Spring 5-15-2017

The Maternity Ward as Mirror: Maternal Death, Biobureaucracy, and Institutional Care in the Tanzanian Health Sector

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Tanzanian Health Sector
by
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A dissertation presented to
The Graduate School
of Washington University in
partial fulfillment of the
requirements for the degree
of Doctor of Philosophy

May 2017
St. Louis, Missouri

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ACADEMISCH PROEFSCHRIFT

ter verkrijging van de graad van doctor

aan de Universiteit van Amsterdam

op gezag van de Rector Magnificus

prof. dr. ir. K.I.J. Maex

ten overstaan van een door het College voor Promoties ingestelde commissie,

in het openbaar te verdedigen in de Agnietenkapel

op woensdag 12 april 2017, te 10 uur

door Adrienne Elizabeth Strong

geboren te Cleveland, Ohio, Verenigde Staten van Amerika

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Acronyms

AMO- Assistant Medical Officer
AMSTL/AMTSL- Active Management of the Third Stage of Labor
APGAR- Appearance, Pulse, Grimace, Activity, Respiration (also named after Virginia Apgar)
APH- Antepartum hemorrhage
BEmONC- Basic Emergency Obstetric and Neonatal Care
CEmONC- Comprehensive Emergency Obstetric and Neonatal Care
BTL- Bilateral tubal ligation
CCF- Congestive cardiac failure
CHOP- Comprehensive Hospital Operating Plan
CPD- Cephalopelvic disproportion
DC- District Commissioner
DIC- Disseminated Intravascular Coagulopathy
DMO- District Medical Officer
DRCHCO- District Reproductive and Child Health Coordinator
EN- Enrolled Nurse
EPMM- Ending Preventable Maternal Mortality
FGD- Focus group discussion
FSB- Fresh stillbirth
Hb- Hemoglobin
HBB- Helping Babies Breathe
HIV- Human Immunodeficiency Virus
HMT- Hospital Management Team
ICU- Intensive Care Unit
IMF- International Monetary Fund
IUD- Intrauterine Device
IUFD- Intrauterine fetal death
IV- Intravenous, short for intravenous fluids in most instances
MDG- Millennium Development Goal
MMR- Maternal mortality ratio
MO- Medical Officer
MoH/MoHSW- Ministry of Health/Ministry of Health and Social Welfare
MOI/C- Medical Officer In Charge (of the hospital)
MSB- Macerated stillbirth
MSD- Medical Stores Department
MTUHA- Mfumo wa Taarifa za Utoaji Huduma za Afya, System of Reporting of Provision of Healthcare Services
NASG- Non-pneumatic Anti-Shock Garment
NG- Naso-gastric
NGO- Non-governmental organization
NO- Nursing Officer
OPD- Out Patient Department
OT- Operating theatre
PPE- Personal protective equipment
PPH- Postpartum hemorrhage

PV- Per vagina
QIT- Quality Improvement Team
RAS- Regional Administrative Secretary
RHMT- Regional Health Management Team
RMO- Regional Medical Officer
RN- Registered Nurse
RRCHCO- Regional Reproduction and Child Health Coordinator
SAS- Sub-Assistant Surgeon
SDG- Sustainable Development Goal
TB- Tuberculosis
TBA- Traditional birth attendant
TNMC- Tanzania Nurses and Midwives Council
UNFPA- United Nations Population Fund, formally United Nations Fund for Population Activities
UNICEF- United Nations International Children's Emergency Relief Fund
USAID- United States Agency for International Development
WHO- World Health Organization

Acknowledgements

First and foremost, it is with the greatest love, respect, and admiration for those healthcare professionals with whom I worked for this research that I wrote this dissertation. While it will reveal many challenges and complicated problems, my hope is that it will also demonstrate the resilience, ingenuity, and dedication of all those people striving to provide care to women and their newborns in what are, undeniably, difficult and constraining circumstances. This is a work of love and devotion for all of them.

The research would not have been possible without the support of a number of people in Tanzania and in the Rukwa region. Thanks must go to Dr. Jasper Nduasinde who graciously received me out of the blue in 2012; to Ester, my second mother and home away from home; to Drs. Samwel Marwa and Francis Mashigala whose friendship undoubtedly influenced my decision to return to the Rukwa region after my first visit and who helped facilitate my access to the hospital and the information I needed. To Dr. John Gurisha for agreeing to allow me what amounted to nearly free range of the health facilities in the region and provided me with his perspectives on the challenges facing the region. To the nurses with whom I worked on the maternity ward, thank you for allowing me to be there with you, thank you for all that you taught me, and for the laughter and stories we shared. To Cyril Ngaponda and Karugira Rweyemamu for hours of insightful conversation and Qamar for taking me in like family—food, gossip, jokes, and sisterhood included. And, with all my love, thanks to Edward Mwakasege, Tumaini Mdapo, Vivian, Innocent, and Maya, for the support, the love, the food, and everything else with which you provided me while I was in Sumbawanga, *asanteni kwa yote.* And to Rebeca Matiku, my research assistant, for her labor and companionship- you certainly made the work infinitely more enjoyable and possible.

Even though I'm certain my family understands more about what I do now than they did when I worked in a research lab at Ohio State, it is impossible to always know what goes into a Ph.D. While the emotional demands of my research, because of its topic and content, the length and distant location of my field site, as well as the nature of writing a Ph.D., have caused some conflict and misunderstandings, my family has been there for me through it all, cheering me on at every step of the way. I thank my mom, first and foremost, for everything she has done to support me and facilitate this process even while going through a number of important life changes herself. Bringing Steve into the family has been one of the greatest gifts, particularly in these last stages as I try to navigate the world of the academe. Your visit to Tanzania in 2014 was not as smooth as we might have hoped but it means so much to me that you both were able to see me in the place and with the people that mean so much to me. I hope it helped you see more about why this research continues to inspire, motivate, and challenge me. To my dad, your visits always come at the right time and I certainly would have been unable to carry on with all the moves required without your spatial reasoning and muscles. Your enthusiasm and support for me and my work have been a wonderful part of graduate school. To my brother, your eye for rhetorical structure and English grammar certainly has made my work more legible. I always look forward to stimulating and challenging conversations with you and I know we will continue to make each other better in many ways. Thanks always for all the hours you were forced to sit

through events and ceremonies for me, and for your understanding when I was on the other side of the world during those same events in your life.

Last, but not least, thanks also must surely go to Hussein, for the hours together, which have always been too few, and for the logistical and emotional support. Without you, I may never have gotten ethical clearance or a car, and my many random questions would have frequently gone unanswered. I would surely have been lonelier and with less insight into the experiences of life in Tanzania. Our relationship has been a bridge builder, a conversation starter, and sometimes a challenge but, always enriching and I have grown so very much because of you.

<div align="right">Adrienne Elizabeth Strong</div>

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May 2017

ABSTRACT OF THE DISSERTATION

The Maternity Ward as Mirror: Maternal Death, Biobureaucracy, and Institutional Care in the

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by

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Doctor of Philosophy in Anthropology

Washington University in St. Louis and the Universiteit van Amsterdam, 2017

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As public health policies continue to encourage women to give birth in biomedical care facilities, this research provides insight into the sequences of events leading to deaths in these settings from the unique perspective of the healthcare providers and administrators themselves, in addition to that of women and their communities. While the term maternal mortality implies biological processes and clinical practices, this dissertation focused on sequences of events at the hospital, and on historical, institutional, and political economic structures that shaped maternal risk in this region through 23 months of mixed-methods, ethnographic fieldwork in the Rukwa region of Tanzania and the Mawingu Regional Hospital. Women's lives and healthcare experiences before reaching Mawingu influenced their social support and access to resources in times of emergency in the hospital. Archival data helped explain how poor infrastructure, healthcare worker retention challenges, and debates on home vs. hospital birth have roots in the British colonial period.

Situated in a global health complex that emphasized data collection, healthcare providers found themselves constrained by an "accounting culture," as opposed to working in a "caring culture." Nurses desired to be part of a "caring culture" on the institutional level in which administrators demonstrated their care for and appreciation of nurses. Institutional lack of care contributed to the continued production of nursing care that gave the appearance of lacking motivation. This environment led to reduced expectations that providers and hospital administrators can solve clinical or systemic problems, constrained as they were by a system that makes it so difficult to do so.

Preface

After spending nearly an entire month in Dar es Salaam, Tanzania waiting for research and residency permits, I was finally able to set off for Sumbawanga, a two-day bus journey across the country, dragging over 200 pounds of luggage with me. I arrived in the beginning of February 2014, the rainy season well underway, and reported to the Mawingu Regional Hospital the very next morning. I stood up in front of the morning clinical meeting, nearly 100 hospital staff members staring back at me, to (re)introduce myself and explain to them my purpose for being in their midst. I was proposing to research maternal death, a subject often accompanied by resonances of blame and failure on the part of individuals, institutions, and the state. I explained the goals of my research in a way that emphasized the need for the voices and perspectives of healthcare providers, those who were working hard to provide pregnant women with life-saving care during emergencies, despite many challenges.

In less than three weeks after my arrival, we saw five maternal deaths on the maternity ward. I've reconstructed the following from my field notes from March 5th, 2014 in order to give a sense of some of the ways in which bureaucracy and institutional constraints appeared to be influencing the ways in which nurses and doctors were able to engage in care practices on the Mawingu Hospital maternity ward. Over the course of the following 15 months at the hospital, I began to unravel the complex intersections of history, geography, regional identity, state policies, political economics, biomedicine, and institutional and individuals' goals for receiving (and providing) care as these factors all influenced maternal health and death in the Rukwa region.

March 5, 2014 Wednesday

7:30am, Morning Meeting

There were 6 deaths last night: 3 on ped[iatrics], one on maternity, one in the ICU, and one on

Ward 3. There was another serious, maternity-related case that came in around 5:30am and she

has been admitted on Ward 8. The working diagnosis is severe anemia and heart failure. She was

admitted previously on February 17th of this year due to a retained placenta. They performed an

evacuation and she got two units of blood via transfusion. Her blood hemoglobin level (Hb) was

4 point something and an x-ray wasn't done (to look at her heart) because of an electricity issue.

Dr. Fakhiri is saying that CCF[1] can be life-threatening and Patron says we will continue to

review the case.

Patron is making several announcements this morning, including about washing all of the

mosquito nets because the hospital has two full sets of good nets so they should be washed once

per month or per every two months. He is now talking about the new trolleys in the storeroom

and saying they are going to go to ICU, the theatre, ward 9, ward 3, and ward 5. There is going to

be a meeting for the In Charges (nurses) with Patron and all the supervisors (everyone who

rotates through Supervision), including theatre, tomorrow, Thursday at 10am, in the morning

meeting room.

8:30am, Maternity Ward

I got to the ward and started trying to track down files for the women who have died. Today,

working the morning shift, we have Kinaya, Martha, Lucy, Rukia, and Linda. I was in Kinaya's

office and she had a list of the deaths from February that was sort of only half filled out. I was

looking at it and started copying down some information. One woman, P.N., seems to have been

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[1] Congestive Cardiac Failure

written down on the list as having died on February 7th from severe pneumonia but I'm wondering if that wasn't the woman who died right after I arrived, on the 17th, who had HIV Stage IV? Who knows if the name is even P.N. because the other woman's file says Jesca but her name was actually Joyce. Documentation is an issue here. Why? That is one thing I want to know. It seems like just a little bit more time and rigor would solve a lot of problems and save a lot of confusion. Is it possible the nurses don't think it matters? Or they don't care? Or there's just not enough time to fill everything out? Everyone deserves to have accurate information in their file and they deserve to be called by their actual name, not to mention it would make it easier to keep people straight. Dates and times are often confused. I've seen more than one place where Dr. Charles has only written "—am—" or "—pm—" without including an actual time, which makes it impossible to reconstruct an accurate timeline, which I think is 100% necessary for their own information and efforts at quality improvement. In the maternal death audit meeting last year that I attended they talked about documentation and staff members not recording times. I need to follow up with all the doctors involved in these cases and I need to figure out which nurses were working each of the shifts involved and try to talk to them.

9:56am

One patient came in with a retained placenta sometime early this morning, or possibly on the night shift, it wasn't clear to me when exactly she arrived, and had to have the placenta manually removed. Now, at 9:56am, Linda is telling Rukia that Rukia needs to help her in the post-natal room because the patient is still bleeding excessively. Linda also wants to take a blood sample to the lab and clean up the patient who didn't bring very many clothes with her. The woman appears to be sleeping, and Linda tells me it's because she's still coming out of general anesthesia. I went to help Linda clean up the patient, mopping up the growing pool of blood with

some of the woman's khangas she had brought with her, and whatever else we could find. The ward doesn't have much in the way of disposable pads or linens that could be used for this purpose so most times we have to use something the woman has brought with her. The woman or her relatives then have to wash these blood-soaked clothes by hand in the communal bathroom in the ward. Not very sanitary, for anyone involved. I worry about, not only the pregnant women, but their relatives getting infected with something. There are women with severe infections in the same room though they're in beds slightly separated from the other women who have already given birth. However, I think they all share the one bathroom off the room.

10:15am

Right after that incident, we got another woman (now 10:10am), Pascalia, who has started hemorrhaging after giving birth. She has a lot of clots still in her uterus and has lost a lot of blood. They are starting an IV and a catheter now, at 10:15am. Rukia was up almost to her elbow in the woman's uterus, trying to do a manual removal of any clots or bits of the placenta that might be preventing the uterus from contracting. And we don't have any gynecology gloves that go up to the elbow so she had blood well up her arm and certainly far beyond the extent of her gloves. She was desperately asking for antiseptic after she finished because of the blood contamination.

Things have calmed down a bit now so I am back in the office and looking around in report books to try to find out who P.N. is and whether and when she died and of what. It appears she was 25 years old, from Village I, and did, in fact, die on February 7th. However, the postnatal report book says that her cause of death was anemia. She had a C-section and had twins who both died. The woman I was remembering is named Rose R. S. She was also 25 and the report book doesn't say where she was from. She was admitted on February 12, 2014 and died on

February 17, 2014 at 9:40pm, so that was the first death after I arrived. It didn't say anything about the status of her pregnancy or even if she was pregnant. Maybe she'd recently had a baby? It's not at all clear from the book's entry. I tried to find her in the admission book on the antenatal part of the ward and I was absolutely unable to find her there. We seem to be having a particularly bad period in terms of death for the last month or so. I'm trying to collect this information about each of the cases so I can start trying to trace them but there are so many conflicting accounts in the report books and case files that it is rapidly becoming overwhelming and confusing.

According to the records in Kinaya's office, it looks like there were 28 deaths in 2013 (at least, but I can't tell if this includes those from ward 5 [gynecology]?) and maybe as few as 18 in 2012. According to the audit forms it seems like there were actually at least 19 deaths reviewed [in 2012] and I don't know if there were any more from ward 5 that should have been included. There were 4153 live births, per this count, for 2012, which makes the maternal mortality ratio (MMR) 457 per 100,000, about the national estimate. Using the same number of live births for 2013 and counting at least 30 deaths from 2013, we come up with an MMR of 722.4 for last year. The average age of those who died in 2013 is 25.4 years old. Just estimates but it gives me an idea of what's been going on. Also, it really makes it clear how questionable some of these data are, because it's unclear how complete the information is. I don't find much mention of any deaths from the gynecology ward but surely there are women admitted there because they are early on in their pregnancies. That ward gets cases of severe anemia in pregnancy or malaria in pregnancy, ectopic and molar pregnancies, as well as post-abortion complications. If women are dying from any of those causes they should also be included in these counts. Just by looking at

the paperwork available in the office right now it's almost impossible to tell if these deaths are or are not included in the totals.

11:27am

I wonder what is going to happen with Kija's baby, the woman who died yesterday. The poor thing is still just lying in the warmer in the delivery room and it is now 11:27 am. –Later I did see her relatives come to pick up the baby. It was a group of all men and they looked a bit forlorn carrying the can of baby formula. I had actually greeted one of the men earlier but not known that he was Kija's relative. Nurse Kinaya spent about one second explaining how to read the instructions on the baby formula can. I'm a bit worried the baby might not fare very well. Sometimes these babies whose moms have died get sent to the orphanage in town if there aren't any relatives willing to take care of them. I hope this baby will be OK.

I was chatting with a Dr. Happy from Africare over tea today and I mentioned my research. I said I've been very busy because we've had five deaths in just three weeks' time. She pretty much didn't respond at all. This lack of emotional response really seems common but I don't understand why yet. This is definitely something I need to think about and discuss more with the nurses and doctors. I would like to know more about their personal feelings in connection with these cases and how they feel immediately following the death of one of the women. Maybe this is a function of them being more or less used to a relatively high number of deaths and not feeling like it can be any other way? Or feeling like they tried their best with what time, supplies, and information were available?

I went to Ward 5 (gynecology) because I was wondering about deaths from there being included in the maternal mortality audits. I asked what tends to cause the abortions—a common cause of admission, and one of the main clinical causes of maternal morbidity—i.e. are they

spontaneous or induced. Nurse Sokota, here on ward 5, said the abortions are mostly induced and that healthcare workers at dispensaries will often do it, which can tend to be problematic because abortion is illegal in Tanzania. (This, then, is why Kinaya was talking about getting cases of imminent abortion from one particular dispensary and said the district or regional health offices should send someone to investigate there.)

1:15pm

I returned to find out that we're still continuing on with lots of work here this morning! It's now 1:15pm and we just received a referral from Laela health center. She's an 18-year-old primigravida with prolonged labor and she has now started having eclamptic seizures, at least once, if not more, so they referred her from Laela to us for further management. I think she is the one with whom Kinaya was working and was only speaking Kifipa with her because she didn't understand Swahili very well.

The nurses seem to be filling out partographs after the fact and more than just filling them, it seems they often start them after the woman has already given birth. Today it's really busy so that seems somewhat excusable but usually they tell me you should start it when the woman arrives, if she's in active labor already. I wonder what else prevents them from following this rule.

We are still waiting for Paulina I., the planned C-section from this morning, to come back from the theatre. I saw her when she was on her way there around 8:30 or 8:45am. Apparently, she started bleeding excessively and they took her back to the theatre to see what the problem was. Rukia said, *"Shida za bleeding zimezidi leo! Shida zimezidi leo!"* (These bleeding problems have been excessive today! They have been excessive today!)

1:45pm

We are still waiting to know, here on the ward, what the issue is. It's now 1:45pm and Lucy just came back. Paulina died. After taking her back to the theatre and opening her up again they took her to the ICU. Apparently, she lost too much blood and was O- and there was only one unit of O- blood, which came from the Red Cross's supply. She was in such good health too and the baby is alive, a beautiful 3.5 kg baby girl. Dr. Deogratus did the surgery and Lucy was also in the theatre, at least initially, to take care of the baby.

After receiving the news from Lucy that Paulina didn't survive the surgery, we were all talking about what happened. Rukia said this one, Paulina's death, really hurts because Paulina was so healthy, so beautiful. She had already agreed to have a BTL (bi-lateral tubal ligation) and now she has left three children. She had two previous scars from earlier C-sections. Rukia says, *"Tabia ya huku ni mwezi wa pili na wa tatu watu wengi wanapush."* (The habit here is that in February and March a lot of people push [give birth].) I think we are all feeling Paulina's death to be particularly painful because she seemed so healthy and had absolutely no signs of any problems. Lucy said it was a problem with her blood hemoglobin level (Hb). I'm not sure if that's really what she meant or if she meant it was a problem with her Rh factor (negative)? Apparently, this death doesn't get written down in the maternity report book because technically she died in the ICU and as "transferred out" of maternity. I will try to learn more about the cause of her death from Dr. Deogratus who did the surgery.

I'm wondering about post-partum readmissions, like the woman on Ward 8 that they were talking about in the morning meeting today. Do any of these ever result in deaths and if so, are they included in the maternal death audits? Record keeping and maternal death surveillance

seem to be challenges here, but that's not terribly surprising given how busy the ward always seems to be.

2:15pm

The woman who was our referral case from Laela just had another seizure at about 2:15pm. She already gave birth to the baby. Her name is Magreth S., first pregnancy. Kinaya has really been intensively caring for her and was really helping her to push in the second stage. Kinaya let her be in a more upright sitting position for delivery.

Nurse Peninah says that every time someone dies like this it hurts a lot. She said some people say *"ujauzito si ugonjwa"* (pregnancy is not a sickness) and Rukia retorted, *"Nani anasema hivi? Mimba ni sumu!"* (Who says that? Pregnancy is poison!) Peninah responded, *"Ni kweli. Na ni vijana sana!"* (It's true. And they are really young people!) This was the first time I'd heard the nurses openly expressing their feelings about a maternal death, usually they don't say much.

According to Kinaya, Dr. Deogratus has already gone home so I can't try to talk to him about either this case or the woman who died last night. Dr. Deogratus spent most of the last week entirely alone on the maternity ward. There are usually supposed to be at least four doctors on the ward but two were traveling and one, well, I don't know where Dr. Benard was but, I didn't see him for almost two weeks. So Deogratus alone all this past week. Having only one doctor seems to be common so far, Dr. Charles was on call essentially 24/7, alone for almost three weeks and last month he once told me, "If you're the only one here, you're fucked. Either you die or they die," meaning the patients on the ward. In these cases they basically never had time off, so they are used to slipping out when things on the ward don't seem busy but, on a day like today, we need to be able to find Dr. Deogratus!

3:10pm

I was just thinking that for this most recent case maybe there wasn't much information that is useful for my study but actually, I do want to know about her blood work. What was done and did they have the results from the lab before she starting her surgery? It often seems that the lab work requests are taken well after the woman goes to surgery so they can't possibly know Hbs or blood type beforehand. Though, Paulina was a planned C-section so they've had since yesterday to get that all done. Early blood work is definitely not the normal routine. I want to try to get a full description from Dr. Deogratus and Lucy about what happened today. I still need to find Paulina's age, place of residence, etc. I'll try to get her file tomorrow. And, as an aside, it doesn't look like the two ward 5 deaths from February 2013 were included in the maternal death audit forms that I looked through but, those would bring the number up to something like 30 deaths for 2013.

Care is attentive to such suffering and pain, but it does not dream up a world without lack. Not that it calls for cynicism either: care seeks to lighten what is heavy, and even if it fails…

It keeps on trying.

-Care in Practice: On Tinkering in Clinics, Homes, and Farms, Annemarie Mol, Ingunn Moser, and Jeannette Pols (eds.), p.14

"The maternity ward is the mirror of the hospital…I mean, you will find that in any hospital, a person will ask how is it, how is the language on the maternity ward? How is the care on the maternity ward? How is the drug supply on the maternity ward? How are the deaths on maternity? I mean, it's necessary. A person, if they reach any hospital, the person can be just passing, but they will say they are interested in knowing about the maternity ward…I think it is a sensitive department because it is the workshop, the factory for bringing people into the world after asking God for them." -Nurse Aneth, Mawingu Hospital

Part I: Introduction to the Study

Chapter 1: Introduction

1.1 Introduction

The events and lives presented herein are but one version of reality, affected by the people who would talk to me, the events I was allowed to see and understand through the actions and interpretations of others, and a result of who I *am* in the world. I have sought to render linear and orderly a complex set of influences, narratives, rumors, and deep historical roots that are anything but. I have been able to call into being, to pin down, one version of events, even as the bodies, the institutions, and the lives presented continue to fracture, multiple versions hovering together, edges blurred as they oscillate between one form and the next, always just outside the bounds of our perception.

As much as this dissertation is about complexity-in work, in bodies, in institutions, in realities- it is also about care. In the obvious ways one might expect with a hospital ethnography, it is about the ways in which healthcare providers, working in environments characterized by scarcity, care for their patients or fail to be able to do so. But, this is also a story about the ways in which hospital administrators, and the hospital as an institution, (failed to) care for their employees- the nurses and doctors. It is a telling of the ways in which institutions may or may not be capable of caring for patients and for staff members even as the same institutions are sites, or conduits, of myriad forms of violence- ranging from the physical to the structural. Too, it is about relatives and communities caring for pregnant women and how these groups understand maternal deaths or obstetric emergencies through their interactions with healthcare at a regional hospital but also closer to home, in village dispensaries. It is about how these people are wounded by their interactions with their healthcare system through remembered and current incidences of corruption and exclusion. This is also a tale of the ways in which healthcare

1

providers sought to care for each other and for their own families while striving to uphold the professional ideals of medicine and nursing within a struggling system.

In this dissertation, I argue the fundamental point that the very institutions that politicians, clinicians, public health and policy practitioners, as well as the public, have imbued with the power to save lives, and which they conceived of as a panacea to solve *the* maternal mortality problem, are, instead, at the root of systemic failures to improve maternal health outcomes and care. The role these institutions are supposed to play is repeated and elevated in a sort of collective fantasy or imaginary about how to reduce maternal deaths, without adequately acknowledging the ways in which these institutions have failed to progress and the scarcity that forces deviation, justification, and improvisation that does not meet international best practice guidelines. I use insights from participant observation, interviews, group discussions, surveys, and primary source archival research to outline the ways in which history, political economics, and policy constantly permeate the borders of hospitals, individual bodies in obstetric crisis, and those bodies engaged in the work of mitigating such crises. This work seeks to challenge prevailing notions of where the boundaries of technologies, institutions, and policies lie, and how all three intersect with bodies and the many meanings of care in times of emergency and under conditions of scarcity.

The second goal of this dissertation is to present a thorough and nuanced portrait of the ways in which healthcare providers and administrators, in particular, work to provide maternal healthcare services and uphold the ideals of their professions within a bureaucratically and structurally constrained system. What follows in part III is a detailed account of the meaning healthcare providers and administrators in the Rukwa region attribute to maternal deaths and the meanings of care across myriad registers. I show how these actors cope with the deaths of

pregnant women and what they think causes them. This section also demonstrates the many

barriers that can come in the way of providing high quality care at personal, institutional, and

systemic levels.

1.2 The Research Problem: A Point of Departure

The World Health Organization (2016) defines maternal mortality as:

> The death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes. To facilitate the identification of maternal deaths in circumstances in which cause of death attribution is inadequate, a new category has been introduced: Pregnancy-related death is defined as the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the cause of death.

Research on the causes of maternal mortality in sub-Saharan Africa, the site of half of all such

deaths globally, points to the combined, and interrelated, effects of poverty, lack of education,

gaps in infrastructure, poor communication, and inadequate healthcare staff training (WHO

2012). Current global recommendations for reducing maternal deaths focus on ensuring women

give birth with biomedical supervision. Despite these recommendations, women in Tanzania still

have a 1 in 45 lifetime risk of dying due to pregnancy related causes[1] (WHO 2015). As policies

have shifted over the last 30 years, anthropological research has problematized global health

recommendations for reducing maternal deaths, emphasizing the perspectives of women (Allen

2004), local healers (Pigg 1997; Langwick 2011, 2012), and their interactions with biomedicine

(Langwick 2008). As a distinct but complementary approach, to explore another component of

the complex contributors to maternal death, I embarked on an in-depth ethnography of the

Mawingu Hospital in the Rukwa region of Tanzania, which has one of the highest maternal

mortality rates in the country, to elucidate the routes through which the biomedical health care

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[1] For comparison, women in the United States have a 1 in 3,800 chance and women in the Netherlands, a 1 in 8,700 chance of dying due to pregnancy related causes (WHO 2015).

system as a bureaucracy may combine with these other complex dynamics to contribute to poor maternal health in the region (pilot data 2013; UNFPA 2011).

At a maternal death audit meeting at Mawingu Hospital in 2013, healthcare providers from the region determined that four of the six cases of death they were discussing would have been avoidable if the hospital had more efficiently managed the woman's condition or taken a more comprehensive patient history. It was clear from their discussion that bureaucratic mishaps, systemic malfunctions, and social relations contributed to these lapses in care provision. Although it is undeniable that access to certain drugs and procedures can save a woman's life, this research project sought to problematize an underlying policy assumption that if only a woman could reach a hospital, by overcoming community barriers to care, she would receive the life-saving help she needs. With this analysis I argue, instead, that institutional and social dynamics of the maternity ward, the hospital generally, and the overall health care system came together in ways that worked against a woman and contributed to the deterioration of her condition and her subsequent death in far too many instances.

This approach to the study of maternal death adds to anthropological understandings of how biomedical healthcare workers and administrators, as well as patients and their relatives, function with the confines of locally produced bureaucratic environments, hierarchies, and power structures. The institutional and administrative components of care, and their possible contribution to maternal deaths, as the explicit foci of inquiry, have been understudied in the sub-Saharan African context; African biomedical health care providers and administrators have been "functionally invisible" (Wendland 2010:22)[2]. Understanding the complex inner processes of

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[2] But since Wendland wrote that statement, there have been a handful of studies on the perspectives of this population, notably including those also from African scholars (c.f. Kyakuwa 2009; Kyakuwa and Hardon 2012; Martin 2009; Mulemi 2010)

these institutions[3] and their staff members has become even more important with a continued emphasis on biomedical birth to reduce maternal deaths. This research also contributes to understanding of the ways in which health bureaucracies as post-colonial projects are embodied in the context of maternal death.

1.3 Theoretical Framings and Analytic Lenses

In my framing of the research questions and design, I approached the topic with some central bodies of literature and theory in mind. Here, I call these the elements of the theoretical frame. Other ideas emerged inductively through the conduct of the fieldwork and the analysis of the rich words of my informants. I call these the analytic lenses which I apply to my interpretation of this work. Below, I lay out the be primary components of each, in order to situate what I have written in the chapters to follow. Throughout all of these topics, and the dissertation as a whole, the issue of political economics surfaces repeatedly. I use the term political economy to encompass the ways in which broad economic shifts and policies influence health in Tanzania, as well as the ways in which governance and political policies inform strategies to reduce maternal death. Tanzania, and the health of pregnant women, is embedded in a global political economic system that continues to shape inequity and public health interventions in a number of ways, which are apparent throughout the dissertation.

1.4 The Frames
1.4.1 The Anthropology of Reproduction: Birth as a Site of Power and Inequality

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[3] Throughout the dissertation, I use the term "institution" to refer to the hospital, as an organization, but also as a set of practices that orders the goals and activities of the organization. Hodgson (2006) more generally defines institutions as "systems of established and prevalent social rules that structure social interactions," and while I do not use institutions in this way very much throughout the text, there are many aspects of work and interactions within Mawingu, and biomedical care more generally, that might be considered institutions. Additionally, chapter 4 introduces some other institutions, such as bridewealth and marriage.

The anthropology of health has long engaged with questions related to reproduction, though it was not until the feminist movement of the 1960s and 1970s that this field of research came to be a vital site for the study of women's power and subordination (Browner and Sargent in Saillant and Genest 2007:233; Ginsburg and Rapp 1991). The anthropology of reproduction intersects with many other strains of anthropology including, but not limited to, kinship studies, marriage, parenting, and domestic economies (Ginsburg and Rapp 1991). Power is at the center of all of these relationships. As Thomas (2003:10) writes, "female initiation, pregnancy, and childbirth have long been important sites through which men and women of various ages and positions have constructed and contested power." Gendered analyses of healthcare often take reproductive health as their starting point. Scholars use reproductive health as a place to highlight broader health inequities based on gender, particularly those inequities that have become clear with increased globalization or that continue to persist despite years of efforts to address them, as with maternal death (see, for example, the chapters by Nhongo-Simbanegavi; Desai; and Doyal in Kickbusch, Hartwig and List 2005; Inhorn 2006). In her 2006 work, Marcia Inhorn identified what she considered to be twelve vital areas for further research in the field of the anthropology of reproduction and women's health. These included, among others, addressing the "increasing biomedical hegemony over women's health; the production of health by women; the health-demoting effects of patriarchy;" state interventions in women's health; and the "politics of women's health" (Inhorn 2006:347), all of which I address in the dissertation and which have informed the framing of the research.

There have been many excellent ethnographic accounts of pregnancy, birth, the postpartum period, breastfeeding, and childrearing in a number of cultures (see Allen 2004; Andaya 2014; Berry 2010; Chapman 2010; Liamputtong 2007; Mabilia 2005; Pinto 2008;

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Sargent 1982, 1989; and van Hollen 2003 for a sampling). A variety of themes recur within these ethnographic accounts and across cultures. Power dynamics, the imposition and integration of biomedical healthcare services and professionals, medicalization of pregnancy, birth and reproduction (Berry 2010; Pinto 2008; van Hollen 2003), and changing interactions between kin around the site of pregnancy (van Hollen 2003; Berry 2010), as well as the importance of pregnancy and birth as times for enacting "development" and progress (on state and personal levels) (Spangler 2011), all arise as central to understanding these transformative life events. So too do the issues of therapeutic choice and healthcare decision-making arise (Chapman 2010; Sargent 1982, 1989), and the ideas of risk and threat from both biological and supernatural forces (Allen 2004; Chapman 2010; Pinto 2008). Conflicting ideas about the appropriate role of biomedical care also emerge in many settings where biomedicine accompanied the colonialist project and has had a significant impact on ideas about pregnancy and care for pregnant women (Berry 2010; Chapman 2010; Lock and Nguyen 2010; Pinto 2008; Sargent 1982; van Hollen 2003).

At the heart of many of the studies on pregnancy and childbirth lie issues of power and politics, identity and social relationships. Pregnancy and reproduction are powerful sites of regulation, negotiation, and control. The political economy of pregnancy, birth and reproduction has become a crucial lens through which to analyze broader issues of social transformation, development, nationalism, and gender inequalities and follows more general trends in medical anthropology's engagement with global health issues (Browner and Sargent 2011; Ginsburg and Rapp 1991, 1995; Janes and Corbett 2009; Kuhlmann and Annandale 2010). Soheir Morsy critically states,

> […] There remains a need to elaborate the relationship between women's compromised
> health and state policies in historical and global contexts. Otherwise the state and

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international development institutions will continue to be presented as the promoters of women's well-being, absolved of responsibility for the social production of compromised health, while this responsibility remains assigned to 'culture' and potentially innumerable discrete variables ranging from those designated 'individual' to those labeled 'institutional.' (Morsy in Ginsburg and Rapp 1995:173)

This dissertation engages with the issues raised by Morsy by examining one particular hospital in a remote area of Tanzania and tracing its interconnectedness with a global system, related to the projectification of global health interventions (Rottenburg 2009), aid dependency and health financing, gender inequities, and the ways in which these and other structures collide in the lives of individual women, nurses, physicians, and health administrators. If women are treated differently because of their gender, or if government policies and institutions consistently work to systematically disadvantage women, despite the rhetoric of gender equality and human rights, women will never be able to achieve high levels of health.

1.4.2 Authoritative Knowledge and Childbirth

The concept of authoritative knowledge is integral to thinking about power relations within the healthcare setting. I include it here because I, like many other scholars, see the differential value of types of knowledge to be directly related to disempowerment and power relations throughout all levels of a society, but particularly in the hospital setting. Jordan (1993:152) writes, "The central observation is that for any particular domain several knowledge systems exist, some of which, by consensus, come to carry more weight than others, either because they explain the state of the world better for the purposes at hand ('efficacy') or because they are associated with a stronger power base ('structural superiority') and usually both." This quote brings to the forefront the issues of power and a distinction between value and idea systems, which are perceived to have different levels of worth and validity. As biomedicine continues to reach into ever further corners of the world, its pervasiveness has meant the

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importation of biomedical knowledge as the proverbial gold standard in many locations.

However, the arrival of biomedicine did not preclude the continued utilization of alternative

forms of healing or healthcare. The continued presence of coexisting systems proves time and

again to be at the root of contestations over "truth" and "lies" on the maternity ward, as when

nurses accuse women of killing their babies by drinking local herbal medicines or other non-

biomedical treatments. Nurses might look down on a woman as being uneducated and "from the

village," in a derogatory sense, if they think she is resisting biomedical interventions, authority

or methods. By extension, biomedical healthcare workers largely scoffed at the methods and

knowledge of "traditional" healers and birth attendants, at least in public settings. At its heart,

these are contestations related to power and authoritative knowledge within the walls of a

regional hospital.

As certain ways of knowing, and the attendant practices, are discounted, others gain

ascendance and are thereafter sustained and reproduced (Sargent and Bascope in Davis-Floyd

and Sargent 1997:183). Sargent and Bascope (in Davis-Floyd and Sargent 1997) argue that

authoritative knowledge, during the event of childbirth, may belong to those with the necessary

technical control over aspects of birth, and not necessarily those in formally recognized positions

of power and authority (Sargent and Bascope in Davis-Floyd and Sargent 1997:185). This means

that the holders of authoritative knowledge may differ in different settings and in different

"communities of practice;" the authoritative knowledge is contingent upon shared experience

and social position (Sargent and Bascope in Davis-Floyd and Sargent 1997:185). Parallel

systems of knowledge often exist (Jordan 1993:152) and the interactions of these systems can

change, as when a formerly high-tech system, such as a public hospital in Kingston, Jamaica,

becomes increasingly dysfunctional, thereby eroding some of the social distance between women

and healthcare workers formerly achieved through the technical expertise of the providers. This breakdown brought parallel systems into closer contact by decreasing the power differential (Sargent and Bascope in Davis-Floyd and Sargent 1997:203). Similarly, it might be that nurses in Tanzania label women as being "from the village" or use derogatory language as a way of emphasizing the distance in their social positions and concomitant access to authority and power. This may be necessary in the face of shortages of supplies and unreliable medical equipment.

In the sub-Saharan African context, colonizers brought with them biomedicine and added their power and authority to a set of practice already imbued by the authority scientific methods and knowledge have enjoyed since the Enlightenment period (Sargent and Bascope in Davis-Floyd and Sargent 1997:183). Jean Comaroff writes, "British colonialism in Africa, as a cultural enterprise, was inseparable from the rise of biomedicine as a science" (as cited in Thomas 2003:56). Extending beyond the importation of biomedicine during the colonial period, the social position of current healthcare workers is often important for the workers' claims to authoritative knowledge and "has a basis in the legitimacy of the profession and its claim to generate and control authoritative knowledge" (Sargent and Bascope in Davis-Floyd and Sargent 1997:204). Maintaining the image of a "good" nurse and striving to uphold the ideals of the nursing profession, as interpreted by my informants, influenced many of their actions and those of hospital administrators (chapter 7, for example).

At the heart of many of the conflicts and challenges related to maternal health and mortality is a disagreement about where is the proper place for a woman to give birth- is it at home, surrounded by those deemed socially appropriate? Or is it in a biomedical health facility, constrained by the norms and rules of such institutions and facilitated by the knowledge, technology, and tools of its staff members? This central question echoes out of the archival

documents, resonates with a number of other ethnographic works on birth (Allen 2004; Berry 2010; Chapman 2010; Van Hollen 2003) and persists in the changing policies of global health organizations (i.e. WHO) and even in local ordinances, such as those mandating fines for women who give birth at home (chapter 4). Is it the biomedical institution itself that somehow reduces maternal death, as might be envisioned by public health practitioners, or is there something more complex at play in these places that challenges this clinical reductionism and complicates perceptions and beliefs about how to best reduce the deaths of pregnant women?

1.4.3 Colonialism

It has been clear since maternal mortality became a part of national and global public health agendas that political economics and inequity structure the differential risk of dying during pregnancy that women face throughout the world. In the case of countries like Tanzania, the current political economic state cannot be uncoupled from an understanding of the country's colonial past. Due to their lasting effects, colonialism and colonial administration of healthcare continue to be integral components for any analysis of the current state of health. A number of scholars have conducted historical and historical anthropological studies related to the development of healthcare systems under colonial rule (cf. Hunt 1999; Marks 1994; Vaughan 1991). These studies trace the introduction (Beck 1977; Patterson 1981; Turshen 1984) and expansion of biomedicine and public health projects (Gish 1975; Jeffery 1988; Lyons 2002; Packard 1989) in the colonial and post-colonial periods. Other works investigate the growth of bureaucratic institutional power in countries such as Tanzania (McCarthy 1982) and India (Gupta 2012), and the expansion of bureaucratic power through development projects (Ferguson 1990). I seek to extend these historical insights and connect their trajectory to the contemporary structure and function of healthcare services in Rukwa, Tanzania, including connections to broader global

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discourses of the expansion of biomedicine as a post-colonial project that is still intertwined with development efforts and neoliberal policies. To this end, in chapter 3, I include primary source documents from the Tanzania National Archives related to healthcare infrastructure and expansion, policy, and administration in what is now called the Rukwa region, as well as Tanzania more generally.

A variety of works also trace the interactions between local peoples and colonial medicine as it formed a cornerstone of colonial policy (Olumwullah 2002; Hunt 1999; Vaughan 1991). Vaughan's (1991:200) account of interactions between colonial medicine and local people works to demonstrate how biomedicine as a cultural system contributed to the construction of "the African." Hunt's (1999) expansive work is also important in this area. Broadly speaking, Hunt's (1999) work concerns the interactions between missionary medicine and indigenous communities in the Congo, revealing the hybridity of form and meaning that biomedicine came to encompass in Zaire, differing from both indigenous healing practices and the biomedicine found in the metropole. Hunt (1999) places birth and the works of nurses and midwives in the center of her arguments about changes in bodily practices and meanings in the colonial context.

At the level of kinship and community, colonialism also had lasting effects. Intergenerational dynamics of social control and inheritance, as well as bridewealth and initiation ceremonies were all impacted by colonialism. While there are some particularly striking accounts of intense intergenerational conflict and the breakdown of intergenerational control during colonial times, these struggles have not been limited to the colonial period (see Comaroff and Comaroff in Weiss 2004). Snyder (2005) describes several examples of current day conflict between generations among the Iraqw of Tanzania. The loss of initiation ceremonies, the advent or popularization of different forms of marriage (or, for lack of marriage, see Hunter 2010), and

changes in orders of inheritance all are characteristic of the current period in time (see

Rwebangira and Liljestrom 1998).

During the colonial period in South Africa, many European commentators saw

colonialism as leading to the breakdown of the Bantu family, while many anthropologists had a

more nuanced view of changing kin relations and the interactions between family members

(Thomas in Cole and Thomas 2009:38). Much as a perceived rise in abortions in the Meru area

of Kenya was thought to signal a breakdown in order and tradition (Thomas 2003), an increase in

illegitimate pregnancies in South Africa was thought to presage drastic social change (Thomas in

Cole and Thomas 2009:38). Anthropologists even went so far as to attribute the rising rate of

premarital pregnancies to the inability of the older generation to control their children and hold

young men responsible for their sexual actions (Thomas in Cole and Thomas 2009:38), an idea

not inconceivable to the community members with whom I spoke who worried about their

inability to prevent their children from early pregnancy and marriage (chapter 4). As families

were pulled apart due to urbanization and educational opportunities or migratory labor, and

capitalist accumulation subsumed older forms of wealth transfer between generations, it is

incontestable that family dynamics and kin relations changed and continue to take on new forms.

Often, these social institutions continue to be in flux, particularly as they come into

contact with ideas about human rights and gender equality. Intergenerational conflict can be

particularly pronounced for women around reproduction and might be expressed via her husband

as he mediates the expectations and demands of his parents or older kin (see chapter 4). As the

world continues to become increasingly interconnected, generational differences also colored

interactions between nurses and among other staff members at the hospital, with older nurses

accusing their juniors of being only interested in Facebook, WhatsApp, and texting on their cell phones, to the detriment of patient care.

1.4.4 Bureaucracy and Biobureaucracy

Many scholars seem to agree that the dominance of institutions (including the global hegemony of capitalism) is a key component of modernity, along with ever-increasing interconnectivity, sometimes in the form of these very institutions (Appadurai 1996:3; Giddens and Pierson 1998; Gyekye 1997; Knauft 2002; Pigg 1992). With the proliferation of institutions has come a deep interest in their functioning and the ways in which bureaucracy grows up alongside them in order to standardize complex procedures. Social scientific interest in bureaucracy was long a part of the domain of sociology dating from Weber (1947) and those who sought to build on or critique his perspectives (Constas 1958; Gupta 2012; Miller 1970; Rudolph and Rudolph 1979; Weiss 1983). Only relatively recently has bureaucracy become an explicit object of anthropological study. Classic studies of bureaucracies have focused on individual bureaucrats and their relation to clients, valuable context in order to understand the life- and work-worlds of government healthcare providers (Dubois 2010; Herzfeld 1992; Lipsky 2010). More recent ethnographic analyses of bureaucracies emphasize the ways in which politically or socially marginalized groups can work within a bureaucratic system to advocate for themselves (Chary et al. 2016; Hetherington 2011), or experience bureaucracy as a form of structural violence (Gupta 2012), and the ways in which the material products of bureaucracies can signify or create meaning, mediate relationships, or effect other ends (Hull 2012). Along these lines, there has been a surge of scholarly interest (c.f. Allard 2012; Cabot 2012; Drybread 2016; Gopfert 2013; Hull 2012; Jacob 2007; Lowenkron and Ferreira 2014; Riles 2006) in paperwork generated by and in bureaucratic systems, relevant to my exploration, in chapter 8, of

the effects of paperwork burdens on nurses, care, and accountability. I add to this growing literature through analysis of the social and relational objectives nurses and physicians accomplish in their utilization of and interactions with paperwork.

Bureaucratic structures can either constrain or facilitate worker autonomy and innovation, leading to stasis or dynamic change. More subtly, these structures aid in governance and control of clients subjected to these systems (Auyero 2012). The institutional characteristics of hospitals play an undeniable role in facilitating improvements or maintaining the status quo in care provision and patient experiences. I engage with the literature and theories of bureaucracy in order to investigate how patient care transpires in the messy space between uncontrollable patient worlds, providers' lives outside work, larger political economic influences, and the static annual reports of hospital organization and policy (c.f. Britan and Cohen 1980). Hoag (2011) outlines inherent paradoxes of bureaucracy and its universal quest to bridge intent and realities of practice, which are particularly apt in a stressed rural hospital setting where it often seems the maternity ward is on the verge of collapse.

In order to integrate more explicitly some of the concepts from the study of bureaucracy with healthcare, I draw on Kohrman's (2005:3) term "biobureaucracy." Kohrman (2005:3) conceives of biobureaucracies as conglomerations of institutions that have cropped up and proliferated with a singular "conceptual and practical orientation of advancing the health and well-being of people understood to have bodies which are either damaged, sickly, or otherwise different, based on local or translocal norms of existence." He goes on to specify that these biobureaucracies are intimately connected to the growth and multiplication of the biomedical and biological sciences, which have brought an attendant pattern of ways "for conceiving of and responding to normalcy and abnormality, health and pathology," (Kohrman 2005:3). These

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biobureaucracies can be transnational, international, community or religiously based, or key functions of a state, or a combination of any/all of the above. These biobureaucratic institutions structure the ways in which we conceive of and define, surveil, and seek to mitigate biomedical forms of pathology or bodily abnormality.

Though pregnancy is not an illness, under most normal circumstances, strikingly large biobureaucracies have emerged, seeking to combat those times when pregnancy and childbirth deviate from the biologically determined norm. Kohrman (2005) uses the term "biobureaucracies" to highlight the degree to which the expansion of biomedicine and its worldview are intrinsically linked to the expansion of bureaucratic institutions. Hunt (1999:4) suggests colonial efforts to increase birth rates and medicalize pregnancy "became enmeshed in the growth of bureaucratic state forms and *la paperasserie* of colonized life," drawing attention to the fact that biobureaucracy is simply a new word for an old phenomenon. Biobureaucratic institution building has not yet been discussed enough from an anthropological perspective (Wolf 2012:93); it may be that certain bureaucratic features routinely accompany the expansion of biomedicine, while manifesting differently in specific local contexts, particularly as part of the post-colonial project. States have employed biobureaucratic institutions for functional and idealistic ends, such as improving the health of citizens in order to ensure a robust and productive workforce, but also by emphasizing healthy citizens as integral for the success of ideological nation-state goals, such as the realization of *Ujamaa* socialism in post-independence Tanzania. The idea of biobureaucratic control, proliferation, and functioning undergird and structure many of the arguments I make throughout the dissertation.

1.4.5 Hospital Ethnography

Hospital ethnography has roots in medical sociology but has grown into a sort of subfield within medical anthropology, with a particular set of perspectives, theories, and methodological approaches. An underlining principle is that hospitals are not clones of a universal model of biomedicine. Their particularities are determined by the specificities of the societies and geographic locations in which they are located (van der Geest and Finkler 2004). A second guiding principle is the view that hospitals are domains in which the core values and beliefs of cultures can come into view and these institutions "reflect and reinforce dominant social and cultural processes of their societies" (van der Geest and Finkler 2004:1996). Research interest in hospitals as locally particular institutional and social environments has seen a resurgence in medical anthropology only since the turn of the 21st century. For many years, hospitals were only infrequently a subject of anthropological interest, with more researchers focusing on "exotic" forms of healing. Hospital ethnography often demonstrates the inability of these institutions to excise patients entirely from their social settings (Bridges and Wilkinson 2011; Livingston 2012; Mulemi 2010; Smith-Oka 2013; Tanassi 2004; Varley 2016; Vermeulen 2004; Zaman 2004, 2005), despite the efforts of biomedicine to do so via medical records, bureaucratization of institutional procedures, the proliferation of various forms of documents, and the standardization of technical procedures. Hospital ethnography increasingly draws on ideas from science and technology studies for ways of understanding the events that transpire in these settings and in order to analyze the ways in which bodies are governed and acted upon in these settings (Pinto 2014; Street and Coleman 2012; Street 2014; Sullivan 2012; White, Hillman, and Latimer 2012).

Hospital ethnography also includes a particular set of complex ethical and methodological challenges. How does the researcher gain access to these highly specialized or technical environments (Inhorn 2004)? As a patient (van der Geest and Sarkodie 1998)? As the

helper or relative of a patient? As a staff member (Zaman 2008)? Wind (2008) proposes a form of "negotiated interactive observation" because, she asserts, it is often impractical, if not impossible, for the researcher to be seen as anything but in the hospital setting. The actors in the healthcare setting are constantly asking or wondering about the position of the researcher, which leads to an on-going negotiation of roles, perspectives, and experiences in that setting (Wind 2008). Wind (2008:87) states that negotiated interactive observation "captures what happens when you are doing fieldwork without at the same time assuming that you become one of 'them.'" Though I do not agree with Wind's assertion that the components of clinical practice are necessarily incompatible with also being a researcher and observer (perhaps if one were to be committed to full time work as a clinician this would be true), I do appreciate her description of the difficulties involved in clarifying or explaining one's position in a clinical environment. For me, it was impossible, and unjustifiable, to simply sit idly, scribbling notes in what was to become my infamous little black notebook, while the maternity ward was overwhelmed with patients and lack of staff. I was, over the years, thrust into patient care (see more in chapter 2). My level of participation in the hospital environment undeniably was more extreme than would ever have been possible in a hospital in the United States, for example, due to differing legal requirements and protections. This meant I strove to constantly examine the ethics of my participation in patient care and procedures so as not to violate the maxim of do no harm.

Insights from ethnographic studies done in clinical settings helped framed my approaches to this research and the questions of maternal death in biomedical health facilities in Tanzania. For example, Inhorn (2003) discusses the ways in which providers' personal attributes, and patients' perceptions of how those affect care, influence interactions in infertility clinics. Livingston (2012) describes challenges facing oncology care providers in Botswana. Wendland

(2010) describes what motivated medical students in Malawi to enter their profession and how they understand their roles as medical professionals within broader society. Such studies discuss the importance of, but do not always fully interrogate, the sequences of events in biomedical institutions and how the very nature of the institution, and broader health system structures, may affect health. This is despite the fact that, in all healthcare facilities, institutional structures, processes, and interpersonal communication can drastically affect care. When these systems go awry, patients suffer debilitating consequences, even death (c.f. Gawande et al. 2003). In the United States, Greenberg et al. (2007) found that poor communication between incoming and outgoing shifts can result in missing files, the wrong patients being prepared for surgery, or delays in emergency surgeries- this in a well-funded, well-supplied institution with highly qualified providers. In sub-Saharan African biomedical settings, the same communication issues exist but often without the potential benefits of computers, electronic patient records, cutting-edge diagnostics, and virtually limitless supplies. With this dissertation, I seek to build on research on maternal mortality and health by offering a complementary perspective derived from the voices of maternal healthcare providers, administrators, and women, and informed by historical data. In seeking to understand how factors such as women perceiving nurses as "fierce," or doctors saying all nurses have an "attitude problem," relate to the institutional environment of Tanzanian biomedical care facilities and influence the health of pregnant women, this study complements previous research and enables a more nuanced and theoretically rich conception of the determinants of maternal risk and, ultimately, death.

1.5 The Analytic Lenses and Contributions to Theory
1.5.1 The Meanings of Maternal Death

The death of a woman when she is pregnant, or in the period surrounding the birth of her child, is undoubtedly a tragedy but how do different actors conceive of this event? By presenting

the perspectives of these different actors, I delineate the position-dependent interpretations of maternal death. I demonstrate the ways in which nurses, doctors, the hospital, the district and regional medical administrators, women and community members constructed maternal deaths and understood their meaning or significance in different ways. In chapter 4, I present the ways in which community members have experienced maternal death and healthcare services for pregnant women. In both chapters 4 and 6, I lay out the ways in which Tanzanian citizens interpret the failure of government healthcare services as a failure of caring and a failure to realize their rights as citizens of the country; the ultimate failure should be considered the death of a pregnant mother. In chapter 8, though more properly about stillbirth, I explore the ways in which women and their relatives speak about deaths that occur in the maternity ward. Chapter 9 includes an analysis of how healthcare administrators and the nurses and doctors talk about and cope with maternal deaths. For providers, these deaths may be bad luck, the culmination of unfortunate circumstances in the lives of women before they ever reached the hospital, or the result of a lack of knowledge or resources in the clinical setting. For the administrators, I discuss the ways in which they spoke of maternal deaths in their districts or region as being a source of embarrassment or an area for improvement when comparing themselves with the rest of the country. Ultimate, for the country, the recalcitrant nature of maternal deaths in many regions of Tanzania is a sign of continuing governance challenges, a failure of the state to progress, as measured against global indicators.

1.5.2 Metrics and Modalities of Accountability

Directly related to the different meanings of maternal death, particularly at the state level, is the growing centrality of measurement and data in the field of global health. With biobureaucratic expansion has come an increase in the modes of accounting for and measuring

health- interventions, outcomes, expenditures, deservingness of aid, and more (Adams 2016; Erikson 2012; Geurts 2015; Merry 2011). I delve into this subject more thoroughly in chapter 3, and the subject comes up repeatedly throughout (chapters 6, 8, and 9, for example). I present concepts of governance and health policy particularly by highlighting different modalities of accountability at the ward, hospital, regional, state, and global levels. These forms of accountability vary depending on the sites and circumstances but are often shaped by broader demands, such as those citing greater evidence, data, and accountability as the cure for maternal health problems (c.f. Hulton et al. 2014). Erikson (2012), for example, demonstrates, through examples from Germany and Sierra Leone, the ways in which numbers and statistics can be performances, drawing on business concepts of risk, return, and profitability: "Whether statistics are accurate or enough to improve health is less important than whether statistics are performed and work to enable economic systems" (Erikson 2012:373).

Here, accountability comes to take on, at least, two different meanings. First, the term can be thought of in relation to accounting for money- aid, investment, resources, supplies, equipment (c.f. Erikson 2012). Second, accountability can mean being accountable, as in being subject to report, explain, or justify actions (or inaction), which I use on the personal, instead of fiscal, level in order to talk about providers' responsibility for care or other tasks in the biomedical setting. Providers talked about being accountable to themselves, to their superiors, to patients, to their profession. In turn, the hospital is accountable, at an institutional level, to the central government, and the central government is held accountable for expenditures and advancement towards achieving health indicators by a bevy of global organizations (the World Health Organization, the International Monetary Fund, the World Bank), nongovernmental organizations, and foreign governments which donate funds to the health sector (chapters 3 and

6, also Strong 2017). Some of these concepts also tie into the broader analysis of the ways in which global and/or national political economics influenced the functioning of the Tanzanian health sector during the time I was in the field. With the expansion of NGOs, direct budget contributions, and other forms of foreign aid and assistance to countries like Tanzania, there are a number of ways in which these organizations have demanded increased accountability while escaping it themselves by circumventing state structures (Rottenburg 2009). However, the state continues to play an important role as an employer of healthcare personnel, builder of certain forms of health infrastructure, and as an important actor in many other ways, though perhaps not always as in control as might be expected (Geissler 2015). How this reality of the para-state (Geissler 2015) intersects with healthcare administration and biobureaucracy in the realm of maternal health in Tanzania also emerges as a theme in Parts II and III of the dissertation, pointing out places where the state continues to be very present and others in which it exerts a very incomplete sort of control.

1.5.3 Risk and Uncertainty[4]

Piot (1999:23) suggests that with increasing complexity, interconnectedness, and changing conceptions of time and space in a globalized world comes a profound sense of uncertainty and ambiguity. However, the concept of uncertainty, as well as the ways in which it is tied to health and misfortune, is much older than the current modern (or post-modern) moment (c.f. Douglas 1966; Evans-Pritchard 1937; Janzen 1981; Turner 1968; Whyte 1997). The forms of diagnosis with which I am concerned here are perhaps somewhat different than those mentioned by the likes of Evans-Pritchard and Turner but, the absence of pathology services in

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[4] Portions of this section come from an article manuscript currently in preparation Strong 2016 in the bibliography.

Mawingu Hospital, and sometimes-limited diagnostic tools, shifts clinical uncertainty to the forefront in several of the deaths that occurred while I was there.

The very idea of illness is tied up with concepts of risk, uncertainty, and people's desire to bring health problems back under their control (Steffen, Jenkins, and Jessen 2005). Skolbekken (1995) posits, in part, that an increase in biomedicine's preoccupation with risk and risk reduction is related to an increase in medical technology, which has brought exponentially greater numbers of risk factors within human control, as never before in history. In seeking to control risk, people seek to know more about risk factors, looking for less uncertainty in disease pathways or trigger mechanisms. The uncertainty about an individual's lifestyle, genetic makeup, or a virus's mode of replication is now, itself, the risk. In the context of providing healthcare services, nurses and doctors must concern themselves with reducing their patients' risk (or more precisely, probability) of contracting a disease or, in the case of maternal healthcare, developing a potentially life-threatening complication or emergency while pregnant or when giving birth. Anthropologists, and other social scientists, have often focused on the ways in which patients conceive of and mitigate risk in the healthcare setting or the ways in which people more generally conceive of risks to their health (Aronowitz 2009; Fredriksen 2005; Lock et al. 2007). Allen (2004) explicitly draws upon the concept of risk and risk management to explore safe motherhood in Tanzania, using a community based approach to elucidate everyday people's perceptions of risks *to* motherhood and risks *of* motherhood as separately conceived categories. However, in my fieldwork, it became apparent that risk was also a constant influence on healthcare providers' actions or interactions, even when they may not have always thought so in the moment. What has largely been missing from the literature, though often included as a side note to other descriptions (i.e. Wendland 2010:77), is a more thorough conceptualization of the

roles risk and uncertainty play in these under-resourced healthcare facilities, particularly when it comes to interactions with women or administrators.

1.5.4 Care

Concepts or theories of care and its nature go far beyond the technical or clinical components of care in the healthcare setting. Nursing has been portrayed as closely tied to gendered notions of caring, with nursing and the emotional dimensions of care being conflated with the feminine (Brown 2010; Henderson 2011; Leininger 1980) and compassionate care a mandated aspect of nursing practice (Schantz 2007). This mandate to care, and with compassion, extends back to the origins of nursing in the experiences of Florence Nightingale (see chapter 7). Chambliss (1996:2) suggests nurses experience conflict in their work environments sometimes as a result of being expected to do emotion work, which ordinarily would be able to emerge spontaneously. Instead, as Reverby (1987) suggests, nurses are "ordered to care." Due to the ways in which illness and disease transcend the clinical realm and bleed into the social, medicine has never been solely a technical field, though in more recent times, the pendulum has swung to the side of technocracy, divorcing medicine's art (of caring) from its science of curing (Kleinman 2008).

Through my participant observation at Mawingu Hospital, as well as countless hours of formal and informal conversations with women, neighbors, nurses, doctors, administrators, and community members, care took on a much fuller meaning. In the discussion that follows, I have found anthropologist Hannah Brown's (2010) capacious definition of care, based on Mayeroff's 1971 essay *On Caring*, to be particularly helpful for the theorization, or thinking through of, many of the actions, interactions, expectations, and disappointments I observed, experienced, and was told in interviews: "…Practices of care are other-directed (in their concern with the

development of the other) and are relationally locating." Brown argues this is a suitably vague definition as to be useful to think with while centering on care as active practice, which allows the thinker to be freed of the boundaries of artificial dichotomies often imposed on care (Brown 2010; see also Mol 2008:5). To this definition, I also add Aber and Drotbohm's (2015:2) definition of care, which states care can be "understood as a social practice that connects not only kinsmen and friends, neighbors and communities, but also other collectivities such as states and nations." I would add to this only that care should be conceived of in the multiple, as social practices, without one singular form. They go on to say that, "care is a social and emotional practice that does not necessarily need to be defined in relation to the sphere of work, but rather entails the capacity to make, shape, and be made by social bonds," (Aber and Drotbohm 2015:2) which adds further explanation to Brown's (2010) "relationally locating" aspect of care.

With these concepts in hand, I argue that what I refer to as "institutional care" is a key component of this research and vital for understanding maternal healthcare. To different groups of my informants, institutional care meant different things. For the nurses and doctors, institutional care should be taken to refer to the set of ways in which their superiors, as agents of the institution of the hospital, cared for the hospital employees, or failed to do so in ways that met the expectations of those working on the wards. For women who came to the hospital as patients, institutional care encompassed the way in which biomedicine as a set of clinical or technical practices and affective relations with biomedical healthcare providers met (or did not) their needs for surveillance, rehabilitation, or mitigation of risk during pregnancy and while giving birth. For community members, institutional care in the context of biomedical healthcare services came to mean something slightly different. For these people, institutional care was more of an embodiment of the ways in which state institutions realized or actively thwarted their rights

as citizens of Tanzania. This form of care was undermined through community members'

interactions with corrupt, disrespectful, or negligent providers, as well as opaque bureaucratic

mechanisms that prevented the expected (and government mandated) free healthcare for

pregnant women and children under five, which is meant to include the provision of basic

medications and healthcare services at the village dispensary level.

Care also should not be taken to have a universal quality; Tanzanian nurses' actions, to

my American upper-middle class, white sensibilities, might seem to be abusive and cruel but the

nurses themselves describe these same interactions as the epitome of caring for a pregnant

woman in the throes of a protracted second stage of labor, unable to finish pushing her baby into

the world. Older nurses told me different ideas of what constituted professional nursing care than

did the more recent nursing school graduates. Not overtly demonstrating sadness when faced

with the death of women or babies on their ward was another way nurses expressed their caring,

adopting a more stoic, business-like attitude in order to inspire patients' confidence in their

technical care abilities (chapter 9). Within the Tanzanian context, de Klerk (2013) writes about

"toughening up" people after the loss of their relatives from HIV in Northern Tanzania. This

toughening is a form of caring and support after the death of a loved one and I saw nurses engage

in this type of rhetoric, telling women not to cry when faced with the death of their baby. Due to

these examples, I take issue with how Henderson (2011:24), for one, describes care in the

hospital setting, as something composed of a "distanced set of procedures," which she contrasts

with the caring, for AIDS patients, in this case, that takes place in the home, the neighborhood, or

community, which "bears the emotional weight invested in bodies and gendered subjectivities"

(Henderson 2011:24). To separate technical care from the affective work done by nurses and

other healthcare providers is a disservice to their particular subjectivities and collapses some of the complexity of working in a busy, under-resourced maternity ward (chapter 9).

I ascribe more to the open-ended explorations of care and its local meanings and practices as described by Mol, Moser, and Pols (2010:12), paying particular attention to "what is sought, fostered, or hoped for, then and there: what is performed as good…[and what] is avoided, resolved, or excluded: what is performed as bad" care in any particular setting. Sometimes these good and bad forms of care are obvious or straightforward but, more frequently, they are complex and ambivalent; "if one looks hard enough any particular 'good' practice may hold something 'bad' inside of it (and vice versa); 'good enough' care may be a wiser goal than care that is 'ever better'" (Mol, Moser, and Pols 2010:12-13). Indeed, "good enough" care may be all that is possible in a certain setting. The authors continue by asserting that ethics of care include multiple versions of "good" that not only reflect particular, situated or subjective values, but also different ways of ordering reality; care "implies a negotiation about how different goods might coexist in a given, specific, local practice" (Mol, Moser, and Pols 2010:13).

Fassin (2008) also describes conflicting forms of care in a South African hospital and challenges reductionist interpretations of what causes care to not meet the desires and expectations of patients. De Klerk (2012, 2013) demonstrates that practices which, from the outside, may seem far from caring are, in fact, deeply important local forms of caring, such as concealing a person's HIV status, particularly at the end of life, as form of compassion (de Klerk 2012). Dilger's (2007, 2008) work on HIV in the Mara region of Tanzania also demonstrates other, local practices of caring as related to communities built through Pentecostal churches (Dilger 2007) and as enacted during burial practices for the deceased after HIV related deaths (Dilger 2008). In the context of maternal healthcare, "different goods" enter the picture as each

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different actor seeks to give, receive, or demand care across various registers. The complexities and ambiguities of care practices will continue to arise throughout the dissertation.

As a note, it would be easy to think that those on the receiving end of the forms of institutional care I have just mentioned were passive recipients of care. Mol, Moser and Pols (2010:9) argue linguistic shifts, from "patient" to "customer," for example, were in response to a need to acknowledge that receivers of care are not always passive and lacking in control. Mol (2008:7) argues that the logic of care involves action, is embedded in practices, focusing on what people do- as patients and the activities they are involved with, and as healthcare personnel. Thinking of my research informants, and those women and their relatives whom I came across in the biomedical setting, as simply passive recipients of care would not do justice to the ways in which all of these actors engaged with the biomedical healthcare system and its institutions. At all levels, there were examples of agency, activity, engagement, defiance, resistance, subversion, resilience-however one might prefer to name these actions. There were nurses who followed the OPRAS form, an annual evaluation of their work, to the letter in a quest to demonstrate to their superiors their deservingness of promotion. There were nurses who appropriated standard, technical documents to serve a broad array of social purposes (chapter 8). There were communities that chased out their providers after one too many people died due to a lack of timely care (chapter 4). And there were women who elected to bypass their local facilities, seeking services in facilities they perceived to be better, as well as those who absconded from the regional hospital maternity ward without discharge in the face of stillbirth and care that did not meet their desires and/or needs.

The way in which I conceive of institutional care is closely entangled with biobureaucracy. The biomedical institution is part and parcel of a global biobureaucratic complex

while also being a fully functioning biobureaucracy within its own right. Here, the boundaries of inside and out, local and global, are no longer useful. Biobureaucratic policies and institutional goals order expectations of care, in both the technical and affective registers (c.f. Mol, Moser and Pols 2010:12). Along with influencing expectations of care, the broader biobureaucracy of global health and safe motherhood has brought with it quality improvement guidelines aimed at improving "care" through increasing surveillance, documentation, and metrics. In fact, I argue, some of these guidelines and technocratic approaches disallow some forms of institutional care, or impose new tasks on nurses and doctors that then reduce workers' satisfaction with their jobs. This reduced satisfaction can result in fraught interactions between patients and providers, leading to mistrust and rumor, which contribute to poor patient outcomes on the maternity ward.

Risk and uncertainty cannot possibly be disentangled from the concepts and modes of care presented herein. Healthcare workers and administrators, women and community members, all engage with both risk and uncertainty in the realm of reproduction. Attempts to mitigate risk in the face of uncertain physical health or uncertain supply chains, or to come to terms with forms of care that are not guaranteed, shape the ways in which all these actors perceive their positions within the healthcare system, as well as their interactions with one another. One of the greatest challenges of maternal mortality as a health problem is that it is exceedingly difficult to predict who will develop a life-threatening complication (chapter 4). Women and healthcare providers alike are unable to know with any degree of certainty whose body harbors the potential for hemorrhage, unforeseen eclampsia, or catastrophic amniotic fluid embolism. This uncertainty is only exacerbated by the lack of diagnostic or pathology resources at places such as Mawingu Hospital. This uncertainty also makes it more difficult for anyone to feel as though they have control over women's outcomes or, indeed, any actual ability to reduce maternal death rates.

When every intervention is met with mixed results, conflicting or missing data, rumors, and claims of (or actual) mismanagement, is it any wonder that healthcare providers begin to work in a way that suggests they do not believe it is possible to make lasting changes to the system in which they work?

1.6 Background: Tanzania, the Rukwa Region, and the Health Sector

Before describing the organization of the dissertation, I include here brief background on the history of Tanzania, provide a description of the Rukwa region in which I conducted this research, and lay out the formal organization of the Tanzanian government healthcare sector. These background details will provide some structure and context for the discussions in the chapters to follow.

1.6.1 Tanganyika and Independence

After more than 80 years of colonial rule, first under the Germans and then the British, the move for independence began in earnest in the mid-1950's. On December 9, 1961, Tanganyika peacefully gained its independence from Britain. Three years later, Tanganyika and the island nations of Zanzibar joined to form the United Republic of Tanzania (Krabacher, Kalipeni, and Layachi 2009: 98). After the United Republic of Tanzania was formed in 1964, Nyerere became president in a one-party election in 1965 (Krabacher, Kalipeni, and Layachi 2009: 98).

1.6.2 Post-independence Ujamaa and the Ideology of Self-Reliance

On February 5, 1967, President Nyerere issued the Arusha Declaration, outlining the country's new policy on, what he termed, African socialism, or Ujamaa (literally "familyhood" in Swahili) (Nyerere 1968:13). These socialist policies included an emphasis on the equality of all citizens and on the idea of self-reliance. Politicians used the term self-reliance both to refer to

individual self-reliance, as well as the self-reliance of the Tanzanian state in regards to foreign relations and economic dependence on foreign aid (Nyerere 1968:16). Nyerere fully recognized the dangers of accepting outside funds because he saw that the country was poor and would be unable to repay loans or other assistance with ease. Additionally, the available assistance would not be able to fully fund development efforts in the country (Nyerere 1968:23-25). Perhaps most important ideologically, Nyerere stressed that independence meant not being dependent upon gifts and loans from other countries; independence meant self-reliance (Nyerere 1968:24). Unfortunately, Tanzania was still largely dependent upon these foreign monies because the major means of production were still owned by foreigners in the immediate post-colonial period (McHenry 1994: 167).

The most notorious legacy of Ujamaa is what came to be known as villagization, or the forced movement of the rural populations into cohesive villages in order to promote and strengthen agricultural production and facilitate the provision of social services. Just ten years after the Arusha Declaration, by 1977, there were more than 5,000 Ujamaa villages, which incorporated more than 13 million Tanzanians (Jennings 2008:48). To this day, sparsely populated rural areas remain an administrative challenge for the country but signs of communities that were created through the villagization are apparent, such as when I was riding in a car with local health administrators during a supportive supervision visit of one of the districts and one official noted that the villages neatly located close to roads must have been Ujamaa villages. She went on to suggest that other villages, which were further from infrastructure or hidden from view, were probably not due to Ujamaa efforts. Others in the car seemed to agree with her assessment.

1.6.3 Growing Dependence on Foreign Aid: The 1970s and 1980s

Despite the rhetoric of self-reliance, and a general distrust of foreign money, the

fundamental basis of the Tanzanian economy was still colonial in nature and the economy

depended heavily upon cash crops (Campbell and Stein 1992:5). The main export crops were

sisal and coffee, the prices of which were closely tied to the international market, making the

country's economy very susceptible to global price fluctuations. By the late 1970s Tanzania was

feeling the effects of the deteriorating return on its primary cash crops resulting from global

increases in oil prices, droughts, and a recession (Campbell and Stein 1992:5; McHenry

1994:167). This deepening economic crisis resulted in a steep decline in per capita income and

increased the country's susceptibility to the influence of foreign donors, as the country became

more desperate for income (McHenry 1994:167). By 1980, the country's economic condition had

worsened to the point that foreign capital equaled more than half of the gross investment[5]. In

light of the strong ideological rhetoric of self-reliance that had been in play for almost fifteen

years, government officials and the common people did not welcome the prospect of entering

into an agreement with the International Monetary Fund (IMF) (Biermann and Wagao 1986).

Due to the global economic environment, many sub-Saharan African countries faced making a

deal with the IMF and the World Bank or total economic collapse (McHenry 1994:167). These

economic developments provide insight into the current structure and functioning of the

Tanzanian healthcare system because events from this period resulted in wide-sweeping reforms,

beginning in the mid-1980s, which drastically effected social services.

Many Tanzanian leaders felt that the conditions attached to IMF assistance would

undermine the transition to socialism as, indeed, many IMF conditions emphasized capitalist

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[5] Ten years earlier, foreign capital was only one tenth of the total gross investment, representing the
country's growing dependence on outside money to sustain the economy (Biermann and Wagao 1986).

economic liberalization (McHenry 1994:167). A structural adjustment program (SAP) was introduced in 1982 but the country did not enter into an official IMF accord until 1986 (Campbell and Stein 1992:7; McHenry 1994:167). The IMF package required the country to abandon or radically modify many of the policies that had been previously adopted to facilitate socialism. Despite the fact that some donor countries or loaning countries agreed to forgive large portions of Tanzania's debt, this forgiveness most often was, and continues to be, contingent upon continued economic reforms and development in line with the vision of those institutions and governments providing the funds (McHenry 1994:169).

One of the major effects of the IMF and World Bank's structural adjustment programs[6] was to decrease expenditures on social services, including education and healthcare, and the Tanzanian government began to allow privatized healthcare services, which they had banned originally in 1977 (United Republic of Tanzania 2003). Hospitals faced drastic supply shortages and this resulted in increased maternal death, even at the largest and most capable hospitals in the country (Campbell and Stein 1992:109). Additionally, structural adjustment reduced provider wages and limited the number of new providers hired, further contributing to a general decline in living conditions and social service provision during the 1980s and early 1990s (Bech et al. 2013). Top-down focus on development, or *maendeleo* in Swahili, has continued to figure prominently in national-level planning and rhetoric, extending from the time of national self-reliance and *Ujamaa*, through the adoption of neoliberal reforms in the mid-1980's, and the

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[6] Structural Adjustment Programs from the IMF and the World Bank generally required countries to: 1) devalue the currency in order to make exports less expensive for foreign buyers, 2) reduce deficits by freezing government salaries, 3) stop setting agricultural prices and eliminate subsidies to urban consumers, 4) end import restrictions, 5) privatize state-owned enterprises, and 6) increase bank interest rates to encourage savings to generate capital investment (Gordon 2007:87).

present-day reliance on non-governmental organizations and aid assistance (Nyerere 1973; Snyder 2005:4).

1.7 The Rukwa Region

The Rukwa region is one of the twenty regions, which make up mainland Tanzania (Fig. 1.1). It is the second largest region with a total population estimated at approximately 1.6 million people (Sumbawanga Regional Referral Hospital 2013). Until 2012, the Rukwa region also included Mpanda, which has since been turned into the administrative region of Katavi (Fig. 1.2). Also in 2012, a fourth administrative district was formed, the Kalambo District. The region now includes: Sumbawanga Urban District, Sumbawanga Rural (a.k.a. Sumbawanga DC), Kalambo, and Nkasi districts. The vast majority of people in the region, more than 90%, are involved in small-scale agriculture, growing primarily corn, millet, rice, beans, and cassava. Some people also grow sunflowers as both food and cash crops (Sumbawanga District Council 2012). The main ethnic group is the Fipa or Wafipa and their language is called Kifipa, with several different groups throughout the region, the members of which speak slightly different forms of Kifipa.

The region has historically been geographically and socially isolated with a reputation as a home to powerful witches and traditional healers (Willis 1978, 1981). One person even told me that he believes the region has the highest number of deaths from lightning strikes in the country and many people attribute these deaths to witchcraft (F. Mashigala, personal communication 2012). I was repeatedly told that powerful witches in the region were known for being able to send lightning to kill someone. In one book from 1977, Kesby describes the inhabitants of the Ufipa plateau as displaying a high degree of cultural unity, "of which the most dramatic example are the periodic witch-hunts," further supporting the longstanding importance of witchcraft in this area; popularly, witch hunts in this area were still considered to be more numerous than in

other areas (Kesby 1977:160). Any time I got in a taxi in Tanzania and told the driver where I was working, I invariably got a response along the lines of, "Oh! But there are so many witches there!" The name, Sumbawanga, roughly translates to something along the lines of "to throw witchcraft." This general public perception of the region as the home to powerful witches served as a deterrent to some healthcare providers. Dr. Deogratus of the Mawingu Hospital maternity ward told me that when he learned he had been posted to this region, he was reluctant to report partly due to concerns about poor infrastructure in the region but also because, he said, "There were stories that there were so many witches," but he went on to add that when he arrived, in the end, he saw it was a fine place to live. However, these rumors prevented others from readily accepting positions in the region. Despite the rumors of witchcraft in the region, there is a history of Catholic missionary presence in the region dating back to the German colonial period (Smythe 2006).

Anecdotally, my informants cited little government support for infrastructure building or regional improvement, until the very recent past when a person from the region, Mizengo Pinda, succeeded in national politics and became the Prime Minister in 2008, a position he held until the most recent elections in 2015. One of the doctors at the Regional Hospital told me, on my first visit, "The people here in Rukwa, they are still sleeping. They haven't woken up yet," which was his way of saying that the region has been behind in terms of education, health, and infrastructure for many years. In chapter 3, I connect some of these present perceptions to the history of colonial occupation and activity in the region.

Sumbawanga Town is located on a plateau at an elevation of approximately 5,920 feet (1,804 m) above sea level. The region encompasses the Rukwa valley to the east, as well as the communities bordering Lake Rukwa in several areas, and is bordered in the West by Lake

Tanganyika, also at sea level. The varied terrain makes for a diversity of ecology and varied growing seasons and agricultural possibilities. However, it also provides a number of infrastructure and transportation challenges. Roads were slowly being completed across the region in order to ease travel and increase trade, via ports on Lake Tanganyika, between the rest of Tanzania and neighboring Democratic Republic of Congo. Several areas were still without cell phone reception when I was in the field, particularly those communities on the shores of Lake Tanganyika. Poor road conditions deteriorated further during the region's rainy season which could last upwards of nearly six months, from November through the end of April.

Fig. 1.1 Map of Tanzania (open source map)

Fig. 1.2 Map highlighting Rukwa region, with Sumbawanga Urban District in the darker color (open source map)

1.8 Health Sector Formal Organization and Referral Chain

A basic understanding of the formal organization of the government healthcare system within Tanzania contextualizes the events that follow in the rest of the dissertation. Here I present this organization as the government presents it and which organizes the government's approach to healthcare delivery. In practice, men and women did not follow the referral chain and did not access the healthcare system in the linear way in which the government has designed the system to be used. Additionally, not all patients and communities had access to all levels of the healthcare system.

In addition to the Regional Hospital, the health sector was organized in accordance with formal government principles established in the mid-1990s meant to decentralize care and improve access for people in rural areas. The system in Rukwa consisted of four levels of facilities providing care, with community health workers below these, which I represent in Fig.

1.3 from my own data on the region's health administration. Fig. 1.4 shows the more general pyramidal organization of healthcare services in Tanzania, which also coincides with the referral system (TZ MOHSW 2014). The Tanzanian healthcare sector more generally has undergone a process of decentralization in the past two decades. The remote location of the Rukwa region meant that approximately 51% of healthcare provider positions in the Sumbawanga Urban District alone remained vacant and it was an accepted fact that it was even more difficult to entice trained personnel to accept positions outside of the town and the Urban District (Sumbawanga District Council 2012). The region ranks last in terms of the average distance people must travel to a full service hospital, the one regional hospital, an average of between 77 and 200 kilometers[7] (Sumbawanga Regional Referral Hospital 2013). The region ranks fourth from last in the number of medical officers and nurses per population though no specific number was available (Sumbawanga Regional Referral Hospital 2013).

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[7] Now that Katavi is a separate region, people from that area are referred to Mpanda, which should have helped to reduce the distance to full service health facilities.
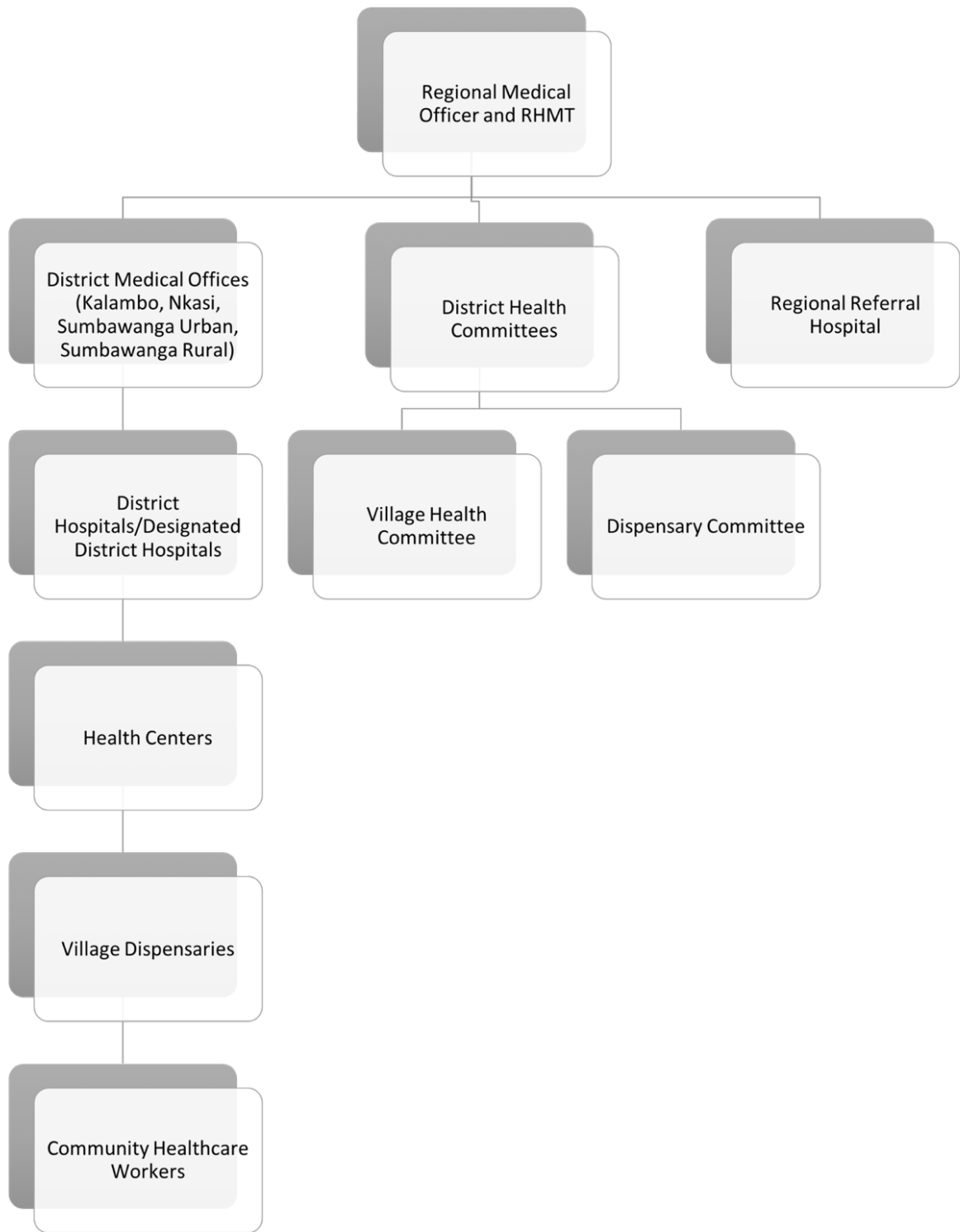
Fig. 1.3 Health sector organization, Rukwa, Tanzania

Referral/Consultant
Services

Regional Hospitals

District Hospitals

Health Center Services

Dispensary Services

Village Health Service
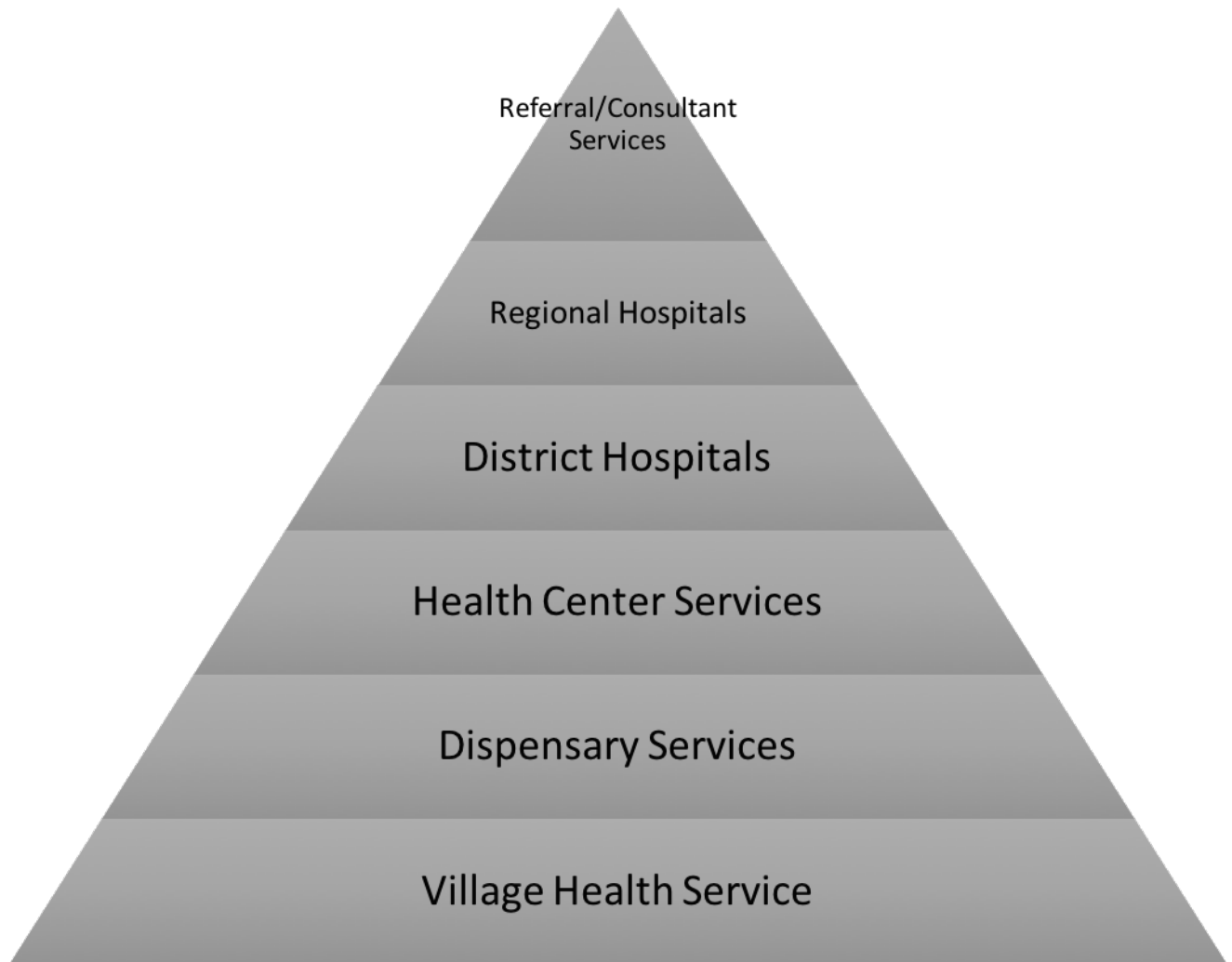
Fig. 1.4 Formal structure of the Tanzanian health sector

The village health service is the lowest level of care and provides some basic health education

and information in people's homes at the community level. Each village health facility generally

has two village health workers who have been selected by the village government and receive

short training. In much of the Rukwa region these village health workers were supported by the

organization Africare as part of the multi-NGO project Wazazi na Mwana[8], aimed at improving

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[8] A group of NGOs, as well as USAID and CIDA (Canadian International Development Agency) ran this
project collaboratively in the Rukwa and Geita regions.

maternal and child health outcomes in the region. The second level of care is comprised of village dispensaries. One of Tanzania's primary health sector goals since 2010, when Jakaya Kikwete began his second term as president, has been to ensure each village has a dispensary. These are generally small health facilities without laboratory equipment and are most commonly staffed by medical attendants and enrolled nurses. Some dispensaries also have a clinical officer on staff. The dispensaries are supposed to serve approximately 6,000-10,000 people in the surrounding villages (TZ MOHSW 2014), meaning one dispensary could serve between one and five surrounding communities, by my estimation based on the population of villages in the Rukwa region. Next are the health centers, which serve approximately 50,000 people. After health centers, each administrative district in a region is supposed to have a district hospital. In the Rukwa region, as of the end of my fieldwork in 2015, there were two district hospitals but four administrative districts and the region had no immediate plans to build district hospitals in the two districts lacking such a facility. In Rukwa, both of these district hospitals were designated district hospitals (DDHs), which means they were run by religious organizations and have made an agreement with the Tanzanian government to act as district hospitals within the government health services referral chain.

Regional hospitals are the fifth level of care and there is generally one per region. These hospitals have specialists in various fields and offer more comprehensive services than those available at the district hospitals. The top level of care is the referral or consultant hospital. In Tanzania, currently there are four hospitals at this level: Muhimbili National Hospital in Dar es Salaam serving the eastern zone; Kilimanjaro Christian Medical Center (KCMC) serving the northern zone; Bugando Hospital in Mwanza serving the western zone; and Mbeya Hospital serving the southern highlands zone (TZ MoHSW 2014). The Mawingu Regional Referral

Hospital includes "referral" in its name to indicate it is the level responsible for referring patients out of the region, on to other levels of care, though throughout I generally refer to it simply as the Mawingu Hospital. The next point of referral from the Mawingu Hospital, before referral to Dar es Salaam, was the Mbeya Referral Hospital, approximately four hours away by private car. The coordination between these different levels of care, and the reliability of their providers, heavily influenced the ways in which patients sought care. The efficiency and competence of the medical personnel at the lower levels of care were critical for the timely functioning of the referral chain and, ultimately, could heavily influence health outcomes for patients seeking all forms of care. I witnessed this myself during visits to village dispensaries and the nurses at the regional hospital often spoke of the low skill levels of personnel in villages as a key cause of maternal deaths. Poor quality services at the lower levels resulted in ever-increasing numbers of patients at the Mawingu Regional Hospital, overburdening this facility as it took on patients that could have been served at lower levels.

The Mawingu Hospital had 270 inpatient beds and has been unable to increase this capacity over the last several years due to lack of funds to invest in infrastructure. The hospital has seen a dramatic increase in the number of patients served each year just since 2010 but without a concomitant increase in physical capacity (Prime Minister Office Regional Administration and Local Government [PMORALG] 2015:1), leading to a bed occupancy rate of 172%, representing a great deal of overcrowding, forcing patients to often share beds. Bed-sharing was particularly problematic on the maternity ward, which saw an increase in the number of births from 4,153 in 2012 (PMORALG 2015:12) to 5,825 in 2015, which averages between 500 and 600 births per month, or nearly 20 in every 24-hour period (ward monthly report books).

1.9 Organization of the Dissertation

The dissertation begins with an ethnographic anecdote in which the reader is drawn into the chaotic feeling of the maternity ward with its attendant uncertainty, violence, improvisation, and institutional norms. Part I includes this introduction and chapter 2, which is an explanation of the methods and ethical issues involved in the design and execution of the research. Chapter 2 ends with a discussion of my position in the field, with some comments on how my positionality may have influenced the data I was able to collect, as well as my interpretation of those data. Part II includes chapters 3 and 4 and examines the global construction of the problem of maternal mortality with brief background on the complexity of maternal death as a clinical and social problem. Chapter 3 reviews the specific efforts of Tanzania to address maternal mortality, covering the construction of the pregnant body as in need of oversight and the historical development of discourse around pregnancy and maternity care in Tanzania from the colonial period to the present day. I demonstrate how historical trends, in the Rukwa region and nationally, are later echoed in national policy shifts away from training traditional birth attendants to strongly, even coercively, encouraging women to give birth in biomedical facilities. In this chapter I also outline the development of healthcare services in the Rukwa region and connect challenges colonial officers cite in the archival materials to the present day challenges affecting the region. In chapter 4, I draw on community-level data to discuss the structures women faced in their daily lives that may have predisposed them to life-threatening obstetric emergencies, such as access to education and decision making in the family. I also recount the gendered logics that informed the ways in which men and women talked about gendered work, bridewealth, marriage and the status of women; I use the local level data to present a counterpoint to the logics that drive neoliberal global health policies and interventions as supported by organizations such as the WHO. Chapter 4 concludes with a discussion of women's

expectations and experiences of health services when they were able to reach their local facility. These expectations and desires for care were sometimes influenced by historical notions of care or taboos during pregnancy as told by local midwives (*wakunga wa jadi*) and men's and women's previous experiences at these facilities. Additionally, I demonstrate ways in which different communities and individuals have (unevenly) taken up state and global health rhetoric and practices meant to encourage men to take part in their partner's care during pregnancy and childbirth.

Part III of the dissertation is based on data collected at the regional hospital and is centered on the difficult work environment in which maternity care providers find themselves. Chapter 5 serves as an introduction to the layout and temporal and spatial flows of Mawingu Hospital. In chapter 6, I describe how maternity ward personnel faced a uniquely complex ward characterized by the unpredictability of labor and birth, as well as staffing deficits, low pay, and insufficient supplies and physical infrastructure. Motivation in the workplace became a central theme for the research participants. Their different positionalities within the hospital afforded different actors within the hospital varied access to information about how the health system operated, thereby informing how they interpreted what it means to be a motivated worker in an under-resourced environment. Here, too, I discuss the ways in which their work environment did not produce sufficient institutional care for the staff members, which may have detrimentally affected the care they, in turn, were able to provide to women in labor and during delivery. In addition to examining issues of motivation and what it means to "be called" to midwifery, in chapter 7 I deconstruct a protracted conflict over nursing uniforms to analyze gendered norms within biomedicine, what it means to be a "good" nurse, and the ways in which maternity nurses often failed to perform this role due to the very nature of maternity care, which disallowed the

same norms and other regulations administrators intended to be applied universally throughout the hospital. This conflict epitomized the hospital's resolute refusal to acknowledge the singular nonconformity of maternity care in their setting and was reflective of the challenges facing the standardization of maternal healthcare globally.

In chapter 8, using cases of stillbirth, I analyze systems of accountability and ethics within the hospital setting when care went wrong. I highlight the role of bureaucratic health sector procedures in limiting administrators' ability to discipline staff members, which they told me reduced accountability but increased administrators' and providers' ethical and philosophical struggles when seeking to protect their patients and while coming to terms with their roles in the deaths of women and babies. I then end Part III with chapter 9, which is an examination of maternal death audit meetings, which are meant to prevent future deaths by examining gaps in care. Instead, I argue these meetings became more of a performance of process, giving the appearance of efficacy and complying with national and global demands for data and accountability, while not including viable interventions or follow-up actions. Providers often constructed a narrative in which the women who died came from remote areas "already dead," shifting blame to forces outside the facility. I also discuss the ways in which maternity ward nurses used narrative as a way of coping with the deaths of mothers for whom they had cared, exploring the meanings they sought to construct around these deaths. I finish with a brief conclusion section which also includes some recommendations for the community, district, hospital, and national levels pertaining to the organization and administration of maternal healthcare.

Chapter 2: Methods

2.1 Introduction

The overall goal of this study was to contribute to the existing literature on maternal mortality by conducting an ethnography to examine if and how the history and contemporary structures of the healthcare system in the Rukwa region of Tanzania contribute to maintaining high rates of maternal morbidity and mortality. The topic of maternal mortality often evokes ideas about clinical practices and biological processes. However, past literature has demonstrated just how important socioeconomic factors can be and I extended this perspective into biomedical healthcare facilities. I worked to uncover, through a variety of methods, the effects of both everyday healthcare provider actions and institutional structures on healthcare provision and women's and providers' experiences of obstetric emergencies. My research design and methods addressed four interlocking realms which, together, help to elucidate the social, historical, institutional, and political economic structures and dynamics that shaped maternal risk, particularly within the hospital setting. The four different realms included the regional hospital, biomedical facilities lower down the referral chain (health centers and village dispensaries), communities, and history. In all cases, I conducted the research in Swahili. My research assistant, Rebeca Matiku[1], aided in the collection of data related to sub-objectives 2 and 3 and she helped transcribe interview and focus group recordings.

2.2 The Regional Hospital

Within the regional hospital, I used a variety of methods in order to collect data on the ways in which the social and institutional environment of the hospital was influencing the care

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[1] In the transcripts from focus group discussions in chapter 4, Rebeca appears as RM and I appear as AS.

that women were able to receive and how sequences of events sometimes led to a woman's death. My primary method was participant observation. Over the course of a cumulative 18 months spent almost exclusively on the hospital's maternity ward, I engaged in nearly every aspect of daily life on the ward. The nurses, physicians, and hospital leaders and administrators were the primary focus of my study and, therefore, I spent a great deal of time following them in the course of their activities, helping with various tasks, and conducting informal interviews about topics related the maternal mortality but also related to the hospital work environment and general challenges the hospital employees faced. I was particularly interested in the ways in which institutional factors, such as bureaucracy, hierarchy, the supply chain, financing, and leadership intersected with the personal strategies of the healthcare providers and shaped obstetric emergencies. These personal strategies included, for example, interpersonal communication, engaging in non-job related activities at the hospital, acting above or below their skill or training levels, and ways in which staff members improvised or innovated while on the job.

The data presented here are primarily based on the cross-sectional data I collected from the healthcare providers, administrators, and women as described below. The maternity ward was a relatively small environment[2] which meant I had access to all of the healthcare workers involved in each case of maternal death and was able to use the posted duty rosters to follow-up on specific incidents with the staff members who had been on duty at the time.

Between February 2014 and the end of May 2015, there were a total of 35 maternal deaths that occurred at the hospital (Table 9.1), including those women who died from pregnancy-related problems both on the maternity ward and the gynecology ward (women with

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[2] Roughly thirty total staff members including aids, nurses, and doctors though it did increase in size throughout 2014 and 2015 as they continued to add additional nurses to the ward.

early pregnancies, abortion complications, or ectopic pregnancies, for example, were admitted to this ward). Whenever possible, as in the case of women who suffered complications or near-misses,[3] I interviewed the women themselves (as their health allowed), though this was not terribly common due to the traumatic nature of the events, frequently brief stays on the ward, and/or some women slipping out of the ward without receiving an official discharge. I was, however, able to interview, both formally and, more often, informally, several women about their experiences before arriving at the hospital and the care they had received once admitted. Due to the fact that many of the women who came to the hospital with emergencies were originally from outside of the urban district in which the hospital is located, it was difficult to plan interviews outside the hospital setting. It has always been my feeling, based on my own previous research (and the findings of Kruk et al. 2014), that women often bias their answers towards a more positive interpretation of hospital staff, care, and their treatment when they are still within the hospital/health facility setting. This has a great deal to do with fears of repercussions if they say anything negative about the nurses.

2.2.1 Cross-sectional Data

As a starting point, I conducted open-ended interviews with women and healthcare providers to generate free lists concerning the causes of maternal death and severe morbidity in the region. In order to generate these lists, I asked participants to think of all possible causes of maternal death. I then conducted a general review of the lists generated by women, doctors, and nurses (more experienced vs. less experienced). My observations of the lists provided some of the basis for interview and focus group discussion questions meant to elicit more detailed

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[3] Near misses are cases in which a woman almost died but did not, often from a cause that other times results in death, such as severe infection, eclampsia, or hemorrhaging (Nelissen et al. 2013).

explanations of the causes of maternal deaths. My original hope had been to use the generated lists to conduct pile sorts with the same groups of respondents. However, the nurses and doctors were slow to warm up to my research goals and were often suspicious and unwilling to participate in activities for more than six months after I arrived. This made it difficult to find willing participants. I also began to worry about participation burnout for the hospital staff members due to their already heavy workloads and low familiarity with qualitative research. I therefore made the decision to prioritize other aspects of the data collection, including the Conditions for Work Effectiveness Questionnaire, a leadership pile sort, and formal interviews.

As an initial exercise for examining the working environment of the Regional Hospital, I adapted the Conditions for Work Effectiveness Questionnaire (CWEQ) (Appendix C; Laschinger 2012). This Likert scale has been tested and used to measure perceived empowerment in nursing work environments and, when paired with interviews and observation, has helped to provide a picture of the degree of autonomy, agency, support, and empowerment maternity nurses perceived in their jobs (Laschinger 2012). These factors are often related to the institutional identity of an organization, which allows or disallows actions such as innovation and autonomy. The questionnaires have not been used in an African context, so I modified them based on data from my observations and early interviews. I used cognitive interviewing (Willis and Miller 2011) to pretest the questionnaires with a sample of nurses before using the questionnaires with the rest of the maternity ward at the regional hospital. The comments from my cognitive interviews around the questionnaire during the pretesting phase helped improve my understanding of the nurses' selections. The CWEQ also provided the basis for several of the formal interview questions.

In addition to the CWEQ, I conducted participant observation of working conditions on the maternity ward, including standard procedures, meetings about protocols, training sessions and daily activities. I observed interpersonal dyads (e.g., nurse-nurse; nurse-patient; nurse-doctor; ward staff-administrators) in order to understand the performance of formal and informal leadership roles, hierarchy, and general interactions, especially during times of crisis. I took detailed field notes that systematically documented staff interactions and crisis management, as well as protocols and how providers deviated or adhered to these protocols under everyday working conditions, and any interventions from hospital administrators. In total, I spent approximately 1600 hours on the maternity ward and in hospital meetings. Typically, I arrived at the hospital at 7:30am each morning, the start of the government workday, and began each morning in the hospital's clinical meeting, typically referred to simply as "the morning meeting," in which we would hear a report from the night staff, including the Nurse Supervisor and the Out Patient Department doctor on duty. This report included the number of patients received, admitted, or discharged, as well as any surgeries, emergencies, or deaths that occurred over night. The doctor or nurse supervisor would also present particularly critical or difficult cases for review by the collected staff members, soliciting comments and suggestions for the patient's care. A person from accounting read the financial report from the previous 24 hours (or, on Mondays, the weekend), including the amount of money collected, the amount billed to health insurance, and the amount of exemptions from the care of patients such as the elderly, pregnant women, and children under 5. Typically, thereafter followed a time for announcements and, sporadically, continuing education or death review presentations put on by various hospital departments. Ideally, the meeting ended by 8am and rarely after 9am, after which time the staff members proceeded to their assigned wards for the rest of the morning shift, which ended at

approximately 3:30pm. Nurses often left as soon as the evening shift members arrived (as early as 2:30pm) and doctors often stayed later in order to finish clinics, rounds, surgery or administrative duties. I attended all such morning meetings, as well as ward meetings and other miscellaneous staff meetings throughout the fieldwork period.

Additionally, I attended surgeries (primarily C-sections and the occasional fistula repair or evacuation post-abortion/miscarriage), assisted nurses with the intake and discharge of patients, counseled and tested women for HIV, took vital signs, filled out paperwork related to birth records, labor progress, doctors' rounds, death certificates, and patient consent forms. I also tested urine for protein (a sign of eclampsia), took blood samples to the hospital lab, collected lab results, restocked supplies, provided laboring mothers with comfort measures, delivered babies, and resuscitated newborns, as well as mopped floors, took equipment to the autoclave, helped fetch supplies from the main store or central pharmacy, and any other tasks that arose as part of the maternity ward nurses' duties. Though I most frequently worked the morning shift with the nurses, I did go to the hospital for several evening shifts, sometimes staying from the morning through the evening shift, which ended at approximately 6pm. I stayed at the hospital only for one complete night shift in order to experience the conditions, but I stayed for half of the night shift on a number of other occasions, particularly after I had a car and could safely travel home at night.

I conducted formal, open-ended, semi-structured interviews with the maternity ward nurses and doctors (n=17, representing more than half of the nurses and half of the doctors assigned to the ward) in order to understand incentives or punishments for deviating from hospital protocols and in order to explore the personal motivations of such actions (e.g., does deviating from formal protocol allow workers to serve patients better? Access more social

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capital? Accrue other personal or collective benefits?), as well as to explore a number of other relevant topics. These topics included, briefly, information on their educational backgrounds, motivations for entering the health professions, their perceptions of challenges in their work environment, reflections on the number of maternal and neonatal deaths, how they cope with maternal deaths, their perceptions of ward and hospital management, communication, and reflections on their interactions with women and community members (see interview schedules in Appendix A). In recruiting nurses from the maternity ward, I excluded any nurses who had arrived on the ward within the last six months because they were all new school graduates and had comparatively little experience at the regional hospital. These newcomers had also not participated in the CWEQ, from which I had derived several interview questions. From there, I posted a notice on the ward bulletin board announcing my desire to schedule interviews with as many of the nurses and doctors as possible. I then approached nurses individually, trying to recruit a variety of different people in order to build a sample that included enrolled nurses (ENs), registered nurses (RNs), nursing officers (NOs), nurses with more than ten years of experience and those with as little as one year of experience. I interviewed three of the doctors who had worked on the maternity ward for more than one year and the others, then currently posted to maternity, had only been working in the department for a matter of months and did not participate in the formal interviews.

I also conducted open-ended, semi-structured interviews with the hospital (n=3), district (n=2) and regional government health care administrators (n=6) in order to gain insight into the difficulties they face when implementing national policies, staffing facilities, and improving care for pregnant women. These participants included the hospital's Medical Officer In Charge, the hospital Patron and Assistant Matron, the regional pharmacy ordering person, the Regional

Nursing Officer, Regional Medical Officer, two District Medical Officers, the Regional Reproductive and Child Health Coordinator, and the Regional Health Secretary. These interviews have helped to connect local institutional structures and outcomes with broader national policies and influences. I used purposive sampling to recruit district and regional medical administrators. I conducted all of the formal interviews in the last six months of my time at Mawingu, which meant that nearly all of the administrators already knew me and were familiar with my research questions and the ward staff members had been working alongside me for the past year. This meant I only had one person who declined to participate in an interview, all others did so willingly and several told me after the interview that they were very happy to have had the opportunity to express their thoughts and opinions on so many topics, as well as to tell someone about their experiences working in the healthcare system. When I returned to Sumbawanga in May 2016, the nurses and doctors with whom I had worked on the maternity ward very enthusiastically welcomed my return, expressing their desire that I should stay for another year. The Regional Health Secretary also told me that she still remembered what we had talked about in her interview and expressed her thanks because I had relayed to her that many of the nurses looked to her as an example of a leader who cared about their issues and spent time to listen and resolve them. The interviews were, on average, approximately one and a half hours long with none shorter than one hour. Several were more than two hours, with one being over three hours, which I conducted over the course of three subsequent days. Interview schedules are located in Appendix A.

2.2.2 Data Analysis

The CWEQ includes a key for analysis, with higher scores indicating higher levels of access to resources, more support from superiors, and a more empowering workplace. The

CWEQ's Likert scale also lent itself to visual representation and the hospital administration found it to be a useful tool in informing them of the needs of their staff members. After I presented the results to members of the hospital administration in a Hospital Management Team (HMT) meeting in May 2015, they expressed some interest in using the questionnaire with nurses in other departments at the hospital. Additionally, for analysis of the CWEQ results, I used descriptive statistics in order to arrive at the mean and mode for each question. I represented the results for each sub-section of the questionnaire as a bar graph showing the distribution of responses.

More generally, for the cross-sectional data, I developed a codebook and inductively coded my field notes and the transcripts from the interviews, by using the participants' own words, to generate themes related to hospital structure and working environment (e.g., apparent delays, communication, issues related to supplies, different forms of leadership demonstrated in hospital-based interactions), as well as to identify the mission of the hospital and its bureaucratic ethos. I have checked for interrater reliability (Krippendorf 2013:277), by having a key informant code random selections of the interview transcripts and field notes, and coded for recurring themes, which form the basis of most of the analysis in the dissertation.

2.3 Referral Chain

Women who arrived at the regional hospital often came from other biomedical facilities lower down the referral chain (see chapter 1 for the healthcare system's formal organization). With this in mind, I was interested in the events that precede a woman's arrival at the regional hospital from these other locations. Healthcare workers in these lower level facilities were often responsible for determining when a woman has a complication that they cannot handle. The providers then sought to facilitate a timely referral to another facility with the necessary

expertise, infrastructure, or supplies to provide appropriate clinical care for the woman in question. What actually transpired in these facilities often deviated from formally stated protocols or guidelines due to the difficult conditions or remote locations of these facilities. Some women may not even have started their care seeking journey, once labor started, within the biomedical system, instead preferring to consult a local midwife, or *mkunga wa jadi*. Within this context, I visited dispensaries and health centers in 27 villages in order to learn about the sequences of events that typically preceded a woman's referral to a higher level of care and why these events might differ from an idealized sequence of referral procedures.

2.3.1 Sampling and Data Collection

I collected cross-sectional data from the healthcare providers at lower level health centers and dispensaries, local midwives/birth attendants, district and regional health care administrators, and government health representatives. These cross-sectional data were critical for my development of a more complete picture of the sequences of events that may transpire within and outside the biomedical care system when a woman develops a pregnancy related problem requiring emergency care. Most women in the region do not live near the Mawingu Regional Hospital and must navigate the government referral chain before their arrival at the hospital.

I visited a random sample of eleven government dispensaries and three health centers throughout the Rukwa region, roughly equally distributed between the three non-urban districts-Kalambo, Nkasi, and Sumbawanga Rural (details on sampling below). At the selected dispensaries and health centers, I interviewed healthcare providers at each site, generally all that were present and not less than two in each location, about what they did if a woman developed an emergency condition during pregnancy, birth, or the postpartum period. Questions were related to the normal sequences of events that led up to a woman being referred out of the

facility. I asked the providers to recall a recent case that demonstrated what ordinarily transpired and asked them to describe the clinical management of the case as well as anything they were able to recall related to interpersonal actions (e.g., communication) and institutional factors, especially those related to the overall government healthcare system (e.g., availability of supplies and equipment, sufficient number of staff members, referral support). I also asked the providers more general questions concerning the resources available at the facility, difficulties facing the staff, and their perceptions of difficulties facing the communities they were serving (see Appendix A for interview schedule). Using purposive sampling, I identified local midwives/birth attendants in three of the eleven villages for a total of approximately fifteen participants in small group discussions related to the roles, knowledge, and responsibility of these local midwives (Appendix B). I interviewed them about their practice, home versus hospital births, their experiences with obstetric emergencies, the worse cases they had managed, and when they might refer a woman to the biomedical healthcare sector. We also discussed past traditions and taboos related to pregnancy, birth, and maternal death and they described what a normal, uncomplicated home birth tended to include in their communities.

In order to select villages that were suitable for both questions related to the referral chain and community life (i.e. with a healthcare facility, as well as the potential for community conversations and participant observation), I used random sampling to select three or four villages in each non-urban district. The sampling frame was composed of all villages in the non-urban districts that have a health facility, either a dispensary or a health center, obtained from the district government offices. These methods have provided insight into care during birth outside the biomedical system, the norm for nearly 70% of women in the region (NBS and ICF Macro 2011). This valuable background information helps to contextualize emergency cases that

reached the hospital from outlying villages. I originally estimated sample sizes based on my first-hand knowledge of the sites with consideration for feasibility and following purposive sample size guidelines for achieving theoretical saturation (Guest, Bunce, and Johnson 2006).

I collected lists of all villages with health facilities from the district medical offices. Those without dispensaries or health centers were excluded from the study because each village visit included a visit to the community's health facility. Therefore, this study cannot speak to the challenges faced by those communities which do not yet have a dispensary, though it is a government policy now that all communities should have a dispensary by 2015. However, it is unlikely all villages were successful in meeting this goal due to a number of the challenges raised in the community focus group discussions. As a note, my research assistant and I did briefly stop in a community in the Kalambo district, Kifone, that had an unregistered, relatively new dispensary which provided some insight into the challenges faced by those communities without any health facility. There were also a number of communities that were served by dispensaries in nearby villages and we did speak with community member representatives from these sub-villages while in certain locations including, for example, Mkamba village.

After I procured the list of all health facilities in each district, I used an online random number generator to choose a random sample of villages from each district. Each district list was treated independently. Villages with privately funded health facilities were also excluded in order to try to limit the number of variables when making qualitative comparisons between the villages and their healthcare facilities. After this initial selection, which resulted in a list of approximately 20 potential communities, the number of villages in each district was further culled by eliminating those villages that were immediately adjacent to each other and those with impassible roads. Then I checked the list against district and regional maps to ensure good

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geographic diversity and in order to ensure there was at least one village from each of the main geographic zones in the region, which I classified as bordering Lake Tanganyika (Namansi, Kirando, Ngorotwa), bordering Lake Rukwa (Kalumbaleza, Mkamba), interior (Kizi, Mao, Ilambila, Kifone), and highlands (Songambele, Laela, Lowe). Maps can be found in Appendix D.

Table 2.1 Villages, including types of focus groups conducted in each location

District Name		Kalambo				Nkasi			Sumbawanga DC				
Village		Mao	Ngorotwa*	Ilambila	Kifone	Kirando*	Kizi	Namansi	Laela*	Lowe	Kalumbaleza	Mkamba	Songambele
FGD	Women	X	X	X	X		X	X		X	X	X	X
	Men	X	X	X			X			X	X	X	X
	HCWs	X	X	X	X	X	X	X	X	X	X	X	X
	Leaders	X	X	X			X	X		X	X	X	X
	Disp. Kamati	X	X	X			X	X		X	X	X	X
	TBAs	X								X			X

FGD= Focus group discussion type

*indicates communities with a health center, all others had a dispensary

Disp. Kamati indicates a meeting with the dispensary committee, citizens who oversee the administration of facility in partnership with the healthcare workers and village leaders

I then used the selected villages as sites for learning about the referral chain, non-biomedical personnel (including local midwives), and the community setting more generally. Due to time constraints, road conditions, and availability of transportation, I decided to also use these villages for recruitment of those women self-identifying as *wakunga wa jadi* (local birth attendants/midwives), instead of conducting a probability proportionate to size sample to choose other villages for this exercise. In each village, I, together with my research assistant, interviewed the healthcare providers, then observed their care and routines, as available based on the number of patients present or seeking their care. In one instance we were able to directly observe an obstetric emergency and even follow up with the outcome of the case at the designated district hospital in Namanyere after the dispensary providers referred her there for surgical intervention following an arm prolapse and prolonged labor (see chapter 4). Otherwise, we elicited most of the information related to care of pregnant women through semi structured interviews, which involved a standard set of questions with others being added for clarification, follow up, and elicitation of community-specific issues of interest.

In each village, I conducted focus group discussions with community leaders, men, and women. Each focus group with women and men had, on average, between 10 and 20 participants. People were allowed to come and go as they pleased so, often, in the beginning, the room would be full of people and we would level out after half an hour or so with approximately 15 participants. The village leader discussion groups included as many village and neighborhood leaders as were available, generally between 5 and 10, sometimes as many as 15 were present. The FGDs with the *wakunga wa jadi* included, on average, 5 to 10 women plus usually a younger woman who offered to help translate from the local language of Kifipa, which was more comfortable for the older women. We recorded all these conversations and my research assistant

transcribed them, with assistance as needed. We also interviewed members of the community's dispensary committee and/or community health committee, as available, which usually included between 3 and 5 members.

We interviewed all healthcare workers who were present when we arrived in the community, usually at least one and generally more not more than three. In one village, Lowe, there were, at the time of our visit, no biomedical health professionals in the community but we did speak with a well-known healer and one of his sons. In one village, we were unable to hold the formal group discussions with the men and women due to weather conditions and subsequent work because it was a fishing village. In two communities, we spent time only in the healthcare centers and did not organize community discussions though we did informally speak with community members. The purpose of these trips to health centers was to build a picture of the different levels of care in the region. In Sumbawanga rural district, I chose the health center for the sample based on the high patient load, recent reports of two maternal deaths in January 2015 in the space of one 24-hour period, and the lack of a district hospital in the district. In the other districts, I selected the health centers via purposive sampling, one for geographic location near another sample village, in Nkasi district with a long-standing history of providing C-sections and serving the more remotes communities along Lake Tanganyika, and one for its more remote location, in Kalambo district.

In some cases, particularly in Nkasi district, I contacted village leaders three or four months in advance of my return to the village to inform them that their village may be selected to be part of a research study. On these introductory visits, I explained the purpose of my research, the potential risks and benefits, and asked the community leaders if they and their communities would be willing to participate. They responded overwhelmingly positively and contact was then

re-established at the commencement of the community portion of this study, in February 2015. Other villages with which I'd had no previous contact were notified by the District Medical Officer, in the case of some of the villages in Sumbawanga Rural district, or were approached with no previous contact and the same recruitment and explanation process took place, asking for their participation in the study. While some communities were more openly welcoming, all but one participated with a great deal of enthusiasm and cooperation, with village leaders actively helping to recruit focus group participants from their respective sections of the village and spreading the word about the meetings. Only one community, Namansi, failed to gather participants for the organized focus group discussions and this was in large part due to rain that then meant the entire community was either out fishing or engaged in preparing the early morning catch for drying, freezing, and transportation to market. However, we were able to speak with the healthcare providers, the dispensary committee, and the village leaders in this community, which provided us with a picture of many of the community's challenges and needs. We also had an abbreviated version of a focus group with a mixed group of men and women who were waiting for care at the village dispensary. Extremely poor road conditions and continuing rain made it impossible to extend our stay, as did the lack of a place for us to sleep.

2.3.2 Data Analysis

My research assistant and I transcribed the interview and focus group discussion recordings. I then coded the transcripts and field notes in order to qualitatively analyze interpersonal interactions, sequences of events (particularly any delays), and the ways and extent to which care or referral procedures tended to deviate from guidelines. I added these codes to the master codebook and checked for interrater reliability by having a key informant code a random sample of transcripts (Krippendorf 2013:277). Using participants' own words, I identified themes

related to the referral system, obstetric emergencies, and other issues that arose in the interviews, particularly those related to education in the community, gender roles, and suspicions and allegations of corruption related to the availability of medical supplies. The data from this sub-objective has been woven into the overall analysis as a means of contextualizing obstetric emergencies before the woman arrives at the hospital.

2.4 Communities

Women do not arrive at the regional hospital from a vacuum which meant it was important to also understand the ways in which communities shaped women's experiences related to care during pregnancy and childbirth but, more generally, how women fit into their communities. Women's health when they arrive at any biomedical facility is shaped by prior life experience and broader structural factors. I traveled to communities throughout the Rukwa region in order to gain more insight into the ways in which women's everyday lives and social relations intersected with biobureaucracies and how women's broader experiences could serve to place them at risk for obstetric emergencies and death in biomedical institutions.

2.4.1 Sampling and Data Collection

To gather ethnographic background information on women's daily lives and community-level contributors to maternal death, I collected cross-sectional data through interviews and focus group discussions with non-medical personnel (biomedical personnel and local midwives are included in the methods related to the referral system). I selected a random sample of villages throughout the three non-municipal districts of the Rukwa region, as described previously, as sites for this ethnography. Interviews and focus group discussion questions pertained to men's and women's experiences with maternal health and death, including decision making during pregnancy and obstetric emergencies, and healthcare seeking (non-biomedical and biomedical). I also inquired about women's household responsibilities, educational opportunities, and any other

themes arising from the participants themselves, which they felt were relevant to the overall health of women and gender issues in their setting (see Appendix B for focus group discussion questions). I used participant observation in these communities to collect further data on these topics.

2.4.2 Data Analysis

Similar to the analysis of data collected about the referral chain, my research assistant and I transcribed and then I inductively coded the interviews, field notes, and focus group discussions to qualitatively analyze the ways in which women's lives, community events, men's participation in reproductive health, infrastructure and other factors contributed to maternal health outcomes. I have integrated these data into the overall analysis to contextualize obstetric emergencies, the status of women in communities, and how these factors may contribute to maternal health and death.

2.5 History

I was also interested in the ways in which the history of biomedicine in Tanzania and the Rukwa region continued to influence healthcare provision in the present day. I took a more deductive approach to the historical data and was specifically interested in the ways in which colonialism, socialism, structural adjustment programs, and attributes of the Rukwa region (e.g. geographic isolation) created the present system, including institutional environments that limited innovation and improved care provision.

2.5.1 Sampling and Data Collection

To address the historical influences on current maternal healthcare and hospital functioning, I collected archival data (Hill 1993) in the Tanzania National Archives over the course of approximately three months. I also conducted oral history interviews (White, Miescher, and Cohen 2001) with healthcare workers and administrators who had worked in the Rukwa

region for approximately twenty years or more and those who had retired. The Tanzania National Archives house a significant collection of documents well catalogued and dating back to the German occupation period in the late 1800s (TNA 2011). Looking at archival records from the colonial and post-colonial period provided insight into the bureaucratic and administrative goals of the changing governments in regards to healthcare planning, provision, and biobureaucractic expansion. Records from colonial offices and the post-independence Ministry of Health and Social Welfare allowed me to begin tracing the development of the structures of the government healthcare system, including providing some insight into financial and policy goals and difficulties, such as pressure to meet targets like the Millennium Development Goals or other, broad global goals throughout history.

Using the archives' finding aids, I sought out any and all documents related to the expansion of healthcare services in rural areas, to the establishment and functioning of district and regional hospitals, and to decisions to decentralize health administration (in order to help understand financial and efficiency issues) from all periods of Tanzania's history, as well as all materials directly related to Ufipa, midwifery care and training, and health facility data related to childbirth and related complications. The German period records are exclusively in German and no English or Swahili translations were currently available. Therefore, I was forced to begin my work with records that commenced after England was granted Tanganyika as a protectorate after the German colonial losses post-World War I. This limits the time period of what documents were available but, for the purposes of my study, this was not a significant limitation. The present day Tanzanian healthcare system is still largely based upon the British model instituted after WWI.

I supplemented the archival work with oral history interviews with long-time and retired healthcare providers and administrators (n=6), as well as older community members (n=10) who were able to provide additional descriptions of the development of biomedical healthcare in the region, as well as telling me about changes in healthcare provider training, salaries, their perceptions of the availability of necessary supplies and equipment, and their memories related to quality of life in different periods of Tanzania's history. I identified the oral history interview participants through purposive and respondent-driven sampling because this sample was relatively small and more difficult to locate. These interviews often picked up where the archival records left off because many records from the post-independence era have yet to be made available to the public. The oral histories helped to provide insight into the policy recommendations and changes documented in the historical record. The ramifications and modes of implementation of these policies cannot be fully understood without the experiences of healthcare providers who witnessed these changes and were meant to implement them. The oral histories also served to illuminate personal experiences with the changing structure of healthcare and the biomedical institutional environment in the Rukwa region.

I primarily asked participants questions related to their memories of ways in which healthcare has changed in the Rukwa region by asking them to compare their experiences during the different presidencies from Julius Nyerere through the then-current president, Jakaya Kikwete. The different presidencies have been characterized by distinct shifts in economic policies, ranging from socialism to structural adjustment to liberal policies and a significant increase in foreign NGO activity and outside donor involvement in the country. This made asking about people's experiences under different presidencies an easily understandable way to

get people to think about shifting economics and health infrastructure on both a local and national scale.

2.5.2 Data Analysis

I primarily relied on an interpretive, broadly qualitative analysis of the historical data which I collected from the above mentioned sources. I deductively coded for *a priori* themes of interest, such as infrastructure and references to Rukwa regional identity, as well as political perspectives on the region and mentions of healthcare infrastructure, organization, and management. In addition to these *a priori* themes, I added some themes which arose during the other phases of data collection and analysis. I also coded the transcripts from the oral history interviews. I used the archival records and oral history interviews as a way to connect the ethnographic data to broader historical trends and to explain the hospital's institutional characteristics and functioning. These data also helped to connect the hospital to regional, national, and global trends in maternal health policy and administration, as well as maternity care and midwifery training on a national level in Tanganyika.

2.6 Data Collection Summary

In table 2.2 below I outline the various phases in which I collected data to address each of the realms of study. Based on access to particular locations and logistics, such as the availability of transportation, I moved between the different phases of the project and did not complete them in succession nor in chronological order. Instead, this process of alternating between the different research objectives resulted in a more iterative approach and made it possible for me to generate more questions for each set of data sources, whether people or archival documents. It is my belief that this order resulted in a more comprehensive, well-grounded, and richly contextualized data set than if I had collected the different types of data without being able to go back to the other sources.

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Months	Research sub-objective	Location	Activities conducted	Additional notes
January 2014	-	Dar es Salaam	Obtained research clearance and residency permits	
February-May 2014	Regional hospital	Mawingu Hospital	Participant observation, informal interviews	Part of the trust-building phase; multiple deaths occurred in quick succession
June 2014	Referral chain	Kalambo District	Participant observation and informal interviews while accompanying a supportive supervision trip	
June-July 2014	Regional hospital	Mawingu Hospital	Participant observation, informal interviews	
July-August 2014	History	Dar es Salaam, Tanzania National Archives	Archival research with primary documents	
August-October 2014	Regional hospital	Mawingu Hospital	Participant observation, informal interviews	
November 2014	Referral chain	Nkasi District	Participant observation and informal interviews while accompanying a supportive supervision trip	Made contact with villages to which I returned in Feb-April
December 2014-February 2015	Regional hospital	Mawingu Hospital	Conditions of Work Effectiveness Questionnaire; leadership pile sorts; informal interviews	
February-April 2015	Referral chain and communities; history	Kalambo, Nkasi, and Swanga DC districts	Community level focus group discussions; formal interviews; oral histories	
May 2015	Regional hospital and history	Mawingu Hospital	Formal interviews and oral history interviews	
June-August 2015	History	Dar es Salaam, Tanzania National Archives	Archival research with primary documents	

Table 2.2 Summary of methods and sites

2.7 Ethical Considerations

Any research involving issues related to death and suffering comes with a variety of ethical concerns. In the case of this study, not only were there a number of issues related to sensitively dealing with the issue of death-of women and their babies- but, there were also additional concerns due to the nature of hospital settings and my presence in or observation of a number of ethically fraught clinical situations. There was also some level of potential risk involved for the healthcare providers in choosing to discuss maternal deaths and the inner workings of the hospital with me. Therefore, at every stage of the planning and conduct of the research I strove to ensure anonymity and to minimize any risk of harm to all those who chose to participate in my project. All names used in the dissertation are pseudonyms except in the instances of district and regional health administrators whose titles would be sufficient for identifying them. In those cases, I requested explicit permission to use their titles in reference to what they told me and received their permission after a full explanation of the implications of their consent. Therefore, this lack of anonymity in these cases may have influenced what they were prepared to tell me on the record because they knew their statements would be used in conjunction with their titles.

I received ethical clearance from the Washington University Institutional Review Board, as well as Tanzania's National Institute for Medical Research, and obtained research clearance from Tanzania's Commission on Science and Technology (copies of all these documents are available in Appendix E). For the purposes of research and ethical clearance in Tanzania, my local partner was Dr. Samwel Marwa from Mawingu Regional Hospital. The Regional Medical Officer, Dr. John Gurisha, was also aware of my project and approved my requests to have access to health facilities throughout the region. During the development of my project, I was in

contact with Dr. Marwa and when I arrived back at Mawingu in February 2014, I immediately

made available copies of my full research proposal, including all the objectives and methods, in

an effort to be as transparent as possible with the hospital and regional health administration.

Throughout the text I have tried to be as transparent as possible about my involvement in

or knowledge of ethically challenging situations that transpired in both clinical and social

settings regarding my presence at the hospital or the particularities of my research. In the clinical

setting, hospital ethnography presents a variety of somewhat unique ethical challenges (Long,

Hunter, and van der Geest 2008) including knowledge of medical negligence or malpractice,

harm (generally, or almost always, unintentional) to women who were patients, violent

interactions between administrators and ward staff that violated codified ethics (Tanzania Nurses

and Midwives Council 2009), situations in which bureaucratic constraints limited aid to

desperately ill mothers and babies, and myriad forms of-what I would, from my American

perspective classify as- disrespect and abuse perpetrated by nurses towards women present on

their ward during labor and while giving birth. In the next section I elaborate more in-depth

about my particular position in the hospital and my personal background as a way of explaining

how I came to access the types of information herein. Here, I will simply say that my extensive

previous experience in Tanzania, particularly in hospital and clinic settings, prior to the

dissertation research, taught me how to navigate these environments, as well as what staff

considered to be acceptable roles for me, the foreign researcher. Out of respect for women and

their family members, I also attempted to provide them with as much information as possible

related to their conditions, hospital procedures, what they might expect in the hospital

environment, and how they might maximize their interactions with the ward staff. Because I do

not have medical training, beyond a bachelor's degree in biomedical science, I did not offer

clinical advice outside the bounds of my additional training related to birth control and basics such as personal and family hygiene. Despite repeated offers from midwives over the years to teach me how to conduct vaginal exams, I have never felt this procedure to be useful for my research and, due to its intimate and uncomfortable nature, have always abstained from doing this procedure. I do, however, deliver babies when the cases are uncomplicated. Tanzanian doctors have taught me how to correctly perform neonatal resuscitation. I only provide care that is uncomplicated and within the bounds of the instruction that I have received. If I was ever uncertain about any part of a procedure, I refused to perform it. Sometimes the nurses did not understand why I was refusing to assist them but it has always been my firm belief that, though I have had some instruction, it would be ethically inappropriate, and disrespectful of women, to engage in any clinical activities if I was at all uncertain of any aspect- including the suitability of the procedure, the steps involved, or any other aspect therein.

Out of respect for the hospital staff and administration, I always explicitly refrained from discussing any potential medical errors with the women who were on the ward, or their family members. More than once, relatives saw me on the ward and, once they realized I spoke Swahili, they would ask me questions about their relative's condition. Sometimes this took the form of them asking me to tell them the particulars of how the woman had been treated and, occasionally, these inquiries included questions related to suspicions they harbored about how care had not transpired in the way they had expected. I always referred them to the nurses on duty, the ward Nurse In Charge, or, in one case, the Medical Officer In Charge (chapter 8). I did not feel it was my place to answer their questions about any specifics of what might have gone wrong (or differently than expected). As I suspect happens in many clinical settings, in low and high resource environments, the medical personnel often closed ranks and sought to mediate any

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complaints relatives or patients brought forward in order to minimize accusations of neglect, abuse, or malpractice. Oftentimes, patients and their families brought forth complaints that were a result of miscommunication with the hospital staff members. In other instances, I was offered money by women or their relatives in return either for services provided or as a bribe for looking after the woman more closely. I always refused to accept this money and tried to reassure women's families that I would follow-up with her case and make sure she was being treated well, while also explaining to them that hospital staff members were not supposed to take any money from either women or their relatives.

In recruiting Mawingu Hospital maternity ward staff members for in-depth interviews I offered small incentives. I had a collection of small gifts I brought from the United States and offered them on a first come, first served basis. The items included things such as sample size make-up, reusable bags, small mirrors, or earrings. Several members of the staff refused any form of compensation for their participation. I did not offer either hospital or district and regional health administrators any form of compensation for their participation in interviews and they generally seemed to conceive of their participation as part of their broader job requirements. I only had one person who did not agree to an interview and most likely it was due to miscommunication and my inability to sufficiently explain to her the goals I had for our interview.

In the community setting, particularly when we were conducting focus group discussions, community members asked my research assistant and I what we were going to do for *them* and/or for the village. In these instances, I was particularly careful to not make any promises I would not be able to uphold. Organizations, both local and foreign, as well as politicians and government officials, often made promises to communities for much needed services or

infrastructure and then never returned to fulfill them. This led to many of the stories community members told us about broken promises which had resulted in disillusionment and cynicism for many village leaders and their communities. In villages, I also offered only minor incentives for participation in the focus groups, generally limited to a small amount of money per person for refreshments (the equivalent of approximately 25 cents) or, in many cases, I took photographs of the individual participants and of the group. I printed out the pictures in Sumbawanga town and made sure to return the photos to the community so everyone received at least two photos as a souvenir of their participation. This generally was met with a great deal of enthusiasm from everyone involved.

2.8 Positionality

There are a number of aspects of my academic and personal trajectories that have made it possible for me to conduct this research and have facilitated the level of access and buy-in that I ultimately achieved in the Rukwa region. I have been traveling to and/or conducting research in Tanzania since 2007. After my initial trip, I returned to my undergraduate institution, The Ohio State University, and began studying Swahili. I took six quarters of Swahili in the classroom, the maximum number of courses offered at that time. I also returned to Tanzania in 2008 (for one month) and 2009 (three months) in order to continue to practice Swahili, establish contacts, and conduct research for my undergraduate honors thesis project. In 2008, I had my first experience in the Tanzanian government health system, spending one month shadowing doctors in a regional hospital. In 2009, I spent most of my time interviewing women I recruited from either the maternity ward or the maternal child health clinic at the Singida Regional Hospital. In 2009 I also went to several small villages in the Iramba district of Singida, my first exposure to village dispensaries in rural areas. From September 2010 through July 2011, I lived and conducted

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research in Singida, Tanzania on a Fulbright IIE Student Research Fellowship. It was during this period that I reached fluency in Swahili. In brief, I spent the majority of that fieldwork in one small village, and on the maternity ward and in the maternal child health clinic (MCH) at the Singida Regional Hospital. I spent a great deal of time observing and interviewing women in village dispensaries (three different dispensaries located in close proximity to the village in which I was staying), as well as on the regional hospital's maternity ward. Due to my slightly less developed Swahili, there were certain limitations to my interviewing abilities and I had not yet, at that point, received much formal training in anthropological field methods but, during that year, I learned invaluable lessons about conducting research. Additionally, it was from this time that I first started thinking about the questions that eventually became this dissertation. I consistently have had excellent access to government health facilities and good rapport with healthcare providers. While I initially resisted the idea of conducting my research with this population, being still more interested in basing my research in communities and on women's perspectives, I came to see that maternity healthcare providers as a group face a number of unique challenges. Healthcare providers have proven to be very open with me in discussing these challenges, both in Singida-when I did not yet know the questions to ask- and from my first trip to the Rukwa region in 2012.

It is via this trajectory that I gained more knowledge of Tanzania, as well as Swahili. I had many of the most significant experiences of my young adult life in Tanzania and, because of this, often feel as though I spent time in the country during an important formative period. Despite my brief trips in the first couple years, I spent much of the intervening time in the United States pursuing a course of study that would allow me to learn from and understand more about the people of Tanzania. It was due to my time in Tanzania, and events I witnessed at the Singida

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Regional Hospital, that I first enrolled in a medical anthropology course. I witnessed a tense interaction between a woman who wanted to take her small child out of the hospital and the hospital staff members who were insisting the child was not well enough to be discharged. The two parties were unable to come to an understanding due to a fundamental disagreement about the child's diagnosis- malaria versus plastic teeth (for a discussion of this, see Weiss 1992). It was during the same time as my encounter with plastic teeth that I moved away from a previous fascination with infectious diseases, particularly hemorrhagic fevers, to an interest in obstetrics and gynecology, and women's reproductive health in general. A doctor in Singida asked if I, and two other American undergraduate students, wanted to observe an autopsy he was going to perform. Not knowing what we might encounter, but eager to learn and see as much as possible, we agreed to watch. He performed the autopsy of a woman who had died during pregnancy, her full-term baby unborn. The incisions he performed were the same as those of a Cesarean section that would have saved the woman's life, and that of her child. The experience raised many questions for me about the global distribution of resources, the on-going causes of maternal deaths, and inequities that made the causes, and deaths, possible in the 21st century. That one experience in 2008 turned out to be the impetus for most of my subsequent research, as I sought to contribute another piece to our picture of the phenomenon of maternal death.

My undergraduate degree is a Bachelor of Science in Biomedical Sciences. The degree program itself is relatively unique and is administered through Ohio State's College of Medicine School of Allied Medical Professions and was closely tied to both biomedical research and medicine. I was able to choose a variety of different science courses to meet the major's requirements, building on my interest in the biological sciences that I had started to develop in high school, particularly through anatomy and physiology. A second unique component of the

program was that all of those pursuing the degree (only about 20 students per year) conducted research in a laboratory through the Ohio State Medical Center for at least two years.

Upon embarking on my bachelor's degree, I had wished to go to medical school and become a doctor. Largely due to my experiences in Tanzania, and courses I eventually took in medical anthropology, I decided, in the end, to pursue a Ph.D. in anthropology instead. I therefore have taken courses such as three years of chemistry (inorganic, organic, and biochemistry), as well as microbiology, neuroscience, graduate-level physiology, microbiology, and courses in molecular virology, immunology and molecular genetics. I also took courses in public health, including field epidemiology, and a course on emerging tropical diseases. Courses through my major program also included classes related to leadership in healthcare and an entire 10-week class about the organization and administration of the U.S. healthcare system. For my two years in a research lab, I worked in a lab that was, broadly, studying tuberculosis. In the lab, I reported to an immunologist and I assisted her on projects researching signaling pathways in the lung through examination of lung surfactant protein A (SP-A).

My education in the biological and physical sciences created a shared background and base of knowledge with the healthcare providers in Tanzania. This meant we were able to "speak the same language" in terms of some scientific or clinical jargon. They also tended to recognize me as having a certain level of credibility in the clinical setting because of my knowledge of physiological and biochemical processes to which they would periodically refer. It also meant that, with a foundation already in place, it was perhaps easier to teach me to conduct certain procedures than it would have been for someone with little to no education in the biological sciences.

With this shared background, I was able to build bridges with the healthcare provides, discussing the horrors of organic chemistry exams and sharing stories of our initial wonder when presented with the intricacies of bodies as encountered through dissection. We often compared the similarities and differences between healthcare in the United States and Tanzania. These shared experiences transcended cultural or language differences because, after all, molecules and the laws of physics tend to be treated in a universal way, taught to students as a shared language of science. This very same shared background of science was something I had been working to unlearn as an anthropologist. I no longer believe in positivism in the way I once might have and I am much more keenly aware of the implicit biases and cultural influences that operate on and within science. Sometimes, while immersed in the hospital's maternity ward, it could become difficult to not fall into the same patterns of thinking and behavior as the doctors or nurses. It was often easy for me to forget my role as anthropologist and slide into the role of medical professional, what I had aspired to be for well over six years of my life. With several overlapping systems of power, thought, and expertise, I was both insider and outsider in various registers. I have tried to be aware of and attuned to the ways in which these fuzzy borders and boundaries may have influenced my views, interpretation, and writing of events that occurred during my time in Tanzania.

While I have written some in the previous section about ethical entanglements, it bears repeating again. Due to the nature of the work in which I was engaged, and my long-term presence, the nurses often entirely forgot I was present, acting as if I were not around or was simply another of their colleagues. It took me almost an entire year to develop a level of trust and rapport with the nurses that allowed frank discussions about ethics, interactions, mistakes, and potential wrongdoing. For this reason, I conducted nearly all my formal interviews in the last two

months. More than once, I was in a position in which I knew there had been some form of

medical misconduct or neglect. Never did I report the actions of the nurses to their superiors but I

did give my opinion or account of events when directly questioned, as when I had been directly

involved with the care of a patient who later developed complications (see chapter 8 on

stillbirth). I did sometimes vent to close friends who were not medical professionals, never

naming names or disclosing medical details or case particulars. I am fortunate to be close

personal friends with the man who was, at the time of my fieldwork, the Medical Officer In

Charge of the Regional Hospital. We were a mutual source of support when we encountered

respective frustrations and I believe we became close friends because he was unflinching in his

commitment to unseating the status quo at the hospital in a quest to improve patient care and

outcomes. Sometimes, in this quest, he encountered opposition that was particularly entrenched.

Some of our conversations about these challenges inform this dissertation, which would not be

nearly as rich without his candor and participation.

I would be remiss if I did not also write something about my position as a white woman

working in Tanzania. Due to a history of NGO projects and aid in the country, the color of my

skin often prompted requests for money or other gifts, or led people to believe I was there in

order to provide services for the community. In other cases, many people misinterpreted my

presence at the hospital and believed I was either a nurse (due to my gender) or a doctor (due to

my skin color). I tried not to take advantage of these misreadings of my role but there were times

when I did use my white, foreigner privilege, such as when I did not tell the regional hospital lab

personnel that I was not a doctor because, when they thought I was, they fast-tracked any

requests for blood or lab tests that I brought them from the maternity ward. In this context, I

gained a reputation on the maternity ward as the best person to send to the lab in an emergency

because I almost always came back with what we needed. In terms of interviews or conversations with community members outside the hospital, I tried to be aware of the ways in which my skin color and foreignness could influence the responses I received. Often, my past experience and my Swahili language ability, made it possible for me to eventually work around any untruths or canned responses people gave me, which were the answers they thought I would want to hear. However, I do have to consider how people's answers to my questions or their portrayals of themselves and their communities might have been different had I been Tanzanian. This issue could have been more prominent in villages when I went only for a few short days to conduct group discussions because the community did not know me. A colleague suggested that perhaps villagers would try to make the state of their community sound worse in the hopes that I would provide them with some form of aid, because many people in East Africa have become so used to NGO culture. In the Rukwa region, there has been significantly less NGO activity due to the region's remoteness. However, this is still an issue which I have taken into consideration in my interpretation of the data. Additionally, my observations and conversations with other Tanzanians about the communities in question generally verified the answers the community members had given me. In the hospital, I am confident that the amount of time I spent there significantly decreased the bias of any answers people gave me.

Not infrequently, I felt a sense of despair when I walked into the maternity ward on yet another morning to find a line of small, bundled corpses awaiting paperwork and their relatives. The lack of supplies, the sometimes harsh manner of the nurses, the grinding, exhausting work of delivering baby after baby to women who have sometimes faced a lifetime of discrimination based on their gender and/or socioeconomic position, was occasionally enough to make me question if there is any way the system can ever change. However, in addition to describing and

interpreting the system and its historical antecedents, I hope, herein, to also present a picture of the ingenuity and courage of those who daily struggle within it to make lives for themselves, while also being in service to the women who go to the hospital to give birth. During visits to communities, village health facilities, and meetings across various levels, I encountered the anger, resentment, and dissatisfaction of community members, average Tanzanians, men and women both, who often felt deeply wounded by their lack of adequate healthcare services. But here, too, I saw the ways in which communities organized themselves to build new facilities or chase out negligent providers. So much has happened within the Rukwa region's healthcare sector just in the last five years that I am certain, as Tanzanians would say, they will continue *kupambana*, to encounter the system, clashing with it, to make the system better. While committed to the academic and theoretical projects of anthropology, I am also deeply committed to remaining grounded in the reality that even as we talk, or as you read this, women and their babies continue to die and healthcare providers continue to work in structurally violent environments from which it is nearly impossible to escape.

Part II: Contextualizing Maternal Health and Death: Historical, Policy, and Community Perspectives

Introduction to Part II

Part II provides the context and background needed to understand the dynamics of a regional

referral hospital maternity ward. In Part II, chapter 3 includes a description and analysis of the

historical development of healthcare services in the Rukwa region, then called Ufipa, and the

development of global policies and initiatives focusing on maternal health. Chapter 4 includes an

analysis of the gendered and locally specific logics operating in communities, which structure

women's experiences and reproductive decision making within their families. Chapter 4 also

includes an overview of some of the public health research generated by the Safe Motherhood

Initiative in the mid-1980s and the ways in which top-down global policy and public health

logics may operate differently than, or be in conflict, with the local logics of communities in the

Rukwa region. These factors, and women's interactions with the biomedical healthcare system,

subsequently form the background against which to view their experiences in the regional

hospital.

Chapter 3: The Problematic Birthing Body: The Evolution of Maternal Healthcare Services in Tanzania and the Construction of the Problem of Maternal Death

3.1 Introduction

Birthing bodies have long been a site of governance, historically and across societies. In Tanzania, British colonists first took an interest in African birthing bodies in an effort to ensure conscripted labor and to (re)produce governable subjects or to gain access to and a favorable position among local populations. In post-independence, socialist Tanzania, reproduction was a part of nation building. Governments have long had an interest in reproduction for these reasons and more. I argue in this dissertation more broadly that today, the post-socialist Tanzanian state regards pregnant bodies as a site for the state to "perform" (Butler 1988) legitimacy and efficacy. This particular performance centers on improving the health and reducing deaths of pregnant mothers to accomplish goals set by the global community.

This aim is structured and facilitated by the UN's Millennium Development Goals (MDGs), which are often used as a yardstick against which to measure progress in countries such as Tanzania. Achievement of the MDGs has become a proxy for the legitimacy of states and their healthcare institutions and can determine their worthiness for aid and investment. Accomplishing the MDGs has been complicated by the residual influence of colonial rule on healthcare institutions across Africa. In Tanzania, these colonial structures were subsequently transformed, but not replaced by, socialism, and neoliberal structural adjustment programs. This makes healthcare institutions a vital site for understanding colonial and post-colonial trajectories in the expansion of biomedicine as they intersect with today's global system and the subjectivities of healthcare providers and patients.

In this chapter, I discuss the development of these institutions in Tanzania, as well as trace the origins and construction of maternal death as a global health problem, not simply a personal, community, or state issue. The historical data provide insight into the on-going challenges to healthcare institutions within Tanzania but also the Rukwa region more specifically. The descriptions of and from Ufipa in the first half of the 20th century demonstrate the important influence of geography on healthcare worker retention in that region of the country, while also describing the challenges Ufipa faced in building healthcare infrastructure. A second important message from the archival records, and which continues to resonate today, is the central role of the debate around home (domiciliary) versus institutional (hospital) births and the pros, cons, and challenges of each. Along with this debate came, at the time and continuing in the present moment, concerns about recruitment and training of nurses, the role of local/indigenous midwives/birth attendants, and physical infrastructure-roads, transportation, and biomedical buildings. All of these debates continue to influence the Tanzanian health sector and, ultimately, the conditions at the Mawingu Regional Hospital.

3.2 The Development of the Tanzanian Medical System: An Overview

Starting in 1884, German trade companies began settling Tanganyika. Karl Peters' company, The Society for German Colonization, commenced official occupation of the territory in 1887 (Kinambo and Temu 1969:102). During this time period, the focus was not on forming Tanganyika as a settler colony but on extracting resources from the country in order to enrich Germany. Probably due to a low number of Germans actually living in the country, under German colonial rule between 1891 and 1919, only a relatively small number of hospitals were constructed and staffed; this included twelve general hospitals, the largest of which had a 75-bed capacity (Turshen 1984:140). These hospitals were largely for the support of the German army

garrisons and, later, for those colonial settlers who did take up residence in the country (Turshen 1984:140). Most healthcare services were for the use of the European population or were to be used in order to keep the African workforce healthy (Turshen 1984:141). This is in line with the colonial interests throughout the continent, which tended to be primarily focused on maintaining a sufficiently large labor force, both in urban and rural areas (Turshen 1984:35; Beck 1977). As late as 1910, nearing the end of Germany's presence in the territory, there were only 43 doctors serving the more than 10 million inhabitants of German East Africa (Beck 1977). In a 1910 letter, the German colonial secretary wrote, "A system of medical care for the blacks, even in the government sector of the medical services, does not yet exist. The introduction of such a system is our goal although the means to secure it will probably surpass the present capability of the protectorate" despite the fact that providing medical services was widely viewed as a crucial aspect of maintaining stable relations with the African population (as cited in Beck 1977:31). The Germans were slow to provide medical services to the broader African population largely due to a lack of doctors, funds, and lack of easy access to large, remote expanses of the territory (Beck 1977). The Germans also were unable to effectively leverage the missionaries throughout the country who were sometimes the only presence in the more remote areas of the country and often provided medical services (Beck 1977).

After World War I, the Treaty of Versailles, signed in 1919, awarded a large portion of the German protectorate in East Africa to the United Kingdom. The British inherited the roads, telegraph system, and the few medical buildings built under German rule, including a laboratory and hospitals in Tabora and Dar es Salaam (Crozier 2007:8). The British Colonial Service continued healthcare policies similar to those of the Germans until Tanganyika was incorporated into British East Africa, after which the colonial government reassessed its goals in the region

and sought to decentralize services and increase their accessibility to the local population

(Crozier 2007:9). The local authority dispensary system was introduced in 1926, at which time

the rural African population was included in curative medical services through small, basic-level

healthcare facilities (Turshen 1984:141).

The organization of the health care system under the British largely remains intact to the

present day, including the hierarchical organization of medical offices and administration

(Crozier 2007:77). From the start, the British placed a great deal of emphasis on medical

services as a fundamental avenue for accomplishing their goals in Africa. As Crozier (2007:3)

writes, "In Africa especially, where health problems loomed large, successful medical

colonization was recognized as one of the fundamental springboards by which to establish

political objectives." In 1895, with the appointment of Joseph Chamberlain as Secretary of State,

the British Colonial Service underwent reorganization and streamlining in order to increase its

efficacy. At this time, nearly one third of the Colonial Service was made up of the Medical

Service (Crozier 2007:3). Each colony's Medical Service was run independently, though the

services in West Africa were consolidated under one regional administration in 1902. The British

government did finally create a unified East African Medical Service in 1921 (Crozier 2007:5).

Further reorganization followed throughout the 1920s, 30s, and 40s.

Under British colonial administration there were four types of medical care: government,

missionary, industrial, and private[1] (Turshen 1984:141). This list, of course, does not include any

sort of indigenous system of healing though the colonial healthcare system was imposed on top

of a long-standing local healing system. Missionaries and colonial doctors worked actively to

suppress traditional healing throughout Tanzania (Turshen 1984:145). The result of colonists'

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[1] Because my research exclusively focused on government healthcare facilities, I will be limiting my
discussion in this chapter to public sector/government healthcare services.

efforts to eradicate traditional healing was simply the denial of any sort of healing services to a majority of the population; available biomedical services did not begin to fill the resultant void and the general population most likely continued to utilize multiple methods to fill this gap (Turshen 1984:146). Due to continued poor coverage of primary healthcare facilities, people still sought care from multiple, concurrent healing systems while I was in the field[2]. The national healthcare system consisted of three levels: central, provincial, and district administration (Turshen 1984:141), which would today be roughly equivalent to the national, regional, and district levels of management, respectively (United Republic of Tanzania 2003).

The Colonial Service directly recruited candidates for service in East Africa. Crozier (2007a) writes of the ways in which many British medical personnel viewed service in Africa as a route to adventure and a chance to play hero in a land sensationally portrayed as being full of danger and mystery. As healthcare expanded in British East Africa, there were increasing demands for skilled personnel, including medical officers and nurses. Unable to keep up with the demand solely with those European providers coming directly from the metropole, the Colonial Medical Service began to implement strategies for training locals for work in a variety of medical positions, including as health aids, ayahs (mostly working as cleaners), and eventually as nurses or nurse assistants. Sub-Assistant Surgeons (SAS) oversaw posts in areas not serviced by a European Medical Officer and reported to the Provincial Medical Officer. Sub-Assistant Surgeons were very often Indian and were recruited to the Colonial Medical Service in India. Until I was looking through the colonial records in the Tanzania National Archives in 2015 and repeatedly came across Indian surnames in the correspondence related to healthcare in Ufipa, I had not realized there had been so many Indian medical personnel working in British East

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[2] Stacy Langwick has written extensively about traditional and biomedical systems within Tanzania.

Africa. Greenwood and Topiwala (2015:13) write that there has been very little acknowledgement of this population of medical professionals and "it is a little known fact that there were actually almost twice as many Indian doctors working for the Colonial Medical Service as Europeans" in the post-WWI era. Indian medical personnel were vital contributors to the healthcare system in East Africa well into the 1930s and 1940s.

The central government in the territory was responsible for preventive health services and these services were wholly independent from the curative services offered at all levels (Turshen 1984:143). Maternal and child healthcare fell under public health services, in addition to other services such as nutrition and health education and general sanitation. In 1961, just before independence, the central government was responsible for 71 prenatal care clinics, while local authorities were responsible for 204 such clinics and voluntary agencies controlled another 137 (Titmuss as cited in Turshen 1984:144). However, these prenatal maternal/child health (MCH) clinics were such a low priority that they did not even receive a separate line in the health budget (Turshen 1984:150).

3.3 Colonial Medical Service in Ufipa

The Ufipa plateau refers to what is now known as Sumbawanga town. Ufipa more generally connotes the lands of the Wafipa people, the predominate ethnic group in the area. Ufipa was part of the Western Province which was administered from Tabora. The Germans had left a research outpost and rudimentary port in the area in the vicinity of Kasanga, on the shores of Lake Tanganyika, which remains a village to this day. In the Ufipa District book vol. 2 from the Tanzania National Archives, the District Officer kept an account of the major happenings in the district throughout the 1920s. He writes that in 1922 the district headquarters were transferred from Kasanga to Namanyere and Kasanga subsequently became a sub-station. Of

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note, also in 1922, "after many requests, a European Medical Officer was posted to Kasanga in January but was transferred again four months later." The district book details the many challenges of working in this remote area of the country, including accounts of years in which those in the district had no access to mail or telegraph services for several weeks or even months at a time. Their best connection to the Provincial Offices in Tabora was via boat service on Lake Tanganyika. Whenever the steamer was out of commission for repairs, or due to other problems, the district could be effectively cut off from the rest of the territory. For example, in 1923, "When it became apparent that the Mwanza could no longer undertake carriage of mails, application was made for a regular overland service from Tabora. The postal authorities however were either unwilling or unable to arrange this and in consequence Ufipa was frequently several weeks without mail" (no page number).

In 1928, headquarters were once again moved, this time to Sumbawanga where they remained; the town is still the center of administration in the region to this day. However, the move did not coincide with an increase in communication or infrastructure for some time and in a 1929 report the District Officer wrote,

> No steps have yet been taken to connect the new district headquarters at Sumbawanga with the telegraph line and it is understood that no proposals to this end are to be considered during the financial year 1930/31. The Postal Agency at Kasanga was closed. The posts and telegraphs office remains at Namanyere with an agency at Sumbawanga. (no page number)

These changes and the lack of coinciding improvements in infrastructure seem a harbinger of the region's future; the area has faced many challenges in the area of financing and infrastructure. The region's location on the country's periphery made it particularly hard to access and this continued to be the case well past the turn of the 21st century, with nurses telling me stories of

walking for days in order to reach Mbeya to the east because buses were infrequent and regularly

could not traverse the roads during the rainy season, and this was in the late 1990s.

In the late 1920s, the colonial government first began building and expanding the

government health facilities in Ufipa. The records in the District Book from 1930 mention that,

"Native Administration Tribal Dispensaries were set up during the year at Namanyere, Mpui, and

Maji Moto (Mpimbwe) and proved a great benefit to the people." The Native Administration was

expanded beginning in the mid 1920s as part of the increase in indirect rule in the Tanganyika

territory led by the Governor, Sir Donald Cameron. Native Authority courts and dispensaries

were run under the administrative oversight of local chiefs.

In 1929, the colonial government first built a hospital in Sumbawanga. Though it is

referred to as a hospital in colonial correspondence, the descriptions of the buildings and services

that were available do not conjure up an image of a hospital as might have been found in less

peripheral outposts. In fact, just a matter of a few years after it was established, the hospital was

already in need of repairs and expansion.

Memo from 20th February 1930
"The Honourable, the Director of Medical and Sanitary Services, Dar es Salaam
… I have the honor to draw your attention to the fact that a Native Hospital has already
been constructed at Sumbawanga in 1929 out of the funds originally voted for building
the new station. The District Officer's letter 2/H/219 of 31.8.29 addressed to your office
refers.
2. The present hospital consists of wards, dispensary offices, kitchen, stores, etc. consist
for the most part of thick green brick walls erected on ant proof course and with cement
floors, thatched roofs, good wooden doors, and glazed windows.
3. Neither the District Officer nor myself had any idea that a further allocation for a
Native Hospital was likely to be voted.
4. The present buildings if roofed with iron would last for years and it is submitted that
instead of pulling down the present hospital and building again on the same site the
money now voted should be used in roofing the present hospital and in erecting quarters
for the hospital orderlies, native sanitary inspectors, and in adding such cement floors as
may be required. If you require further information I will ask the District Officer Ufipa to

submit a ground plan showing the layout of the hospital and the size etc., of the buildings which were erected in 1929.
C.J. Bagenal, provincial Commissioner, Kigoma Province
(Tanganyika Secretariat TNA file 23853)

Unfortunately, the requests to finish the already-started hospital took many years to be approved and the initial amount of money needed was reduced further and further. Meanwhile, the weather conditions in the area, including a very long rainy season, continued to wreak havoc on the mud brick buildings. In a memo from October 12, 1932, the Provincial Commissioner wrote that the hospital had been built in semi-permanent style, meaning with sun-dried bricks and thatched roofs. The memo continues: "The erection of the new ward was also commenced; the construction being of sundried brick. The outmost walls reached the height of about 4ft and there the work stopped and the allocation lapsed." There were no funds for continuing the work on the hospital and the district officials were requesting permission to use the remaining supplies to repair the district officers house, "It will be necessary to reroof the district officer's house at once. The hospital is not in urgent need of a new ward, the work already commenced for that building may gradually be completed by tax labor and covered by thatch as the other wards." The memo circulated to various officials, one of whom commented, "Who asked for the new ward at Sumbawanga and why was it not built but left with 4 feet walls? And what is to become of the remaining £135 of material. F.J.D." The file (Tanganyika Secretariat TNA file 23853) continues in this manner with correspondence from the rest of the year about the mismanagement of funds, waste of supplies, and the general poor administration of the building projects in Sumbawanga, including the hospital and roads. The writers explained that the rainy season in 1930 had stopped work on the construction at the hospital and during that period, the monies lapsed, which meant they had not recommenced building in 1931, and needed renewed funds. Bureaucratic procedures prevented the quick completion of the buildings and they continued to deteriorate.

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Despite these issues, the hospital was able to provide care for the local population and, as early as 1930, the Sub-Assistant Surgeon felt the district could benefit from maternal and child welfare services. However, he did not have enough staff members to support the expansion of services:

Ref. No. 39/N/30   29th May 1930
The Hon. The Director,
        Medical and Sanitary Services,
                Dar es Salaam.
u.f.s. The District Officer,
        Sumbawanga.

Sir,
                        Estimates, 1931/32.
        With reference to my No.38/N/30 of to-day's date submitting estimated requirements for 1931/32, I have the honour to request your consideration of the following matter.
2.   It is felt that this district offers excellent scope for Maternity and Child Welfare work and an effort is being made to increase the usefulness of the local medical services in this direction. Situated as I am at present however I find myself handicapped through lack of staff. My own time and that of my two hospital orderlies is fully occupied with the daily routine of attendance upon inpatients and outpatients at the Sumbawanga Hospital.
3.   If I were myself able to devote more time to this particular work I am certain that there would be a considerable increase in the number of women attending the hospital. As it is however the women show a natural disinclination to being attended to by my hospital orderlies and I am sure in my own mind that the possibility of this often deters women from taking advantage of hospital treatment.
4.   It was at one time believed that there was a possibility of a Nursing Sister being posted to Ufipa but I understand that no such steps are proposed at present.
5.   In this district it would be possible to obtain the services of native women, partially trained by the Sisters of the White Fathers Mission. If funds could be obtained for the employment of two such women, whose training could be completed at the Sumbawanga hospital, their services would be most valuable. The knowledge that such "nurses" were always available for the examination and care of women patients would do much towards achieving our object.
6.   I therefore have the honour to solicit your favorable consideration of our needs in this direction and to ask that if possible a grant of Shs. 700/- may be made for this purpose, with under Sub-head, Maternity and Child Welfare, or alternatively by an increase in the allocation for Upkeep of Hospitals. The sum asked for would be sufficient to cover the salaries of the two women and the construction of suitable quarters.
                        I have the honour to be,
                                Sir,
                        Your obedient servant,
                        L. Coro, Sub. Assist. Surgeon.

The above letter was forwarded with strong recommendation from District Officer J.E.S. Lamb, who also referred, in his accompanying letter (Ref. No. 7/F/255 from May 30, 1930) to a previous discussion regarding the suitability of Ufipa for Maternity and Child Welfare work but acknowledging that it would be some time before a European Nursing Sister might be able to be appointed. In all other files available in the National Archives, it does not appear this ever came to pass. The letter from Lamb ends with:

> It may not be found possible for some time to appoint an European Nursing Sister to Ufipa but I think it would be a great pity if existing conditions were allowed to continue longer than is really necessary. The appointment of two native nurses would go far towards improving matters and their employment would not involve any great expenditure.

However, there was no evidence in the archives that the station was provided with any of the staff requested. For many years, there are no further available records which indicate maternal healthcare was ever a priority in Ufipa.

In June 1933, one O.T. Hamilton stated he felt a new ward for the Sumbawanga hospital was now necessary because there were more inpatients needing accommodation than accommodation available. In December 1933, a Sleeping Sickness Officer corroborated this view and reported on the state of the Sumbawanga hospital:

> Excerpt from letter No. s/12/3/1 dated 3 December 1933 from Sleeping Sickness Officer, Kahama, to D.M.S.S., Dar es Salaam
> Sumbawanga Station and Hospital
> The Hospital wards, six in number, have a total floor area of about 1350 sq. feet (two with 375 sq. feet each and four with 150 sq. feet each), a height of about nine feet and a bed accommodation at present of 32. The buildings are in poor repair but I understand than [sic] an estimate for current repairs is to be submitted to your office.
> There is an insufficiency of blankets. Sumbawanga is an exceptionally cold station and I should suggest that heavy woollen [sic] blankets be provided.
> At the time of my visit the number of in-patients was 32, but I am assured that there would be more if more accommodation and funds for Upkeep were available.
> (TNA Acc. No. 450, Medical Dept. File 55)

Through these letters it is possible to see the environmental challenges that were particular to

Ufipa and still exist, particularly problematic for building projects of any sort, which often must

cease entirely during the rains. Additionally, nurses told me that the cold weather, still a

characteristic of the region, led to poor hygiene because people did not like to bathe in cold

water. Despite the weather and infrastructure challenges, the hospital continued to function and

the next correspondence in TNA Acc. No. 450, Medical Department File 55 concerns the

hospital a couple of years later in 1935.

> November 9th, 1935
> Remarks by Inspecting Officer
>
> I went over the hospital with the District Officer yesterday. I am quite satisfied that
> Dr. Ghanekar is doing excellent work with the means at his disposal. I am glad to see that
> at last a new building has been approved, and that sufficient funds have been provided. I
> told the [District Officer] that I would arrange that a [Public Works Department] foreman
> comes down, or that, alternatively, the Prisons Dept. undertakes the work with trained
> staff. An operating table and certain other equipment seems necessary & I agreed to try to
> get this sent down. The sub-ordinate staff seems to be sufficient. The importance of
> keeping a first class S.A.S [Sub-Assistant Surgeon] with full equipment here must not be
> overlooked, as Ufipa generally & Sumbawanga in particular are beyond reach in any
> emergency.
> > Sd/F.J. Bagshaw
> > P.C.
> > Western Province
> > (TNA Acc. No. 450, Medical Department File 55/231)

As in past correspondence, it is plain to see that the colonial administration was concerned with

the remoteness of the Ufipa district and this was a clear barrier to the expansion of medical

services and providers in the area. In July 1936, the Sub-Assistant Surgeon, V.M. Ghanekar,

wrote a letter to the Sleeping Sickness Officer in Tabora, outlining the repairs and infrastructure

problems with the existing hospital in Sumbawanga. He said several walls were nearly hollowed

out by white ants, the thatching needed replacing, and other floors and walls were in bad

condition. He also stated that it was very cold in Sumbawanga and the in-patients needed fires

inside but, because the buildings were thatch, he wasn't sure if this would be possible even if

proper fireplaces might be built. However, a few months later, it seems no progress had yet been

made in addressing these issues and a subsequent letter vividly describes the shortage of

appropriate medical supplies and equipment in these meager facilities:

   Oct. 22nd 1936   Provincial Commissioner.
        I inspected the hospital today and am sorry to find that the buildings proposed
and arranged for last year are still in the air. I observe also that the S.A.S. Dr. Ghanekar
must still operate on a kitchen table. The hospital generally does excellent work with the
means at his disposal, but I wish that these could be improved. Dr. Ghanekar reports that
Tribal dressers were sent down with Microscopes, but insufficient Microscopic
equipment.
               Sd/ F.J. Bagshawe
                  P.C.   (TNA Acc. No. 450, Medical Department File 55/255)

These infrastructure and funding issues seem to not be simply a colonial administrative problem

but continue to plague the current Tanzanian government. As demonstrated in the colonial

records, what was once called Ufipa has long been an administrative challenge due to its

isolation, geography, and weather. The area's peripheral location also made it a very difficult

place to live for any person not from the area and continues to be a barrier to the recruitment and

retention of highly skilled medical personnel:

   Saving Telegram
   To Primed, Dar es Salaam
   From Tryps, Tabora   Ag. S.S.O.
   Saving No. 16/4/893   25/7/1944

        As you may remember it has been laid down that no Sub-Assistant Surgeon stays at
Sumbawanga longer than one year. Mr. Shevade has nearly finished that period and I
wish to move him. I should like to move Mr. Desai from Kahama, where a new broom is
needed, to Sumbawanga. The move will take about a month as Liemba sailings govern
these movements. Can you provide me with a relief S.A.S. for one month in the near
future or must I make my own arrangements from my provincial staff? In that case would
you object to my stationing a senior Hospital Assistant at Sumbawanga during the
movement period.

Mr. Desai will probably try to refuse the transfer, everyone does, so do you approve of my arrangements or can you suggest any other arrangement.

Tryps.   (TNA Acc. No. 450, Medical Department File 55/321)

The above correspondence from July 1944 marked the beginning of a period in which the district struggled to maintain sufficient senior staff at the hospital, with a high turnover rate for the Indian Sub-Assistant Surgeons. In order to try to prevent the absence of medical personnel entirely, the administration discussed other options, including downgrading the station so that it could be under the charge of a lower ranking, less skilled Hospital Assistant or African Assistant Medical Officer. The isolation, remote location, and lack of additional income generating possibilities all deterred more highly skilled people from accepting posts in the region:

TNA Acc. No. 450, Medical Department File 55/336
Saving Telegram
To Primed, Dar es Salaam
From Senmed, Tabora
Saving No. 16/4/973   Date 28 February 46   S.M.O.

Following the recent difficulties experienced by you in posting Sub-Assistant Surgeons to Sumbawanga I wrote to Dr. Cane for his opinion as to whether it should be reduced to a Hospital Assistant Station or possibly held by an African Assistant Medical Officer.
The difficulty for Asians there is lack of Asian society combined with lack of private practice, as you probably well know.
Dr. Cane's reply, recommending the maintenance of Sumbawanga's existing status, is attached for your information.
                                SENMED.

55/337
Memo (handwritten, some parts illegible)
From M.O. Kigoma
To SMO W.P. [Western Province]
                                23.2. 1946
Dear Wilkin,
In reply to your memo about Sumbawanga I should have been very happy simply to have been stationed there.
I am, however, possibly --- gregarious than some others, enjoy the more bracing climate of the highlands and have no special desire to supplement my pay by private practice.

If these Indians, who enjoy considerably higher pay and social position than in their own country (where I've had experience of them) are not prepared to serve in whatever station they are posted, it is preferable in my opinion to deal with them as with – and –in –of any temporary inconvenience-to let them return home.

…

I do not approve of your suggestions that Sumbawanga Hospital be put in charge – of a Hospital Assistant (or practitioner if available). This is a most responsible post-Europeans there also- and no hospital for serious cases or British nearer than Abercorn 100 miles distant. Communications and transport for patients to Kigoma only once in 3 weeks by Liemba.

Yours sincerely, Cane.

Cane emphasizes that the hospital was the only source of any medical care for many miles and therefore provided important services for both Europeans and the local population. The Rukwa region continues to cover a vast amount of land area and the hospital still continues to be a vital source of services in this remote area.

In July 1947, the Tabora Medical Officer wrote to headquarters in Dar es Salaam suggesting they no longer try to force Indian Sub-Assistant Surgeons to work in the Sumbawanga hospital because they were often unhappy and left. As a result, the Medical Office suggested they could 1) elevate the station at Sumbawanga, making the hospital a [European] Medical Officers' station, 2) make it an African Assistant Medical Officers' station, which would have decreased the hospital's capacities and services provided or 3) close the hospital entirely, opening a new facility nearer to Mpanda in the northwest. The reply came just four days later and suggested that closing the Sumbawanga hospital would be an untenable solution and posting a Medical Officer was not feasible due to shortages of staff throughout the territory. A month later, faced with further staffing complications, an African Assistant Medical Officer who was supposed to report to Sumbawanga was instead rerouted to another location and the district missed out on much needed reinforcements (TNA Acc. No. 450, Medical Dept. File 55/345,

55/347). The District Commissioner of Ufipa expressed great consternation in response to these decisions:

Western Province   District Office, Sumbawanga, Ufipa
Ref. No. 17/15/65
The Senior Medical Officer,
Tabora
                              Sumbawanga Hospital
        I note with regret your decision to admit defeat over the staffing of Sumbawanga Hospital.
        The handing over of the medical work of the District to an African Hospital Assistant is to complete the ruination of this already moribund hospital, while it is a serious set back to the native administration dispensaries which depend on the hospital for their supplies and technical advice.
        Fortunately, there is one bright spot in the picture, Dr. Trant, now employed by the International Red Locust Control Service, is making her headquarters at Sumbawanga and has volunteered to supervise medical work at the hospital.
        I have allocated to her the unused housing previously occupied by the Sub-Assistant Surgeon and she has already taken up her quarters there.
        The arrangement, which I hope will meet with your approval, is that seriously ill patients from the International Red Locust Control Service labour force of 1,500 Tanganyika Territory natives will be treated in the Government Hospital by Dr. Trant who will use her own drugs when possible, but if forced to use any Government Stores will return them at the end of the Campaign.
        Rations for International Red Locust Control Service patients will be provided by their supply organization, as will all necessary transport.
        One room of the house occupied by Dr. Trant will be used as a ward for European patients if required.
        Cooperation between the International Red Locust Control Service medical service and Government will be to the advantage of all concerned.
        I shall be grateful for your approval of these arrangements.
                              Sgd. G.M. Martin
                              District Commissioner, Ufipa
                    (TNA Acc. No. 450, Medical Department File 55/354)

I have included Martin's entire letter here as an illustration of the complicated negotiations and the difficulties involved in staffing and maintaining the Sumbawanga hospital. Despite the passage of nearly seventy years, many of these challenges are still present in the Rukwa region. In this letter, too, it is possible to see the ways in which the District Commissioner of this remote outpost circumvented bureaucratic protocols in order to cover the staffing needs at the hospital,

by inviting the Red Locust Control Service doctor, Dr. Trant, to provide services and welcoming

her to live in housing provided for government employees, which she was not. There are a

number of letters which follow and in which others complain about Dr. Trant's presence,

however the Senior Medical Officer in Tabora replied,

> I have no information to give. No doubt it was a bright idea of the local District Commissioner; or else his way of trying to make the administration of our department difficult in order to take revenge on us, because we reduced his station in medical rank. That would reduce, in his view, his 'command'.
>
> Stupid as this may read, it is the kind of thing certain administrators do in this country after being in charge of outstations for several years.
>
> The matter is finished. No action is needed; mainly because the Abercorn office instructed their medical officer [Dr. Trant] to go to the Rukwa swamps and do her work among the personnel there.
>
> (TNA Acc. No. 450, Medical Department File 55/356)

Reading the correspondence, it is also impossible to overlook the fact that Dr. Trant was a

woman and, subsequently, it is hard to imagine her gender did not in some way predispose some

of the men to dislike her, particularly the person who arrived to take over the Sub-Assistant

Surgeon's house in the position of African Assistant Medical Officer and found Dr. Trant living

in "his" house (TNA Acc. No. 450, Med. Dept. File 55/350):

<div style="text-align:right">

Native Hospital,
Sumbawanga,
17/12/47

</div>

The Senior Medical Officer,
Western and Central Provinces,
Tabora

Sir,
    I have the honour to report that as soon as I got to Sumbawanga I found a certain Locust Woman Doctor who is occupying the S.A.S quarter. When I went to see the D.C. the next morning, he told me that was going to stay for some months. I asked whether she was a Government Doctor, he did refuse and said that she was of the Locust Company. She is also working in the Hospital and she even done one amputation of the right leg of one In-Patient, assisted by me in anaethetic [sic]. I have no house where to accommodate myself being a stranger here. Beside this, I came with one Hospital Orderly from Kigoma Hospital and instead of him staying into the H.O. John's house whom he came to relieve I had to take that small banda and staying in it where as the dresser has got no where to

keep. They are staying in one house with Harrison another Hospital Orderly. Please let me know, therefore, if this Doctor is entitled to be in the S.A.S. house or as to whether she is a Government M.O. as we have got troubles of houses here.

<div style="text-align:center">

I have the honour to be,

Sir,

Your obedient servant.

Sgd. Y.K. Harawa.

Hospital Assistant I/C

Sumbawanga

</div>

In the correspondence, another writer laments that the Administration seems to be "once again dictating medical policy," meddling in an area with which they do not have the requisite expertise, and goes on to say that "it is unfortunate that once again the Western Province figures in a clash over medical policy," (TNA Acc. No. 450 Med. Dept. File 55/353) alluding to the fact that this area was notorious for difficulties related to medical administration, which, I would argue, is a sentiment that might extend to the present day in the western regions of Tanzania.

Records from the Sumbawanga hospital pick up again in the 1950s with descriptions from supervision visits. In 1951, Dr. Davies from Medical Headquarters wrote, "…I think we should be ready to 'be in on' this opportunity to get this very isolated station its new hospital which is so badly needed to replace the hovels at present called 'the hospital'." However, after this, it appears the hospital did not receive sufficient funds for several years and the new building projects were frequently delayed by the rainy season. Supervision of the hospital was often impossible due to the poor quality of roads and the lack of reliable transportation to the area, in addition to insufficient personnel. Present day district level health administrators in the region continue to use these factors to justify their infrequent visits to village dispensaries.

The following excerpt seems to encapsulate the Sumbawanga hospital and, once again, sounds as if it might have been written much more recently than 1953, because many of the challenges mentioned remained well into the 2010s:

<div style="text-align:center">101</div>

From Safari Report July/August 1953 by Dr. J.S. Meredith- Sumbawanga District
<u>Sumbawanga District</u>

      On returning from Lake Rukwa, I went to see Sumbawanga Hospital. This is steadily becoming more and more dilapidated and it must be very trying for any Medical officer to have to work under such conditions.

      New wards are being built and the theatre is now in a reasonably satisfactory state. An Autoclave had just arrived and was in the process of being assembled. Drugs supplies had been in a very precarious position until shortly before my visit as there seems to be an inordinate delay in the transport to this outlying station.

      At the same time, it is very hard for such a small station-so very far away- to have to bear the cost of transporting all their stores.

      Dr. Akim, the A.M.M in charge, was of the opinion that he did not have enough work to do but did not seems to realize that in a station which for so many years has borne a bad reputation in the district, so much depends upon he, himself, making work. He does not inspect the Native Authority Dispensaries and without transport, of course, this is not surprising. However, I do feel that he could arrange to travel around occasionally with the District Commissioner or some other local person. (Original 1554/2C)

The cost of transportation has, naturally, decreased in recent years, particularly with better infrastructure, however the burden of transportation costs often continues to fall on district or regional health budgets due to decentralization. Additionally, as will become clear in later chapters, the bad reputation of facilities providing poor quality care (or no care), for a variety of reasons, continued to be a barrier to the expansion of the uptake of services in the Rukwa region for many years[3]. Supply chain problems can rapidly create severe shortages of medications and equipment in the region and were often caused by the cost and logistics involved in transporting goods so far away from more centrally located distribution centers.

    A great deal of building work was completed in the 1950s, including a modest operating theatre and it seems as though the hospital continues to be located in the same spot in Sumbawanga town, though it has gone through several updates and rebuilding projects. When I

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[3] However, starting in 2012, with the arrival of a new Regional Medical Officer and several physicians, care began to improve and the hospital's services have been increasingly in demand ever since.

first visited the hospital, I was told that the hospital had been built in the 1970s but these letters would appear to indicate the hospital has been at the same location since at least the 1950s. On the map, the road labeled "To Abercorn" is the same as the road leading to Mbeya and the road "to Boma" is still the direction of the road to the administrative offices for the districts, which are, most likely, also still located in the same place.
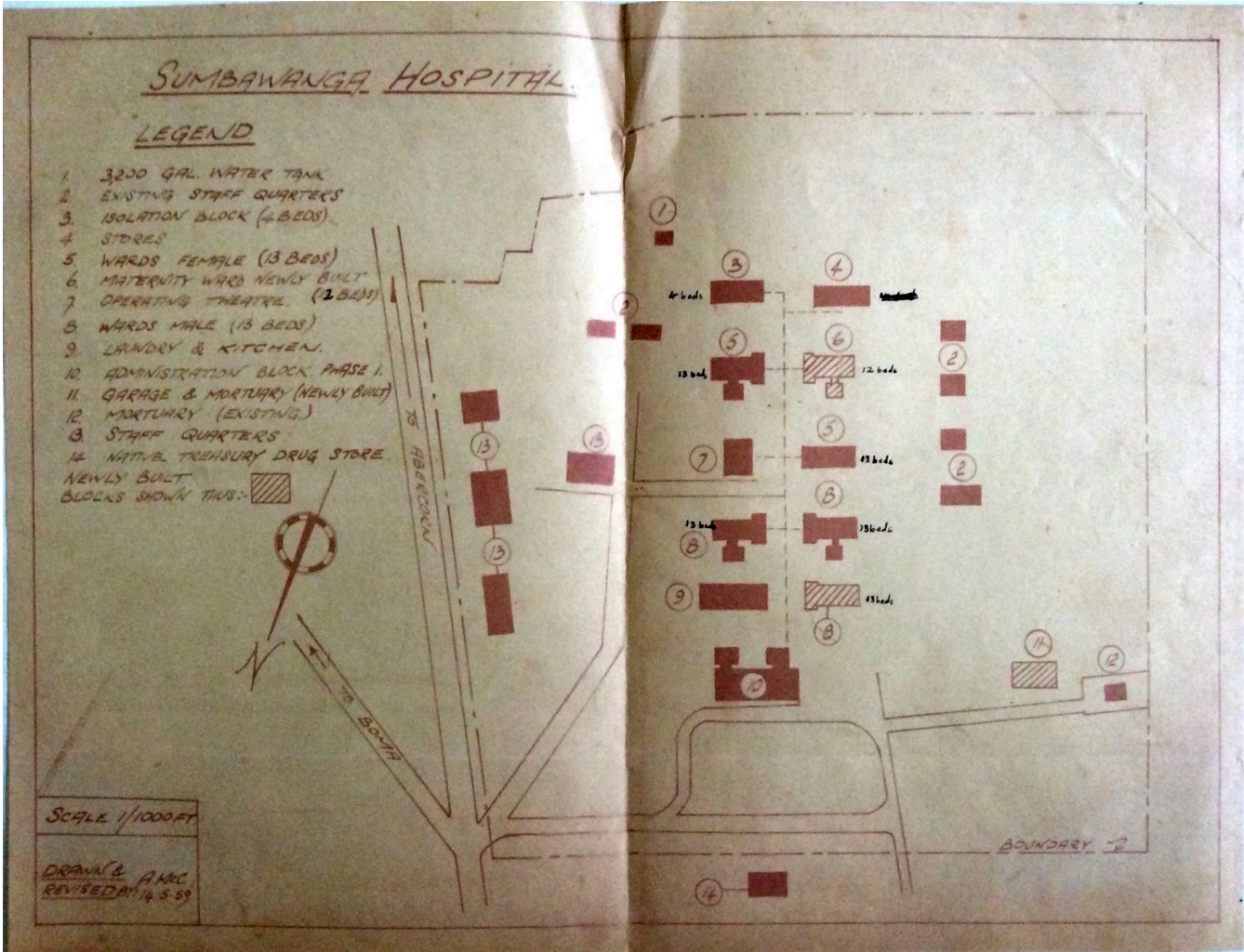
Fig. 3.1 Map of Sumbawanga Hospital plans, 14 May 1959, TNA Acc. No. 450, Medical Department File 55 inserts

3.4 Development of Maternity Services in Tanganyika

The primary debate surrounding maternal healthcare that is reflected in the archival record centers on whether pregnant women should be giving birth in hospitals or at home. This debate was framed in terms of institutional versus domiciliary birth and the colonial administration appears to have reversed opinion a number of times between the 1930s and the end of colonial rule in 1961. Parallel systems of services developed during this time. On the one side were services for European woman during their pregnancies and births, which even extended so far as to include conversations about reimbursing them for travel expenses to hospitals for "lying-in" close to the time of giving birth (TNA 108/9 Vol. II). Services for local women were not nearly as robust and were founded with fundamentally different goals, more related to educating locals in "mothercraft" and using medical services to bring the local population in closer contact with the colonial authorities.

One of the earliest mentions of maternal and child healthcare services in the territory dates to November 6th, 1926 and is part of a general accounting of the expansion of services in the territory. The document indicates that between 1921 and 1926, the number of Nursing Sisters in Tanganyika increased from 16 to 28; Native Hospital staff from 297 to 464; Hospitals from 31 to 52; and Maternity and Child Welfare Centers increased from zero in 1921 to 8 in 1926 (TNA Acc. No. 450, File No. 189/34). The issue of training personnel to provide maternity services became a pressing issue in the late 1920s. In the archival record, there are a number of documents related to the training of indigenous midwives, as well as those discussing the difficulties involved in finding and recruiting suitable candidates to train as domiciliary birth attendants. According to Allen (2004:27)[4], the training of indigenous midwives in Tanganyika

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[4] Allen cites TNA file no. 10409 which may be one of the files that I repeatedly requested and was told the Archives staff were unable to find. In the intervening 20 years since Allen made use of the archives it

received a great deal of attention from colonial administrators in the late 1920s. There was some

difficulty in finding suitable candidates to train as domiciliary birth attendants and there were no

established training facilities during this period (Allen 2004:27). Due to these and other issues,

the government decided to place the emphasis on moving births to the hospital so trained

providers could oversee them in a more concentrated form; it was simply impossible to cover all

the women if they continued to be dispersed throughout the community. However, this increased

the workload in the hospitals and more healthcare providers were desperately needed. The

district officer of the Shinyanga region recommended the administration train young women

(ages 15 to 18) to provide help in the maternity wings of hospitals and clinics in order to

augment the workforce (Allen 2004:27-28). Allen also cites further archival documents in TNA

file no. 10409, which relate colonial officer's descriptions of "native" women giving birth at

home, including suggestions that these women did not need the assistance of midwives as such

(Allen 2004:28).

The archival documents Allen cites also include a great deal of discussion about the

reluctance of families to allow their daughters to undergo midwifery or other training away from

home (Allen 2004:27). This issue of training candidates and removing local girls from their

homes continued to be a challenge even after training centers were formalized. Well into the

1940s and 1950s there are documents lamenting the difficulties surrounding recruitment of

"suitable" young women for training programs. One file (TNA Acc. No. 450, file no. 314)

includes many years' worth of documents assessing the suitability of candidates for training. The

earliest documents are lists of "ayahs for training in domiciliary midwifery" and, in addition to

listing their education and marital status, there are comments about the women's personalities

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is not inconceivable that this file has been irretrievably lost, at least until some future time when the
archives perhaps are moved to a new located and/or digitization occurs.

and perceived suitability for the job. Some comments include: "I think she is too old." "Very careless." "Very good practical worker. Don't think she could do the lecture." "Fairly intelligent, (inclined to be lazy) and cheeky. Unsuitable." "Fairly intelligent-quiet manner. Fairly suitable." "Very good worker." The most suitable students were those women who were intelligent, but not too much so as to be defiant or "cheeky," and hard workers who complied with orders and were generally clean (see chapter 7 for more on the idealized nurse).

3.5 Home or Hospital: The Start of an 80-year Conflict

In 1936, Dr. Mary Blacklock wrote a report entitled "Certain Aspects of the Welfare of Women and Children in the Colonies," a copy of which was circulated among the Colonial Medical Service in Tanganyika. The original contained comments on native women's education and their roles as mothers, describing baby shows and other training fora. In the responses to Dr. Blacklock's report, the Governor of Tanganyika, Harold MacMichael wrote (TNA J/24840/15), in part:

> 4.   The difficulty of obtaining suitable African candidates for training either in general nursing or midwifery has given much concern. Literate candidates for these duties have not in the past been available and many attempts to obtain them from missions have failed through the calls of matrimony or owing to the lack of suitable boarding accommodation and supervision of the girls when off duty. The female native staff of the medical department, whose members cannot yet be dignified by the name of nurses, are therefore mostly illiterate, though attempts have been made in some cases to teach them to read and write during training; but it will readily be appreciated that the technical training of native women of such a low educational standard cannot proceed very far. The difficulties are greater in the towns than in the country where serious efforts to train literate midwives have been made in Government institutions, unfortunately without a large measure of success. In certain missions, however, where the permanency of the staff and resulting personal influence with parents and girls render moral control and discipline effective, better results have been achieved, though even there the number of girls who carry on their work after completion of their training is negligible when the effort expended on teaching them is taken into account. For these reasons the training of health visitors has not been attempted.
>   Better results are appearing in the training of colored girls not of pure African descent. A small number of these girls is under training and they promise well; and provision has been made for expansion of this service during the present year. But I fear

it will be some years before the supply of even moderately competent native midwives and nurses can meet the great need throughout the Territory for work of this nature.

Maternity and child welfare work is carried on by women at twelve special clinics maintained by the Government and by missionary societies, some of which receive financial assistance for this work from the Government.

…

5. In short, while agreeing in principle with most of what Dr. Blacklock writes, it will, I fear, be several years before substantial progress in the education or employment of native women can be made in this Territory.

Harold MacMichael
Governor

It is clear that the territory's administrators were still struggling to generate an effective means of recruiting, training, and retaining local midwifery staff. Fundamentally, it was difficult to find candidates with the requisite levels of formal education. The recruitment of high quality, i.e. academically successful nursing school candidates continues to be difficult in present-day Tanzania. At the same time, local women were utilizing the services of the government's health facilities more and more, even for uncomplicated births (Allen 2004:29).

In the late 1940s, one of the medical officers stationed in Tabora, in Western Province began to propose a number of changes to the provision of maternity care in her province, as well as for the territory as a whole. Dr. Jackson extensively reviewed the state of medical services in her province, particularly focusing on maternal and child health services. Some of the relevant parts are included here:

Present Government Maternity Services
I. Aims and Methods. The first maternity services appear to have been instituted as one of the instruments for fact finding in a survey made from 1927-31 in Kahama- this place being chosen as a typical section of the native population. Women were encouraged to use the lying-in facilities provided; it was realized that institutional delivery of all women in Tanganyika would probably never be possible but the contact with the Africans at lying-in wards could reasonably be expected to be a valuable source of information as to beliefs and practices connected with women's and children's lives. Also it was considered that if large numbers of midwives were trained (and this can be undertaken only where an institution offers material for demonstration practice) the loss of lives in childbirth would be greatly reduced.
…

With the exception of the Sewa Haji Hospital, where proper attention is given to female out-patients, I consider that the plight of sick women and children is hopeless, even Hospital Assistants don't seem interested in them, and firmly as I am convinced that prevention of disease in children is of infinitely more value than patching up sick children and mothers, I consider that *it is essential to find some compromise in order that we may not alienate the familiarity and beginning of trust which Africans are starting to have in Western medicine*. This compromise can only be devised by people with experience of modern Western welfare clinics combined with a real knowledge of Africans among whom they work. With my English background I am more impatient of the practice of giving a dose of medicine of some kind to every woman and child attending the clinic, but most people who have much experience of African woman consider that to be necessary and the educated Arab and African men with whom I have discussed this feel that the idea of banning medicine from welfare work is too advanced for their women folk. (Emphasis in the original, TNA Acc. No. 450 File 108/9/169C)

It is clear through her letters that she, as a representative of the colonial administration, viewed the local women who were giving birth in hospitals as a source of information. She only tangentially mentions the possible outcome of institutional birth, and enough trained midwives, as a reduction in the deaths of pregnant women, the first time maternal death was specifically mentioned in the documents I reviewed. She then goes on to describe the types of services offered by the various religious missions in the area and states that their provision of medical services, particularly maternity care, is largely related to evangelism because "meeting mother at an impressionable time in her life, perhaps getting a response to evangelism as an act of gratitude so that mother, and through her, the family will be converted." Dr. Jackson noted,

Present delivery centers- Medical Department, Native Authority and Missions. None of these at present can be closed down for the resultant confusion and sense of frustration in the Africans who have been taught to value these centers for their medical and political and probably other unknown social values would make the Africans suspicious and uncooperative for years in any more useful service we may offer. I have discussed this eagerness to come to a clinic for delivery with all the Missionary workers I have met, with some members of the Administration and with some educated Africans and most of them consider that the main reason for women liking institutional delivery is that it is the only way in which they can evade traditional rites and practices. This is itself important as a beginning of throwing out old practices, but its importance is enhanced by the fact that among most tribes it is customary for people to go for advice regarding the care and upbringing of the child to the person who has had charge of the delivery. Some mothers are prepared to go for advice to the person who has given ante-natal supervision, but these are the people coming from homes in which they are allowed to be delivered in a

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manner advised during pre-natal supervisor is ousted and supplanted by the traditional assistants and the care of the child is then directed by these traditionalists and the mothers are only allowed to take their infants to hospital when they become really ill.

(TNA Acc. No. 450 File 108/9/169C)

It is here that we can see the beginnings of what was to be a very long-lasting problem. Since the

beginning, medicine had formed a central route to the good will of the local population. By

bringing people to these services, it was easier to learn about their thoughts and practices, but

also to track and surveil them. By changing the recommendations about giving birth in hospitals

to refusing to serve women without complications or abnormalities, the colonial administration

risked incurring the ill will of the local population. Just as Dr. Jackson feared in the 1940s,

repeated changes in Tanzanian policy related to the roles of local, indigenous midwives and the

roles of biomedical institutions have reduced people's trust in these facilities (chapter 4). Dr.

Jackson's recommendations included,

> 1. Institutional delivery should however be permitted. This compromise with the status quo is necessary in order that we may not alienate the familiarity and confidence already gained. It may even be necessary as one of the steps in development when we are in a position to expand Maternity and Child Welfare work in areas of the territory which have not yet come into contact with any such work. It is important however that the work of Maternity and Child Welfare clinics should not be judged by the number of institutional deliveries and that lying-in wards such as the present remote Native Authority "Clinics" in the Tabora and Nzega districts be avoided. European supervision and adequate ante-natal and infant welfare facilities are essential in any "clinic."
> 2. Institutional delivery of women should not be encouraged except for (a) abnormal conditions which should be treated in a maternity ward of a general Hospital which alone has adequate and Staff for surgical obstetrics and (b) a training school where nurses with general training are trained to staff maternity wards, and young women are trained before marriage i.e. a general training in hygiene and child care.

(TNA Acc. No. 450 File 108/9/169C)

Importantly, Dr. Jackson suggests that the overall success of maternal child health services

should not be determined by the number of institutional deliveries. She also emphasizes the

importance of facilities that have surgical capabilities. In these recommendations, she was well

ahead of her time. She was highlighting quality of care over numbers, a concept which, in the

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current era of randomized control trials and metrics, continues to highlight important tensions within biomedicine and at the policy level. Dr. Jackson's letter generated a great deal of interest and response, with some respondents accusing her of not being familiar with "the natives" and others very much in favor of her views and propositions. She was eventually moved to Dar es Salaam to run a training school and help direct the reinvention of maternal and child welfare services in the territory.

In February 1947, the Director of Medical Services wrote,

> A survey of the existing maternity clinics is now in progress to determine how it may be possible to ensure that these objectives are attained. In the meantime, as a matter of policy, the establishment of new maternity clinics will not be encouraged, unless it is made clear to this Headquarters that:
> • Personnel, time and facilities are available to allow for the full program
> • This program is fully developed on record and understood by the Officers concerned
> • The assumption of such additional duties as may be entailed, is without detriment to existing departmental commitments.
> • Additional fiscal and building requirements are fully foreseen and within reasonable prospect of attainment either from public or private funds. (TNA 108/9/177)

The Director's letter draws attention to the need to ensure well-functioning facilities by not initiating their creation if their sustained support and access to funds and facilities could not be guaranteed. Unfortunately, this holistic approach to the expansion of medical services was not sustained as the demand far outpaced the available funds, facilities, and trained providers. From this point forward in the file there is a great deal of confusion about what Dr. Jackson's report, and the Director of Medical Services' response to it, meant for the actual provision of care for pregnant women. One representative letter reads:

TNA No. 108/9/178
11/1/369   10th February 47
The Provincial Commissioner,
        Western Province,
                Tabora.

        Maternity Clinics, your No. 1550/9 dates 6th February 1947, refers.
        No written instruction has been received from the Director of Medical Services, nor
has any written instruction been issued from this office excluding normal confinements
from the Clinics. It is possible that Dr. Jackson, whilst on safari, has issued such an order
to individual clinics during her visit.
        Such an order would be in line with the policy discussed with the Honourable, the
Director of Medical Services during his visit here. The future policy would be aimed at
encouraging ante-natal and child welfare work with the object of reducing maternal and
infant mortality. To do this, it would be necessary to reduce the number of admissions of
normal confinements, which do not benefit the country as a whole.
        The object of ante-natal work is to ascertain whether the case will be normal or not,
and to attempt to correct, before confinement, irregularities which may cause a difficult
birth.
        If you wish, I will ask Dr. Jackson, on her return from leave about the end of this
month, whether she has in fact issued any such order. I have no doubt she has done so,
and if that is the case I should agree with it.
                        Senior Medical Officer.

Later in February 1947, the Director of Medical Services again intervenes in the correspondence

in an attempt to raise some concerns as well as to clarify directions for maternity care.

        Your 11/1/369 of 10 February copied to me for reference: I do not of course know what
        action has in fact been undertaken by Dr. Jackson, but my only apprehension rests upon
        the question of timing. The judiciousness of the pace of change must rest upon you and
        the person on the spot. I do not advocate timidity but I do suggest that sudden revolution
        is not sound tactics.
        •   The general principle that the interests of the abnormal pregnancy are
        paramount to those of the normal is reasonable, but to refuse midwifery attention to the
        normal with the hope that the abnormals will occupy full time attention is in my opinion,
        unsound. I would be prepared to support the criterion of all "comers" within a specified
        radius from a clinic to which you could expect the resultant infant to be brought in
        weekly or fortnightly, or at such other interval as may be appropriate. Those mothers who
        fail without good reason to collaborate, should be listed and in future pregnancies, if
        normal, should be penalized to the extent of offering ante-natal services only; not
        delivery services. As for normal from distances beyond the practical "follow-up" required
        for infant welfare services, they might have the lowest priority for delivery services.
        Abnormals from a distance should have the same priority as any other abnormal. (TNA
        No. 108/9/180)

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I include the above excerpt also in order to illustrate the tactics the colonial administration was trying to use in order to incentivize antenatal care and to limit institutional births. While Tanzanian women now nearly all attend the antenatal clinic at least once in their pregnancy (NBS and ICF Macro 2011), only around half give birth in health facilities. It is plain to see that inconsistency and reversal of course have long plagued maternal and child healthcare efforts.

3.6 Village Midwives, Home Births, and Transportation

The debate picked up once again in the 1950s. In 1950, the Provincial Medical Officer of the Lake Province refers to suggestions to train "village midwives" in order to increase the services available to women giving birth at home and to expand the rural midwifery services:

> The "village midwife" should therefore combine the functions of assisting in delivery with those of the "health visitor". If she is to do her two jobs properly her sphere of activity must be strictly limited. She must be acceptable to the local population, which implies that she should be a local resident of mature age. She will therefore probably be married or a widow and have a family of her own to look after. Such a person is unlikely to be able/supply the needs of more than 100 families. (TNA No. 314/127)

In addition to not having the space and trained staff to support institutional deliveries, the Provincial Medical Officer and others, including Dr. Jackson in her earlier letters, saw domiciliary births as a way to gain entry to local women's homes and thus provide them further education on topics such as hygiene and child rearing. The full text of the above letter is included in Appendix F, item A. In other areas of the territory, including Tanga on the east coast, there were other ongoing efforts in 1950 to encourage domiciliary birth and provide women with someone to check on them during their births or shortly afterwards (TNA 314/131 text included in Appendix F, item B). One of the most important aspects of the schemes designed to support home birth was appropriate transportation for the nurses, aids, or others who were meant to be providing these services. Without an ability to reach the women in their homes, the whole scheme would be for naught.

The challenge of providing transportation for the purposes of helping women give birth at home proved to be a serious limiting factor. I was once relating to a Tanzanian colleague this idea of nurses in villages visiting women in their homes, possibly going by bicycle, and the person with whom I was speaking began laughing. The thought of a Tanzanian nurse mounting a bicycle in order to visit women in their homes was unthinkable. Needless to say, this model did not last into the post-Independence era. The Regional Assistant Director of Medical Services in Tabora, Dr. Keevill, wrote a lengthy response to the original letter outlining the rural midwifery expansion plans (Appendix F, item C) and several of his main concerns were related to the fact that many local women had come to prefer institutional delivery. He did not imagine there would be any objection from the local Native Authorities:

> There is no doubt that the Native Authorities would welcome a "Midwifery Service." The local members of Barazas always know what to ask for in order to be regarded as "progressive;" it is not at all so certain that the rural African women are at present making much demand for domiciliary midwifery. That the need exists there is no doubt at all. That it is a tough fight to get the women to accept what we think is good for them is also without doubt. (TNA 314/133 and 133A)

In later correspondence, the same Regional Assistant Director of Medical Services, mentions the fact that many of the Native Authorities take pride in constructing the buildings for clinics but then are unable and/or uninterested in maintaining them once, "Their prestige has gone up, they are now regarded as 'progressive,' so why worry if the place is falling down or if the dresser is openly taking bribes or indulging in malpraxis [sic]." This short excerpt from the Assistant Director's letter ties biomedicine to "modern" or "developed" identity construction, which continues to figure into biomedicine's role in Tanzania to this day. Additionally, he writes of bribes and malpractice, topics which repeatedly arose in community focus groups in 2015 (chapter 4). This evidence suggests these problems may consistently ride the coattails of

bioburocratic expansion in whatever era, particularly when the expansion occurs in a

haphazard, erratic way without the necessary supervision, supplies, and support.

The Regional Assistant Director of Medical Services cites the government's ability to

assist in running these facilities as being limited by a lack of sufficient funds, tutorial staff,

supervisory staff, and communications and writes,

> Some comparatively wealthy Native Authorities have funds available for the erection of dispensaries and clinics and do not seem to understand why the Medical Department does not welcome the multiplication of buildings. It needs to be explained to them that the provision of a building is usually the easiest and least important part of a medical service (TNA 314/136A).

Once again, here Dr. Keevill seems to be presaging the future problems that would follow the

Tanzanian government for years to come, well into the time when I conducted my fieldwork.

Empty buildings do not qualify as biomedical facilities.

Significantly, Dr. Keevill's first letter also includes a portion on the local midwives who

were already operating in the area,

> 6. It may not be widely realized that there is already in existence a rural midwifery service. Each small area is served by African women who are recognized as the local midwives and who receive remuneration either in cash or in kind for their services. They are mostly illiterate but they have some accumulated local wisdom (not to be dismissed too contemptuously) and they are accepted. It seems to me that these are the women who should be taught, not midwifery but the elements of cleanliness, e.g. the importance of hot water and soap and the use of a nail-brush, even possibly the use of some harmless antiseptic such as Dettol to add to the hot water and to cleanse, if not to sterilize, the old safety razor blade or the traditional piece of "mtama" stalk with which the cord is cut. Such women would not look to Government or Native Authority for remuneration; they would simply have been helped to do better a job on which they are already employed. (TNA 314/133 and 133A)

Though this letter is from 1950, the wording regarding these "traditional birth attendants," as

they would later come to be called, might be from the 1990s, down to the very use of Dettol, still

in existence, and the feeling that these women should not expect remuneration from anyone

(chapter 4).

3.7 Bioureaucracy and Abnormal Bodies

In 1953, the Colonial Medical Department in Tanganyika began to stress the use of

institutional delivery services only in complicated, abnormal cases, in order to stem the increase

of women without complications who came to the hospitals to give birth. In its focus on

abnormality, the Colonial Medical Department was sanctioning health services, and the

subsequent biobureaucratic expansion, on the grounds of a certain, biomedical definitions of

deservingness and need, predicated on deviations from the normal, which are notoriously hard to

determine in pregnancy. These decisions had repercussions for years to come and fundamentally

undergird the approach to maternal health services that still persists and continues to trouble

Tanzania today. A representative description of the challenges and decisions, from July 1953:

> 2. You will see that the doctors are now of the opinion that we have now reached the
> stage when maternity services should concentrate more on domiciliary visits than what
> they call "institutional midwifery" and which to us laymen means "maternity clinics."
> 3. Probably none of the Assistant Directors of Medical Services will have been on the
> service long enough to recall that great efforts were made by the Provincial
> Administration, at the request of the Medical Department, to encourage African women
> to go into maternity clinics. The success of those "institutions" is a tribute to the work of
> the administrative officers in the districts concerned. It may not be as easy as the doctors
> imagine to reverse this teaching and encourage women to stay at home rather than go to
> the clinics. However, I think we will all be glad that matters have reached this stage and
> will agree that, if it is practicable, we should adopt this policy.
> 4. I should very much like to know your views on the matter.
> M.S.S. (TNA 34300/74)

Local, African women had been disciplined into compliant colonial subjects, trained to attend

maternity clinics and give birth in institutions. Reversing the decision to encourage institutional

deliveries most likely raised complicated negotiations about the role of care. Additionally, these

systems and policy reversals were laying the groundwork, producing the conditions that continue

to privilege and disallow certain forms of maternity care throughout Tanzania. In response to the

above letter, many of the provincial commissioners responded and most were skeptical of the

changes, citing reservations linked to the economy of institutional services, the greater ability to

control services when provided in an institution, and the ongoing lack of enough personnel to adequately undertake home health visiting, particularly in the most remote areas (see Appendix F, item D for further information).

At this point in time, the colonial government proposed five changes in maternity care: 1) an emphasis on prenatal and postnatal care with hospitalization only for complicated maternity cases, 2) a curb on the "uncontrolled expansion" of institutional midwifery services, 3) encouragement of home births for normal cases, 4) development of domiciliary services in rural areas, and 5) the training of "native" midwives for domiciliary work (Tanzania National Archives 34300). This reversal of policy was, in fact, a clear harbinger of the future indecision that would mar both national and international policy recommendations concerning maternal health, extending to the present day. A few years later, the 1957 Annual Report from the Provincial Medical Office in Tabora for the Western Province stated that, despite the change in policy, hospital deliveries continued to increase and, "Deliveries at home unfortunately have not increased, and there are still large numbers who have delivered before the arrival of the Midwife" (TNA Acc. No. 450, File No. 1614/8A). It was clear there would be many challenges on this front for years to come.

3.8 Healthcare Services after Independence[5]

After independence, there was much debate in Tanzania about how best to provide health care services for the population (Turshen 1984:194). The country's First Five-Year Plan was issued in 1964 and it focused on the achievement of self-sufficiency in health personnel requirements, raising the national life expectancy from 35-40 years to 50 years, and increasing

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[5] At this point in history, starting around the Independence era, there are many fewer documents available at the National Archives. I was told many of these files had not yet been released for the public. One alternative would have been to try to gain access to the Ministry of Health's archives, which would be a route for future study.

per capita income (Tanzania Ministry of Health [MOH] 1990:1). The First Five-Year Plan also

sought to establish a regional hospital with specialist and surgical medical care in all of the

regions of the country (Tanzania MOH 1990:1). The emphasis at this time was on improving

hygiene, environmental sanitation, and child nutrition (Tanzania MOH 1990:2), which might be

seen as an extension of similar efforts by the British and the Germans to "civilize" and "develop"

the country. Services initially focused on curative care, which did little to effectively improve the

health of the population when what was really needed was a comprehensive approach to

preventative services, in addition to the improvement of curative care (Turshen 1984:195). An

undated speech (most likely from 1964) given by the Minister for Health, D.N.M. Bryceson,

around the time of the launch of this Five-Year Plan starts off thusly:

> As we plan how we are to fulfill this in the future, we are fortunate to have the report and recommendations of the Titmuss Committee to guide us. This small expert committee came at the end of 1961 as a result of a request which I had made to the African Research Foundation. The Chairman was Professor Titmuss of the London School of Economics.
> This group recommended that we should do a certain reorganization of the health services in order to do two things:
> 1. to make the maximum possible use of all our available resources-of central government, local government and the voluntary agencies;
> 2. to ensure that a particular emphasis would be placed on health education and the preventive aspects of medicine. (TNA HE 1172)

Here, the emphasis on preventative services is plain to see. I have included the other excerpts

from the speech in Appendix F, item E. In summary, the speech also included plans for financing

the medical services portion of the Five Year Development Plan. The Minister covers many

topics, including training of personnel, but the primary message is on the move to decentralize

services and focus on reorienting attitudes in favor of preventing disease and illness via

improving hygiene, vaccination rates, and the like. In a circular on "Training of Nurses" from

July 1963, there was a focus on training medical personnel in order to be able to replace the large

number of expatriate nursing staff who would soon be leaving Tanganyika. The circular

emphasizes the lack of personnel as well as the lack of information about the number of village

midwives and their activities (TNA HE 1172).

In a memo dated May 18, 1964, Minister of Health Bryceson wrote to all healthcare

providers to tell them their roles in helping to support Nyerere's Five Year Development Plan

(Appendix F, item F):

> After explaining a number of policy matters, Mwalimu ended with his call to the Nation-
> It can be done. Play your part. [Fanya wajibu wako]
> Now what does this plan mean to the Health services and what is our part. But before
> turning to that I should like to make it clear that in the context of this Development Plan,
> each of us has two roles to play.
> On is a personal individual one- for this is a plan of the people, conceived by the
> people assisted by our planning experts and dependent on the all-out individual effort of
> each person. So it is the duty of each of us as a member of society to take part in nation
> building projects which have an important place in the plan. All over the country there
> are development committees. It is incumbent on each of us to assist in the work of
> development through discussion on those committees where that is appropriate, through
> energetic and enthusiastic participation in community development projects as they are
> started and whatever form they take, and through personal effort and contribution of
> particular skills or knowledge. Being a laboratory assistant does not relieve you of the
> duty of cultivating a communal shamba, being a doctor does not mean that you should
> not help make a new road, being a nurse does not stop you from teaching young or old
> people to read and write and count. Whatever the development we, as citizens of a
> progressive society, have our personal parts to play and it is our duty to play our part and,
> playing, encourage and assist others to do theirs too. (TNA HE 1172/67)

I also include this excerpt to demonstrate the ways in which socialist rhetoric was deployed in

this period. While none of the healthcare personnel with whom I spoke had begun their studies or

practice in the 1960s, their accounts of their time studying or working under Nyerere reflect the

rhetoric used here. The healthcare sector was an important cog in the machine of Ujamaa

socialism. Bryceson ends his memo by saying,

> We are responsible for the health of the nation. The attainment of the broad aim of an
> increase in life expectancy is dependent upon our efforts. The very target of an improved
> standard of living is dependent to a large extent on the success of our teaching. I know
> that our medical workers, of all grades both in the Ministry and in the Voluntary
> Agencies are already hard worked. Nevertheless, I am asking for more time, more effort-
> particularly and specifically in the field of preventive medicine. (TNA HE 1172/67)

Particularly in light of my conversations with providers regarding their memories of working in healthcare during the Nyerere era, I am led to believe that this rhetoric, which invokes providers as key actors in nation building, imbued them with a sense of purpose and responsibility which those currently working do not feel as strongly. The more diffuse 21st century rhetoric of development and human rights simply does not resonate as strongly on the local level and therefore is not the same kind of motivator for working hard under difficult conditions. One of the retired doctors I interviewed told me,

> Then now, health, it was- we were very strict. With what? With that knowledge. Truthfully, the knowledge that we got, those of us in the beginning, is totally different than now. The knowledge currently is different, and our attitude and that of those who are leaving school nowadays, it is different. Mmm. And us, that quality, it has declined a bit, if you compare with Nyerere's time.

Another provider who had started her career in healthcare under Nyerere said, "Work accountability, people were really working very hard. People had respect and they had love. That is different than what you see [these days]." There were others who also told me they felt that during Nyerere's time the healthcare facilities had been better stocked with the supplies that were available during that period and, overall, healthcare providers were more focused on providing care as opposed to trying to make money. Enriching oneself for personal, rather than national or community, profit was antithetical to the mission of Nyerere's Ujamaa.

With increasing villagization, and its attendant population density, after the Arusha Declaration in 1967, it became easier for the government to provide rural populations with healthcare services. The Second Five-Year Plan, initiated in 1969, after the Arusha Declaration, emphasized the socialist ideals of equitable distribution of, and access to, social services and resources in the country (Tanzania MOH 1990:2). The Second Plan paid more attention to preventive services aimed at curbing the spread of communicable diseases (Tanzania MOH

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1990:2). There was still no targeted focus on maternal or maternal child health at this period in the country's development. However, the ideology of Ujamaa and self-reliance led to government efforts to increase equality and social justice, and to minimize conflicts within the country (Campbell and Stein 1992:5). These efforts took the form of social programs and welfare initiatives, which included providing education, rural health services, and clean, running water in the Ujamaa villages (Campbell and Stein 1992:5).

Some sources attribute a decline in the healthcare sector to Ujamaa socialism, citing it as an additional obstacle to improving the health of Tanzanians (Turshen 1984:195-201). According to Bech et al. (2013), the socialist era also contributed to deteriorating work ethics in the healthcare sector. Starting with government guidelines issued in 1971, management of the healthcare sector began to fail and managers had only limited power to discipline workers (Bech et al. 2013). The "ndugu" or "brotherhood" concept, popularized by the socialist government in the latter half of the socialist period, had important implications for healthcare. Okema (1996: 36-46) relates corruption, inefficiency, indifference, and lack of necessary authority and discipline in the civil service to this concept, which had dire implications for government healthcare services and provider morale. However, the providers with whom I spoke, as reflected above, did not seem to remember the period in this way. It is true, however, that they would have been young and early in their careers at this time and therefore did not have administrative responsibilities and would be unable to reflect on those aspects of the system.

3.9 Maternal Health in Post-Independence Tanzania

In 1974, the Tanzanian government launched the first coordinated maternal health services. The coordinating team was comprised of the Ministry of Health, the National Family Planning Association (UMATI), and the National Women's Organization (UWT) and was appointed to

formulate a maternal and child health policy to be implemented throughout the country (Family Care International [FCI] 2007:76). This project also established a dedicated unit in the Ministry of Health, which was responsible for planning, organizing, coordinating, and implementing maternal and child health policies throughout the country (FCI 2007:76). At that point, the main policy objective was to provide integrated health services to at least 90% of the population by 1980 via rural dispensaries and clinics (FCI 2007:76).

Donors had long been the primary contributors to funding for national health initiatives in Tanzania, particularly against the background of poor profits from cash crops on the global market due to the economically difficult period of the 1970s. During this period, much of the social services in the country were underwritten by foreign aid because the organization of the economy could not support these services and the material resources they required (Campbell and Stein 1992:5). By the 1980s it became apparent that the country's limited tax base would not be able to support the increasing health needs of the country (Lambert and Sahn 2002:120). The country's second president promptly accepted money from the World Bank and the International Monetary Fund in exchange for implementing structural adjustment plans in the country. Structural adjustment in the 1980s reduced provider wages and the number of new providers hired, and contributed to a general decline in living conditions and social service provision as the country was forced to reduce spending, particularly in these areas (Bech et al. 2013).

Donors had contributed to the failures of the public health sector, particularly in regards to the sustainability of the system. A lack of coordinated programming and communication had resulted in an inability to create a comprehensive national health strategy (Lambert and Sahn 2002:120). In 1988, the Tanzanian Ministry of Health put together a team of experts in order to formulate the country's first, comprehensive national health policy (FCI 2007:76), which it

published in 1990 (FCI 2007:76; TZ Ministry of Health 1990). The policy's first objective was "to reduce maternal and infant morbidity and mortality and increase life expectancy through the provision of adequate and equitable maternal and child health services, promotion of adequate nutrition, control of communicable diseases, and treatment of common conditions" (FCI 2007:76; TZ Ministry of Health 1990).

3.10 Health Sector Reform and Decentralization

Prior to the early 1990s, the people of Tanzania were not required to pay user fees and for-profit, private sector activities in healthcare were limited (Lambert and Sahn 2002:121). In 1996, the government undertook a process of health sector reform, which included decentralizing many aspects of healthcare planning and delivery. The goal was to let each district have the autonomy to identify and address its particular healthcare needs (FCI 2007:78). The central government still played a part in coordinating broader policies and, at that point in time, the private sector started to play a larger role in health care delivery. Importantly, as a result of these reforms, cost sharing of health services was decentralized to health centers and dispensaries, and communities were to assume responsibility for the financing of health services through a range of avenues, such as community health funds (FCI 2007:78-79).

As part of the health care sector reforms that were initiated in 1996, the government of Tanzania and the donor community started to change the way in which funds for the healthcare sector were allocated. Donors established a Health Sector Basket Fund (HSBF), which allowed them to deposit money into a holding account in the Bank of Tanzania that was specifically earmarked for healthcare programs (FCI 2007:79). There is now a Basket Fund Committee comprised of the Ministry of Health, the President's Office, the Ministry of Finance, and Regional Administration and Local Government, which approves funding and releases funds

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quarterly (FCI 2007:79). The District Council, roughly the county level of administration, is now

the seat of the accounting office for all local and donor resources that go into primary health

care, including safe motherhood initiatives (FCI 2007:79). One of the goals of this reorganization

was better coordination of the flow of donor resources into safe motherhood and other primary

healthcare services (FCI 2007:79).

In 2004-2005, foreign funds made up approximately 55% of the health expenditure in the

country (FCI 2007:81). Spending on reproductive health and safe motherhood programs

amounted to just 7.7% of the total healthcare budget, which itself was just 9% of the national

budget (FCI 2007:82). What all of these data demonstrate is that there has clearly been strong

and consistent political commitment to addressing reproductive and maternal health but the

implementation of policies has been inconsistent and uneven. A lack of reliable and sufficient

funding (or its effective channeling into programs) has also hampered the success of

programming and a concomitant decline in maternal morbidity and mortality.

The long-term effects of these structural issues continue to the present day throughout

much of the country. I have written elsewhere about the origins and on-going effects of donor

involvement and aid dependency in Tanzania, as well as the effects of structural adjustment

policies implemented after 1985 (Strong 2017). Training of medical personnel in sufficient

numbers to meet the demands for services, particularly in rural areas, also remains a challenge.

In the 2010s, the Ministry of Health reduced the time of study for enrolled nurses from four years

to three years and, in some cases, even two years, with mixed results; more nurses are working

but the general consensus among older nurses was that the new nurses' levels of expertise and

knowledge were lower than with previous generations[6].

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[6] Mhamela (2013) wrote a definitive text on the history of nursing in Tanzania, which is available through
the Tanzania Nursing and Midwifery Council. Here, he traces the developments of nursing in the area

3.11 The Evolution of Global Safe Motherhood

AbouZahr (2003) summarizes the entire history of the Safe Motherhood movement so I will not recreate her article here. However, I want to include the main highlights of this movement in order to demonstrate how and why maternal mortality came to be taken up by the global community as a public health problem worthy of time, effort, and financial resources.

The colonial records cited previously in this chapter should make it clear that colonial administration, at least for the British, was concerned with maternal and child welfare as a way to promote progress and "civilization," as well as functioning as a route to winning the hearts and minds of the local population. The reasons that motivated an interest in maternal health evolved over the course of the 20th century. AbouZahr (2003) notes that concern for maternal and child health was included in the League of Nations' founding documents in the 1930s and that these health issues are also components of the WHO's Constitution. With the rise of feminism in the 1960s and 1970s, the United Nations declared 1975 to be the International Woman's Year and organized a conference in Mexico City, the first World Conference on Women and, at the urging of the conference participants, declared 1976-1985 to be UN Decade for Women (United Nations 1976).

This focused attention on women's issues, including health, and generated a large quantity of scholarship on so-called women's issues (Allen 2004:35). It was during this period of increased interest in women's health issues that scholars and policy makers began to pay more attention to maternal mortality globally. Mahler (1987) explains that maternal mortality had not garnered more attention earlier because the scale of the problem was largely unknown. The

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from the colonial period to the present. In this volume, Mhamela also thoroughly reports on the training requirements and programs of study for nurses throughout history, which I will not repeat here. He includes a number of examples of course syllabi from nurse training course, which can also be found in the Tanzania National Archives (Mhamela 2013:86-90).

countries with the largest burden of maternal deaths also had poor infrastructure and were most often lacking vital statistics registry systems that could effectively track deaths and their causes (Mahler 1987). Starting in the mid-1970s, a number of surveys were carried out, which helped to identify the true scope of the problem of maternal death. To this day, measuring maternal deaths continues to be a challenge in many countries (WHO 2015). Rosenfield and Maine (1985) issued a strong call to clinicians and policy makers to rethink their approaches to maternal health, asking "where is the 'm' in MCH?" (MCH- maternal and child health). They suggest that too often the services provided under the heading of MCH did little to address maternal morbidity and mortality but, instead, it was assumed that what was good for the health of children would help women (Rosenfield and Maine 1985). Aside from the sheer number of deaths that could now be counted, the global community identified maternal mortality as a health problem that had severe implications for the well-being not only of the woman and her family, but also her community and countries as a whole, on a social and economic level (Mahler 1987).

The Alma Ata conference on Primary Health Care held in 1978 is most often cited as the beginning of the Safe Motherhood movement, though this was not to be an official movement until almost a decade later. Primary healthcare as a global focus was meant to address the needs of the poor, focusing on community-level health problems, which encompassed maternal and child health (AbouZahr 2003). This conference occurred around the same time as researchers were conducting surveys to measure maternal mortality. The emphasis in the late 1970s and early 1980s on women's health, and improvements in measuring maternal deaths, culminated in the Safe Motherhood Conference, held in Nairobi in February 1987 and jointly sponsored by the WHO, UNFPA, and the World Bank (AbouZahr 2003). The conference gave birth to the Safe Motherhood Initiative, which underwent various transformations throughout the 1990s. The

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1990s also saw enormous scholarly effort poured into identifying the causes of maternal death, particularly in low resource settings, both clinical causes and other, more sociocultural factors. With better understand of underlying causes, both proximate and ultimate, there came the push for interventions to address these causes and reduce maternal deaths. The interventions ranged from training so-called traditional birth attendants, to an emphasis on skilled attendance at birth, to what is now called Basic Emergency Obstetric and Neonatal Care (BEmONC) training.

3.12 Tanzania and Safe Motherhood

Tanzania was one of the first countries to sign on to the Safe Motherhood goals, doing so the same year the conference occurred (Tanzania MOH 2008:1). However, despite planning and formulating a national strategic plan to combat maternal mortality, published in 1992, the implementation was inconsistent (FCI 2007:77). Implementation of the policy recommendations was largely vertical and lacked integration among the various stakeholders. One of the best (or worst) examples of these failures was that no moves were made to create the multi-sectoral safe motherhood coordinating committee that had been called for in the original document (FCI 2007:77). In 1993, after an assessment by the WHO, the country significantly revised the strategy, this time with more of a focus on integration of stakeholders and improving the quality of and access to maternal health and emergency obstetric services, and expanding family planning services (FCI 2007:77). The 1994 International Conference for Population and Development prompted Tanzania to establish a Reproductive and Child Health Section within the national Ministry of Health that same year (Tanzania MoH 2008:1). This new section in the MoH went on to develop the National Reproductive and Child Health Strategy. Over the years, the country has made an effort to continually implement comprehensive strategies to improve health indicators, moving away from a reliance on project intermediates (i.e. number of facilities

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built, similar to Dr. Keevill's criticism of counting buildings) as measures of success and, instead, focusing on measures of individual outcomes (i.e. a decrease in the number of maternal deaths) (Lambert and Sahn 2002:120).

3.13 Shifts in Direction

In the years immediately following the conference in Nairobi, policy makers and public health specialists, against the background of the Alma Ata conference, and an increasing emphasis on preventive and community care, focused on improving prenatal care and training traditional birth attendants (Starrs 2006). Prenatal care came to take on a significant role in the plan to reduce maternal mortality. Routine prenatal visits play an important role in monitoring maternal and fetal health and act as a means for "establishing a good relationship between women and their healthcare providers," which can lead to a reduction in maternal mortality (Magadi, Madise, and Rodrigues 2000:551). In the Democratic Republic of the Congo, for example, studies showed a 17-fold decrease in maternal deaths with the implementation of standardized prenatal care (McDonagh 1996). Based on such findings, the WHO began recommending at least four prenatal visits with the first visit occurring at the end of the first trimester (WHO 1996). Unfortunately, many women in lower income regions of the world have been unable to follow this recommendation (WHO 1996). By the late 1990s, the focus on increasing prenatal care attendance had waned as health officials came to acknowledge the fact that prenatal care is, in fact, a very ineffective mechanism for identifying women at high risk for developing a serious problem in pregnancy or while giving birth (Yuster 1995). Prenatal care came to be seen by many as a costly and inefficient way to identify women who might develop a problem when many of those who had gone through their pregnancies free of problems suddenly developed a life-threatening condition at the time of birth with little or no warning (Yuster 1995).

In the wake of research bring produced about the complicated and multiple factors contributing to maternal deaths, ranging from clinical problems to gender inequality, the Safe Motherhood Initiative often manifested as complicated and expensive multi-sectoral schemes that were nearly impossible to implement (Starrs 2006). At the end of the movement's first decade, the global community recognized the failure of the primary care interventions, the large scale training of traditional birth attendants, and the diffuse, complex programming; organizations and governments shifted their approaches to focus more on health sector interventions designed to increase women's access to skilled, professional care, particularly when they faced obstetric complications (Starrs 2006). In 2001, the Tanzania Ministry of Health issued a report on the country's progress in the first decade of attempts aimed at reducing maternal deaths (MoH 2001). The report elaborates the country's efforts to create and implement a national sentinel system for tracing cause-specific mortality, allowing them to collect more accurate information on the causes of death (MoH 2001:3). The primary outcome of the report is that the country had succeeded in reducing maternal mortality but only in urban areas; declines outside of the urban center of Dar es Salaam were not statistically significant for the period under review (MoH 2001:5). This reflects broader global trends that persist to the present day; inequity in the burden and distribution of these deaths can be tied to wealth, education, and access to other resources including health facilities, all of which are relatively more available in urban areas as compared to rural ones. Interestingly, this report also suggests that in real numbers, maternal death was comparatively rare, even in resource poor settings, and was therefore not a cost-effective measurement of results achieved under the Safe Motherhood Initiative, though it suggests no alternative measures (MoHSW 2001:8).

3.14 Doomed to Repeat History

The policy reversals and the extension of services only to withdraw or drastically change them later mirror debates happening in the Colonial Medical Service fifty years earlier. One of the ongoing challenges appears to be overextension; the aspirations nearly always seem to extend beyond the actual capacity of the government (and affiliated organizations) to live up to the plans, which then creates a vicious cycle of poor progress and dissatisfaction with the outcomes. Unfocused efforts to improve care, lacking consistency in different places, and lacking singularity of purpose, not to mention the financial and human resources, have long delayed further improvements of maternal health in Tanzania, and many other countries. Without attending to the successes, failures, and key debates of the past, the Tanzanian government repeated many of the mistakes that occurred in the colonial era and, perhaps unknowingly, continues to grapple with the systems established many years ago. Biomedicine and biobureaucratic expansion continue to determine which pregnant bodies deserve biomedical assistance or where these same bodies should be allowed to give birth and with access to what personnel and what resources. The bounds, limits, and acceptable forms of caring for pregnant women were long ago determined and continue to produce many challenges and conflicts both within communities and biomedical institutions.

3.15 The Era of the Millennium Development Goals

From the 1990s, a number of policy shifts occurred. Perhaps the most relevant and important was the creation of the Millennium Development Goals (MDGs) in 2000. A set of eight goals designed to focus poverty reduction efforts globally, the MDGs were established with an end date of 2015. Several conversations in the Rukwa region and among NGOs and the Ministry of Health and Social Welfare in Tanzania at the time of my fieldwork revolved around the end of the MDG timeline. MDG 5 was to improve maternal health, with a sub-goal to reduce

maternal mortality by three quarters from the 1990 level (UN 2015). At the close of 2015, the

WHO and partners issued a report on maternal death at the end of the MDG period, stating that

globally maternal mortality had declined by an estimated 44% since 1990, missing the mark of a

75% decrease (WHO 2015:16). In the lead up to 2015, global health policy makers and

practitioners worked to redesign the efforts to reduce maternal death for the post-MDG

landscape, producing a new set of development goals terms the Sustainable Development Goals,

which include 17 comprehensive target areas. Goal 3 is related to health and wellbeing and the

first target listed under this goal is "By 2030, reduce the global maternal mortality ratio to less

than 70 per 100,000 live births," emphasizing the ongoing importance of this goal which the

world failed to reach under the MDGs (UN 2016). For those organizations focused on maternal

health more specifically, they have created the "strategies toward ending preventable maternal

mortality" or the EPMMs (WHO 2015a). The EPMM guiding principles include empowering

women, girls, families and communities, integrating maternal and newborn care, prioritizing

country ownership, leadership and supportive legal, regulatory and financial mechanisms, and

applying a human rights framework "to ensure that high-quality sexual, reproductive, maternal

and newborn healthcare is available, accessible and acceptable to all who need it" (WHO

2015a:14).

An integral "cross-cutting action" for EPMM is cited as "improving metrics, measurement

systems and data quality" (WHO 2015a:14). This focus on data collection and utilization builds

on a trend that began under the MDGs but, the argument could be made, extends to the period in

the 1970s which paved the way for the Safe Motherhood Initiative[7]. The thought seems to have

long been if we can measure it, we can solve it. Indeed, the WHO report on maternal mortality

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[7] Data collection extends to a much earlier time, see Adams 2016 for a brief history of the uses of
statistical data in health projects.

always includes many pages in the beginning of the document which explain how the organization arrived at its estimates, the statistical analyses involved, and the ways in which degree of uncertainty is measured, and how they interpolate data in the absence of robust vital statistic and civil registry systems. Policy makers, politicians, global regulatory institutions, and others often put these data on health indicators to use much more broadly as proxies for state efficacy, stability, legitimacy, and deservingness of aid or investment (Davis, Fisher, Kingsbury, and Merry 2012; Merry 2011).

In a recent edited volume Vincanne Adams and her co-authors (Adams 2016) explore the myriad ways in which metrics are taken up and used for a variety of purposes. Metrics, better evidence via better data, were touted as the panacea to all the global health problems, bringing these health issues out of politics and into the ostensibly less biased arena of science and statistics (Adams 2016:23). However, the chapters in the volume all emphasize the dangers inherent in this thinking. Adams (2016:27; also Erikson 2012) argues that the rise of metrics, and the emphasis placed on them, is in part linked to a call for greater accountability in global health interventions; to know if a project or aid money is effective, there must be a way to measure the outcomes, without these measurements, who was to say that aid money was being utilized effectively? Cost-effectiveness helped to drive the increased focus on data and metrics. Despite this link with calls for greater (fiscal) accountability, Adams (2016:37) suggests data are often fabricated and care, treatments, or diagnoses manipulated in order to correspond with expected outcomes. Additionally, organizations and regulatory bodies circulate and return numbers and statistics, producing globalized renderings of local phenomena (Erikson 2012). Finally, just because some diseases or other phenomena cannot easily be studied via random control trials,

does not mean that they are any less important, nor does it mean data collected in other ways are not valid and useful (Adams 2016:36).

3.16 Conclusion

Oni-Orisan (in Adams 2016) and Wendland (in Adams 2016), each describe in detail the ways in which statistics can be manipulated in calculations of maternal mortality ratios in order to skew numbers in ways that are favorable to politicians, as well as highlighting the uncertainty still built into these calculations. It is with these critiques and warnings in mind that I proceed with the following chapters. The question, the problem, of maternal mortality is one that is inextricably linked to global inequity between high and low income countries and between groups within a country. If nothing else, the archival data demonstrate some of the ways in which reproduction has long been a site of governance and has been tied to shifting political goals. Additionally, these documents demonstrate the ways in which maternity care stubbornly defies standardization and violates the norms of other healthcare service provision. The colonial era, and subsequent policy changes and health sector restructuring produced the current environment in which healthcare providers acted when trying to save women's lives. Certain forms of care (technology-based biomedicine) achieve primacy through metrics, data collection, and the reduction of bodies to numbers and tick boxes. Other forms of care, more affective and relational, were effectively quashed within the biomedical system due to institutional scarcity, which has often been the result of biomedical and biobureaucratic expansion that sought to accomplish too much, too quickly.

Maternal health, and reproduction more generally, can never be separated from state making and perpetuation. In countries that have undergone a demographic transition and now have low fertility rates such as Italy, for example, or during the Ceausescu era in Romania, the

state has actively promoted pronatalist policies. During the colonial period, bodies were a valuable source of labor to be exploited and biomedicine was introduced for practical and ideological purpose; to keep productive subjects healthy and to win the allegiance of the local populations, goals inextricably linked to the expansion of the British empire in the 19th and 20th centuries. Because of the complex and unpredictable nature of obstetric complications that can lead to maternal death, maternal mortality ratios are often used as a sort of litmus test for the overall functioning of healthcare systems (Wendland in Adams 2016:62). What follows, then, is an analysis of some factors that contribute to maternal deaths, while being attuned to the perils of biological reductionism. The chapters present the varying discourses surrounding this ongoing, and sometimes seemingly intractable health problem, as well as an analysis, centered on healthcare facilities and providers, of how maternal risk is shaped across the various levels of individuals, community, district, region, and state in light of these historical precedents.

Chapter 4: "Pregnancy is Poison:" Logics of Risk and Care in the Community

4.1 Introduction

At the end of the rainy season, as I navigated mud-slick roads with the windshield wipers on their highest setting, white knuckles gripping the steering wheel, on the way to Kizi village, the district ambulance sped by in the opposite direction, taking a patient to the Namanyere District Hospital. When Rebeca and I arrived in Kizi, we first went to the dispensary and there, once we began talking with the staff members, discovered they had called the ambulance a couple hours earlier. They had been trying to help a woman in labor since the middle of the night, around 3am, when she had arrived from home complaining of problems. When the nurses examined her, they found Pieta's baby was transverse and the baby's arm was the presenting part; she would need a C-section in order to give birth. She was 25 years old and pregnant with her third child. Pieta's relatives had taken her back home, refusing help from the nurses, but insisting her father-in-law would be able to "say some words" to resolve the social conflict in the family, and the malpresentation, making it so she could give birth without an operation. After they refused to let the nurses call the ambulance, Pieta and her family insisted on returning home with her in the hopes she might still give birth. Eventually, the nurses from the dispensary went with the village executive officer to her house and were able to convince the woman's family to bring her back to the dispensary again several hours later, now around 9am, so that they could finally call the ambulance. Though they had called for the ambulance from the district medical office around 9 or 10am, the car did not finally arrive until 1:30pm because of the trip to another village and then back to Namanyere, which was when we had passed it, and then back again to Kizi.

While we were waiting for the ambulance to arrive, I looked in on Pieta and saw she had a full bladder and the nurses were trying to keep her hydrated with IV fluids. I asked if she had been able to urinate and the nurses said no but that they did not have any catheters. At any rate, the baby was compressing the urethra, which would have made it difficult to insert a catheter even if they'd had one. Pieta was confused, exhausted, and barely able to answer questions. When the ambulance arrived they loaded her into the back, along with two male relatives to donate blood, in case she would need it, and two of her female relatives. Her husband planned to go ahead on a motorcycle. As we waited for Pieta and the relatives to settle into the ambulance, and for the nurses to hurriedly fill out a make-shift referral form, I spoke with her husband. He told me that Pieta herself had asked to go back home, refusing to let them call the ambulance. When I pressed for further details about the family problems the nurses had mentioned, he was noncommittal and vague. After they left in the ambulance, I talked with the nurses about the situation again and they accused Pieta of lying about when her contractions had started. They were saying that maybe this lying was because Pieta had planned to give birth at home and didn't want the nurses to know she'd been in labor for some time already before arriving at the dispensary. The nurses told us that it was not uncommon in their village for women to report having had fewer pregnancies so that they would not be told to give birth at the district hospital. People in Kizi believed any referral to the hospital meant the woman would always have a C-section.

Before heading back to town, Rebeca and I stopped at the district hospital in Namanyere, where Pieta had had her operation, to see her. She'd had a C-section, and she had baby boy, weighing 3.0kg but he was stillborn. She also had received a blood transfusion and drugs were in such short supply that she and her relatives were told she had to buy them but, they didn't have

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any money. In the end, the family had to go to the District Nursing Officer herself to get the money for Pieta's medications (facilitated by the hospital), which was exactly what a lot of people feared when they were told to go to someplace other than their village dispensary—having to spend a lot of money on supplies or medications. Pieta also told me multiple times that she was glad we had been there because she felt that the nurses at the dispensary *"walinishangaa tu"* (they were just shocked by me). She told me she felt the nurses had not known what to do with her case and she said she had been confused and so tired. Pieta's case illustrated many of the ways in which community and biomedical perspectives could come into conflict; she was but one woman who experienced delays during an obstetric emergency due to complex interactions of clinical, social, and infrastructural factors. When we received women like Pieta at the Mawingu Hospital maternity ward in town, we rarely saw, or even heard about, all the events preceding the woman's arrival but, all these events, and the woman's prior life, indelibly influenced her decisions, conceptions of risk (biomedical and social), and, ultimately, whether she (and her baby) lived or died.

While most women and healthcare providers with whom I spoke did not necessarily view pregnancy as an illness, it was an inherently risky time in a woman's life. Following after a spate of maternal deaths at the regional hospital, one nurse said, "Who said pregnancy is not an illness? Pregnancy is poison!" expressing her opinion of the dangers inherent in this period of a woman's life. However, the global public health constructions of the problem of maternal mortality have been built on logics of risk and care that sometimes differ from those logics that circulate and guide actions and practices within communities. The World Health Organization's recommendations, which permeate policy making at national and local levels, are based in a particular version of the world in which pregnant women are rational neoliberal subjects who,

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with the right amount of information and health education, will make choices during pregnancy and while giving birth that will help them to be healthy and safe. However, in this chapter, I demonstrate the ways in which those logics differ from the gendered, social logics operating within communities that work to guide and influence women and their larger networks through more complex decisions related to care, medical pluralism, and the sociality involved in reproduction. Women did not arrive at the Mawingu Hospital from a vacuum but, instead, after having already navigated and experienced life events that influenced their opinions of and trust in the biomedical system. Within public health generally, and at Mawingu Hospital, maternal mortality has often been reduced causally to women coming from villages and lacking trained assistance. While I disagree with this reductionism, social relations, meanings of pregnancy and risk, and expectations for local midwives within communities did shape the strategies and decisions of pregnant women and their families. With this in mind, I present some of the underlying experiences and logics that influence women's lives before they arrive at Mawingu Regional Hospital pregnant or in the midst of an obstetric emergency in order to better understand how a woman might come to die at the hospital. I start the chapter with a brief summary of the ideas and worldview that drive biomedical and public health discourse on maternal health and maternal risk in order to argue that the logics structuring public health and biomedical programs were intertwined with those logics working at the local level in Tanzania in much more complex ways than presented by those bodies and officials designing programs meant to reduce maternal deaths. This insight, then, complicates and informs the interpretation of the events I relate in Part III within Mawingu Hospital.

This chapter is based on participant observation in communities in both the Rukwa region, as well as my earlier experiences in villages in the Singida region of the country.

Additionally, I draw on the community group discussions my research assistant, Rebeca, and I conducted in eleven different villages in the Rukwa region with women, men, community leaders, and local midwives or *wakunga wa jadi*. I have organized the chapter to follow, more or less, the way in which a woman's route to Mawingu Regional Hospital might unfold, broadly speaking, over her life course- childhood, marriage and domestic work, pregnancy, and care seeking.

4.2 A View from Above: The WHO's Definition of Maternal Mortality and Risk

The WHO, public health practitioners, clinicians, and policy makers generally divide the causes of maternal mortality into direct and indirect causes (Ronsmans and Graham 2006). The direct causes are those clinical conditions responsible for the majority (though certainly not all) of maternal deaths worldwide and include hemorrhage, complications from abortion (or attempted abortion), hypertensive diseases (such as eclampsia and pre-eclampsia), sepsis/infection, and obstructed labor (Maine and Rosenfield 1999; Ronsmans and Graham 2006). Despite years of efforts to reduce deaths from these conditions, they continue to be the most common causes of maternal mortality. Often these clinical problems are caused or exacerbated by a lifetime of poor nutrition, repeated malaria infections, anemia, and STIs, in addition to tetanus (Merchant and Kurz in Koblinsky, Timyan and Gay 1996). Clinically, other deaths are the result of the pregnancy exacerbating an underlying health condition such as diabetes, HIV, malaria, obesity, or heart problems (WHO 2015). Clinicians and public health practitioners classify those women whose deaths occur during pregnancy, but are caused by these pre-existing conditions, as indirect maternal deaths.

Clinically, one of the greatest challenges in providing emergency obstetric care is the fact that many women do not exhibit any signs of problems or experience any complications during

their pregnancy. But, they can suddenly develop a life-threatening emergency at the time of giving birth or immediately after. Being unable to predict with complete accuracy (Majoko, Nystrom, Munjanja and Lindmark 2002; Yuster 2005) who may or may not develop problems presents a challenge to healthcare workers and women alike and is, strictly speaking, impossible. By the 1990s, after a decade of the Safe Motherhood Initiative, the policy and public health focus on increasing prenatal care attendance had waned as health officials came to acknowledge the fact that prenatal care is, in fact, a very ineffective mechanism for identifying women with clinically determined high risk for developing a serious problem in pregnancy or while giving birth (Yuster 1995)[1]. The global health tactic of choice became a more aggressive move to institutionalize birth in order to monitor all women—those with known risks factors and those without—in an attempt to save more women's lives.

The public health literature often attributes indirect causes of maternal death, as one article from 1985 states, "to the patient, the environment, cultural beliefs or to defects in the health services" (Rossiter 1985:100)[2]. Within public health, the three delays model continues to structure analyses of maternal death. The delays include: 1) deciding to seek appropriate medical help for an obstetric emergency; 2) reaching an appropriate obstetric facility; and 3) receiving adequate care once at a facility (Thaddeus and Maine 1994). This model constituted an

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[1] However, prenatal care continues to be many women's first introduction to the biomedical healthcare system and, therefore, continues to play an important role in influencing their perceptions of what the system can offer. Additionally, the WHO released new antenatal care guidelines in November 2016 which now recommend 8 prenatal visits, double the previously suggested number (WHO 2016a). In Tanzania, nearly 95% of women attend prenatal care at least once, a number that has remained very consistent for several years.

[2] Public health practitioners and clinicians often include factors such as women's autonomy and status within a society, delays in deciding to seek care, failure to recognize the severity of an obstetric problem, or family issues that cause a delay in seeking care, which can also be related to delays associated with lack of transportation and poor infrastructure, as indirect causes of death (Danforth et al. 2009; Gabrysch and Campbell 2009; Mrisho et al. 2007; Pembe et al. 2008; Prevention of Maternal Mortality Network 1992).

underlying logic for clinicians, policy makers, and public health practitioners and continued to

influence discussions of maternal mortality in the Rukwa region. The pervasive influence of this

mode of thinking was particularly apparent in discussions during maternal death audit meetings

when providers had to decide when delays occurred, with blanks on the form for each of

Thaddeus and Maine's three delays (see chapter 9). Both the broader public health literature, and

the healthcare workers with whom I worked, blamed women's decisions to seek care from a

local midwife or other indigenous healing expert for delays in reaching biomedical healthcare

services when an obstetric emergency was underway.

Since the global policy recommendations shifted away from training traditional birth

attendants in the 1990s[3], the WHO's primary approach to reducing maternal deaths has been

encouraging women to give birth with the assistance of a skilled provider, preferably in a

biomedical health facility equipped with adequate supplies and staffed by providers trained in

(minimally) Basic Emergency Obstetric and Neonatal Care (BEmONC) (Koblinsky et al. 2006;

Ronsmans et al. 2003; Scott and Ronsmans 2009)[4]. The Tanzanian Ministry of Health also

followed this global trend and it, as well as other organizations, ceased training TBAs. A skilled

attendant or healthcare worker is defined as "an accredited health professional such as a nurse,

midwife, or doctor who has been educated and trained to proficiency in the skills needed to

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[3] Many countries found training TBAs to have little effect on institutional delivery rates, while sometimes encouraging more women to stay at home due to the TBA's increased knowledge. With the realization that more women preferred TBAs, national policies reversed course and moved away from training them.
[4] BEmONC training includes instruction on the identification of danger signs indicating possible serious complications, management of normal labor and delivery, as well as treatment of problems such as pre-eclampsia, hemorrhage, or retained placenta, appropriate referral procedures, neonatal resuscitation techniques, and maintenance of necessary supplies and equipment needed for a safe and healthy delivery, including gauze, sterile gloves, cord ligature, scissors or surgical blade to cut the umbilical cord, oxytocin to help the uterus contract, a method of sterilization, and neonatal resuscitation equipment, to a name a few items. Additionally, BEmONC trainings include information on postpartum care and techniques for culturally appropriate, respectful communication with clients and their family members.

manage normal (uncomplicated) pregnancies, childbirth, and the immediate postnatal period, and in the identification, management, and referral of complications in women and newborns" (DRHR WHO 2008). While the WHO makes this definition sound clear cut, there continues to exist a great deal of grey area, particularly apparent through women's stories, and my observations, of prenatal and delivery care in both local dispensaries and larger health facilities. If an enrolled nurse went to school and was present in classrooms and during clinical rotations related to maternity care but cannot actually describe the signs of eclampsia when asked, is she skilled or unskilled? Technically, she would be grouped with skilled providers because she has an EN diploma but, functionally, she is unskilled in providing maternal healthcare.

For many women in low and low middle-income countries, especially those living in rural areas, logistical (e.g. distance, transportation) and economic (e.g. user fees, travel costs) constraints are obvious barriers to the use of those biomedical health care services that are available (Campbell and Graham 2006; Koblinsky et al. 2006; Lubbock and Stephenson 2008). Improving the social status of women and girls remains a key Sustainable Development Goal (SDGs) and the global community sees this goal as an integral piece of a broader approach to decreasing maternal and reproductive health problems in lower income countries[5].

One global effort, reflected in the SDGs and MDGs, to increase women's empowerment centers on improving girls' access to education[6]. Education for girls, even just through the

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[5] A number of public health studies have suggested a lack of female autonomy in decision-making as a limiting factor in the utilization of healthcare services (Gage 2007; Koblinsky et al. 2006; Lubbock and Stephenson 2008; WHO 2015).

[6] It is virtually impossible to extricate education from several other indicators of women's empowerment, including decision-making autonomy and access to household resources (McTavish, Moore, Harper and Lynch 2010). Levels of girls' education in a country can also be reflective of a broader political and social environment that encourages and supports women's empowerment and social status through means such as legal protections upholding the rights of women to inherit and/or own land, to have greater access to loans, and labor market rights (McTavish, Moore, Harper and Lynch 2010).

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completion of primary school, has been shown in several studies to be a predictor of lower maternal mortality levels (McAlister and Baskett 2006; Ahmed, Creanga, Gillespie and Tsui 2010). It is not so much the book knowledge girls gain in school but "the knowledge to demand and seek proper healthcare" (McAlister and Baskett 2006), through more general empowerment, confidence and skills needed to navigate information or bureaucratic systems. Women who have been to school may also have access to better employment or income generating activities in both the formal and informal sectors, which can strengthen their position within their families.

According to public health practitioners, exposure to health messaging and formal education both increase the likelihood that a woman will be more aware of the biomedical risks involved in pregnancy and that can occur while giving birth. Waiswa et al. (2008) in their Ugandan study, suggest women's poor understanding of the risk factors for poor pregnancy outcomes and labor complications, as well as a poor understanding of the benefits of prenatal care and the presence of a trained assistant at the time of delivery have led to lower use of biomedical services. In the eyes of public health practitioners and policy makers, more exposure to health information does not always prove effective because it "doesn't change the social context of maternal health seeking behavior" (Hawkins, Newman, Thomas and Carlson 2005:17).

This is a clear example of how the underlying logics operating in two different registers may be in conflict. Women and their relatives do not necessarily change their behavior due to information about clinical, biomedical risk, particularly if the social risks associated with *not* having children are greater. In Tanzania, total fertility in rural areas was still 6.1 children, as of 2010 (NBS and ICF Macro 2011:57). The slow decline in the fertility rate is reflective of a number of issues including the continued desire for large families in rural areas. Childbearing

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still has a number of important implications for a woman's position in her, or her husband's family. Communities may view marriages as insecure until the couple has had their first child, which proves their fertility and concretizes the marriage (van der Sijpt and Notermans 2010). For women who are able to successfully become pregnant and carry their pregnancies to term, they enter into a new status in their families, their husbands' families, and their communities.

Oftentimes, even if women can reach care, they complain that biomedical facilities do not provide the same services and giving birth there does not accomplish the same sociocultural ends as giving birth at home[7]. Many women are harassed or otherwise abused and subjected to disrespectful treatment in the healthcare setting (Allen 2004; Amooti-Kaguna and Nuwaha 2000; Bohren et al. 2015; Kruk et al. 2014; Mrisho et el. 2007; Van Hollen 2003; and my own research). In places where these abuses are common, women and their family members may decide to avail themselves of local healers instead, reasoning that such care will cost less than the hospital and may indeed be more effective, socially appropriate, and take place in a more dignified setting than the hospital can provide (Amooti-Kaguna and Nuwaha 2000; Danforth et al. 2009; Kyomuhendo 2003; Lubbock and Stephenson 2008; Mrisho et al. 2007). Conflicts between local beliefs and the practices of biomedicine are also an important factor affecting women's decisions regarding the use of biomedical healthcare services (Bazzano et al. 2008; Kyomuhendo 2003; Okafor and Rizzuto 1994). Guidelines such as those of the WHO do not often take into account the extent to which women and their families still value plural forms of care.

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[7] Kyomuhendo (2003), in a study in Uganda, found that women preferred the help of close relatives, traditional birth attendants, and friends during childbirth over that of health workers who were viewed as outsiders and thus not part of the local birth culture. Berry (2010) explains how giving birth at home in Guatemala solidifies a woman's place in her husband's family.

4.3 A View from the Ground: Local logics of Gender, Care, and Reproduction
4.3.1 Access to Education and the Road to Early Pregnancy

Upon arriving in each village in the Rukwa region, I always asked the village chairman to give me a brief tour, walking by the market, the health facility (either health center or dispensary) and by the school. In most villages, we passed by the school as a couple hundred primary-level children ran about in the school yard, with the smallest children running home with cups of *uji*, which, I was told, marked the end of their school day, around 10am. Often, on these tours, we would stop in the school headmaster's office so I could introduce myself. In several villages, my research assistant and I held our group discussions in available school rooms. It was clear, more or less, from the state of the blackboards, the number of desks, and the number of teachers' names on the headmaster's list pinned up in the office how each school was faring. In discussions with community members, my research assistant and I started with general questions about challenges facing the village. Often participants brought up education in this context. If they did not, we asked specific questions about primary and secondary education: how many teachers and students? Was there a secondary school and if not, how far away was the nearest one? Was the community satisfied with the quality of education the students were receiving and, if not, why not? Often, the community members told me their schools were under-resourced:

> The challenges that are there in our school there, first is that there aren't any houses for the teachers. Then, the second thing, our school is just like an environment for keeping children because the classrooms that are there aren't enough, again they really aren't enough. Then, third, toilets, the toilets aren't sufficient. Fourth, supplies for learning and for teaching still are a problem. (Kizi village, men's meeting)

These types of comments were pervasive, though some communities we visited did tell us that they had recently gotten more teachers or the number of students who passed their primary school leaving exam and gotten a spot in a local government primary school had increased.

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In Songambele Azimio, the parents complained that the quality of education available at the village's primary school meant that most children did not get the opportunity to go to secondary school. Therefore, starting around the age of thirteen or fourteen, children were done with school:

> RM: That means children that remain because they lack a spot to continue their studies, it's always a lot of them, so now what do you all usually do, I mean what happens? Like if she's a girl, does she get married or how is it?
> 1: This remains the responsibility of the parent, to see my child, how can I help her according to our economic means. If you have good finances, you can find a place for her at another school so she can continue. If your finances aren't good, well, she stays and she farms.
> RM: Here, in your community, there isn't any child marriage[8]?
> 2: It's there, again a lot.
> RM: What usually happens?
> 2: You find like that ability to take her to another school, you don't have, so she just stays at home and the results are that she gets married. I mean, she doesn't have anything else to do therefore even if you forbid her, it just is that way, or she gives birth at home.
> 3: I mean, you find you are all there at home, you are eating dinner, you all go to sleep. Now, you think your child has also gone to bed but really, she has gone to the videos. In the morning, if you wake up, you find she's in her room like she was there the whole time but really she has gone to see the bad movies therefore they [the movies] are ruining children. (Songambele, women's group)

The women suggested the movies included graphic sexual content which youth then went to try with each other, resulting in early pregnancies leading to early marriages. These comments were particularly significant in light of the fact that one of the first things I had noticed at Mawingu Hospital in 2012 was the high number of very young girls giving birth at the facility. At that time, I had asked one of the doctors working on the maternity ward if women in the region commonly gave birth at a young age, from his observations. He confirmed that the hospital did see large numbers of very young girls coming to give birth. Clinically, girls who have not finished growing have a higher chance of developing severe complications, such as

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[8] In Swahili, the term is "ndoa katika umri mmdogo" which literally translates to marriage at a young age, but was often glossed as child marriage by Tanzanians with whom I spoke.

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cephalopelvic disproportion, necessitating surgical birth. However, on a social level, oftentimes these young pregnant women were not married, or the father of their baby had agreed to marry her only as a direct result of the pregnancy.

These unintended, early pregnancies put young women in a more socially precarious position. For example, one young woman whose case I followed at Mawingu came to give birth only to discover she had a phantom pregnancy[9]. Instead of waiting for further test results or counseling, she absconded from the ward without discharge. When Dr. Charles and I had spoken to her, she told us her family had been unhappy with the news of her pregnancy, and conflict had ensued between her family and that of the man who had gotten her pregnant. They had only resolved the dispute when he agreed to marry her. Now, in light of the nonexistent pregnancy, her status was once again uncertain. This uncertain social position could also severely limit the support a woman would have available to call upon should she develop a complication during her pregnancy or while giving birth. In my immediate social circle, two families had their housegirl (domestic helper) run away from the home after becoming pregnant. Young women who did not attend secondary school sometimes took up positions as house help and, in their free time, engaged in sexual relations with men in the neighborhood.

In describing the effects of early marriage and pregnancy on families, a woman from Songambele explained, "Really, this has a lot of effects because your child, if she gets a child, OK, it's your grandchild, but both are children and the burden of raising them is yours, as the mother, because a time will come when she will be defeated by life there where she has gone [to the father of the baby] and she will return home." This comment also illustrates the ways in

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[9] When a woman displays all the outward signs of pregnancy including weight gain in the abdomen, amenorrhea, and even morning sickness. The phantom pregnancy might be caused psychologically, such as due to pressure or desire for a pregnancy. Other physiological abnormalities, particularly with the endocrine system may be a cause.

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which these early pregnancies could result in decreased social support. In this case, if a young woman returned to her parents, she might be unable to draw on the baby's father's family for financial or other support, particularly for needs requiring cash, such as healthcare services.

The men in Songambele also mentioned the problematic issue of the sexually explicit movies being shown in their community. In their focus group they said children were hard to control these days, and it was hard to control what they saw or learned about sex because of the availability of these videos. One of the villager leaders who was present in the discussion said, "A child these days is a child of the state," which prompted other participants to talk about the idea of human rights and one said, "Parents' strength has decreased these days because of these human rights." When I asked for further explanation, the men suggested parents were no longer able to discipline their children, particularly with corporal punishment, because this would be considered violating the child's human rights. This comment clearly demonstrates the ways in which local and more global logics were in conflict in communities in the Rukwa region. As conceived of by policy makers and global health advocates, a rights-based approach to health is meant to empower individuals and keep states accountable for providing for their citizens. However, these comments from men in Songambele Azimio call into question the universality of this framework. The WHO and UN use a rights-based discourse in both the Sustainable Development Goals and the new strategies for Ending Preventable Maternal Mortality (EPMM). In light of men's comments, I challenge the idea that this WHO and state rhetoric would be successful in this community, and others in the region, as a way to promote women's health interventions when it so clearly failed to resonate in relation to children, perceived, instead, as an affront to parents and local forms of intergenerational control[10].

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[10] There is much more that could be said here in terms of analyzing the implications of the man's statement about children being children of the state. This implies a conflict over autonomy and the state,

In several communities, we discussed sexual education. While one community said students got some health education in school from the local dispensary healthcare providers, most communities did not have a formal mechanism for sex education. When we expressly asked parents if they spoke with their children about how to avoid pregnancy or how to not get someone pregnant, the responses usually fell into two categories. Either parents said they talked with their children but the children did not listen, or they told us that it was not a subject that was easy for parents to bring up and, so, many things were left unexplained. Also, several community members felt it was inappropriate to discuss something such as birth control with an unmarried daughter, instead hoping she would simply abstain from sexual relations. These local logics that guided intergenerational relations served to further illustrate the gaps in the global, WHO-led constructions of maternal health and death. The norms and values which led parents to not discuss sexual education and contraception with their children followed rational decision making, to be sure, but in a form that the WHO, clinicians, and public health experts in offices might not recognize as such. In turn, the lack of sexual education increased the chances of early pregnancy, leading to increased clinical risks for the young woman, which could be further exacerbated by the halving of social and financial support to which a women suffering from an obstetric emergency could turn, all resulting from the unrecognized or unplanned nature of a pregnancy.

4.3.2 Bridewealth, Marriage, and Decision Making

In talking about educating girls, one man in Kizi village observed that, while working to register children for school, he had noticed the Sukuma people purposefully kept some girls at

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as well as over what forms of discipline are acceptable and who should carry them out- State agents? Kin? Elders?

home, away from school, so they could marry her off at an earlier age, anticipating a high

bridewealth payment. Among healthcare providers throughout Rukwa, the Sukuma women were

rumored to be the least educated, often not speaking Swahili, still ascribing to indigenous

religious beliefs, and often not giving birth in health facilities. Some providers had a clear

prejudice against these women and would often address them, while in the health facility, simply

as "the Sukuma." The aforementioned tendency to keep some girls out of school could have also

added to providers' perceptions of the group overall as being uneducated.

As in the conversation referenced above, in speaking about education, the conversation

among community members in our groups often drifted into the topic of bridewealth, marriage,

and women's subordination within marriage. In Kizi, the men said:

> 4: I should just say, you know the basis of the difficulty is that you find you have educated your daughter, she has gone there and gotten married. Now the motive is always bridewealth, I mean that is the problem because, for example, a Sukuma, he always gives really a lot of cows. Now, he is believing that, 'Her, I have bought her.'…
> …
> 4: I mean, it would always be just like a person is giving [bridewealth] like a gift. But the question of this bridewealth, it makes people feel like they have bought other people, again like me, maybe I take ten cows to them [in-laws] then today you have done something at your home place without asking me, weee! It will all erode.
> 3: You know, we Africans, the question of giving bridewealth, there is something there in between. First, it brings a good relationship between two sides, then it brings respect, I mean even you married [someone], you say yes.
> <div align="right">(Kizi, men's group)</div>

In this conversation about bridewealth, the men in Kizi note that bridewealth can be an

instrument used to keep women in a subordinate position within a marriage, if that is how a man

chooses to use it. A Sukuma man went on to say:

> 2: At our place, us, our relatives, Sukuma women are very forbearing, friends, I mean to quarrel with each other, it's really rare and it's possible it never happens.
> RM: A person just closes it in their heart.
> 2: Yes, I mean our women are patient, forbearing every day. If it happens that they have gone to their place, I mean it is difficult, because first it's like the army- everything

is 'yes,' she can't add a word, even one. For example, if you tell her, 'Go to the field.' She will go running.

      RM: What contributes to women appearing to be low people such that everything is just yes, is it the bridewealth or?

      1: I mean, if I give a bridewealth for a light skinned girl, I mean it can be 60 or 40 cows therefore she must submit to me a great deal because you have given for her a large bridewealth. (Kizi, men's group)

It was clear that for this man, as he spoke on behalf of his Sukuma community, that women whose families had received a large bridewealth payment were not supposed to disobey their husband nor, in fact, contribute much to any sort of decision making in the extended household. This mode of thinking had ramifications for healthcare, particularly for pregnant women, because their position in their marital home could make it difficult, or impossible, for them to choose when to seek biomedical (or other forms) of care during their pregnancy or at the time of giving birth.

Despite national and global health efforts aimed at increasing men's participation in women's reproductive health, local communities and individuals took up their participation in these schemes unevenly. Many men still lacked information about pregnancy and childbirth which meant they were not as well informed as their partners about danger signs or obstetric emergencies. When women could not voice their need or desire to access biomedical services because they were not the primary decision makers and were subordinate to men who felt they "owned" them, women could suffer from life-threatening delays, reaching Mawingu Hospital, for example, only in time to die on the hospital's doorstep. In Mkamba village a Sukuma man told me that even if there was an emergency in the family, a Sukuma woman would not sell a cow or anything else in order to raise money for emergency transportation to medical care. Instead, she would have to wait for her husband or another male relative to carry out those procedures, thereby possibly resulting in delays.

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Among the Wafipa, there was not as much consensus on these issues of bridewealth, and men generally put forth a range of thoughts on the topic of women's roles in the family, some saying they involved their wives in decisions. In Songambele, women said that men often refused to listen to their opinions or input because men feared listening or submitting to women would make them look weak or like they had allowed themselves to be dominated by a woman, which was socially undesirable. One woman said, "They will always say this, men, I mean [they say], 'Me, I should give bridewealth then you make yourself to answer me, isn't it that I have married you?'" In Swahili, men marry (kuoa) and women are married (kuolewa). For women, it is always a passive verb and for men it is an active verb, which was reflective of the ways in which men saw their roles. They often used this linguistic difference to remind their wives that they, as the husband, were in charge. Therefore, these dynamics, influenced by bridewealth and socially constructed gender roles, also contributed to what men were willing to do and to what degree women were able to make decisions, particularly about their own healthcare needs.

In Kalumbaleza village, the topic of decision making came up directly in relation to health education, pregnancy, and the prenatal clinic. One of the healthcare providers in the village had told me that he was frustrated because he often advised women to plan ahead in order to give birth at Mawingu Hospital, for example if they were in their first pregnancy or very young, very short, or had had many previous pregnancies, all risk factors for various complications. I wanted to know if or why women did not follow his advice, as he had suggested to me, so in the women's discussion group, I asked:

> AS: Why do you all think that the doctor advises women to go to another place [to give birth]?
> 1: He has already recognized your problem.
> AS: So why do people refuse to go?
> 2: Others of us are unable to understand, we have hard heads.

3: And also, it can be economics. Because men, if they were attending the antenatal clinic, they would know a lot of things. But now, because they don't attend, that's the reason they don't know that there is an importance to going to give birth in Sumbawanga. If you tell them, they become argumentative. For example, if you leave the clinic, if you tell him, your husband, that you are supposed to go to give birth in town, he doesn't understand you at all. Now, as a woman, you don't have any way out, you just have to stay quiet.

Here, in these village settings, if a woman did not have any access to cash herself, there was no way for her to arrange for travel to the hospital in Sumbawanga, or even to the relatively close by health center. She was dependent on her husband for the financial resources, as well as, in some cases, permission to travel. Because men did not attend the prenatal clinics with their wives, they did not learn about danger signs in pregnancy or the reasons why the dispensary workers might refer a woman to a higher level of care. Instead, they might assume their partners were simply angling for a trip to town or just preferred to not give birth in the small, under-resourced dispensary.

4.3.3 Pronatalism and the Value of Reproduction

While women in more urban areas in Tanzania appear to be verbalizing a desire for smaller family sizes (my own interviews 2009-11; NBS and ICF Macro 2011:57), women in rural areas often still expressed a desire for larger families, for a number of reasons. One of these reasons is simply the fact that under-five mortality rates are still quite high in the country (though have dropped quickly, Afnan-Holmes et al. 2015) and many families still expect to lose at least one child. In June 2012, I was in a maternal-child health clinic in Singida, Tanzania when a woman came in with her three-year-old daughter. The girl had been having difficulty breathing at home and the mother had rushed her to the hospital. Despite the woman's haste, the girl had already died, having choked on something she had swallowed while playing in their yard. The woman was distraught about the death of her youngest child. In addition to her grief over the loss

of her daughter, the woman kept repeating that she had just had a tubal ligation, having made the decision to have no further children, and now she would be unable to have another child in place of this one who had tragically died. Such instances weighed heavily on the minds of women whose health and that of their children remained perilous.

At Mawingu Hospital, the pediatric ward experienced more deaths than the majority of other wards, though I never counted these. In the rainy season in 2015, as I rushed to the hospital, late for the morning meeting, I passed a woman who was walking down the road near the hospital gates crying and saying over and over, "Bring back my child, bring back my child." I went into the meeting to hear the report of another death on the pediatric ward. With these fears, it is no wonder couples continued to value large families, despite health education efforts aimed at reducing the national fertility rate.

Against this pronatalist[11] background, I examined women's roles in their communities and in their families, both nuclear and extended, in order to better understand the ways in which marriage and bridewealth contributed to this social imperative to reproduce. Understanding decision making within a household can lead to insights into how couples make the decision to have children, how many to have, the timing of pregnancies, or whether or not to use any of the available forms of birth control. All of these decisions have implications for a woman's health throughout her pregnancy, as well as her risks of morbidity and mortality.

A woman told me while she, as the wife, might prefer to stop having more children, her husband did not know about the potential dangers of having many children and simply saw a large family as an expression of his masculinity and a societal ideal. In every focus group discussion, women complained to us that their husbands did not support them through the

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[11] Pronatalist means beliefs, practices, or policies that encourage reproduction and childbearing, particularly supporting a higher birthrate.

difficulties or complications associated with using various forms of contraception and, as such, they often felt alone in shouldering the burden of limiting family size. In this context, I asked men in Songambele village about family planning and who decided when or how many children to have. One participant told me,

> This decision making in there between the husband and wife. Now, another problem, you find, inside the home, that there is another wife, she can say, 'Let's use family planning' and instead that is her strategy to find a lot of men so that she starts to annoy me, saying that that family planning is a really good idea but many [women] use it for another purpose. (Participant 3, Men's group, Songambele)

If there was this lack of trust between the woman and her partner, it became exceptionally difficult for her to negotiate the use of contraceptives in order to limit the number of children they would have. While this man from Songambele started out by making it sound as though the man and woman both have equal say, an inherent suspicion about women being unfaithful colored his view of contraception, a detrimental barrier which could lead to maternal depletion and increased danger of developing severe obstetric complications if his wife were to carry more than five pregnancies. High birth rates increased women's chances of experiencing complications during pregnancy or while giving birth but, more generally, the lingering desire for larger family sizes reflected a sense that reproduction, and life in rural areas, in particular, was still precarious and could not be assured.

4.3.4 Gendered Work and Care

Children, especially girls, are often a great asset to their families when it comes to additional labor. Early contribution to the household economy persists and only intensifies throughout a woman's life. In many societies women bear a "double burden;" they are responsible for household work, as well as a large amount of agricultural labor (WHO 1989:67). Historically, women played an important part in agricultural cultivation of key crops that were

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essential for the family's survival (Gordon and Gordon 2007:33). Colonialism changed the gendered structure of labor in ways that largely excluded women from involvement with cash crops, relegating them to kitchen gardens for domestic use. This gendered involvement in cash crop production had a substantial impact on women because many households did not pool money and other resources; women could no longer bring in equal resources as subsistence farming lost its value in the colonial, capitalist economy (Turshen 1984:55-6). Men began to occupy the position of economic providers for the family. In communities in the Rukwa region, many men related a common narrative about economic provision as care for their families and their wives. Women, on the other hand, engaged in large amounts of domestic labor.

Particularly during my time doing research in communities in the Singida region of Tanzania between 2009 and 2011, I followed women as they went about their daily duties. Many women in rural areas wake up very early in the morning to start work. When I spent time in one village, the women in the house awoke as early as 4:30am to begin preparing food for the small restaurant they ran. Women and girls are often responsible for fetching water, collecting firewood, and working in the fields. They also must prepare all the meals, which often takes a great deal of time when cooking on charcoal stoves. The women also must make sure their children get up and get ready for school. They are responsible for washing clothes and the general cleanliness of the house and compound, which can mean several hours bent over at the waist, sweeping the dirt or washing floors in the house and around the compound. As becomes immediately obvious, while women do incredible amounts of work, very little of it takes place in the formal economy. Women have very little leisure time and are unable to rest, even when they are pregnant, because of all their responsibilities. What also becomes clear is that the labor and economic contributions of women often go overlooked, even by their husbands, "Partly because

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so much of their outside labor is unpaid and therefore 'invisible,' women are rarely relieved of any of their housekeeping duties by their menfolk" (WHO 1989:68), as true today as in 1989. Many women, over the course of my time in Tanzania, have told me that ideally they would reduce their workloads during pregnancy but only some women were able to do this. Women most often told me they relied upon neighbors or female relatives to help them while they were pregnant (unpublished data from fieldwork in 2010 and 2011).

Once, while on a supervision visit to communities in the Nkasi district, we were riding in the car, past people coming back from the fields. One of the district health administrators commented that you always see women with water or firewood on their heads, babies on their backs, a hoe in one hand, corn in the other, and another baby growing in her belly. And the men are walking behind the women, maybe with a couple ears of corn or a hoe. She said that women are like the donkeys of the community, doing all of the heavy lifting (Fig. 4.1).

Fig. 4.1 Women carrying firewood and water

Women often told me that, even during pregnancy, if they expressed a need for help with

their work, their husbands simply said, "What, are your hands pregnant that you can't work?" A

woman in Songambele had a representative response to my question about what women typically

do and whether or not their husbands help with the work,

> 2: If you wake up, you sweep, you wash dishes, you cook, another time there's no
> firewood so you go to collect firewood, you go to the field, and there you are pregnant
> and there you have a baby on your back and if you tell your husband he tells you, 'What,
> is the pregnancy in your hands?' Even to sleep at night, he says let's sleep together and
> there he doesn't care if you are tired. Honestly, the work exceeds us, women from here.
> (Songambele women's group)

Women overwhelmingly explained that men did not help with domestic tasks even if they, the

women, were sick or pregnant. Instead, it was most often other women who would help a

pregnant neighbor or relative in a communal sharing of tasks. Women could also only rely on

this help if they maintained good social relations within their community and were not, for example, from outside the area or from a minority ethnic group.

Men viewed their own roles as the family providers. While frequently it was only men who were to be found with the leisure time to hang out playing cards, checkers, or the board game bao under shady trees in the afternoon, or drinking and taking meals in bars, they explained how they saw their contributions to their families:

> 1: Here in Kizi, 99%, searching for money and community development are [the responsibilities of] men. That is the main thing, I mean the man is the finder like if he wants firewood, or charcoal, or I don't know, he will carry timber, or bricks, that is his responsibility in order to prepare so his wife and family get their daily needs.
> 3: If he has already returned home it's not that just because he finds they have already cooked he eats and just sits. No, it's also his responsibility to know the development there at home, for example if there's something that is pressing on his wife, he helps her.   (Kizi village, men's group)

Here, these two men describe the ways in which a man is responsible for always searching for the materials or money needed to meet his family's needs. Ultimately, this searching, the man's role as the "finder," was a key responsibility in caring for the family despite the more nebulous form of this work.

4.3.5 Men's Involvement in Care and Pregnancy

The gendered logics at play in the communities did not cleanly map onto the policies laid out by top-down approaches to interventions meant to involve men in women's health. Global trends, taken up by the Tanzanian government, and enacted by local village leaders and NGOs often drove policies recommending (or mandating) men attend prenatal visits with their partners, sometimes even causing dispensary workers to fine women or turn them away if they arrived for care unaccompanied. These types of mandates overlooked the ways in which men, to different extents and with vastly differing levels of enthusiasm, were already engaging with their partners'

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pregnancies and health through other, less obvious tasks. These tasks were, nonetheless, socially

valued masculine tasks, deviations from which (such as early adoption of other, externally

imposed activities) were socially sanctioned. The men in Kizi went on to explain why a man

might not engage in the same tasks as his wife:

> 2: Another time you can find that a man, he wants to help his wife. Now, other people, if they pass by, they say he has been ruled by (*tawaliwa*) his wife, so to remove that, the man he decides to change because he is afraid they will tell him he is being ruled by his wife. So then even if his wife gets sick, he says she has done it to herself and says, 'Get up, cook,' just so to protect against what's being said on the street.
> AS: [What does a husband do if his wife is sick?]
> 6: Still that legacy of you being seen to have been dominated by your wife enters in there and that's the reason you find a man is just brought the news that his wife has given birth, that she got contractions at what time. He doesn't even know. His work, if he returns in the evening, first he is drunk, and he should find food and if not, it's the stick. But for those with some understanding, if his wife has been really busy with work, he can find for her even his sister or a neighbor to help his wife, saying, 'Watch her, I'm going out for a bit.'
> …
> AS: And if she's pregnant?
> 8: I am Mmyamwezi, for us if my wife is pregnant, the responsibility for helping her, it rests on my parents. I mean, for me, I don't participate at all until the day I'm told she has given birth.
> …
> RM: Therefore, your mother then does the cooking. What about the responsibility for bringing necessities there to the house?
> 8: That I continue to do but not carrying buckets of water!
> 7: I think when we say the question of helping our wives, it's not necessary that you carry a bucket of water on your head, you can even borrow a bicycle from your neighbor and go to fetch water, eat a little *ugali*, you and the two children, you just stir it around a couple time, you all eat it, and you give some to your wife. Because when women are in that state, they always want to see their children, they want their family to be close. Because that pregnancy, they share with each other, it's of both of them so therefore it's necessary that the husband also should be pained, he should think about how his wife will give birth, why should she suffer with work while he is there? But there are also some women who you find can't do something but she makes herself do it. (Kizi, men's group)

In this conversation, men elucidated a number of ways in which they sought to care for their

wives, though they did not explicitly use this term. The act of finding a bicycle and going to

fetch water or looking for relatives and neighbors to help take care of the woman while sick or

pregnant were all forms of care, sets of actions and practices in which these men engaged, directed outwardly for the perceived benefit of their partners. In Mkamba village, the community leaders, primarily men, also described how they would enlist their female relatives to help their wives with household tasks during pregnancy, clearly presenting this as a form of caring for their wives. Men sought to engage in this care in gender specific ways that would be accepted by the broader community. Just as the women in Songambele mentioned, some of the men in Kizi thought they would be ridiculed by others in the community if they were seen helping their wives. The men in Kalumbaleza village also mentioned not wanting to be seen washing their clothes because they would be laughed at and people would think their wives were dominating them, not a desirable impression. Interestingly, in Kalumbaleza, men suggested that if they weren't married they would cook for themselves and wash their own clothes but once they were married they would not engage in this work again, largely because of this public perception problem. Early in the conversation in Kizi, one of the men mentioned how some men would take up a stick if they did not find food ready at home when they arrived. This subtle mention of the stick also coincides with the honest response from a woman in Songambele village who told me husbands might beat their wives if they came home drunk and did not find food or the other work done[12].

In other situations, too, men did not want to be seen to be doing so-called women's work. In Songambele, we were told that some men would only accompany their wives to the dispensary when she was in labor if it was during the night. Slightly surprised by this, I asked for

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[12] In a survey question in Tanzania's 2010 Demographic and Health Survey, 42.1% of rural men and 27.4% of urban men agreed a husband would be justified in beating his wife for at least one reason; the most common reasons were if his wife argues with him, if she neglects the children, and if she goes out of the house without telling him (NBS and ICF Macro 2011:254), indicating that many men still commonly view women's roles as secondary.

further explanation, thinking it might be due to fears of more danger at night. No, in fact, I was told that it was because men were embarrassed to be seen because it was not considered "manly" to go with one's wife when she was in labor. Pregnancy was still very much women's business. Engaging in activities that were viewed as women's work was another way in which a man could show that he had allowed himself to be dominated or controlled by his wife. In these discussions about their wives' pregnancies, we also discussed who should go with women to their prenatal visits or accompany them to the dispensary, or other health facility, when they were in labor. Men in Mkamba said,

> 5: Maybe I should say for us Wafipa, my wife, if she has already started to complain [of contractions], I quickly run to my sister or my mother so that she comes and starts to prepare her to take her to the dispensary and me, as the father, I am behind, I follow-up later. That's how it is for most.
> 6: Me, as the Village Chairman, I receive a lot of women whose husbands refuse to accompany them to the clinic and if they arrive there without their husbands, [the dispensary staff] won't test them. Now, they have to get a letter written for them so that they get care. Therefore, maybe I should say that more education should continue to be given to men.   (Mkamba, village leaders group)

In this conversation, it starts to become apparent who might be responsible for ensuring a woman makes it to a healthcare facility during labor and birth. She might have to wait for the arrival of a female relative to help her get to the dispensary, which could cause delays, particularly if her husband happens to not be at home when she realizes she needs to think about reaching a facility. Also in this conversation with the community leaders, it is clear that men often think neighbors or female relatives should be helping their wives, instead of they themselves as the husband. In other communities, men were much more used to attending the prenatal clinic with their partners, demonstrating the uneven responses to these top-down initiatives from NGOs and the Tanzanian government meant to encourage men's involvement in women's reproductive health, a nod to the continued importance of men's decision making powers within the family. These programs also

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failed to take into account the ways in which gendered ideals of birth and reproduction were enacted at the community level (see also Brunson 2010). These complicated, gendered interactions and negotiations surrounding care seeking could certainly determine where a woman gave birth and how quickly she reached care during an emergency.

In every community, I asked men and women whether or not men attended the prenatal clinic visits with their wives in order to get a picture of how the community was engaging with the more recent push to involve men. In some places, only a few men could honestly answer that they had gone with their wives; in others, nearly all men said they had been at least one time. In Kizi village, I asked the men if they attended the prenatal clinic with their partners and nearly every single man present had been at least one time, an exception to the more general trend of relatively low participation. I was interested to learn how men felt the healthcare providers were treating them when they came to the prenatal clinic because, in my previous experiences, providers often did not include men in the visit outside of testing them for HIV, as was required. I heard a fair amount of rhetoric about including men in women's reproductive health but continued to view this as a missed opportunity in most health facilities. Sometimes providers were even derogatory or ridiculed men who attended the clinic. In Kizi, I asked one young man to describe to me, in as much detail as he could remember, what happened when he went with his wife to the antenatal clinic. He started by giving a very detailed account of HIV counseling and testing procedures. I then asked him:

> AS: OK, let's say you've already been tested, you don't have HIV, then what happens?
> 1: What follows is that they will continue with those things for women. I mean, she will be put on the bed then she will be tested, tested and then later they tell you, 'You, go' and then they remain with your wife. Therefore, what goes on inside I don't know.
> 2: Me, I like to observe a lot. There was one day, I was at home so we went to the clinic. Now, when we arrived there at the door, the man told me, 'You, get out.' Now, me, intellectually I know that there is care that will be done to my wife but if I wonder

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why they have removed me outside while they are removing my wife's clothes, do I know him? Therefore, me, my eyes didn't move from the window. Truthfully, they looked at her stomach then they took the tape and measured her stomach. Then when he was finished, he talked about a lot of things but he didn't know that I scandalized because I was asking myself why did he remove me outside?

AS: Did you ask him?

2: Like normal, although I asked him why because there she is my wife and he is the provider he can't give out someone's secrets. He told me, professionally, that it's not good because you can find a woman has [high blood] pressure then it's not good to have two men surrounding her. But generally, they usually advise her how to take care of the fetus and that maybe she has pressure therefore she shouldn't be annoyed and she should rest.   (Kizi, men's group)

This was a common occurrence, from my observations. Men then often did not see any point in returning to the prenatal clinic if they had already been tested for HIV, which happened during the woman's first visit. The providers generally did not allow the men to remain in the room and rarely engaged in conversation even with the women. When I was in Mao village, we were waiting for the nurses to be done with their work so we could interview them. In order to help them finish with the patients, I conducted the prenatal visits for all the women who were waiting. Nearly all had come to the dispensary with their partners and I welcomed the men to stay in the room for the whole visit. I explained in detail what I was doing at each step and I asked every man if he would like to listen to the fetal heartbeat through the fetoscope, as a way of involving them in the visit and in the pregnancy. This was clearly a novel experience for all of them, several of whom turned away when I lifted up their wife's shirt to palpate her stomach. I also gave both parties the opportunity to ask questions about the pregnancy or anything else on their minds. I did not use any supplies that were not already available, I simply spent more time with the couple. This is not always possible when a facility is short-staffed, but could improve people's perceptions of the services biomedical providers offer.

4.3.6 Men as "Finders" and Transportation to Biomedical Facilities

Men, as the "finders," were the ones responsible for locating transportation if their partner needed to go to a larger health facility. Ilambila village had particular difficulties transporting ill community members and pregnant women to the nearest health center. The dispensary provided only rudimentary services so, many women tried to go to the health center. The dispensary providers also told us that out of all the times they had called for an ambulance from the district health office in order to carry a referral patient to the health center they had never once had the ambulance arrive. Therefore, they no longer even tried to call the ambulance, preferring, instead, to arrange alternate transportation in order to expedite arrival at the health center. It was nearly always the man who was responsible for coordinating the transportation once everyone had agreed his wife needed to be referred. In Ilambila, they explained,

> 1: Another challenge is transportation. You will find maybe that a patient needs to be taken to Matai [where the health center is], you find that the patient's husband must sell maybe a cow or a plot of land to get the money for the expenses of the transportation.
> RM: Let's take the example, you have a patient who is a pregnant mother or a regular sick person, but they need to go to Matai for more care, what do you do?
> 2: I mean there it's the burden of the patient themselves to see the process of renting a car or motorcycle if they can.
> …
> RM: Now, if the person doesn't have any money? Or anything to sell?
> 8: You just die.
> <div align="right">(Ilambila, Men's group)</div>

Poverty was also a clear contributor to the problems in Ilambila, and throughout the Rukwa region, particularly when the community members had little access to cash before selling the year's harvest. In the same community, the leaders elaborated on the extent of the transportation problem:

> 9: I should add another challenge. You find that other people don't have the means at all even to rent a car, they have to be carried by bicycle and that mother can die on the road. We return the corpse to be buried. If she gets lucky to maybe pay for a motorcycle, then that gets her there…

AS: Has it ever happened that a mother tried to go [to the health center] but then she died on the way?

9: Yeah, by motorcycle.

AS: Mhm do you remember when it was?

9: Three years ago.

3: I transported her by motorcycle… We were on the road and she died. I had to return the body. So, it's a problem. Yeah, transportation by motorcycle is problematic, I mean if a person has already died on the motorcycle, you have to tie the legs, I don't know what all, I really got problems. (Ilambila, Leaders group)

Following that comment, we continued to discuss the ways in which the speaker had had to tie the dead woman's arms and legs to his in order to keep the body from sliding off the motorcycle as he drove back to their village. I saw the same technique used once when I was working on the night shift at the regional hospital and a man arrived with a barely conscious woman on the motorcycle behind him. He had tied her legs to his to try to keep her on the back of the motorcycle on the way to the hospital. In that case, she was barely conscious due to severe hemorrhaging following giving birth earlier in the day. However, because it was late at night, her relative's motorcycle was the only way to make sure she reached the hospital. Using this mode of transportation meant she arrived without any supplies and without any relatives to help, to donate blood, or to find other supplies for her.

Many other communities faced similar challenges and many other healthcare providers working in village dispensaries related stories of unreliable district ambulances, long waits, or struggles to find transportation. In some villages, they did not have working cell phone networks or radio call systems and the providers would have to first climb a hill to reach a spot with reception before being able to call for the ambulance. The walk itself could take at least 45 minutes to one hour, further delaying the referral. As one man in Ngorotwa said, "And another thing, you find that maternal deaths and those of children are many because we are told that we have a car for the health center but we haven't seen it. I mean, a Parliamentarian came, promised

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to bring us a car and honestly he did everything, he brought the car but after a while, it was not seen again. Therefore, this promise of transportation for patients is still ongoing." This lack of reliable transportation or misuse of cars that were provided for the purpose of transporting patients, was a source of frustration for community members and providers alike. There was generally very low ambulance coverage throughout the region, leading to long delays if families were forced to rely on this mode of transport for a pregnant woman.

The ongoing challenges of poor road infrastructure, lack of transportation, and a weak referral chain were all important contributors to maternal and neonatal deaths and formed an important component of women's experiences before their arrival at the regional hospital when they were referred there for further care. In another instance, a woman had been referred from a dispensary many miles away and had, in the middle of the night, walked for hours in the rain after the car she and her relatives had hired had broken down. She arrived at Mawingu Hospital with mud caked on her legs up to her knees and with the umbilical cord protruding from her vagina-a cord prolapse that most certainly had been the cause of her stillbirth and would have probably been preventable had she reached care sooner.

4.3.7 Local Midwives and Pregnancy

In ten out of the eleven villages in which I conducted focus group discussions, women stated it was now more common to give birth in the village dispensary or another biomedical facility than to use the services of a local midwife at home. Strictly speaking, local midwives did not provide any care for women before the time of labor and delivery, which is why I have placed this discussion here in the chapter. In three villages, I conducted group discussions with women the community identified as *wakunga wa jadi*, or traditional midwives. In Lowe village the *wakunga wa jadi* informed me that they were practicing more than they had in the past

because the village had recently chased out a nurse who had been working at the dispensary and the other providers had been away for some time. The most senior *mkunga wa jadi* in Lowe was able to describe, in detail, the ways in which she would deal with various obstetric complications. Her level of skill and knowledge was better than that of many so-called skilled personnel working in village dispensaries. She reported that she had never once lost a woman to complications. In Songambele, the *wakunga wa jadi* described the ways in which they had come to be practicing as birth attendants. In the past, each *ukoo,* or clan, in the area had had its own midwife. In all three communities, the traditional midwives told me younger women were not interested in learning more about the practice and were not entering this line of work. In Songambele, the *wakunga wa jadi* also explained the secrecy that historically surrounded childbirth and pregnancy:

> AS: And generally, maybe men think these pregnancy things are the work of women or?
> 1: During that time when we were doing the birth in the streets [at home], one mother was really a coward, if she felt a contraction she made so much noise like, 'I'm dying!' Now, the men were asking themselves, 'Oh, so birth is work!' But we were afraid to tell them the truth about these things because in our tribe it is shameful for men to know these secret things. But nowadays, they have already started to know after getting this reproductive education.
> AS: Therefore, women were giving birth just silently?
> 1: In the villages, we always give birth just like sheep, I mean it is silent and if you make noise, you are pinched.

It is perhaps partly due to this line of thinking that men were still so little directly involved in pregnancy and childbirth, particularly in a way that would be legible to organizations such as NGOs or the WHO. Women did not often express a desire for their husband to be present at the birth because they felt it was more appropriate to be with a female relative. These are the sorts of issues to which public health practitioners or politicians are referring when they mention "cultural" barriers to the increased use of biomedical services. However, it is critically important

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to take into account these ideals and historical practices in order to plan and provide care that speaks to the needs and desires of women and their communities.

Community members and *wakunga wa jadi* often stated they believed women had had fewer pregnancy related problems in the past. Though this is not necessarily likely to be true, the veracity of the statement is not as significant as what it might connate in terms of the perceptions of the current biomedical system. This discourse might be read as a form of resistance to the biomedical system which disempowers women and discounts, or even criminalizes, the knowledge of *wakunga wa jadi* by locating control and knowledge in institutions of specialized, cosmopolitan expertise which often reduce bodies and obstetric complications to biology, ignoring the local realities of the social milieu of pregnancy and reproduction.

In Mao village, the *wakunga wa jadi* told me that nowadays, because of the fine for anyone who gave birth at home, or helped a woman at home, their main role was just to accompany women to the dispensary when it was time to give birth. They lamented the loss of any sort of remuneration for this kind of work though, even in the past, they hadn't received much. In conversation, the *wakunga wa jadi* told me about the ways in which they used to receive some appreciation from families via goats, soap, flour, or other small gifts that helped the *mkunga wa jadi* run her household. In contrast, nowadays families rarely continued this form of remuneration. While public health practitioners and biomedical providers construct the use of TBA's services as due to supposedly harmful "traditional practices" or beliefs, I would argue that TBAs do not have an incentive to stop practicing if they have been viewing their role as a profession like any other, needed for economic support. A woman working as an *mkunga wa jadi* in Kasanga village told me in 2013 that she was losing her source of income as more and more women went to the village dispensary.

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The people in the Rukwa region were still widely relying on the *wakunga wa jadi* until relatively recently due to the slow development of healthcare services and facilities in the region. Sometimes women would go first to their local *mkunga wa jadi* before heading to a biomedical facility because there were certain aspects of care that the biomedical system could not provide. For example, as in the story that opened this chapter about the woman with the arm prolapse, sometimes people believed that prolonged labor was caused by social problems within the family and biomedical personnel could not address those causes.

In other instances, the *wakunga wa jadi* provided herbal medicines that women and their families believed would increase the contractions and result in a fast birth. Many of the biomedical personnel complained about the use of these herbal medicines because they were convinced large numbers of women in the region used them and the medicines caused problems such as ruptured uterus or stillbirth. The Regional Reproductive and Child Health Coordinator told me, "And they use a lot of those local herbal medicines. Up to right now, here where I am talking, even there in the labor ward a lot of times they are confiscating those herbal medicines." Providers in villages often complained women arrived at their facilities late, in the second stage of labor, ready to give birth nearly immediately after reaching the dispensary. On the other hand, women suggested they did not like to stay at the dispensary for long periods because usually there were not enough beds and the surroundings were uncomfortable and lacked privacy. These factors all may have contributed to a higher desire to limit the time in the facility through the use of these herbal medicines. But, the use, or even suspected use, of these herbs led to repeated conflicts between women and the biomedical providers, particularly at the regional hospital. In the lack of privacy and the prohibition of herbal medicines, the biomedical facilities did not generally meet some of the locally valued requirements of a good place for giving birth.

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However, most women did prefer to have a biomedical provider deliver their baby while, at the same time, limiting the length of their stay in the facility. Many villages in the Rukwa region had implemented a system of fines for women who gave birth someplace other than in a biomedical facility. One man in Ngorotwa village explained, "Also you find other [women] who give birth at home then even they don't go to the facility. Her outcome, if she gets problems, is a challenge and others are afraid to go [after giving birth at home] because they are afraid of the 10,000 shilling fine [for giving birth at home]." This fine had been instituted in many communities I visited and it is yet another example of biobureaucracy, meant to curb what is constructed as the deviant, dangerous, or abnormal use of the *wakunga wa jadi*, regardless of the circumstances surrounding the need to resort to non-biomedical assistance or a woman's prior plans to do otherwise.

The amount of the fine differed but, in most communities, they told us usually the woman had to pay, sometimes also her husband, and sometimes even the person who had attended her at home, be it a relative or an *mkunga wa jadi*. To avoid these fines, and in order to be ensured service in the future when they took their newborn to the dispensary for vaccines or when women later sought contraceptive advice, many women allowed themselves to be integrated into the biomedical system. In fact, this integration was inevitable if women wanted other care or benefits in the future, such as the legitimacy provided by documents such as a child's clinic card or the paperwork necessary for a birth certificate application.

4.3.7 Interactions, Neglect, and the Quality of Biomedical Care

Once a woman arrived at a biomedical facility, the quality of services provided, and the appearance of the facility itself, became of the utmost importance, influencing her future decisions about where to give birth in subsequent pregnancies. In Songambele, they had a

common problem of not enough beds for mothers in labor or after giving birth. Women were most often told to return home almost immediately after delivery:

> AS: Has it ever happened that a woman got a problem on the way home [after giving birth]?
> E: Yeah
> AS: Who can remember what happened?
> K: I myself I remember, it happened to me. When we were on the road a lot of blood started coming out and I had to lie down at a neighbor's.
> AS: Who helped you?
> K: We were with my in-law and she made the preparations to return me to the dispensary and there they gave me a shot. I was admitted and later they came to get me.
> F: Even my daughter, it happened to her too just like that.

Such were the dangers of sending mothers home too soon. In other cases, a woman could have started experiencing eclamptic seizures or other severe complications. Most often, the 24-hour observation period is suggested in order to make sure the woman's uterus has contracted and she will not hemorrhage. This is also a crucial time period to monitor the woman to make sure she has not developed a problem such as pregnancy-induced cardiomyopathy, eclampsia, infection, or severe blood loss.

In addition to a lack of biomedical supplies or decrepit biomedical infrastructure, some villages experienced difficulties and conflicts with their healthcare providers. In Lowe, one of the nurses, in particular, gave the community a great deal of problems, until they refused to allow her to continue working there. In an act of resistance, and in an effort to demand the healthcare services they felt were their right, the community finally decided to report the offending nurse and kick her out when people died due to her negligence. Villagers reported that this nurse also allowed women to give birth unattended. This was a rather extreme example of the ways in which community members could be dissatisfied with the services available. In most other instances, the transgressions were not so overtly negligent. In other villages, people seeking care

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often went through similar experiences when the village's healthcare providers were all out of the community for various reasons. The reasons for their absence ranged from annual vacation leave, to participation in seminars, to three of four nurses in one village all being out on maternity leave, to providers being away while they traveled four days, roundtrip, to collect either supplies or their salary from the district medical offices. Besides all of these reasons, there were numerous occasions on which providers were not available or only one was present. In nearly all of the villages I visited as part of the random sample for group discussions, as well as all those I visited while shadowing supportive supervision visits, we found at least one provider absent, often without notice or explanation.

Social interactions were particularly important to community members during prenatal care visits but, I argue, these interactions during the woman's pregnancy helped to determine whether or not she would seek biomedical care or follow a provider's recommendation to give birth in a larger facility if she had a potential complication. The interactions between women and biomedical providers in the prenatal period helped to build or erode trust in the system as a whole. Community members also cited a lack of supplies and suspected corruption as deterrents to the increased use of the facilities in their villages. In terms of provider understanding and compassion, one of the village leaders in Mkamba had the following thoughts:

> 1: Then another thing, women are embarrassed, I mean if she is told then for example that she should go to town, right away she knows she is going to be operated on. Really the goal is for her to get the best care that she needs but she remains there at home, embarrassed…But, on the other hand, care should be improved and these providers of ours should be given training. (Mkamba, Village Leaders' group)

Here, the leader suggests that a women might be afraid of having a C-section and therefore not follow a provider's recommendation to go to Mawingu Hospital in town. Sometimes this was merely a misunderstanding borne of lack of information or lack of trust in the biomedical system.

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The women in Ngorotwa outlined some of the problems in their community health center which deterred attendance. They complained that if a woman did not have any money, she would not get her prenatal clinic card (which, legally, was always supposed to be free) or medication and she might be charged a bed fee after giving birth there, which was also an illegal practice:

> 1: If you don't have money, you won't get medicine.
> AS: But the medicines are there?
> 2: The medicines are there but they tell you you have to buy them. For example, you have a pregnant child, now while taking her there maybe she gives birth on the way. Now, if you take her there to the facility you are charged money.
> …
> 3: Another challenge is a mother, if she has already given birth, to let her get out of the bed, you have to give money.
> AS: Even for a pregnant mother?
> 3: Yeah, 12,000 they ask for, for soap or something, I don't know.
> AS: Me, I don't understand because healthcare for pregnant mothers is supposed to be free.
> 2: Even us we know that it's free but if you go there, if you ask them they will tell you that not even one day have they ever charge a pregnant woman. Even if you call them to a public meeting, they refuse, they say they have never done that. If they say to ask the women, the mothers are afraid so there isn't even one who says because she is thinking, 'If I say, then the day I go to the health center they will chase me out,' so that is what is restraining the women.   (Ngorotwa, women's group)

These types of abuses and attempts by providers to make more money were common causes of complaints and could certainly erode community trust in their facilities and providers, making it less likely they would choose these facilities for care. The women in Ngorotwa clearly were unable to report their healthcare providers for bad behavior or for imposing illegal fees for fear of retribution the next time they needed healthcare services. These accounts of extortion in village biomedical facilities illustrate the reasons women often decided to seek care in other, higher level facilities, thereby increasing the burden on the regional hospital due to the poor care in these lower level dispensaries or health centers. On the other side, rural healthcare providers reported that they charged small fees for antenatal clinic cards or other services sometimes as a

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way of raising funds to pay for a security guard at the dispensary or other such initiatives. This is not to say that sometimes they were not also charging women in order to line their own pockets, but only to acknowledge the fact that providers sometimes were either unaware they were engaged in an illegal practice or found ways to justify the fees they imposed with rhetoric about using the money to improve services.

4.4 Conclusion

Women did not arrive at Mawingu hospital from a vacuum, instead, before their arrival, they might have already been subjected to a number of factors that could predispose them to poor health and biomedical risk during pregnancy and the postpartum. Starting from a young age, girls may not have equal access to education, may be married or get pregnant at a young age in order to meet the financial needs of their families (through bridewealth payments) or because they lack other activities to fill their time (attending sexually-explicit movies with men), bear the largest burden of work in the family, and may not be involved in family decision making, in addition to being victims of intimate partner violence. What I have presented in this chapter can be considered representative of the lives of women living in rural areas. The experiences of women in urban and peri-urban areas, as well as those employed in professional fields such as teaching or nursing, would be different than for the majority of the women with whom I spoke in group discussions. However, these rural women represent the vast majority of the Tanzanian population.

When women were able to access care in biomedical facilities, there was the potential for numerous other conflicts between the local and global maternal health logics. Understaffed dispensaries with providers concerned with sustaining their own families on low salaries and working in remote areas with little support, often led to poor quality of care and interactions in

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the care setting that left much to be desired. It is no surprise then that many women with economic means and the money for transportation sought to bypass their village facilities, or even the district hospitals, in favor of the Mawingu Regional Hospital.

Both at the community level and within healthcare facilities, women experienced varied forms of care and, often, a lack of it. This lack of care often came from their partners who expected women to continue working through sickness and pregnancy. A man might not even consider involving his wife in decisions about their family or even her own health, instead justifying his unilateral approach by saying he paid bridewealth, or because he was seeking to avoid looking as though he had been dominated or controlled by a woman. Women however, often did provide each other with care through relations with neighbors or family members, both close and extended, sharing work and bringing water or food to women who were ill or nearing the end of their pregnancies. Communities expressed dismay, frustration, and feelings of betrayal when they perceived a lack of healthcare resources and poor quality. Often this was because they expressed the view that the state had a responsibility to provide medications and healthcare to its citizens. Even a lack of infrastructure could be viewed as a lack of state care, as when women died on the back of motorcycles on the way to a health facility due to lack of transportation or impassable roads.

These experiences all formed the background of the decisions women and their relatives made to seek medical care at the regional hospital during pregnancy or at the time of giving birth. Negligent, abusive, or corrupt care in their communities conditioned women and their relatives to mistrust the biomedical system even before they arrived at Mawingu Hospital. Their locally constructed, gendered logics of care and ideas of risk (social or, less often, biological)

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informed their comportment and interactions in the hospital setting. These views, combined with past life events, sometimes paved the road to medical complications or even death.

To conclude this second part of the dissertation, I want to emphasize once again the ways in which the growth of biomedicine has come to disallow other forms of caring during pregnancy and childbirth. This outcome has been accomplished, in part, through the expansion of biobureaucracy across levels. Chapter 3 demonstrates the development of biomedicine as a system to monitor and control local populations under colonial rule and, in a new form, through the Safe Motherhood Initiative meant to empower women and help them to access their right to a safe and healthy pregnancy and delivery. Chapter 4, in turn, shows how the top-down, WHO-led logics of rational actors and rights may, at times, conflict with the goals, needs, and conceptions of risk that are present at the local level in Rukwa, Tanzania. Biobureaucracy continues to expand through fines, forms, referral procedures, and guidelines of best practice that structure what biomedical healthcare providers view as compliant health-seekers, men and women both, when they go to biomedical facilities during a woman's pregnancy or when she is about to give birth. The biobureaucracy has also expanded in a way that made it difficult for village dispensaries to maintain supplies and provide the high quality care that women desired instead, leading providers who were underpaid and left without support, to resort to negligence or extortion to make ends meet in their own lives. Part III carries these themes over into the regional hospital setting of Mawingu's maternity ward.

Part III: Maternal Death in Present-Day Rukwa, Tanzania

Introduction to Part III

In the following chapters I often refer to best practices, standards of care, "high quality" care, or standard protocols and operating procedures. The Mawingu Hospital, like the Tanzanian Ministry of Health, was influenced by and worked to adhere to national and international sets of guidelines related to providing care for pregnant mothers and newborns. These guidelines for best practice often were derived from internationally sanctioned, World Health Organization recommendations, which the Tanzanian Ministry of Health and Social Welfare (MoHSW) then took up and reviewed. Pending approval by their experts, the MoHSW would then reproduce these guidelines either in English or Swahili (sometimes both), affix the seal of the government of Tanzania as official endorsement, and then disseminate these recommendations and protocols throughout the country. This was one avenue by which the state continued to act as a gatekeeper for external interventions and continued to prove its vital importance in healthcare despite a landscape of increased projectification and the explosion of NGOs (see Geissler 2015). In one instance, a new poster appeared on the maternity ward bulletin board, illustrating the use of a new device. The poster did not bear this seal from the MoHSW and one of the nurses immediately became suspicious of those who were sponsoring the device, a conglomeration of NGOs. She picked up her cell phone and called a friend who worked in the Ministry in Dar es Salaam in order to inquire about the legitimacy of the project and ensure the women of Rukwa were not to be guinea pigs for an untested intervention of questionable origins. In the days thereafter, it became clear it was a legitimate project but her concerns were not unreasonable.

Nongovernmental organizations were often involved in suggesting or developing new guidelines or protocols. These would be based on evidence from international trials of devices or

drugs, such as with changing guidelines related to the use of misoprostol[1], treatment of eclampsia with magnesium sulfate, and the more recent introduction of a device called NASG[2] for the management of postpartum hemorrhage. The MoHSW, together with USAID, Jhpiego, WHO, UNICEF, UNFPA, and other NGOs, developed a set of assessment guidelines related to Basic Emergency Obstetric and Neonatal Care (BEmONC). These guidelines are entitled *Standards-Based Management and Recognition for Improving Quality in Maternal and Newborn Care* (Tanzania MoHSW 2013). There was a version for use in hospitals and a separate version for use in the lower level health centers and village dispensaries. These are most often the standards of care to which I refer.

The role and influence of these standards and guidelines will continue to arise throughout the dissertation, as they have already permeated the chapters in part II, shaping women's and men's expectations of care, as well as their roles as biomedical subjects. As part of the global health development complex, these types of protocols, guidelines, and standards for care are the yardstick by which individual providers, facilities, regions, and countries are measured. Their deservingness for aid and investment, as well as proclamations about their individual and collective efficacy, is judged by an individual's, facility's, or country's ability to successfully implement and adhere to these measures despite widely varying access to resources—both human and material—as well as varying infrastructure and differing effects of geographic surroundings. Global health organizations and governing bodies often present these guidelines as the solutions to improving healthcare outcomes and reducing morbidity and mortality, including

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[1] Misoprostol is used to control or prevent bleeding by encouraging the smooth muscles of the uterus to contract after labor. International views on the use of misoprosol have changed from recommending universal use to now making it a second or third line drug for the treatment of postpartum hemorrhage, when other, more preferred drugs, are not available. Misoprostol can also be used to induce labor and is a common abortifacient globally.

[2] Non-pneumatic anti-shock garment, (Bixby Center for Global Reproductive Health 2009)

the deaths of pregnant women. While they are constructed as solutions, I present an alternative view of the ways in which these guidelines were nearly impossible to meet

I refer to these particular guidelines of best practice throughout the dissertation because the hospital staff members and other healthcare providers with whom I worked referred to them and aspired to provide care in full compliance with these guidelines. They were also measured against the *SBMR Tool* by outsiders and via internal, self-assessment activities. I am not a clinician and if I refer to the care that was provided as being of a low quality, it is always as compared to these guidelines that my informants were using or based on their views of the care they or their institution were able to provide, and not a result of my own personal judgments of the quality of care. Conflicts arose and providers sometimes became demoralized due to their inability to fully implement these standards of care due to a number of constraints that shaped their working and living environments in the Rukwa region during my time in the region from 2012 through 2015. Throughout the coming chapters, I demonstrate the ways in which it was oftentimes not even possible to implement these guidelines, let alone uphold them every day for every patient. I outline the pathways and social circumstances, as well as the institutional and systemic attributes, that contributed to making these standards an impossibility at the Mawingu Hospital.

Chapter 5: The Mawingu Regional Hospital Maternity Ward: Site of Care, Site of Violence

5.1 Introduction: Hospital Tour

The painted blue walls of the Mawingu Regional Hospital compound usher people into Sumbawanga Town, located on the Ufipa Plateau, approximately 1200 kilometers from Dar es Salaam. The large plot of land is the same one on which the hospital has sat since at least the 1920s when the "hospital" was no more than a few dilapidated buildings badly in need of repair, far away from the nearest British colonial outpost in Tabora some 600 kilometers to the northwest. At that time, the hospital was headed by an Indian Sub-Assistant Surgeon and these men were eventually rotated out on a yearly basis. The officers in Tabora cited the remote location and "lack of an Asian or White population" as reasons why healthcare providers were reluctant to accept posts in, what was then called, Ufipa (see chapter 3).

Now, the Mawingu Regional Referral Hospital has grown to be a conglomeration of numerous buildings, the oldest of which dates from the 1970s, according to the collective memory of the hospital staff. The blue outer walls of the compound sport the faded white outlines of the Vodacom logo, a telecommunications company which, at some point, had most likely sponsored the fresh coat of paint in return for this free advertising. However, as an extension of the government, the regional hospital compound was not allowed to display sponsorship of this sort and the walls had been scrubbed, leaving behind the faint ghost of the company logo.

Coming from my house to the hospital, I passed the district offices, turned left at the post office onto another road that hosted a waiting area for patients' families, some concrete benches with an aluminum roof that provides shade during the dry season and shelter from the wet in the

rainy season. Here, relatives waited for the hospital's visiting hours, which happened three times per day for approximately one hour each. Some people passed the entire day in this waiting area, having come from a village and lacking a place to stay in town or any relatives with whom to pass the time when they were not allowed inside the hospital wards. This waiting area could sometimes act as a litmus test for the state of the hospital. If I passed relatives crying or if there was commotion in this area, I nearly always could expect to hear reports of a death or some other extraordinary event when I sat down in the morning clinical meeting. Near the hospital walls were a number of billboards sporting public service announcements related to health. One that was in place for several years, until a strong storm blew it down, notified passersby of the symptoms of tuberculosis. Another, visible from inside the hospital walls, advertised the availability of family planning, proudly showing off the green star used countrywide to indicate the availability of these services at a facility.

Security guards manned the gate and occupied a guard house, which consisted mostly of empty rooms, a couple of broken chairs, and a telephone. Usually there were between two and four guards at the main gate, depending on the time of day or night. The guards were responsible for ensuring relatives did not roam about the hospital at unsanctioned times. They also inspected all cars for stowaways, ensuring that no patients left the hospital without the proper receipts confirming payment and their discharge cards signed by a doctor. Despite the fact that most of them knew me, my car was also subjected to search, particularly when I would leave in the middle of the night shift. The guards would ask me to turn on the interior light or open the door so they might look inside the back seat and the trunk to ensure I was not smuggling any patients out of the hospital.

Once past the guards at the main gate, I was confronted with the hospital compound opening up in front (Fig. 5.1).

Fig. 5.1 View of the Mawingu Hospital

A dusty turnaround cum parking area in the dry season, it turned into a muddy and cratered expanse during the region's long rainy season. A sign announced that I have arrived at the Mawingu Hospital and listed the departments to be found within. To the far right side of the compound was a meeting hall, used for the morning clinical meetings, which were similar to grand rounds, which take place at many hospitals. In the morning meetings the hospital staff members gathered to hear reports on the state of the hospital from the previous 24 hours, including the number of patients (bed state), the number of deaths, admissions, and discharges, as well as a report on the money collected and spent. They also discussed particularly difficult cases in order to decide on subsequent treatment and they also presented cases in which a patient

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had died. The Medical Officer In Charge presided over the meeting and it usually ended with any announcements or, occasionally, a continuing education session.

This hall was also host to other meetings, as well as parties, and trainings. Behind the hall, was the hospital canteen, complete with small kitchen and the toilets which served those eating or participating in events in the hall. To the left of the hall was the hospital's administrative block, a low compound in a U-shape, housing the Medical Officer In Charge, the hospital secretary, a couple of doctors' offices in which they held consultations or weekly clinics (such as diabetes or gynecology clinics), employees of a couple of non-governmental organizations that had partnerships with the hospital, an information technology person, and a few regional administrators who did not have office space in the Regional Administrative block on the hospital grounds. This included the Regional Reproductive and Child Health Coordinator (RRCHCO) and her deputy. To the left of this block, was the Out Patient Department (OPD), the point of entry for nearly all patients, except those who may have been going straight to the laboratory or the maternity ward.

To the left of the OPD was the Regional Administrative block, which housed the offices of the open registry, the Regional Medical Officer and his secretaries, the Regional Health Secretary, the Regional Nursing Officer, the hospital accountant, and the Regional Environmental Health Officer. The open registry housed the personnel files of all of the hospital employees. Next door to this building was the dental department. Finally, back near the guard house, was the medical records department, which was a small, two room building with an office and shelves upon crooked shelves of thousands of medical charts and files.

Passing through the main door to the OPD, I had to pass the cash office where there was often a line of patients or relatives waiting to pay the fees that were required at various steps of

the hospital visit or stay. Chipping paint in the uniform colors of government health facilities in Tanzania: a pale yellow on top and a bright blue from waist level down to the cement floors, spotted the walls of the OPD. The OPD itself was a narrow waiting room with several wooden slat benches on which patients and those who accompanied them would wait. The benches were arranged in front of the doors that opened onto the small doctor's rooms. Patients usually jostled each other through the narrow doorways, barely waiting for a patient to emerge before trying to elbow their way through the entryway, eager for their brief visit with the doctor after what was often hours of waiting. This area of the hospital could be particularly crowded and hectic but was also supposed to be the first stop for any emergency cases, because the hospital lacked an emergency department.

The OPD also included a small room designated as the minor theater where minor surgeries, such as cleaning and suturing small wounds, could be performed. At the end of the OPD was the pharmacy. A painted iron lattice separated the pharmacy worker from the waiting patients, relatives, or hospital staff members. Papers and medications were passed between these parties through the lattice or via a small opening at the level of a wooden ledge that served as a counter, well worn by elbows and hands. A doorway near the pharmacy led out into the hospital compound. Straight in front, as I exited those doors, were toilets for public use, pit latrines in a small building. To the left of that building, the district medical offices, and then the pharmacy store rooms from whence hospital staff requested and retrieved supplies and medications for use on their wards. From this vantage point, I could also look out over the yard, past a large and flamboyant poinsettia, to the hospital kitchens and, behind that, the laundry and mortuary.

At the opposite end of the OPD was the doorway to the rest of wards. The Mawingu Hospital was structured like many other hospitals in tropical countries that were built in a style

derived from colonial hospital plans, meant to facilitate the flow of air and patients, preventing

dangerous miasmas (Chang and King 2011). The different wards were offshoots of the main

walkway (Fig. 5.2). You turned off the main walkway and then entered each of the wards. This

walkway was the same cement as the rest of the floors of the hospital, in some areas cracked or

chipped, other areas smooth and polished. For some time, the only portion of this walkway

connecting that wards that was not covered by an aluminum roof was the piece that connected

the rest of the wards to the maternity ward, one of the buildings that the hospital administration

had most recently completed. The eventual construction of this last piece of the roof made an

enormous difference and provided shelter from rain and sun for both patients and staff members

as they moved between the maternity ward, laboratory, ultrasound room, the major operating

theater, and other hospital wards, sometimes pushing heavy gurneys or carrying paperwork and

blood samples.

Fig. 5.2 View from inside Mawingu Hospital

The oldest wards consisted of individual rooms, barely large enough for a twin bed, chair, and small cubby, which also served as a table. Most of the wards were simply long open rooms, some of which had cubicles around every two beds, as well as two small rooms for the nurses. The nurses usually used one room for official purposes, such as filling out and storing paperwork, storing essential medications and files, or consulting with patients or relatives in private. The other room was generally the nurses' changing room which they might also use for tea breaks during the work day or a place in which to exchange gossip, money, wedding invitation cards, conduct side business (such as selling water, snacks, or secondhand clothes) or discuss private issues. The pediatric, maternity, and psychiatry wards were each singular in their layout and design. Since the hospital built the maternity ward and moved services into that location in 2011, pediatrics has been housed in the ward previously occupied by maternity. This meant that pediatrics was a much larger ward than the others, with several connected rooms composing the larger whole. This made privacy easier, but also made it slightly harder to monitor patients from a central nursing station. The pediatric ward was almost always full during my fieldwork period.

Maternity, the major operating theater, and the laboratory were the newest buildings when I arrived first at Mawingu in 2012. As of May 2015, the hospital administration was not, to my knowledge, considering any imminent additions to the hospital, preoccupied as they were with maintaining the existing infrastructure and procuring enough supplies to keep the hospital running. However, wards such as maternity and pediatrics were in need of further expansion. The increase in the number of women who were coming to the regional hospital to give birth had already outpaced the physical capacity of the ward and limited the care women were able to receive and providers were able to give. The number of admissions far outpaced the number of

available beds, which often led to women lying two, or even three, to a bed. The only place in the maternity ward where this was not allowed was in the labor room. An increase in clients without the concomitant increase in investment, budgeting, and infrastructure had dire implications for actors at all levels.

The Mawingu Hospital also had a private ward, called Grade I, for which patients paid higher prices out of pocket or, if they had it, were paid for by their insurance. Grade I was set slightly apart from the other wards, though still connected by the same covered walkway. You entered the door and immediately found yourself in a dimly lit hallway, a shock after the bright sun outside. The entrance was opposite the nurses' station and on either side were individual, private inpatient rooms. Passing through another door to the left of the nurses' station, it was possible to walk out into the rest of the ward, which was arranged in a square around a central courtyard type area, full of trees and flowers. The general feeling was one of verdant peacefulness. The whole area had a feeling of being less harried and calmer than the other wards. Patients quietly queued up outside the doctors' rooms, the pharmacy, the small lab, or the records office. Grade I was the larger hospital writ small in order to provide faster and more personalized services to these clients who brought in more revenue for the hospital.

Leaving Grade I, you passed the X-ray department and the ultrasound room, moving on past old storerooms and the newer psychiatry building. The psychiatry ward never had any patients actually in the building but was the home to a psychiatric nurse who also assisted with social work cases. When the hospital hired a new obstetrician/gynecologist in May 2015, his office was in the psychiatry building. Finally, you walked down the now entirely covered walkway to the maternity ward doors. After walking through the main doors, you faced the ward

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arranged in an outer square around a center area which included greenery and small trees, as well

as the Nurse and Doctor In Charge offices (Fig. 5.3a, b, c).

Fig. 5.3a

Fig. 5.3b

Fig. 5.3c

5.2 The Maternity Ward

The Regional Hospital's maternity ward is the top level of care in the region and therefore serves a catchment area of more than one million people. The maternity ward saw an increase in the number of births from 4,153 in 2012 (PMORALG 2015:12) to 5,825 in 2015 (ward monthly report books). This amounts to between 450 and 600 births per month, with the busiest months seeing around 20 births per 24-hour period, on average. However, maternity care is not an area ruled by averages; some days an entire morning shift of eight hours, could pass with only two births. Other days, the same eight-hour period could be non-stop deliveries, including multiple Cesarean sections, entirely overwhelming the staff members on duty and quickly exhausting supplies and equipment. Work on the maternity ward, like nursing care throughout the hospital, was arranged into three shifts-morning, afternoon/evening, and night. The morning shift was eight hours long, the afternoon/evening shift approximately four, and the night shift approximately eleven to twelve hours long. By the time I left Mawingu in the

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beginning of June 2015, the morning shift generally had about six assigned nurses, including the

Nurse In Charge; the afternoon shift usually had about three nurses, as did the night shift- two on

labor and delivery and one assigned to the postnatal portion of the ward. The ward could quickly

become understaffed if even one nurse left the ward to run an errand, attend a meeting, or return

home to tend a sick child or a funeral unexpectedly. There were perhaps around 40 beds on the

ward, at least half of which almost always were occupied by at least two women. Therefore, a

conservative estimate might be that there were between 40 and 60 women, plus the babies of all

those who had already given birth, on the ward each day, overseen and cared for by just six

nurses, at a maximum.

On the morning shift there were also usually two medical attendants and two to three

cleaners who helped fetch supplies, prepare delivery packs, maintain cleanliness, and generally

run errands for the ward, including opening patient files in the medical records department and

taking samples to the lab. In March 2014, there were 22 nurses on the ward, 13 RNs and 9 ENs.

By May 2015, the ward overall included about thirty nurses across the cadres- enrolled nurses,

registered nurses, and nursing officers—as well as about three medical attendants, and three to

four physicians at any given time. Starting near the end of 2014, physicians were rotated through

the maternity ward much more frequently than had been common in the past, when the same

three doctors had been working on the ward for about three years[1].

The maternity ward was designed with a number of different rooms, which would be

suitable for the different phases of a mother's time at the hospital. The ward managers, the Nurse

In Charge and Doctor In Charge, had decided to arrange the ward into prenatal, labor and

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[1] This occurred because one had been promoted to Medical Officer In Charge, one had gone back to
school to specialize in Obstetrics and Gynecology, starting in the end of September 2014, and a long-time
Assistant Medical Officer from the ward was away from work for a prolonged period due to illness.

delivery, and postnatal sections. In April 2015, they also decided to divide the nursing

administrative responsibilities and created a second Nurse In Charge position. One was to lead

and coordinate the prenatal and labor and delivery sections of the ward, and the second was to

lead the postnatal section of the ward. The prenatal section of the ward consisted of one room in

which mothers waited if they were in very early labor or had arrived before the onset of labor

due to other health conditions- perhaps they had a history of needing Cesarean sections, for

example. Moving clockwise around the ward, the next rooms were a storeroom, which also

doubled as a changing room for the ward cleaners and the male nurses. After that, was the main

nurse changing room, which the ward staff members used for a variety of purposes. Other rooms

of the ward included the admission room, labor and delivery room, operating theatre, post-

Cesarean section recovery room, a staff toilet, postnatal recovery room, a small room for

neonates who had been admitted or readmitted after birth, and the Kangaroo Care room for

premature infants and those who needed close monitoring for feeding and climate control.

5.3 Patient Flows in Time and Space

Women flowed through the ward in different ways but generally in the same direction.

Upon arrival, the woman and her companion, nearly always a female relative, reported first to

the admission room. This large room was divided into two sections by a chest height tiled wall.

To the left, were a number of beds occupied by women in active labor but not ready to give birth,

as well as the more critically ill patients or those who needed close monitoring. Women who

came to the ward with malaria in pregnancy, severe anemia, infections, pre-eclampsia or

eclampsia slept in these beds, where the nurses could easily monitor their condition without

being far from the labor room, which was adjoining. To the right of the wall in the same room

was the admission area. This area housed a large desk for filling out paperwork, a wooden bench

for arriving women, a waist-height examination bed, a trolley with necessary supplies (gloves, cotton swabs, antiseptic, urine dipsticks), and a hand washing station made out of a plastic bucket with a spigot and a plastic basin on the floor. All women started at this point, in the admission room of the ward. They were then funneled into the appropriate other rooms, sorted and marked out depending on which stage of labor they were in or what other health problems they did or did not have.

While those women who lived in the areas surrounding the hospital were familiar with the procedures on the maternity ward and in the hospital more generally, due to previous interactions with the system either as patients or visitors, women who came from outside were often confused about how they were supposed to move through these spaces. Nowhere was it written that women in labor could go directly to the maternity ward and waiting in line in the OPD could cost valuable time. Additionally, when women or their accompanying relatives asked for instructions, they were often met with gruff responses from harried hospital personnel. Sometimes it was the security guards at the front gate who were most useful in navigating the flows of the hospital. More than once, I witnessed maternity ward nurses harshly telling women they had skipped some portion of the designated procedures and instructing them to return again after they'd done it properly—getting the appropriate paperwork, for example, once the hospital had implemented a new accounting and file system. This resulted in much consternation as women in the midst of contractions or a painful pregnancy complication were forced to traverse the hospital, and sometimes more than once, in search of the prescribed piece of paper, stamp, or receipt. These delays and bureaucratic procedures which, to women and relatives unfamiliar with the hospital, seemed opaque and unintuitive, could produce dissatisfaction with care but also reinforce a woman's sense that she was not in control and she would do best to simply be quiet

and listen to the instructions of the nurses. This instantiation of the women's lack of power within the epistemological structure and hierarchy of the hospital served to silence her voice, figuratively, and literally, as when she did not tell a nurse she was experiencing a problem she thought was abnormal. In this way, the hospital hierarchy and bureaucratic processes produced in women a sense of uncertainty about when, and how, they could ask for attention from the nurses or doctors. These experiences paved the way for women who remained silent as they began to hemorrhage or felt a change inside their bodies, which later the nurses and doctors might identify as the cause of the woman's death: infection, embolism, shock, life-threatening high blood pressure, cardiomyopathy, or uterine rupture.

5.4 The Admission

Upon finally entering the ward, passing through the doors of the admission room, which bore a sign forbidding admittance to anyone not in labor, each woman handed a nurse her antenatal clinic card, which included basic health information, a rudimentary obstetric history (number of previous pregnancies, miscarriages, living children), and had check boxes about chronic or pre-existing health problems, with boxes next to categories such as heart problems and diabetes. According to guidelines, healthcare providers at the prenatal clinics were supposed to test every pregnant woman for HIV/AIDS and while most were tested, sometimes the woman's village dispensary did not have the necessary reagents, test strips, or trained providers for carrying out the rapid tests. In one village, the providers told me that they had received a delivery of the test strips and reagents but neither of them had received comprehensive training in HIV testing and counselling. Therefore, they had refrained from testing anyone, much to the consternation of the community members who were forced to travel to a neighboring village for

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testing, even though the supplies were present. In other places, the reagents ran out more quickly than the test strips or the kit had been close to expiring when it arrived at the dispensary.

Nurses at the Regional Hospital also repeatedly told stories they had witnessed or heard in which women had changed their HIV status on their cards or had pretended to lose their card in order to receive a new one which did not indicate their HIV status, which was usually positive in these narratives. Nurses suggested women might do this switch out of either denial about their status or due to the stigma attached to being HIV positive. In fact, the cards did not say "positive" or "negative" but instead, the healthcare system used the number "1" to mean HIV positive and "2" to indicate HIV negative in order to maintain some sense of privacy. Theoretically only those who knew what the numbers stood for would be able to know a woman's status. The system was in place seemingly under the assumption that only providers would know what the numbers meant but nurses' stories indicated that at least some women also knew how their HIV status was being recorded on these documents.

With the antenatal card in hand, the nurse then recorded the woman's demographic information and basic obstetric history in the ward's admission book, a ragged and tired notebook that had pages falling out and was much repaired with medical tape, regular sellotape, and glue. After this, the nurse instructed the woman to take her things and lie on the examination bed so the nurse could check the woman's vital signs, count her contractions, listen to the fetal heartbeat, conduct a vaginal examination to estimate cervical dilatation, and do a general "head to toe" assessment of the woman's overall health. Based on cervical dilatation, the nurse then decided where to send the woman to wait out the rest of her labor, until it was time to move to the delivery room. While these examinations and measurements were all supposed to comprise the initial admission exam, nurses often rushed through them or simply wrote "normal" after

looking at a woman. While the hospital continued to increase the number of nurses working on the maternity ward, those assigned to a shift were not necessarily present, and even when they were, the number of women arriving, in labor, waiting for a C-section, or needing other forms of care could easily stretch the nurses thin. This, not infrequently, resulted in the women having only brief, truncated interactions with the nurses in which the nurses did not ask key questions about the woman's previous medical history, problems during the pregnancy, or current health. Certainly, obtaining any kind of social history, which would have improved care by adding context to the woman's pregnancy (Wanted? Unplanned? Supported by her family? In the context of a marriage?), and asking questions that would have eased the awkward and foreign interactions taking place, was out of the question. More than once, as a nurse expressed dismay and frustration as a mother resisted a vaginal exam, I wondered if perhaps she had been sexually abused and the encounter with the nurse was causing her previous experiences to resurface. Or, perhaps she had no idea what the nurse was doing and therefore felt embarrassed and uncomfortable due to the lack of explanation before someone tried to shove their hand up her vagina. Nurses could certainly have tempered these violations of women's bodies but the lack of time for these interactions was itself a product of a structurally violent situation for the nurses, in which they lacked the personnel and resources they needed.

5.5 Laboring

Clinically, a woman's labor is generally divided into three stages. The first stage is further divided into the latent and active phase and, overall, is the entire time from when the cervix is closed, until it reaches 10 cm of dilatation, considered full or complete dilatation, and the woman is nearly ready to start pushing. At this point, from the time the cervix is fully dilated to when the baby is delivered, the woman is in the second stage of labor. The third and final

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stage of labor is from when the baby is born until the birth of the placenta. There are few hard and fast rules for the amount of time a woman can or should stay in any stage of labor. However, once the woman is in active labor, in the first stage, her contractions will, ideally, remain regular and increase in strength and duration, while also increasing in frequency. The general rule of thumb, at this point, is that the cervix should dilate one centimeter every hour during the active phase of the first stage. Then, the woman enters the second stage, which can last from a matter of minutes to a matter of hours depending on many factors including (but certainly not limited to) how many previous pregnancies the woman has had, the angle at which the baby's head entered the pelvis, the position in which the woman is laboring, the size of the baby, and the mother's own mental, emotional, and physical states. For example, a woman may have had a very long first stage of labor during which her contractions did not allow her to get much sleep. She may not have eaten much throughout her labor and when it comes time to push, she may be very tired.

Women in Tanzania often would say they did not have strength (*sina nguvu*) or that they were defeated (*nimeshindwa*) if they were feeling this way. The phrase *nimeshindwa* is often employed by the speaker to express a lack of control; the passive construction does not provide any idea of who or what may have defeated the speaker, while still conveying the sense that the speaker has tried and, not due to anything within their power, was unable to do something. It is, in essence, an expression of the speaker's awareness of their lack of agency in a situation. A speaker can use this construction to describe any variety of situations, such as *nimeshindwa kufika*, I have failed to arrive, literally, I have been defeated to arrive. This provides the sense that, though they tried everything, it was simply not possible to arrive. Perhaps a reflection of a cultural sense of the locus of control or simply a mechanism for saving face in social interactions (see also chapter 8), this phrase is a common one, not just in the hospital but in life more

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generally. In the case of the women, I suggest a reading of this phrase that takes it also as a sign the speaker, the woman, was aware of her lack of control and relinquishing it, turning it over to the nurses and biomedical intervention in all its forms.

5.6 Ambiguous Caring and the Second Stage

The nurses would often become very concerned about how long the mother was in the second stage because, they said, this was the most precarious time for mother and baby. A baby could spend too long in the birth canal which might compress the umbilical cord, cutting off the baby's oxygen supply. Nurses said then the baby would not "score well," referring to the APGAR score used to assess the baby's appearance and reflexes upon birth. Babies who did not have enough oxygen during birth could develop a number of complications, including twitches which might be an indication of brain damage, as well as being at risk for birth asphyxiation, which was a relatively common cause of neonatal deaths while I was at Mawingu Hospital. In this second stage of labor, babies were also at risk for getting meconium or other secretions in their mouths, which they could then inhale deeply into their lungs when they were born and first began to cry. This created the possibility of infections, especially pneumonia.

When confronted with a woman who was defeated, or was experiencing an extremely difficult second stage of labor, the nurses would frequently resort to a handful of methods that, from the outside, often appeared to be, at the least, disrespectful and, often, downright abusive. When I asked about these behaviors, hitting or using harsh language in particular, and why the maternity nurses did so more than those working on any other ward, Halima explained it this way and her answer was generally representative:

> If you yell at a person, she will understand you but, if you tell her gently- me, I have tried to admit, to admit a woman gently, if I reach labor [room], gently, every area, gently. Until I came to change, it was necessary for me to be severe, why? Because that patient, she comes there, she sees you, that you are have your gentleness and [it shows] she

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doesn't have to be serious. Therefore, she arrives there, she is strangling the baby, she arrives there, you tell her she should lie on her back and push the baby, [but] she sits, she sits on the baby's head and the baby dies there. Therefore, if you don't use that severity, that fierceness helps, at the end of the day, her to get her baby and at the end of the day that patient, she comes to thank the nurse, 'Thank you, there, without you doing that to me like that, I wouldn't have given birth.' You see? Therefore, I see that cultures are different. Even if you go wherever, you can't hear a nurse speaking gently to a pregnant woman because the nurse is doing that fierceness to save that baby. But I don't believe that that severity, a person would do it to a person who has, I don't know, maybe I should tell you maybe like an intestinal obstruction. If [the nurse] does that, we have to ask her, 'You, why are you doing that?' but in things with childbirth, the pregnant mother's mind, it is as though it's not there. Therefore, you have to scare or shock her. You have to yell at her, tell her, 'You, you do this and this and this and here this should be this way and this way. If you don't do these things, you will lose your baby, you will do this!' You tell her even the complete outcome. But a person, if you tell her the truth, a person sees like you are abusing her or you have asked her for bad things, therefore, this is what it's like. Except, the biggest thing is that we always speak in order to protect the baby. At the end of the day, a woman gives birth to a baby who is alive and then she complains about things like those, it's not good. While for her, you are her assistance.

Ultimately, the nurses viewed behaviors such as yelling at the women, telling them they were killing their baby, or hitting them as a form of care, which they undertook in order to help the woman give birth. Brown (2010) also cites similar behaviors in a maternity ward in Kenya, where nurses suggested letting women relax during labor was disadvantageous and did not result in good outcomes for mothers and babies. Similarly, de Klerk troubles Western conceptions of care practices, demonstrating how "toughening" of those who have lost relatives (de Klerk 2013) or concealing dying patients' HIV status (de Klerk 2013) are, in fact, locally valued forms of care, which cultural outsiders might not view as such. These descriptions of locally valued care practices lead to a more nuanced reading of these outwardly abusive behaviors in which the nurses engaged, recasting them as forms of care suitable to the environment in which the nurses found themselves. Halima had first worked on Grade I, the private ward, and when she'd had reason to pass through maternity, often remarked to herself that the nurses were using mean and abusive language with the women. She could not see why and often sympathized with the

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women. That was until, she described, she was transferred to the maternity ward and quickly found her gentle demeanor did not help her in extracting the required compliance or outcomes from her new patients.

Many of the nurses described women in labor, with no access to pain medications, as "out of their minds" or unable to listen and follow directions. While some women were clearly distraught due to the pain and fear of being in labor, especially young women experiencing their first pregnancy and labor, there were many others who labored quietly and compliantly followed all the nurses' instructions. However, I will say that we had a couple of women on the ward who continue to stand out in my mind, albeit they were extreme cases of defiance. One refused to do anything other than sit on the dirty tile floor. Every time we helped her up onto the bed, we would turn around moments later to find her back, squatting on the floor. The doctor kept walking through the labor room that day and repeatedly berated the nurses for "letting" the woman remain on the floor because he had not seen our struggles to move her up onto the bed time and again. Another woman seemed to have experienced a significant shift in her personality with the onset of labor, which even her relatives mentioned. She spoke of seeing spirits around her and she was extremely agitated. Due to her prolonged labor, the nurses started her on an IV of fluids but the woman repeatedly pulled the cannula out of her arm and quickly made her way out into the courtyard of the ward. More than once we went to check on her and found a trail of blood, from where she'd pulled out the IV, leading us to the flowerbed where she was squatting and bearing down with contractions while muttering incomprehensibly, covered in dirt.

Truly, in cases such as these, it was possible to understand how the nurses came to view hitting, slapping, or yelling as the appropriate, and needed, tools. There was, in all honesty, nothing much else they could do with women such as those, particularly as they repeatedly

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defied efforts to entice them into staying put on their assigned bed, threatening to give birth in an

unsanitary location with no assistance, as could have been the case in the flowerbed. These were

full grown women, with pregnant bellies, whom the nurses could not easily physically remove to

their beds or elsewhere, who refused reasoning and for whom the nurses had no other technical

or medical options. Lacking other options, they resorted to this more aggressive form of care.

Another nurse, Martha, one of the past In Charges of the ward, looked for deeper reasons

for these harsh and abusive behaviors, and responded to my question in light of her own fraught

interactions with the hospital administration, which had eventually caused her to be transferred to

a different ward. She believed,

> There are a lot of things that cause that state. The first thing entirely is the frustration that
> she has, the employee. You find from January to December she hasn't ever gone to a
> seminar, she hasn't ever gotten any kind of income other than her salary that you find is
> 200,000 or 300,000 [2]while she has a family and six children at home. Second is the
> attitude, I mean the environment that she has, the employee. You find frankly, at her
> home they have already become accustomed to abusing each other, I mean [where] she
> lives it is just swearing. Therefore, she brings that into work. Another, it's the state in
> which she left her house, maybe she has left and there is no salt, there's no what, and the
> children need to go to school, and she needs to do- well, there, can she really work well?
> Therefore, she is angry, she can't deliver something that is good. Another thing is the
> harassment that she has gotten coming from the administration, maybe a person has a
> problem, she has gone there and encountered bad language and she has transferred it to
> the patient. Another thing is education that she has, you find that she doesn't have enough
> education to know why this mother is being bothersome.

Her personal experience, as well as the insights she had gained from managing the maternity

ward, allowed Martha to explain how poor living conditions, often as a result of low wages, in

addition to tense or abusive exchanges with the hospital administrators could influence a nurse's

interactions with the women for whom she was meant to be caring. Everything Martha

mentioned is an example of a failure of institutional care, beginning at the level of the central

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[2] Approximately between $100 and $150 per month, as of 2015.

government which failed to adequately increase wages in the health sector, leading many nurses to remain preoccupied with the state of their home long after they had walked out the door. Nurses' private lives continued to permeate the boundaries of the hospital, blurring the lines between domestic and professional spaces. The Patron, in charge of all the nurses, was known for his harsh language, which he preferred to see as something along the lines of telling it like it is. His forthrightness, in a culture that valued a certain degree of circumspection and tact, rubbed many nurses the wrong way, often offending them outright if he used language that was profane, or otherwise inappropriate for the workplace, in their interactions.

It is lived realities such as these that are entirely lost in the design of many public health interventions meant to improve care, decrease disrespect and abuse, and empower women in the healthcare setting. When the nurses themselves felt uncared for, were struggling in their private lives, or encountered stubborn and noncompliant patients in the absence of manpower and sophisticated technology, they resorted to hitting and yelling in order to enact some form of care that would enable the woman in question to give birth to a healthy baby.

5.6 Birth

After the birth of the baby, the nurses would quickly cut the umbilical cord and they had all learned active management of the third stage of labor (AMSTL or, alternatively, AMTSL) (Armbruster 2006), in which the nurse was supposed to first palpate the uterus for the presence of another baby and administer an injection of a uterotonic, usually oxytocin, to help the uterus to contract. Then, using forceps, the provider should clamp the umbilical close to the mother's perineum and pull with slow, steady pressure in a downward motion until the placenta fully detached from the uterus and was delivered. The nurse then checked the placenta to make sure it

was complete[3], and thoroughly massaged the uterus to ensure it expelled any blood clots and to make sure it was contracting, a key sign that bleeding will stop. Ideally, the healthcare provider would explain to the mother how to check and periodically massage her uterus, as well as give her information about danger signs in the immediate post-partum period. Only rarely did I ever hear the nurses in the labor and delivery room give the woman any advice that went beyond how to check if her uterus was still contracted and telling her to void her bladder. The nurses in the postnatal room did provide further health education and, in the event a new mother was having a difficult time initiating breastfeeding, for example, the nurses were very willing to help.

Most often, the nurses at the Mawingu Regional Hospital were able to let the women continue to rest in the labor room after delivery so they could monitor their conditions. This was supposed to include vital sign monitoring, as well, though this particular aspect nearly never happened-sometimes due to other women needing assistance, others because the blood pressure cuff was missing or broken, or no one could find a stethoscope that was functioning. In lieu of the more technological monitoring specified in care guidelines, the nurses who were more experienced would visually assess the mother and deem her condition "normal." Sometimes, depending on how busy the ward was, the nurses had to almost immediately move new mothers to the postnatal room on the ward because incoming women were ready to give birth and needed a bed in the labor room. These sometimes hasty transitions were not ideal and more than once led to incoming mothers giving birth on the floor near a bed, or immediately after reaching a bed, and the outgoing mothers were forced to carry all of their belongings to the other side of the ward within minutes of giving birth. When this happened, the mothers hobbled slowly along,

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[3] Any remaining pieces of tissue can cause the uterus to not contract (uterine atony), which is one of the most common causes of continued bleeding. This can cause post-partum hemorrhage, a leading cause of maternal death.

sometimes with blood dripping on the floor from between their legs, plastic basins, overflowing with soiled clothes, balanced on their heads.

5.7 Directed Flows

When the nurse first examined a woman, the nurse then decided where the woman should next travel on the maternity ward. If the woman was in early labor, less than three or four centimeters, the nurse would give her a bed in the antenatal room with instructions to come back to the admission room when her contractions got stronger. If she was between four to six or seven centimeters dilated, the woman would generally receive a bed in the admission room, closer to the delivery room. In both the antenatal and admission rooms, the women almost always shared their bed with a second woman and, at particularly busy times, maybe even two other women. This was due to a lack of beds but, more importantly, a lack of a place to even put other beds. If the woman had already reached six or seven centimeters, she would go directly into the labor room. In the labor room (Fig. 5.4), women never shared a bed due to the need for enough space to conduct the delivery and the messy nature of giving birth. This, however, on busy days could mean that there was a rapid turnover in beds as I described above. Or, the lack of open beds could mean women had to wait for a bed until the last possible moment, as when one mother I was helping gave birth on the floor just feet away from a recently vacated delivery bed. Other times, women rapidly progressed through the last few centimeters and gave birth in the beds in the admission room, in close proximity to other women, without privacy, and, many times, without the assistance of a nurse, who would often come running just as the woman finished pushing her baby into the world. Through many hours of listening, I became attuned to the sounds of the women in labor in the admission room and could often tell from a change in their moans or other vocalizations that they were nearing the final stages of labor.

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Fig. 5.4 Images of the labor and delivery room

Once a woman had given birth, she moved to the postnatal room across the ward, near the entrance, where she typically spent 24 hours, give or take, depending on her health and whether or not she had experienced any complications. Once in the postnatal room, the postnatal nurses took over her care and were responsible for ensuring she had any necessary medications or monitoring. The postnatal nurses were also responsible for providing basic health education related to family planning, breastfeeding, personal hygiene, and basic nutrition and baby care information. On this part of the ward, the nurses also filled out another set of documents, completing documentation started by the labor room nurses in the delivery book in which all the births were recorded, as well as filling out the birth announcement form that families took to their district administrative offices if they wanted to get a birth certificate for their child. If any of the women had not already previously been tested for HIV, the postnatal nurses counselled and tested them, providing those who tested positive with medications for the baby and further

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instructions for follow-up testing and alternatives to breastfeeding. The women generally also received a mild pain killer and an iron and/or folic acid supplement, as well as Vitamin A, which they received when other nurses or auxiliary staff members arrived on the ward to vaccinate the newborns.

5.8 Surgical Birth

If a woman needed a C-section, either planned or emergency, her flow through the ward differed somewhat from the norm. If the nurses identified a possible complication or previous history that suggested the woman might need a surgical birth, they would call the doctor to alert him of a patient for review. When the doctor confirmed the need for a C-section, the nurses then prepared the woman for surgery by having her sign a consent form, taking blood samples for laboratory tests (blood grouping, cross-matching, and hemoglobin levels), in case she should need a blood transfusion and to rule out anemia that might be life-threatening during the surgery, administered pre-operative antibiotics and IV fluids, and inserted a catheter to drain the woman's bladder during the surgery and her recovery. Once new procedures went into place in the fall of 2014, nurses also became responsible for taking the doctor's prescription to the hospital pharmacy to pick up the antibiotics, IV fluids, sutures, and anesthesia drugs for use during the surgery. This entire process could become significantly delayed if any of the aforementioned items were out of stock at the hospital. The patient's family might then have to purchase the items at a private pharmacy outside the hospital gates.

Once in the operating theatre (Fig. 5.5), which, as of December 2014, was located within the maternity ward itself, a nurse from the labor room accompanied the mother in order to be present to receive the baby. This nurse often had to resuscitate the baby (with greater or lesser degrees of intervention depending on a number of factors) and then was responsible for weighing

the baby, recording its APGAR score, gender, and time of birth, and then carrying it back to the

labor room where the baby would wait in a warmer until its mother awoke from the general

anesthesia and was able to care for the baby.

Fig. 5.5 Maternity ward operating theater, which opened in December 2014

At this point, the postnatal nurses took over the care of the mother and were responsible

for collecting her from the operating theatre after the surgical team was finished. The postnatal

nurses transferred the unconscious and/or immobilized woman to a bed in the post-Cesarean

room (Fig. 5.6), changed her perineal pad, and ensured she was warm, clean, and secure. The

postnatal nurses then were also responsible for the follow-up care of these patients, which

included administering pain medication and antibiotics on a schedule and dispensing advice

related to food and fluid intake, breastfeeding, urination, care of the incision site, and general

advice about recovery. The nurses, and often the doctor too, would try to impress upon the post-

C-section mothers the necessity of using a form a birth control in order to prevent pregnancy for

two to three years so their bodies would have enough time to heal and not predispose them to possible future complications, such as a ruptured uterus.

Fig. 5.6 View of the post-Caesar room on the maternity ward

5.9 The Doctors

Thus far, I have primarily explained the roles and responsibilities of the nurses. This is due to the fact that nurses, enrolled nurses and registered nurses, were responsible for the vast majority of the care on the maternity ward at all stages of a woman's stay. The physicians were responsible for conducting patient rounds each day, ideally before noon, in order to assess each woman's condition, monitor any changes, and prescribe next steps for her care. He, because the doctor was nearly always a man[4], would conduct rounds with a nurse who recorded a summary

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[4] There was a woman assigned to the maternity ward but her tenure was short-lived. Everyone agreed she was "not fit" for maternity and the work on the ward did not suit her. She was slow at C-sections, which increased the baby's exposure to anesthesia and increased the chances of maternal complications, while frequently being late to conduct rounds, refusing to stay after hours, and generally being disagreeable. Personally, I found her attitude extremely off-putting and attempted to avoid her in the clinical setting, though she was better in social settings.

of the prescribed care, equipped him with gauze, gloves, plaster, and antiseptic as needed, and

drew his attention to the most urgent cases. The doctors also personally changed the bandages of

woman who had had C-sections or other operations, which the Medical Officer In Charge

credited as the reason for significant improvements in the hospital's rates of post-operative sepsis

and infection. The doctor was also responsible for writing all the clinical notes for the women's

files and he saw patients in the obstetrics and gynecology clinic, which took place once a week.

The doctors were also responsible for the gynecology ward, ward 5, and conducted all

gynecological surgeries, as well as C-sections. They rotated on-call duties for any emergencies

that occurred after the 3:30pm end of the working day, though they often stayed past that time in

order to finish surgeries, paperwork, or other duties. When there were multiple doctors present,

they divided the duties on the maternity and gynecology wards in order to ensure they could see

patients in a timely manner and complete all their duties before the end of the day. Additionally,

the doctors participated in meetings, trainings, and provided advice or saw patients who they

knew perhaps through family or other personal connections, such as the time I had one of the

maternity ward doctors write me orders for a malaria test when I was feeling sick so that I could

bypass the procedures and long line in the OPD.

5.10 Hospital Organization and Personnel

The maternity ward was integrally connected to and dependent upon several of the other

hospital departments. These included surgery, the laboratory, OPD, medical records, and the

gynecology ward, which was technically part of the same service (Obstetrics and Gynecology),

though geographically separate within the hospital. Each hospital department was overseen by a

Medical Officer In Charge and generally each ward also had a Nurse In Charge. Several of the

most experienced and more highly trained nurses would rotate on a weekly basis as the Nurse

Supervisor. The nursing staff included several different cadres of nurses including Enrolled

Nurses (EN), Registered Nurses (RN), and Nursing Officers (NO) and all of these groups

reported to the hospital's Patron and Assistant Matron, the first and second in charge,

respectively, of the nursing staff. The Patron also reported to the hospital's Medical Officer In

Charge who subsequently reported to the Hospital Advisory Board[5] and the Hospital

Management Team (HMT). The HMT was a collective administrative body that made many of

the more complex decisions regarding issues within the hospital. The clinical (non-nursing) staff

included Medical Officers (MO), Assistant Medical Officers (AMO), and Clinical Officers[6]. The

clinical staff, together with auxiliary staff, reported to the Medical Officer In Charge. The

auxiliary staff included laboratory staff members of varying qualifications, medical attendants,

pharmacy personnel, and other non-clinical support staff such as the hospital kitchen workers,

security guards, and the hospital cleaners/groundskeepers. Figure 5.7 on the next page presents

my rendering of the Mawingu Hospital Organogram from the Hospital's Comprehensive

Hospital Operational Plan (CHOP) for the fiscal year 2013/14.

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[5] This was still a nascent administrative body when I left the Rukwa region in June of 2015 but the hospital administration had firm plans and a timeline for completing these plans to implement a Hospital Board.

[6] Clinical Officers were more commonly present in lower level health facilities, such as health centers and village dispensaries.
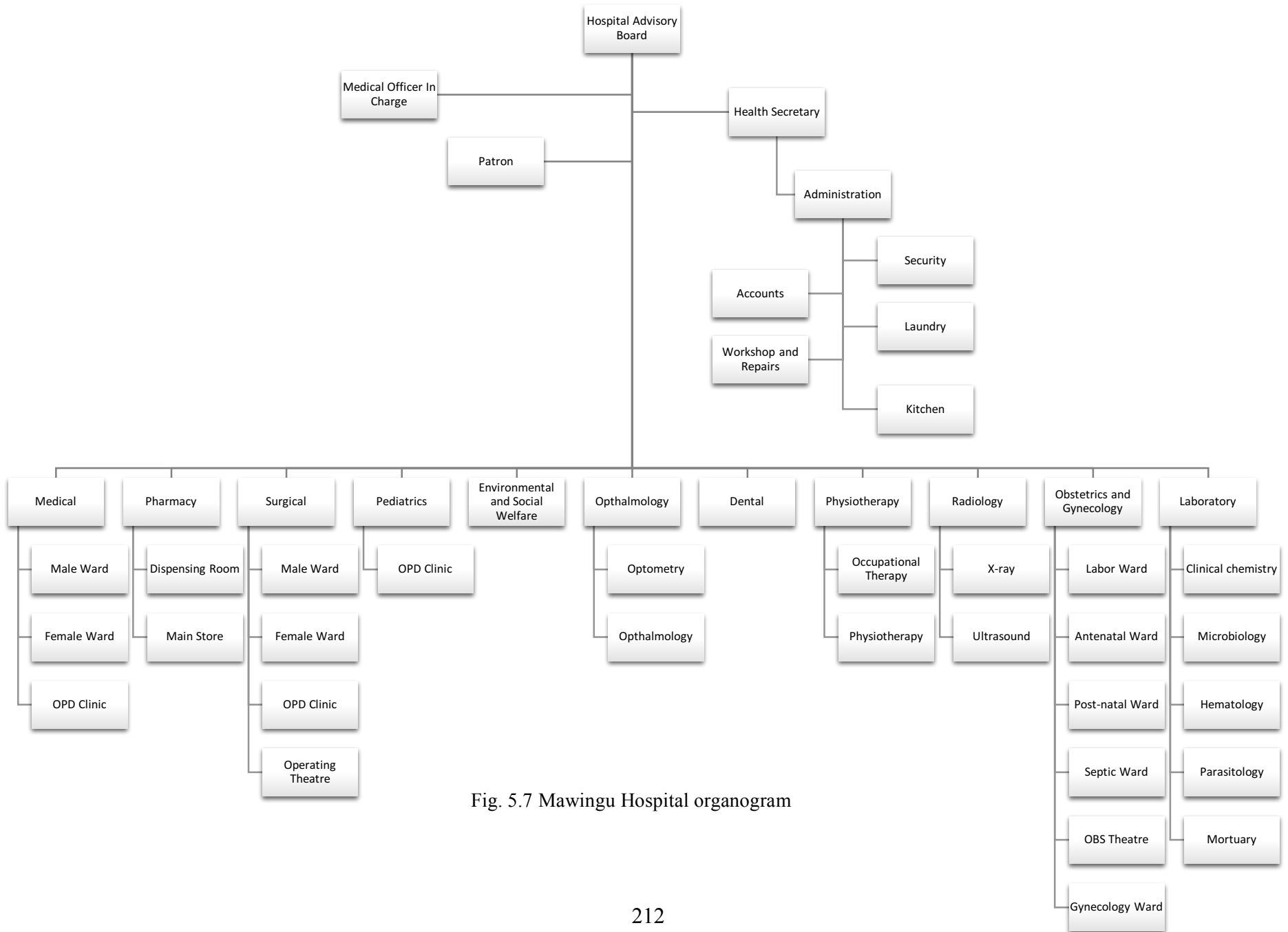
Fig. 5.7 Mawingu Hospital organogram

In this visual layout, slightly different than that present in the actual printed copy of the

CHOP, it is easy to see that the Obstetrics and Gynecology department was more complex, with

more constituent parts than any other department at the hospital. I would point out that, at the

time of my fieldwork, the department no longer had a specific ward designated as the septic ward

because the hospital had seen a significant decrease in cases of sepsis starting in approximately

2010 or 2011[7]. Those patients who did develop sepsis or suffered from other complications

leading to longer recovery times after birth were moved to the back third of the postnatal room,

generally in the last four beds nearest the bathroom. However, the ward did instead include an

additional post-C-section ward and a premature/Kangaroo Care[8] section of the ward.

Additionally, the ward also admitted neonates, babies too young to be admitted to the pediatrics

wards. While a physician from pediatrics was supposed to round on these young patients, this

sometimes did not happen due to miscommunication and at all times the nursing care was always

the responsibility of the maternity ward nurses.

The hospital administration, as represented in the top of the organogram in Fig. 5.7, was

then responsible for coordinating activities with the Regional Medical Officer (RMO) and the

Regional Administrative Secretary (RAS). The Regional Administrative Secretary was not

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[7] This drop corresponded with the posting of the current Medical Officer In Charge to the Mawingu
Regional Hospital. At the time, he was a newly graduated Medical Officer and joined the hospital as the
lead physician on the maternity ward. He encouraged improved wound care and attention to nursing care,
which led to the significant drop in sepsis cases in maternity. He considered this drop to be one of the
greatest successes of the hospital in the preceding five years.
[8] Kangaroo care is where a relative, usually the mother and/or father, place a premature baby into skin to
skin contact on their chest and then generally wrap a piece of cloth or clothing around themselves to keep
the baby firmly attached to the parent's body. This helps the baby to maintain a stable and more regulated
body temperature, crucial for survival and a low-tech solution for settings in which infant incubators are
either uncommon or non-existent. Premature babies are often unable to suitably regulate their own heart
and respiratory rates, as well as body temperatures and therefore run the risk of experiencing several
detrimental conditions preventing their growth and ability to thrive (Richardson 1997). Even in high
resource settings, Kangaroo care is a proven method for promoting parent-infant bonding and improving
health outcomes.

directly involved in the daily functioning of the hospital but was the government's representative and, as such, the employer of all of the region's government employees, including all healthcare personnel employed in the public sector. The Regional Medical Officer, at the time of my fieldwork, was much more involved in the daily functioning of the hospital and almost always attended the hospital's morning clinical meetings, unless he was out of town. He was also an ally in creating and implementing hospital goals, the organization's yearly plan (CHOP), and in ensuring policies from the Ministry of Health were implemented both within the regional referral hospital and at all other facilities throughout the region. The RMO was the head of the Regional Health Management Team (RHMT), which planned and coordinated healthcare activities throughout the region. In addition to daily functions, this body also helped to coordinate special campaigns such as male circumcision and immunization campaigns or health outreach activities to provide women living in villages with access to long acting birth control methods, such as intrauterine devices (IUDs), by sending trained providers on trips throughout the region.

Each level of care intersected with and influenced the next, just as the different departments of the hospital supported and influenced each other in ways that were crucial for the health and survival of women and their babies.

5.11 Conclusion

I have gone into such detail related to the workings of the maternity ward and the hospital more generally in order to paint a picture of the flow of patients through the hospital and the stages of care on the ward. The tour of the maternity ward outlines the sheer amount of work for which the nurses were responsible on a daily basis. In addition to the tasks which I have enumerated, the nurses also fetched supplies, attended meetings, rotated onto the HIV testing and counselling service, family planning service, and cervical cancer screening clinic, and were

responsible for an ever-increasing amount of documentation. In the absence of medical attendants or auxiliary staff members, as on the night shift, the nurses would also mop floors, wipe down beds, wash equipment, and fold gauze for use in delivery kits. They were also responsible for the documentation and reporting involved in the death of newborns and mothers.

The nurses on the maternity ward expressed their continuing feelings of being overburdened even though the hospital administrators told me they had been making a concerted effort for more than a year to increase the staffing levels on the ward. Despite these efforts, the nurses' workloads continued to increase in response to additional documentation demands produced by the hospital itself, as well as outside agencies and the Ministry of Health. This all occurred in the context of continually increasing demand for the hospital's maternity services. Despite efforts to task shift and enable medical attendants, for example, to complete key tasks such as preparing equipment for delivery kits, Nurse Peninah told me,

> …another thing, so much work has to do with the nurse. Therefore, those responsibilities of sharing work, to say that the doctor does these things, the lab person these, these someone from wherever, there isn't any! I mean, any of that work, the nurse does it! … *Everything*. So, you find that people in a lot of sectors, like the lab, a person is just sitting there, he is waiting for the nurse to do it. A person that is in the pharmacy is just sitting there, she thinks the nurse should do it. … You see? That is where the difficulty of the work comes in; there is none of that sharing of work responsibilities.

Later in the same conversation, Peninah told me that even though she was one of the most highly qualified nurses on the ward, as determined by formal education, she did not feel that any task was beneath her because, ultimately, it all had to be done and if she could do it, then she would. This resulted in the endless nature of a nurse's work.

These multiple demands on nurses' time occurred against the background of their home lives and domestic needs and responsibilities. More than one nurse on the maternity ward bore the primary responsibility for paying their children's school fees or those of a younger sibling,

supporting aging parents, and supplementing the income of their spouse who often was not

employed in the formal sector. All of these competing demands, in addition to low wages, and

unsupportive interactions with hospital administrators, sometimes resulted in care for pregnant

mothers that did not meet the guidelines of best practice, which the global health community had

deemed to be *the* route to reducing inequalities, improving access, increasing the number of

births attended by skilled personnel, and, ultimately, reducing deaths. Combined with women

who entered the hospital with uncertain knowledge of the institution's procedures, which often

undermined their confidence in what they knew about their own bodies, these burdens on nurses,

and the high demand for their services, culminated in an environment which allowed some

women to slip through the gaps. On the night shift, as the one nurse on the postnatal ward sought

a few minutes of rest, a woman silently "changed condition and died," as the reports the nurses

read the next morning often stated. During the day, the routine hustle and bustle of the ward,

combined with a difficult home life or conflict with administrators, could result in nurses abusing

or selectively neglecting a particularly difficult patient. That difficult patient might be the one

who later died of cardiac failure after over exerting herself in the second stage, while the nurses

yelled at her to push, not knowing (due to not being able to spend more time on the initial intake

and patient history) or not remembering that she had a history of chronic anemia[9], which had

contributed to heart problems while she was pregnant.

There was a tension between creating good emergency care and what happened in

practice. The maternity ward sought to structure the flows of women through the ward partially

in an effort to deal with being overburdened with patients. This highly structured flow, as

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[9] Chronic iron deficient anemia can result in increased cardiac output, a condition which, when combined with the expanded blood volume of pregnancy, can lead to congestive heart failure (Cunningham et al. 1986; Hegde, Rich, and Gayomali 2006).

described in the beginning of the chapter, was itself a form of bureaucracy within the ward. If a woman did not fit the prescribed structure, due to having an unpredictable body—complications, or faster-than-normal labor—then she often did not receive the care she needed. This lack of appropriate or needed care could take the form of giving birth on the examination bed or without a nurse, in the admission room, or it could take the form of delayed surgeries, lack of medicine, or neglect during a severe emergency, such as the instances described in chapter 8.

With all this in mind, I shift to the next chapter which presents the complex scarcity that characterized the hospital working environment as it influenced the possibilities for care practices on the ward, further preventing improvements in working conditions for providers, and care for women.

Chapter 6: Working in Scarcity

6.1 Introduction

On my first visit to the Mawingu Regional Hospital in 2012, the then Nurse In Charge of the maternity ward led me around the ward on a tour. She told me they desperately needed more delivery packs, a set of essential supplies for delivering a baby, because they only had three full sets. Each delivery pack included a metal kidney dish, two forceps, one pair of surgical scissors, two sterilized umbilical cord ligatures, and two pieces of gauze. All of the materials are placed into the kidney dish and wrapped in two pieces of green cloth, drapers, and tied with a thin piece of cloth. The sets are then sterilized in the hospital's autoclave, which was located in the main operating theater. The nurses used one delivery pack per mother and medical attendants were then responsible for soaking and rinsing the equipment in a series of buckets for preliminary sanitization. The medical attendants then repacked the equipment and took the sets to be autoclaved. Depending on the autoclave schedule and staffing numbers, there could be a long delay between the time when the delivery packs ran out on the ward and when sterile packs became available. Particularly with only three packs in 2012, the nurses operated mainly without this set of tools, considered to be the most basic essentials for a clean and safe birth by the hospital, national, and international standards for safe and skilled maternity care. While this state of affairs had improved by the time I returned to Mawingu in 2014, maternity care was highly vulnerable to stock-outs and failures of the supply chain. As one of the highest volume wards at the hospital, maternity was a constant drain on resources, which led to tense interactions—among providers and between women and the hospital staff—delays in care, and the deaths of women and their babies. Two main factors drove the scarcity that characterized this environment—lack of financial resources (of the institution, the region, and the state) and the

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expansion of biobureaucractic demands and procedures, which complicated access to the

supplies that were physically available. When these two factors combined, they served to create a

setting with an insurmountable sort of inertia, resistant to efforts at reform and limiting

possibilities for changes that might have improved care for women and the work environment for

the nurses and doctors.

6.2 The Material Needs and Inevitable Inertia of the System

In 2014 and 2015, the maternity ward delivered an average of between 450 and 600

babies per month. In addition to the delivery packs, each woman who came to give birth required

a number of other supplies in order to receive care that was of high quality and conformed with

hospital and international guidelines (Tanzania MoHSW 2013). From admission through the

birth of the baby, nurses required an absolute minimum of three pairs of sterile surgical gloves,

though they often used many more pairs. Perhaps most critically, the maternity ward was

supposed to also stock oxytocic drugs, most commonly oxytocin, though ergometrine was often

present as a backup. Women received an injection of oxytocin immediately after they gave birth

in order to help prevent post-partum hemorrhage.[1] Other items needed for the care of the

expectant mothers included personal protective equipment for the nurses, such as boots, gowns

or aprons, goggles or face masks, and caps to cover their heads. The ward must also always have

IV (intravenous) fluids on hand and the giving sets[2] and cannulas for starting an IV. To give a

picture of what was used on a daily basis I present the following list: medical tape (also called

plaster), antibiotics, anti-hypertensive medications, basic pain relievers for post-partum mothers,

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[1] This has become a standard part of Active Management of the Third Stage of Labor (AMTSL) and
oxytocin works on the smooth muscles of the uterus to help it contract, thereby causing the blood vessels
to close, preventing more prolonged and serious bleeding.
[2] The tubing that connects the IV fluid container and the cannula, which is inserted in the vein. There is
also a part that regulates the speed of the fluid flow.

ketamine for surgeries, nasogastric tubes (NG) in both infant and adult sizes, resuscitation

equipment, vacuum for assisted deliveries, sutures of various types, various antiseptic solutions,

syringes, magnesium sulfate, blood pressure cuffs, stethoscopes, urinalysis dipsticks, cotton

swabs, gauze, sterile water, catheters and urine bags. All of these supplies and several more were

integral for providing care to women during their pregnancies, labor, and the immediate post-

partum period. They had to be on hand at all times in order for the staff to be prepared for

emergencies or unexpected changes in a woman's condition, in addition to routine care. During a

C-section or laparotomy, as in the case of a woman with a ruptured uterus, in addition to the IV

fluids, cannulas, catheters, and surgical blades, the operating theater also needed to have a

machine to help monitor the woman's vital signs while she was under anesthesia, and either

drugs or other means of resuscitation in case something should start to go wrong (see Marwa and

Strong 2015). Without resuscitation equipment, such as Ambu bags and face masks, oxygen, or

adrenaline injections, women died on the operating table and babies did not recover from the

effects of severe asphyxiation. In other cases, lack of antibiotics pre and post-surgery increased

the woman's chances of contracting a life-threatening infection.

Nearly every morning I arrived at the hospital between 7:30 and 7:45am. After the

clinical meeting was finished around 8:00 or 8:30am, I headed to the ward. If it was early and the

night shift nurses had not yet finished handing over to the morning shift, I would often find the

ward in a state of disarray after a busy night of caring for patients, as compared to the level of

tidiness and cleanliness that was the norm during the mornings and afternoons. The nurses and

the hospital's Quality Improvement Team emphasized the use of the Kaizen 5S system[3], in

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[3] This system was originally developed in Japan and used in Toyota manufacturing plants as a way of
increasing efficiency and reducing waste of all sorts. It has been implemented in a number of sectors
across Tanzania since 2010 (JICA 2013).

which each item was given a labeled standard location, making it easy to find supplies when the ward was busy. I had helped to lay colored tape around the ward, marking off designated areas for notebooks, gloves, trays, and the color-coded trashcans. While the nurses generally thought it made the ward look neat and several remarked, "*inang'aa*" or "it's sparkling," one of the senior nurses, Mpili, skeptically scoffed that I was wasting my time and the nurses would simply disregard the tapes and continuing placing notebooks and items wherever they landed. Dr. Charles also expressed the same opinion, doubting it would be possible to change the ward's prevailing habits. While a seemingly small change, 5S, Charles' and Mpili's lack of confidence in even the possibility of change struck me, at the time, as a particularly unproductive and defeatist point of view. I was still only two months into my research and operating with my personal love of efficiency and optimism when approaching problem solving, all things they probably viewed as incompatible with the inevitable inertia of their ward. Now, I read this same exchange with an understanding that they had been conditioned through many years of work, in Mpili's case, and several efforts at change, in Charles', that seemed to undeniably demonstrate the impossibility of lasting transformation. Their previous efforts to solve problems that would result in better care were all too often met with nothing—no change, no attention, no investment from administrators, no physical resources. Therefore, they spent less time trying to solve problems, than I, because the environment of their workplace had, historically and presently, made it extraordinarily difficult to do so. This impossibility was, in itself, a form of violence against the women, but also the nurses and doctors working to perform care practices in an environment that barely supported the technical forms of care and severely strained workers' affective resources. Those who continued to try to reform the hospital or the habits of its staff members were the exception and not the rule, which was why the Medical Officer In Charge

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often lamented to me that he felt as though he was dragging others along as he sought to improve the hospital, working as he was against, what many others saw to be, the impossibility of change.

First thing in the morning there were often wrappers from gloves strewn about, empty boxes, sticky footprints on the floor from where tea or IV fluids had splattered, and broken glass ampules from used oxytocin injections. Both the nurses and the cleaning staff on the morning shift embarked on tidying up the ward first thing after the shift handing over occurred, so long as there were not women in need of immediate medical attention. There were three trolleys in the labor and delivery rooms on which sat the most immediately necessary and most commonly used supplies (Fig. 6.1). I always glanced around to see what was missing or almost out, cleared away the paper wrappings from gloves, and straightened the medications before heading to the Nurse In Charge's office to collect the missing items we would need for the day shift. Unless inundated with new arrivals or women needing immediate care, straightening the ward and restocking supplies was usually the first task for the morning shift nurses.

Fig. 6.1 Supply trolleys after a busy shift

The stock-taking and the daily act of collecting and documenting supplies became a litmus test for the health of the hospital's supply chain and finances. The maternity ward was noticeably better stocked when I arrived in 2014 than it had been on my first visit a year and a half earlier in 2012. However, as 2014 progressed, the availability of supplies did not continue to improve and, indeed, many days the nurses struggled to provide care in the absence of drugs and equipment. Some days, the cabinet in the Nurse In Charge's office would be nearly empty when I went in search of bottles of IV fluids, gloves, or catheters, and weekend shifts were unable to procure more supplies from the main pharmacy.

6.3 The Origins of Material Scarcity: Decentralization, Budgets, and the Medical Stores Department

Shortages in facilities at all levels were common and could, in some cases, be related to the decentralization of healthcare services in Tanzania, which placed the burden for procurement on a more local level. This allowed districts and facilities, such as the Regional Hospital to determine their supply needs, but also required them to pay for equipment and supplies out of their budgets, the income for which came from the central government, as well as user fees and insurance reimbursements. Decentralization placed the locus of control in the regions and districts, but also put the fiscal burden of the healthcare system on the shoulders of economically disadvantaged populations in peripheral areas of the country, such as Rukwa. As discussed previously (chapters 3 and 4), peripheral regions of Tanzania have a history of decreased access to healthcare resources due to the logistics complicating the supply chain (e.g., difficult geography, long distances without roads, places only accessible by boat), as well as being, what highly trained medical personnel often considered, inhospitable places to live and work due to their remoteness.

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In this way, inequality has continued to grow between large urban centers and the rural periphery. Throughout the 1990s, healthcare policies continued to evolve in Tanzania and the nation implemented user fees and then, shortly after, created exempted groups- pregnant women, children under 5, elderly patients, HIV/AIDS patients, and those severely impoverished patients seeking care. Policy makers instituted these exemptions in order to encourage vulnerable populations to utilize healthcare services and lower mortality rates. However, at many levels, these exemptions were essentially an unfunded mandate, lacking specific budget lines or any sustainable financial plans for continuing to pay for the care these populations need. While the central government budget does include maternal healthcare, the funds for these services are often supposed to come from outside donor contributions.

The Medical Stores Department (MSD) is a public, non-profit organization that was created in 1993 by an Act of Parliament and began functioning in 1994 (Sikika 2011: 4). MSD has long been the target of criticism. Particularly with the decentralization of healthcare administration, the supply chain has become reliant on MSD but also on District Medical Officers and their resources. A relatively new plan would have MSD delivering supplies all the way to the primary level of the dispensaries, instead of making large deliveries to district medical headquarters, as is now the case. This plan might reduce the cost burden of transportation for the districts, but it only shifts it to MSD and presents a number of complications in peripheral regions with poor infrastructure, which are located far from the zonal MSD headquarters, as is the case with Rukwa. These debates continue to evolve and form something of a background to the daily working life in the Mawingu Hospital and in all the lower level facilities, affecting the availability of supplies, but often only people directly involved in supply procurement knew the intricacies.

During my time in Tanzania, MSD was facing an incredible unpaid balance for supplies already dispersed. In October 2014, Muhimbili National Hospital in Dar es Salaam alone had an unpaid balance of close to $4 million (US) (Tanzania Daily News 2014). The collective debt of all the healthcare facilities in the country was around $50 million (US) or 108.6 billion TZS as of June, 2015 (The Citizen 2015). It was this enormous amount of accumulating debt that caused MSD to issue a statement limiting (or, in some cases entirely stopping) distribution until the government reached a plan to settle the balance. This debt alone accounts for .01% of the country's GDP in a country that spends approximately 7% of the GDP on healthcare each year (WHO 2014). In 2010, the WHO estimated the Tanzanian government spent $223 million on rehabilitative and curative services (WHO 2014). Using this number solely for the purposes of putting MSD's debt in perspective, the debt would (in 2010) represent 22.4% of the government's total health expenditure. Health facilities relied on money from the central government and in-kind agreements to fund their supplies of medications and equipment. If the government was slow to disperse these monies, either due to lack of funds in the budget from low revenue generation or delayed contributions from donors, facilities could be left without the means to pay MSD.

6.4 The Hospital Budget

At the Regional Hospital, the Hospital Management Team (HMT) and the Regional Health Management Team (RHMT) created an annual plan and budget for the hospital's goals and operating expenses. They forwarded this plan to the Ministry of Health and Social Welfare and the Ministry of Finance for approval. The Ministry of Health then disbursed funds into the hospital's accounts. Some of this money went into an account the hospital had with MSD, which was a significant source of funds for the purchase of supplies and equipment. When this account

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was empty, in the absence of supplies being issued on credit, the hospital had to use the cash collected on a daily basis to pay for more supplies.

The daily clinical morning meetings at the hospital always started with a reading of the accounting from the day before. This included going department by department and reading out the number of patients served, the amount of cash collected, and the amount of money used for patients in the exempted categories. The maternity ward was far and away the largest source of exemptions, with a patient flow that surpassed that of any other ward or department. This was the main reason the amount of money spent on exemptions was always around three times the amount of cash brought in on any particular day. For example, on February 9th, 2015, the report read said that on the 8th the total cost of the exemptions was 1,273,127 TSh. Of that, 1,073,000 TSh came from the maternity ward, the remaining 200,000 was from services provided to the elderly, children under 5, HIV patients, or the destitute, combined. The total cash collected for the 8th was 380,000 TSh, which leads to a total cost of services provided for February 8th of 1,650,000 TSh. This was representative of the trend- free services were generally three times the amount being brought in through daily cash collection of user fees. Even so, this level of cash collection was an increase over the past and an improvement.

This all combined to mean that the hospital was operating at a loss every single day. Understandably, the financial losses led to cash flow problems, particularly when compounded with the MOH's delays in dispersing funds for the fiscal year 2014-15. The fiscal year ended in June and by March 2015 the Tanzanian Treasury had only released 58.4% of the fiscal year's budget (The Citizen 2015). What this all meant for the Mawingu Hospital was that supplies were scarce and the hospital was essentially *only* operating on the cash they could collect each day from patients because most of their budgeted funds for fiscal year 2014-15 arrived in May, just

one month before the end of the fiscal year. In the beginning of May, before this payment came

through, the hospital had been operating on very limited funds and the shortage of money was a

constant topic of conversation within the hospital's morning meeting and among the

administrators. The Regional Medical Officer explained:

AS: [Is there a supply problem] Well, for example, on maternity these days it's hard for us to even get catheters or IV fluids.
RMO: Yes, well, we requested 286 million shillings for the fiscal year that is ending in the end of June and until last week [first week of May] we had only received 6 million from the government. Last week they told us that 100 something million has arrived for us. It had been dispersed but it went somewhere, we don't know where, just what they say, but now it has somehow made its way back to our account at MSD. There they tell us we had a debt of about 80 million shillings so now we have 30 million shillings to buy new medications and supplies. But up until then we really only had 6 million shillings to run the hospital. The money that we collect every day can only be used for certain things, for example for medications, but we're not allowed to use it for things like paying "other charges" or on call or things like that. You see the exemptions every day, it's hard to continue to run a hospital with only 6 million shillings for the year. We've already made an order to MSD, we should get more supplies soon.

Here, his answer demonstrates the complicated ways in which funds flowed through the

bureaucratic fiscal systems of the healthcare sector, enhancing the feelings I had, echoed by

many nurses, that the entire process was rather opaque and subject to detours, as when the money

"went somewhere." Here again, the RMO shows that the hospital personnel had extremely little

control over the fulfillment of their needs and the resolution of problems and shortages. The

RMO anticipated the imminent arrival of a large shipment of supplies from MSD that would

significantly replenish the stocks at the regional hospital. This shipment did eventually arrive but

was somewhat delayed because MSD did not have any vehicles available to transport the

supplies the nearly 400 kilometers from Mbeya, where the zonal storehouse was located, to

Mawingu. The RMO also said that sometimes the amount of money the hospital received from

the Ministry was only enough to cover the hospital's most basic bills, including electricity and

water, which had to be paid in order for the hospital to keep operating.

All of these constraints led the hospital to try to manage funds and reallocate them whenever possible. It often meant suspending extra pay[4] for the staff members or delays in the delivery of supplies, including medications, and delays in other crucial activities such as car maintenance for the hospital ambulance or repairs to buildings. The delay in the allocation of funds from the Ministry of Health and the Treasury meant the regional hospital was unable to continue paying on-call allowances for nurses, because the government had increased the required pay amounts and the hospital no longer was able to find the money for these payments in their budget. The nurses often told me they counted on on-call and extra duty allowances as a consistent supplement to their (low) salaries. The loss or delay of these payments was always a source of much indignation and complaining. On the other hand, if these payments were released, the entire hospital seemed to be in a good mood. The RMO told me that they tried to prioritize these extra duty or on call allowances, particularly for the physicians, when the money was available because "this way doctors can be able to do their work, not say 'Oh, I'm not coming right now [to the hospital] even if I'm called because I haven't been paid.' So this money comes." However, it was often the nurses who experienced the cuts that were due to new regulations or guidelines regarding the use of funds or due to the increased amount of extra duty allowances that made it no longer feasible for the hospital to pay them.

6.5 Budgets and Hiring New Personnel

Such budget constraints also affected the hospital administration's ability to hire new staff members or promote those who had been working at the facility for many years. The hospital administration sought ways to deal with these constraints as the nurses and doctors continued to provide care to the best of their abilities. The Regional Medical Officer also

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[4] Extra duty (for additional shifts) pay or on call pay (for shifts on which a person reported for part of the time or could be on standby and depending on patient load, they might be called into work or not.)

explained that though the hospital had succeeded in increasing the amount of money it was collecting from patients on a daily basis, the Mawingu Hospital would never be able to collect as much money from user fees as some other regional hospitals, which were located in more prosperous areas of the country or served large numbers of insured patients. To drive his point home, he said,

> Therefore, even to compare us, to make us competitive [with these other hospitals], is not an easy thing. Because if you do a competition, it should be that each [competitor] is on a level playing field, then you can say you are competing. But this person, you give them good athletic shoes, equipment, and this other one doesn't have any and he is running barefoot, then you say he is competing with the first one, how? It's not possible.

Here he was clearly using the metaphor to demonstrate that Rukwa was lacking good shoes and could not possibly be compared to other regions that had access to sustainable and robust cash collection through insurance coverage or a wealthier population in their catchment area. This concern with the availability of cash for healthcare services in the Rukwa region was a theme that emerged repeatedly in discussions among the hospital staff members in meetings and informal discussions after the hospital raised the fees for services. Nurses repeatedly said they were afraid patients from the region would forego follow-up care, such as bandage changing, in order to try to save their money, such was the level of poverty in the area. The lack of family resources to pay for healthcare, even when the fees were still low in comparison to other regions, was also a common theme and very real barrier to care in the villages I visited.

For people unfamiliar with this region, they would often suggest the hospital just try to increase their collections, or make a better budget, or lay out better plans. This, however, was far easier said than done due to the structural constraints of the region's economy, bureaucratic cost-sharing guidelines that were outdated and severely limited the ways in which hospital funds could be used, and the national-level supply chain problems and financial shortages.

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Scarcity has long been a characteristic of healthcare facilities in many places in sub-Saharan Africa (c.f. Livingston 2012; Mkoka et al. 2014). What follows in the rest of this chapter is an account of the ways in which healthcare providers and administrators in Rukwa, and particularly in the Mawingu Hospital, dealt with this material scarcity and sought to mitigate its effects on their care practices through the implementation of new systems, and via creativity, improvisation, and ingenuity. I also demonstrate the ways in which this environment of scarcity affected providers' motivation levels and morale. Though most of the healthcare providers working on the wards may not have known the details and extent of the healthcare system's lack of funds, they certainly saw, felt, and lived the shortage on a daily basis.

6.6 Increasing burden on regional-level healthcare services

The healthcare situation in communities throughout the Rukwa region directly affected the regional hospital, most obviously by increasing the number of patients seeking care at the hospital when services were lacking at the village dispensary level. While I was at Mawingu, the timing of the crisis at MSD coincided with particularly low market prices for maize in 2014. There was a bumper crop, with some farmers producing more than ever before but, the government had already amassed a surplus that could feed Tanzania for a projected three years. Therefore, this meant the government was not buying maize from farmers at prices even remotely close to those of the harvest of 2013. In November 2014, members of Parliament questioned the delay in payments for the more than 3 million tons of maize the government had purchased on loan (Tanzania Daily News 2014). For many months following the harvest, as I traveled around the Rukwa region, I could see stacks of maize in gunny sacks piled high under blue tarps, waiting for buyers who never came. In other villages, as late as April 2015,

community members told me they were still waiting for the cash from the government for maize bought on credit or loan from many farmers more than six months prior.

What this all meant for healthcare services was a perfect storm. Delayed or no payments for the maize harvest led to cash poor families who could barely pay for the essentials, let alone unexpected costs at healthcare facilities. Due to MSD's refusal to disperse supplies on credit any longer, healthcare facilities became increasingly bare. Without cash, community members could not contribute to community health insurance schemes, known as Community Health Funds (CHF), which were another product of decentralization. Without the money from these funds, most dispensaries and healthcare centers were unable to stock essential medications and supplies. The lack of equipment in these lower level facilities shifted the burden of care from primary level dispensaries to the district health center and designated district hospitals but, primarily, to the regional hospital, which struggled to stay afloat throughout this time. Patients and their families lacked information about the healthcare system and the CHF due to poor communication throughout all levels of the healthcare sector and local governments. This poor communication and lack of transparency created an environment characterized by high levels of suspicion and mistrust between communities and the professionals meant to work with and for them in order to improve their health and wellbeing. While community members bypassed their local dispensaries that only offered bare shelves, the regional hospital absorbed more and more of these clients who had often used what cash they had to *get* to the hospital. This meant it was often difficult for these clients to pay for any unexpected medications or other supplies should they be required to help the mother during labor and delivery.

6.7 Working in Scarcity

After witnessing the frequent stock-outs that were occurring in the end of 2014, I asked all the nurses about their experience of their work environment, hoping to understand more about how they viewed the shortage of medications and supplies, Nurse Rachel said,

> Mmm, for now, the current work environment has become difficult. And now equipment. Now you are told there are no medicines. We arrive at work, you will find me, I'm on the maternity ward there in the labor room, you find that the mother you're helping there, even to start a drip [IV], there's nothing. You find the labor ward has dextrose, D5%, now there you encounter a mother there who has eclampsia, PPH. How do you help her[5]? Truthfully, this environment is very difficult…Many times you find we encounter the women here, they have problems. There are no supplies. It's necessary for them [the mothers] to buy a thing but they don't have any money. This, it becomes a problem. The mother, you just look at her. I stay there with her, alright, it is only God that helps a person to give birth or not, the baby has come out, s/he hasn't cried. Really, honestly the environment is hard. I don't like it.

Rachel's quote was representative of the views of maternity ward staff members. Almost universally the nurses and doctors felt the lack of essential supplies and equipment was the number one impediment to providing better care. They also repeatedly suggested that improving this situation would be the best intervention the hospital administration could make in order to motivate the providers working at the hospital. While the nurses were concerned with having the tools they needed in order to provide the technical aspects of care, Rachel's description also highlights her sympathy for the woman who could not afford sending a relative running to a private pharmacy to buy supplies. Aside from staying with the mother, Rachel was unable to provide other forms of care to the woman in her charge. Her assertion that it was only God who was able to help a woman give birth reiterates staff perceptions that it was nearly impossible to provide the highest quality of care or to change the situation in which they found themselves on a daily basis.

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[5] Dextrose 5% is not used to support women with fluid loss or to help support blood pressure, therefore would not be useful if a woman was suffering from eclampsia or PPH.

In the Conditions for Work Effectiveness Questionnaire that I conducted in November 2014 with all the maternity ward nurses (n=25, response rate 96%), the questions related to access to resources received low scores, with an overall average 2.55 out of 5 for the section.

Fig. 6.2 CWEQ results for access to resources

Nurses of all levels on the maternity ward responded to the survey, which means some of the variation in ratings depended upon their position in the hierarchy of the ward and the hospital. In

question 1, less than half of the nurses said they had "some" of the supplies necessary for their jobs, which they told me was because the Medical Officer In Charge had been working very hard to improve that situation even if it was still not ideal. Questions 5, 6, and 7 all indicate that the nurses generally did not think they had much influence over the decisions made about human and material resources for the ward. Generally, only the Nurse In Charge did the ordering for the supplies. During ward meetings with both the doctors and nurses, we often discussed supplies and equipment, returning over and over again to the needs which never seemed to be met. For example, nearly the entire time I was on the ward, the suction machines the nurses used to suction secretions out of newborns' airways was broken or only occasionally worked. Another time, it took nearly six months to get batteries for the handheld fetal heart monitor that I had brought for the ward. In the end, I bought the batteries myself due to the delays created by bureaucratic procedures and hospital's subsequent workarounds.

6.8 Uchache as Excuse and Idiom

In addition to the material scarcity produced by stock-outs, in 2012, and even into 2014, hospital staffing levels were also a source of frustration and great concern. Nurses expressed their belief that there were simply not enough of them to conduct all of the necessary patient care and documentation activities that a ward as large as maternity required. At that time, the nurses and doctors often referred to *uchache,* or "fewness," specifically of providers, as a key barrier to improving maternal health outcomes at the hospital, though the Medical Officer In Charge did not feel this was an appropriate excuse for not exerting maximum effort with every individual patient:

> The Medical Office In Charge (MOIC) says, "I know we can't avoid death but you get a death like this and see there were gaps." Nurse Mary saying maybe the problem is documentation; maybe things were done but the documentation was bad. MOIC is saying if you say the problem is documentation, you're doing a lot of things, then you should say

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the problem is that there aren't enough people "uchache," just say that because that is the issue. Mary is now saying that if there are only two people working and there is a special case like this [woman who died] then there are two problems, *uchache* and documentation. Now they are discussing the issue of shortage of staff and the division of labor in the ward. MOIC tells them that even if they are few, he expects each provider to give 100% to the patient they are with. RMO [Regional Medical Officer] asking if right now, where we are, it still happens that women are giving birth unassisted? Everyone agrees that yes, this still happens…Eventually, MOIC makes the point here that it's not *uchache*, the issue is that we are not prepared when we see the patient. We are not prepared with the equipment and documentation.

(Notes from Maternal Death Audit Meeting, July 2014)

While the nurses and other maternity ward doctors argued for the difficulties of having insufficient numbers of providers on the ward, the Medical Officer In Charge continued to challenge them, insinuating that the *number* of providers was not the issue, but their lack of skill or preparedness and, by extension, their commitment and motivation to their work. This was a topic which he brought up many times throughout discussions with the maternity ward staff. In light of the fact that the maternity ward received at least eight new nurses during the duration of my fieldwork, it would appear as though the number of people was not so much a cause of poor care as invoking *uchache* was a way to locate the source of the problem of on-going sub-standard care or deaths on something outside the direct control of those on the ward. Maintaining this discourse accomplished a sort of status-quo that served the nurses by not requiring, as the Medical Officer In Charge asserted, higher levels of preparedness or commitment. Even as the hospital and regional health administrators sought to continue hiring greater numbers of qualified providers, the problems of miscommunication and delays in care that staff members had been attributing to their few numbers did not disappear. Additionally, I argue that the continued use of *uchache* can be read as an idiom for more general lack of workplace empowerment and professional efficacy.

6.9 Collecting Cash and the Expansion of Biobureaucracy

Often, the nurses told me, and I witnessed, delays in care occurred as family members tried to find the monetary resources to buy medications or essential equipment for their patient. Some mothers waited on the ward for several days before receiving the first dose of a prescribed drug while others did not have the luxury of time. Emergency C-sections resulted from a number of clinical conditions, which commonly included pre-eclampsia or eclampsia and obstructed labor with suspected fetal distress. In these cases, providers, women, and their family members could not wait. Surgeries could not commence without ketamine, the anesthetic drug most commonly used, or sutures, or IV fluids, or a catheter and urine bag. Hospital protocols for the distribution of such supplies changed multiple times throughout my stay at Mawingu. For many months, the cabinet in the ward Nurse In Charge's office housed all of the ward's supplies save for those needed for anesthesia. At another point, all the supplies were no longer allowed to be housed in the wards but the ward staff had to report to the pharmacy with prescription forms signed by the physician who had ordered the procedure or medication. This change was related to the implementation of a new accounting system at the hospital in September 2014. While in many ways this computerized system helped to significantly increase the amount of money the hospital was able to collect each day, crucial for its continued operation, it also brought with it a host of new complications. The new system impacted the maternity ward in ways that were unique and unheard of in other wards. This was primarily because nearly 100% of the care provided on the maternity ward was exempt, which means it was paid for by the government. Therefore, prior to the new cash collection and accounting system, the maternity ward had never dealt with receipts or the collection of funds from the women who came to give birth.

Prior to the automated system, nurses on each ward that did not serve exempted categories of patients collected money from clients as the need arose. This meant the corner of a patient's file often sported a stack of multi-colored rectangular pieces of paper that served as receipts for items such as ward admission fees, bed fees, laboratory tests, wound dressing, medications, IV fluids, and more. This system often created confusion, particularly for patients, who were unaware of the prices of services and supplies and did not know who was legitimately allowed to collect cash. I was present once on the gynecology ward[6] when a distraught group of relatives came in with a patient in a wheelchair. The nurse and two of the women accompanying the patient engaged in a prolonged discussion about whether or not they had paid for IV fluids and if so, where was the receipt to prove it. Many community members felt this collection process encouraged corruption and bribes because it was unclear who was supposed to be paying what, to whom, and when. Nurses could arbitrarily deny care, citing unpaid balances, and delay potentially life-saving care. To me, as a bystander that day on the gynecology ward, it also appeared to be a system perfectly designed to take advantage of the ignorance of arriving patients and their family members, rife with possibilities for extortion and corruption. Nurses, on the other hand, told me they would provide care for a woman before looking for the receipts if they felt she really was in the midst of an emergency. But, many nurses were unsure of the current prices to charge the patients, nor were they certain whose responsibility it was to do the actual collecting. This confusion could be compounded by poor communication during shift changes. From an administrative perspective, this system more than once resulted in patients and

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[6] Only women who were pregnant and at a gestational age of 28 weeks or later were exempt from the hospital fees, i.e. labor and delivery services were free. Prenatal care was free to women throughout their pregnancies at the maternal-child health clinics but services related to spontaneous abortion (miscarriage) or ectopic pregnancy, for example, were not considered exempt. The woman and her family were responsible for these fees.

their relatives sneaking away from the hospital at night or during the chaotic visiting hours, leaving their debts unpaid. The hospital had already incurred the cost of the physical and human resources expended and now had very little recourse for recouping the loss when a patient "absconded" without paying.

The new computerized system significantly and rapidly increased the amount of money the hospital was able to collect for services on any given day. However, it also drastically changed how the maternity ward staff members conducted their work and requisitioned and accounted for supplies or services rendered. Despite the fact that the women on the maternity ward never had to, officially, pay for care, the administration began to require a daily tally of the supplies used in the course of caring for each patient. This was to help with the ordering of supplies at the level of the hospital's main pharmacy and stores department, as well as to limit waste. The maternity ward nurses primarily saw this as yet an additional burden and part of a more general proliferation of required documentation. Now, before a nurse could take a patient's samples to the laboratory for testing, she had to go to the accounting window to get a receipt, have it stamped with the word "Exempt," have the person in this office staple it to the lab test requisition form and only then could she proceed with the sample to the lab. This was not generally a problem at night when there was not a line of people waiting at the OPD's cash collection window, or nurses from other wards waiting for receipts, but the process of actually getting blood test results could be significantly delayed at the accounting window.

However, even at night, I myself experienced this delay when I wanted to take blood samples to the lab for a patient we thought might need an emergency blood transfusion. The person on duty was a medical attendant who had previously been assigned to the maternity ward. Her time on the maternity ward was short because the nurses thought she was argumentative,

generally difficult, and not a good worker. She would frequently deny responsibility for tasks or refuse to do work that she thought was beneath her, counter to the ways in which the nurses told me they thought of necessary tasks, i.e. each person must do any and everything necessary to help the ward function; no task was below even the most highly educated nurse. This particular medical attendant then had started working at the cash collection window and brought to that work the same argumentative and generally unhelpful attitude. Regardless of the patient waiting back on the ward, she would take her time, pecking out names and the ward number with one finger on the computer's keyboard. Before beginning to stamp any of the pages she would wait for all of them to emerge slowly from the printer. These types of inefficiencies seem relatively harmless on the surface but could add up to life-threatening delays for mothers and babies when combined with all the other opportunities for delay. These delays did not necessarily *produce* scarcity but the expanded bureaucracy within the hospital made it ever more difficult for the nurses to access what supplies were available, compounding their work and, often, frustration levels.

At the same time that Tanzania's healthcare system and Medical Stores Department were suffering from steep financial shortfalls, the demand for biomedical services in facilities continued to expand at a rapid rate. The RMO suggested that with an improvement in the quality of care, the hospital has seen an exponential increase in the number of people seeking care at the facility:

AS: I've noticed that since last year in about October we have had fewer medications and equipment here. Is there a problem with equipment here at the hospital?
RMO: No, really I don't think so. What you are seeing is that more and more people are coming here because they see that the care we are providing is high quality. It used to be that not a lot of people were coming here, but now many of them come even if they should be going to the health centers or the district hospitals because they see the care here is better and it's more in demand so we are using more medicine and equipment.

His explanation demonstrated his confidence in the improving quality of care, at least in comparison with that which was offered at dispensaries and other lower level facilities. There was not a commensurate increase in cash collection and central government funding that could provide the necessary increase in demand for supplies, but the hospital was able to implement systems to manage this increased patient flow. With the expansion of services in the hospital came a concomitant expansion in the bureaucratic systems employed to track, order, and process this new patient flow moves through the facility. The implementation of the automated accounting and cash collection system is another example of the biobureaucratic expansion that has accompanied the expansion of healthcare services globally. While construed as an improvement or advancement because the system relied on computers, it brought with it a number of unintended consequences, such as the medical attendant's gatekeeping.

On the maternity ward, biobureaucratic expansion very often manifested as yet another notebook or oversized data collection book appearing on the stack on the labor room nurses' desk; yet another notebook appeared with the advent of the new accounting system. The nurses were meant to use this new notebook to record the supplies used for each woman and they were supposed to take the notebook with them at the midnight report to the Nurse Supervisor. These books continued to multiply to accomplish the objects of biobureaucratic institutions and the proliferation of their efforts to track, monitor, supervise, train, and constrain the healthcare providers working both in urban centers and the periphery. In addition to the accounting and supplies book, the ward regularly received new HIV testing logs and logs for documenting the provision of family planning services, for example. Handbooks and workshop participant activity books seemed to reproduce in desk drawers as the nurses attended various trainings related to

BEmONC, Helping Babies Breathe (HBB), the NASG, HIV testing, cervical cancer screening, or TB prevention.

The nurses felt the effects of this expansion through the added tasks of documenting the number of syringes and pairs of gloves used each day in service to each patient. They felt it in their interactions with newly empowered gatekeepers in the form of medical attendants who controlled the processing of receipts and "exempt" stamps and, by extension, critical laboratory tests, medications, and vitally necessary equipment for patient care. While one might argue all healthcare providers in a government system are "street-level" bureaucrats (after Lipsky 2010), these medical attendants were, additionally, embodiments of continuing biobureaucratic expansion. In a classic study of the relationship between location in an organization and access to power, Mechanic (1962:352) argues "within organizations one makes others dependent upon him by controlling access to information, persons, and instrumentalities… power is a function not only of the extent to which a person controls information, persons, and instrumentalities, but also of the importance of the various attributes he controls." In this way, it is clear the medical attendants, despite low access to formal forms of power within the hospital's organizational structure, became quite powerful with the expanded bureaucratic procedures involved in producing more accountability and improved cash flow. They came to control money, medications and other supplies, access to laboratory tests, and, ultimately, the speed of all the myriad interactions now required before the actual treatment of patients. The computerized system simplified certain interactions, perhaps increasing transparency and subsequently reducing allegations of bribery or corruption on some wards. However, the system's unintended consequences included opening new spaces of inefficiency, new opportunities for delay, miscommunication, and social maneuvering by the gatekeepers.

6.10 Delays in Care and Social Tension

For those women on the maternity ward who needed C-sections, the process for getting all the necessary equipment eventually became much more convoluted. The nurses could not start preparing a woman for surgery, even if they were certain she would require a C-section, until the doctor had officially written up prescription forms for all of the specific, individual supplies. This resulted in multiple pieces of paper and the nurses then had to go both to the cash collection window, as when taking lab samples, and then to the pharmacy window. The person on duty at the pharmacy was often a medical attendant and could be incredibly inefficient, and overly fastidious, refusing to hand over supplies until all of them were in a pile, taking the individual prescription forms and painstakingly entering them into the log book by hand, refusing to accept only one copy of the forms, and then sometimes disappearing for long periods in search of less common supplies. There were times when even the most basic supplies were out of stock, particularly IV fluids or catheters and the nurse would return to the ward empty handed. At this point, the surgery could not proceed and nurses or the doctor would direct the woman's relatives to quickly go outside the hospital gates in search of the needed supplies. This resulted in further delays as relatives sought out money, then an open pharmacy store, and then the correct equipment. Sometimes, the instructions they received were not explicit enough and the relative came back with the wrong size or strength of a medicine or catheter, which then the hospital staff could not use.

Nurse Halima expressed to me the difficulties of the work environment at the Mawingu Hospital. She was a young nurse who had only been working at the hospital for less than a year at the time of our interview and she had spent the first several months of her employment working on the private ward, Grade I. Her short time at the hospital had already been sufficient

for her to perceive the lower economic means of Rukwa's population, as compared to other regions, as well as the monetary constraints at play in the hospital:

> The [work] environment is just normal. Except that another time it is difficult. You find maybe that there is no equipment. …The supplies really are bothersome for the success of the work. [It] can be that you have studied how to do this procedure but you can't do it and because why? Because of the shortage of those supplies that you need to do work. And if you use more than is necessary, that is, more than has been put in the budget, it means you will do what? You ruin the entire system. It means that the supplies absolutely are not enough. For example, they have said to use maybe six drapers. After only half an hour the mothers that have already given birth, maybe ten or twenty, you find there aren't any drapers, not even one. She will come, a serious person, for a [wound] dressing or she needs suturing, [and] you find that you are defeated, unable to do it because you have already used everything that you needed to use, but because there is a shortage, you find that you yourself have caused this other patient to not be worked on. Really, you were doing the thing that was proper therefore this other work will really bother us a lot. You find someone comes, she needs to be cared for, you fail to care for her like is necessary. And many people from here [Rukwa] they don't have any [economic] means. To say, maybe, go, buy something, bring it for your patient, maybe, for example, you say Ringers Lactate[7] right now there isn't any, if you tell [the relatives] to go find Ringers, they will be distraught, they don't have any money, and the baby there will continue to get tired. So, this environment is difficult. But, at the end of the day, the [relatives] can't criticize that there are no supplies, they will blame you like, "You, nurse, what have you done?" Or that you have caused something. But to look if the environment in which you work is difficult- they can't look.

This quote from Halima exemplifies the frustration many of the nurses and doctors felt when supplies and equipment were out of stock. She also notes that when the nurses must tell patients something is unavailable within the hospital and their relatives must purchase it at a private pharmacy, it was often the nurses who took the blame. More than once, while I was present, the hospital Patron held meetings with many of the maternity ward nurses to address patients' allegations of corruption or extortion.

While there is certainly a history in Tanzania of underpaid and overworked healthcare providers accepting or demanding bribes from patients and their relatives (Maestad and Mwisongo 2011), the majority of time I was at the hospital the supplies were, indeed, out of

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[7] A type of intravenous fluid, one of the two most commonly used fluids on the maternity ward.

stock when nurses said they were; this was not simply a ploy for money. Still, more than once, patients or their relatives offered me bribes, trying to slip me a few bills in their palm as they shook my hand. As they tried to hand me this money, a woman's relatives would explain that they wanted to make sure I looked after her and helped her. Other times, as I was helping during a delivery, I watched as a new mother tried to give one of the nurses money as thanks for her help. In most cases, the nurses refused the money, telling the mother to put it back in her handbag. Occasionally, if the mother continued to insist, the nurse would take the proffered money. Once I watched this happen when the then Nurse In Charge of the ward, Kinaya, was handed money. She explained to me that nurses were not supposed to take money of any sort, citing the Nursing Code of Ethics but, it was allowable if they reported the money to the Nurse Supervisor and used it for collective or ward purposes. In that instance, she sent one of the cleaners to buy a crate of sodas and some cookies for all the ward personnel to share. Despite her proclamation about not accepting bribes, Kinaya had accepted the money and none of the nurses complained; even something as simple as a free soda during a long shift was a welcome bonus. I was nearly always uncomfortable when I saw a woman reaching for money, or if it was visible inside her bag of belongings, because I always wondered what the nurses would do. I can only know what I witnessed but I did think it was not a far stretch of the imagination to picture a nurse, alone on the night shift, accepting, after a long delivery, some few bills that might pay for a ride home after her twelve-hour shift. A long history of corrupt practices in the healthcare sector, even extending to the sale of blood to desperate patients and families in the past, led many women and their families to suspect the nurses were only saying medications or supplies were unavailable in order to line their own pockets.

One day on the maternity ward I was discussing the issue of possible misunderstandings and perceived corruption with Nurses Peninah and Rukia. Peninah told me,

> You know, me, I think it's really the fault of the hospital- from the beginning there, if in the past they were training those people [patients] that 'you, if you go to the big hospital, it's necessary that there are these and these and these and these necessary items or you will have to pay,' they would prepare early, but right now it has come suddenly that things have run out and they got used to if you go to the hospital everything is free, and now they have been told 'go buy this.' She will see you, you are telling her to buy it and that you are eating [the money]--.

The saying "to eat money" (*kula hela*) is a common expression denoting corruption or bribery. These misunderstandings between the nurses and the women they cared for were often a source of annoyance but also consternation because the accusations went against the ethical codes to which most of the nurses ascribed and sought to practice daily. Most of the nurses were offended by the suggestion that they might be corrupt and were particularly incensed anytime the issue of blood surfaced. The blood bank often had only a limited supply and therefore encouraged family members to donate a unit of blood as a replacement unit for the one their patient was receiving. However, the lab employees did not always communicate this clearly or the relatives did not always understand and, instead, heard that they were being charged for blood or the lab personnel were withholding the desperately needed unit until someone donated. A sort of blood donor blackmail. In the preface, I described the care and ultimate fate of one woman who died due to a lack of blood. Sometimes the urgently needed units were unavailable in the blood bank or, if they were, family members saw no need to donate. This could mean that, for a woman like Paulina, whose life was threatened by an absolutely unforeseen surgical complication during a scheduled, non-emergent C-section, death was the result.

Figure 6.3 is a poster that was up in the maternity ward when I returned in 2016, which I had seen in other health facilities previously. It states, "Blood isn't sold, it's always free," which

is in direct response to these misunderstandings and previous blood-selling practices. The posters

sought to empower community members by informing them of their rights and the norms of

blood donation so they could report corrupt practices.

Fig. 6.3 Sign reading, "Blood isn't sold, it's always free" in red and below it, "If you are sold blood, report it at the following numbers." The numbers listed include the "hospital leader," the "Safe Blood Center" in Mbeya Town, the zonal headquarter, and the number for the Taasisi ya Kuzuia na Kupambana na Rushwa- Bureau for the Prevention and Combating of Corruption

In the same conversation, I suggested to Nurse Peninah that I thought the government had

started making services free for pregnant women because they had seen that a lot of women in

poorer areas were not giving birth in health facilities. The Tanzanian government particularly

thought this to be the case in the 1990s after they instituted user fees for the first time in the

country's history. In response Peninah told me,

> Indeed, it was that that started this, I've seen, but instead its second effect those people
> [government officials/policy makers], they didn't see it. They are coming to discover it
> right now. Now [the money] it has finished [run out]. How will you tell that person that
> doesn't have any means there in the village "hey, there is no equipment for service"? Will
> she understand you? She doesn't understand you! Again, us, we that deal with patients,
> we're seen to be bad [people]! Better that person who sits at administration, they don't
> see him, but us, we who tell her to go buy, she tells you you're delaying her because she
> was looking for supplies.

She went on to give an example of how these delays might affect the care of a woman who had

come to give birth, "Just say that she's prime. Yeah, if she'd had contractions she would have

already ruptured. But the blame will come back to the nurse who stays with the patient, you're

told first you delayed treatment, second why didn't you inform someone? But you're waiting for

important supplies." A "prime" patient is a woman in her first pregnancy. It is very uncommon

for a woman in her first pregnancy to have a ruptured uterus and Peninah used this as an extreme

example of delay- a woman in her first pregnancy must be experiencing severely obstructed

labor and a long delay in initiating a C-section if she got to the point of uterine rupture. In her

example, the woman's uterus only did *not* rupture because she was not having contractions. The

main point of the example was to demonstrate the ways in which the nurses often felt they were

blamed for delays or poor outcomes and unsatisfactory care because they were the ones who

spent the most time with the patients. They were visible and therefore within reach when women,

their relatives or hospital administrators sought to attribute responsibility for a woman's death,

poor care, or other unexpected outcomes of her stay at the hospital.

To the conversation, Nurse Rukia added, "They go to the doctor, they come to beg for

her, yeah. 'We have brought her to the hospital and everything is free!' You see? But rather

somebody brought maybe just one small box of DNS and it's already been finished," to which

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Rukia and Peninah both agreed, showing that nurses were often blamed for supply shortages but, in actuality, they had little control over their availability, depending on lengthy and bureaucratic ordering procedures. This particular conversation occurred in February 2015 but was only one of many times when nurses would complain about the lack of supplies, as well as the way they were blamed for causing this shortage. Martin's (2009) study of nursing in Uganda suggests that this is not an isolated phenomenon; while nurses or doctors see referring patients to outside pharmacies as a necessary byproduct of more systemic shortages, patients might read this same act as "corruption, greed or indifference" (Martin 2009:128). Women's and their relatives' expectations that care would be free and available at the hospital was often an ideal constructed against the background of their experiences with stock outs in their village dispensaries. They assumed that the regional hospital, the top level of care in the area, would be able to provide the needed care and equipment lacking in their communities, which was often why they incurred the expense of the transportation to and stay in town near the hospital if they had traveled from outside the urban district.

6.11 Supplies as the Foundation of Community Trust

Faced with the nurse's demand that they purchase supplies in a private pharmacy, many community members concocted explanations that went beyond stock-outs because they also did not understand how the government supply chain operated and therefore did not know a large government facility might *actually* be out of critical supplies. The fact was that supplies were so short as to drive the Regional Medical Officer to comment one day during the morning clinical meeting at the regional hospital, sometime in early 2015, that the hospital would soon be nothing more than a guest house, full of beds but no other, additional services. Despite the reality, the perception that such a large facility, or any facility backed by the strength and size of the central

government, could never truly be out of supplies was pervasive in communities outside

Sumbawanga Urban district. Village leaders and community members repeatedly told me they

did not believe the government health facilities really did not have medicines available while

private pharmacies continued to have them in stock- the private purveyor of drugs is so small and

the government is so big [powerful], how is it, then, that the small person is able to get supplies

the government cannot? A focus group participant in a village in Kalambo District told me,

> …They tell you 'go, buy those drugs' and honestly, if you follow-up in all the dispensaries, you find that these drugs don't go [there]. Now, the government, I don't know. If you go to the private pharmacies you find there the strong drugs, like these gentamycin, you find them in these pharmacy stores. Now why is it that the government fails to bring these for us here so we can be treated here? If you go to town, you find these strong gentamycin, stronger than even PPF. *They themselves [the government] see that we have become fruit to be harvested in the drug shops, rather than bringing us [the drugs] at the dispensary.* Then, if you find the doctor has treated you, it's aspirin, flagyl, Panadol, and amoxicillin, that's the end. (Ngorotwa village men's group; emphasis added)

And a second participant responded to these comments with, "Even amoxicillin it's just one

container. Now, for this entire village, you find there's just one container …The doctors, they

have their own drug store, yes, that's the business that we see, that." The insinuations that

doctors or nurses were selling government provided drugs for private gain was a pervasive

concern. In this particular community, there was palpable distrust of the government services and

its local representatives—the healthcare providers at the health center—with one person even

suggesting the government itself was in on the plan to extract more money from citizens by

forcing them into the drug shops instead of providing them with drugs in the healthcare facilities.

The conversation in Ngorotwa continued and several of the participants agreed that their

health center, and most dispensaries, were nothing more than buildings if they did not have these

medications and other supplies readily available. While in communities I did not witness any

examples of corruption but heard many men and women in focus group discussions provide

examples of times they had been seeking care and were charged for an item or service that should have been free (chapter 4). For many years, the healthcare sector, together with the police, was said to be one of the most corrupt sectors in the country; I have heard this as part of a more general public discourse on corruption. There have long been anti-corruption activities in Tanzania but it continues to be a challenge (Lewis 2006; Mwafisi 1999; U4.no Anti-Corruption Resource Center 2014).

This exchange in Ngorotwa village demonstrates the ways in which, through repeatedly failing to have supplies, health facilities worked to undermine the legitimacy of the state itself. Here, then, was a failure of state care for its citizens via one of its institutions with which people interacted the most, and always in times of need and states of vulnerability—sickness, pregnancy, injury. When the state failed to meet these fundamental needs, people were forced to resort to extremes, such as strapping nearly dead patients to private motorcycles (chapter 4), and great personal expense in order to make up for the state's lack of care.

Clearly, the lack of availability of medications and supplies was prevalent at all levels of healthcare services in the Rukwa region. However, patients and their family members continued to expect the regional hospital to have medications and everything else necessary for their care. The lack of drugs aggravated the relationships between patients and healthcare providers (Martin 2009:128) and may be one of the most crucial elements of establishing the high quality of services available and for reinforcing the legitimacy of the state itself.

Community members often decided to bypass their community healthcare facility, opting to go directly to a health center or even the regional hospital in the hopes of finding more supplies and better quality medications at these higher levels. However, this just further increased the burden on these higher level facilities, without any increase in financial supportive

from the districts that were off-loading their patients on the regional hospital. Again, because

care for pregnant women was, by policy, free, this increased patient load in the maternity ward

was particularly worrying and an enormous drain on hospital resources. Even as the ranks of the

nursing staff swelled in maternity in 2014 and 2015, more hands did not mean more supplies.

Community members, sometimes coming from long distances, expected high quality, full service

care at the regional hospital and were increasingly disappointed if their expectations were not

met. In the meantime, the nurses and doctors continued to strive to do their best without first line

medications of choice, or any at all, and improvised catheters from NG tubes and gloves or other

methods.

6.12 Motivation and The Impossible Demands of Work

Nurses had to contend with the increasing scarcity of supplies, while also handling higher

patient loads than ever before. This led to incredible stress that caused many of the nurses to tell

me that they were often demoralized by their work environment. However, this environment also

engendered impressive stories of innovation, imagination, and improvisation.

In my interview with the hospital's Medical Officer In Charge (MOI) in May 2015, I told

him since I had starting coming to the Rukwa region in 2012 people had been telling me that the

hospital staff members were not motivated. Sometimes this charge was leveled by community

members, other times it was the doctors talking about the nurses. I asked the MOI what he

thought he, or the hospital administration, could do to improve the level of motivation and

morale among his employees. He said:

> I would say, number one [is] to increase the level of supplies- that will boost the morale.
> Because you are not being motivated if you don't have something to use, you don't have
> medicines for patients, the infrastructure is poor, you don't have uh supplies, you get
> demotivated. Then, from there, we may think of… like some competition… which
> departments works better, then we may recognize it by a letter or by certificate. …
> Probably that one would also boost the morale. But we cannot think about that sometimes

because there are these problems with supplies so your head gets congested. I think I have to manage first these…But the issue is [the] money is never enough.

He also told me in the same conversation that even if the nurses and doctors said they would like recognition for their work, even in the form of verbal praise or certificates, what they *really* wanted was money and the hospital simply could not incorporate higher wages or a system of monetary incentives given the already extremely difficult financial state of the institution.

I also asked the Regional Medical Officer about this issue of motivation and what he thought could help the regional hospital staff members to be more motivated in their work. First he asserted, "Ah, all these things we've done, honestly, if a person still isn't doing work with great effort, well this person, that is just how they are- they won't do it." This was primarily in reference to all the ways in which the hospital and regional health administration had tried in the past three years to ensure the staff members received all the workers' benefits to which they were entitled as government employees, including payment for hospital treatment, paid vacation every other year, promotions every three years, and any back pay they were owed, as well as housing allowances for the physicians. However, the RMO went on to say,

> Also, to really ensure that the environment [at work] is better than where they are [home]. That is, infrastructure. If you come, maybe you encounter the Out Patient Department (OPD). I gave the example of the OPD, when you enter in there, you find that it is run-down, it's from a long time ago, there isn't any nice furniture in there. Therefore, even a person that is coming from home comes, she enters there, 'Oh, I see it's better if I just stay at home,' but if there it is looking nicer than at her home-it's not a secret they're not working- the work environment should be nicer than there at her home, where she is coming from, so she is pulled to stay at work more than staying at home. This is the secret. She enters, she comes to work, she finds that she gets tea there close by, if she turns around there's lunch like there near the laboratory[8], yeah she finds that everything is there. There is nice furniture. If it's a computer for doing work, it's there. Equipment is there. If she turns around there is a blood pressure [cuff] right here, glucose test here, stethoscope here, yeah? Nice things. She likes to stay at work. It's things like that.

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[8] Near the lab there was a hospital canteen that served breakfast/tea and afternoon meals to the public and, primarily, the hospital staff members.

In his view, creating a physical environment that was pleasing was an important way to help retain staff members and ensure they felt more motivated to be at their work stations. One aspect of this overall environment that did surface multiple times throughout my stay was the availability of tea, electric kettles, and sugar (at the bare minimum) on the wards. The nurses on the maternity ward, and throughout the hospital, considered this to be a crucial part of making their working environment a livable place. They variably justified it to me as making it easier to have a bite to eat without wasting time leaving their work station or being due this small comfort because of the hard work they did, or because, particularly on the night shift, no other food was readily available inside or outside the hospital grounds. Either all together or in shifts, depending on the workload, the nurses on the maternity ward would take a tea break once per shift, pausing to refresh themselves with tea, conversation, and "bites" or snacks such as *chapati* or *maandazi* or *vitumbua*, which were donut-like items. At almost every all-staff meeting I attended, the nursing staff members requested the hospital start providing bread, in addition to the tea leaves and sugar they already allocated for each ward. The nurses said they needed something to have with their tea. While a single loaf of bread was only about 1000 TSh (or 50 cents), providing it every day on every ward, for the more than 200 staff members, was a strain on the budget. The Medical Officer In Charge told me they once had done this and very soon the staff were no longer satisfied with the loaves of bread but began wanting a variety of snacks, at which point, the story goes, the hospital administration went back to providing only tea leaves and sugar.

It may seem like a small demand but I read these repeated requests for bread or other snacks as a bid for care. The hospital staff members felt the provision of bread or other snacks would demonstrate that the hospital administration had validated their presence and acknowledged their hard work and humanity. In many instances, issues of motivation seemed to

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center around the point that the nurses felt they were unseen and unheard. Very often, they were simply looking for some form of recognition from their superiors both on their ward, as well as within the hospital more generally, which can also be seen in the sore feelings many nurses had about seminars, as I discuss below.

Another section of the Conditions for Work Effectiveness Questionnaire focused on the nurses' access to support, in various forms, in their work environment. The average rating was 2.498 out of 5 in the section.

SECTION 3: ACCESS TO SUPPORT

■None ■A little ■Some ■More than some but not a lot ■A lot

How much access to support do you have in your present job?

1 = None	2	3 = Some	4	5 = A Lot				
1. Specific information about things you do well				1	2	3	4	5
2. Specific comments about things you could improve				1	2	3	4	5
3. Helpful hints or problem solving advice				1	2	3	4	5
4. Information or suggestions about job possibilities				1	2	3	4	5
5. Discussion of further training or education				1	2	3	4	5
6. Help when there is a work crisis				1	2	3	4	5
7. Help in gaining access to people who can get the job done				1	2	3	4	5
8. Help in getting materials and supplies needed to get the job done				1	2	3	4	5
9. Rewards and recognition for a job well done				1	2	3	4	5

Fig. 6.4 CWEQ results for access to support

The questions which the nurses gave the highest concentrations of low scores were those having

to do with praise and recognition- questions 1 and 9, with 10 and 18 respondents, respectively,

saying they received no information about what they did well and no rewards or recognition for

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jobs well done. The nurses also largely felt they received no information about job options or educational opportunities, 4 and 5. According to Laschinger's (2012) tool for interpreting the scales, low scores in any of the sections can correlate with a work environment that makes nurses less effectively able to do their jobs or less satisfied with them. Using the principles of her CWEQ, Laschinger et al. (2009) and Laschinger and Finegan (2005) have found that low measures of empowerment in the workplace lead to burnout, high nurse turnover, and low trust in their work institutions, resulting in poor commitment to the institution, which directly results in reduced patient safety and poor outcomes. The same was certainly true on the Mawingu Hospital maternity ward, where the nurses often felt abused or abandoned by administrators.

While the administration was often concerned that the actual infrastructure of the hospital contributed to staff member's feeling unmotivated, this was not something that came up in the discussions of motivation and the work environment I had with nurses and physicians. Most commonly, the nurses were concerned with the availability of supplies and-another important factor- with the quality of leadership and mentorship that was displayed by the hospital management, at both the ward and hospital level.

Nurse Anna started speaking about the hospital's infrastructure and the availability of up-to-date technology and quickly moved into a discussion of money as a motivator. She described to me what she felt they, as nurses, needed in order to improve the quality of services they provided on the maternity ward,

> Us, in order to improve services, we need technology. For example, other wards have computers now and we, if we had one too, it would help us, but also let's improve the environment meaning that motivation, they should give us [to show] *they care for us*, the maternity ward, that's to say, we swim in blood and you know in the blood there is HIV and hepatitis. Therefore, even if they said 10,000 [TSh] every month for each provider on maternity, it would be motivation because of the type of environment in which we work. (emphasis added)

In this answer to my question about improving services, Anna brought up the issue of extra money, rhetorically linking this extra money she would like to the risk inherent in midwifery care on the maternity ward. She also explicitly connected these extra funds to both motivation and institutional practices of caring for the staff members. Many of the nurses who had been working at the hospital for more than three or four years had mentioned to me, in other contexts, that the maternity ward staff members used to receive an additional amount of money each month that was classified as a "risk allowance." I asked Nurse Anna what this money was for and she told me,

> You know, there in the past we were very few providers. You find in the entire building you entered only two people, therefore the work was really heavy [hard]. Therefore, for this reason, work that should have been done by four people was being done by two people. Now they saw that that money they would pay six people to do the work, better they should give it to those that were present. But now, if you go there they tell you that you are many now or you don't do the work well so, that's it, the money is finished, like that.

Here, in addition to explaining why the ward staff members received this risk allowance in the past, Anna also gave the standard explanation the administration cited when explaining why this money was no longer given out. There were enough providers and there was, therefore, no need to pay each person more for what was a more reasonable amount of work. Many of the more recently employed maternity ward nurses simply did not know this money had ever existed and did not bring it up as something they would like to have in order to help them feel more motivated. Instead, they were more likely to talk about generally improving the work environment or, if discussing money as a motivator, were more likely to refer to the extra duty and on call allowances that they had recently not received.

6.13 Seminars to "Refresh Your Mind"

Nurses and doctors both cited a desire for more continuing education or on-job training opportunities. They felt there had been advances in technology or changes to what should be considered best practice but they said they often felt left out of these "up-dates." The Ministry of Health and NGOs often hosted seminars to disseminate information about new techniques or practices. Often, the healthcare providers told me the chance to have a change of location and attend a seminar was important for maintaining their levels of motivation. In addition to being able to travel, often outside the region, to attend these seminars, each participant received a daily allowance as a per diem, in addition to being reimbursed for travel costs. This extra money was an attractive incentive, too. The per diems created what others have called a "seminar culture" (Boesten, Mdee, and Cleaver 2011). In my experience, the attendance itself was incentivized via these payments but the actual learning and retention of knowledge or the implementation of newly acquired skills was not. Nurses told me the hospital did not have any mechanisms in place to ensure that people who attended seminars actually shared the new knowledge or skills with their fellow providers.

When I presented some preliminary insights from my research to members of USAID in Dar es Salaam in August 2014, one of the women repeatedly assured me there were national guidelines regarding continuing education and they outlined how seminar attendees should disseminate new knowledge once back in their workplace. She and I went back and forth a number of times as I insisted that, be that as it may, people were not following the recommendations, she retorting that they should. For me, this interaction reinforced the bureaucratic fixation of many program planners. The very fact the guidelines existed seemed, to this woman, to mean they were being followed. I instead challenged her by insisting the fact of

the matter was that people were not disseminating the information gained through these sometimes high cost training programs. The woman then went on to suggest that providers at other hospitals, such as Mt. Meru in Arusha, were able to implement guidelines and were successfully providing high quality care. Here again she refused to appropriately take into account the variation within the country and the vast difference in resources between Mt. Meru Hospital and the Mawingu Hospital. I left the meeting feeling like we had spent the entire time talking at cross-purposes, a perfect illustration of what so many public health interventions continue to get wrong. In another conversation in July 2015, an NGO country director told me that while she realized seminar per diems often incentivized the wrong aspect of the programs, they were government mandated, no one would agree to participate without them, and, in fact, the government had just increased the rates.

Due to the attractiveness of extra pay and a chance to travel, seminars were a constant topic of conversation. Many nurses told me the ways in which people were selected to attend were opaque and they did not understand how certain people were selected repeatedly and others were never given the opportunity to attend even once in a year. Accusations of favoritism or ethnic preference abounded. The nurses generally thought the hospital Patron was in charge of selecting who should attend seminars but no one was entirely sure of the procedures. Therefore, many people felt the Patron simply selected his personal friends or fellow administrators or fellow ethnic group members (he was from a neighboring region, not originally from Rukwa and therefore a member of a different tribe than many of the hospital's providers). Overall, these suspicions led to a great deal of dissatisfaction among the nursing staff throughout the hospital and, especially, on the maternity ward. In fact, when I asked the Patron and Assistant Matron, they explained the procedures in place for selecting staff members for seminar attendance. There

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was a standard procedure in place; the problem seemed to be that none of the ward staff knew what the procedures were and this opacity resulted in suspicion and rumors of favoritism and bias. As in many areas of difficulty within the hospital, improved communication seemed as though it would greatly increase understanding and reduce accusations, mistrust, and the nurses' feelings of being the victims of bias in this and other selection processes.

6.14 Driven to Outside Income Generation

Due to low salaries that had not adequately kept up with the cost of living, or because the hospital was unable to promote all the staff members every three years as was the regulation, many of the hospital employees engaged in other activities to support their families. It was common for the people with whom I spoke to be responsible for supporting numerous family members, both immediate and more extended, due to their secure employment in the formal, government sector. Their families counted on this reliable income. However, not a single hospital staff member told me their salary was enough for their needs. Many had taken loans in order to build their houses or undertake other improvement projects, the monthly payments for which were directly deducted from their paycheck, resulting in lower take-home pay at the end of every month. These financial needs were often the reason why the nurses and doctors picked up extra shifts, were so enthusiastic about participating in seminars, and lamented the loss of previous incentives such as the risk allowance. Any extra income was helpful.

I asked each of the nurses what they did to earn extra income. Rukia's response shows the variety of activities in which even one single person might engage:

> Me, personally, I do business, I mean I do business here and there. That's to say, a lot of times it depends on the, well me, which things have been opened up for me. Maybe, maybe I can get to the harvest time, if I get money I can go to look for crops, I store them to help me maybe in December, maybe when the children are going to school. And another time, I usually like to open these store, pharmacies, in the villages. But right now I just have one. But at another point I had them here and maybe in another village, so I

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was trying to do that business. Yes, it was helping me, it means because I had a large family, so it was possible to go someplace. All of them have studied from Form I through Form VI, another, another is going to university, another Form IV and then they went to a technical college, a development college [across the country]. All of them! By the route of just putting yourself in a position once there, another time there. But my salary! After all, at that time, I had a salary of 48 shillings[9] for all those kids I was living with!

Rukia did everything she could to ensure her biological child, and those she fostered, a total of six children in all, were able to study to high levels, completing basic secondary education (Form I-IV), as well as the much more selective Forms V and VI, and even attending college, all on the money she supplied. But, she laughed at the prospect that she could have accomplished any of this on her salary alone. Pharmacies were a common business for healthcare personnel and I knew several nurses, doctors, and retired providers who ran pharmacies either in Sumbawanga Town or other communities. Another nurse raised chickens. Another sold snacks around town and to the other hospital staff members. The Medical Officer In Charge had multiple side businesses with his wife, who was also a doctor at the hospital. These included, by my count, a pharmacy in town, a sort of home goods shop, selling cow's milk, and keeping goats, pigs, and cows, which he sold for profit or used himself. He also had a large piece of land in the Sumbawanga Urban district which he intended to try using to grow a cash crop such as wheat, which seemed to be doing well in the areas he had planted it. Additionally, he was nearing completion on a large house, which he told me he planned to use to open a private specialty medical clinic where he, his wife, and others would work after finishing their duties at the Regional Hospital.

With all this in mind, it is easy to see how many other activities might have occupied the minds of the hospital staff members and diverted their full attention from what was transpiring at

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[9] Because I am not certain to which time period she was referring, it is hard for me to say how much this amount might be worth in today's currency. Rukia started work at the hospital in 1994. Nowadays, she probably made around $100-$150 as an Enrolled Nurse.

the hospital. They may have been more motivated by these income generating activities than their hospital work, and with good reason given the low return on their investments on the ward—poor communication, little recognition for work well done, low salaries, and ever-increasing patient loads. State failure to provide adequate salaries, increasingly demanding work which emphasized forms and account-keeping over patient care, and an institutional lack of care for their employees' fiscal or emotional/psychological needs contributed to an environment that continually contributed to low motivation and providers' sense of lack of empowerment.

6.15 Different Subjectivities, Different Motivations

Different parties throughout the hospital had, unsurprisingly, different ideas of what it meant to be a motivated healthcare provider and why their fellow providers were not more motivated. Administrators, as I have already indicated, often placed the onus of responsibility on the individual. Even if the nurses received all of their rights as government employees, even if the hospital infrastructure improved, and even if the nurses' employer cared for them, the bottom line was that motivation came from the inside. The administrators felt they could do as much as was within their power but there would still exist providers who were not invested in their work and did not *kujituma*, or put in an effort. This difference of opinion was not unique to the Mawingu Regional Hospital and Chambliss (1996:104-5) explains the conflict between nurses, in particular, and administrators as a conflict of perceived priorities and as centering on the ways in which administrators are removed from "life in the trenches;" this distance, physically and, in terms of goals, caused administrators to fail to demonstrate the level of appreciation and recognition for which the nurses were looking.

A divide that I had not anticipated appeared between the older nurses and their younger counterparts. While the younger nurses never mentioned the older nurses were unmotivated,

every older nurse pointedly said the newer graduates did not have the same level of expertise, experience, and training they had had upon graduating. Additionally, the older nurses did not mince words when asked why the hospital staff did not seem motivated and why this accusation of low motivation surfaced time and again at Mawingu. When I asked her how nursing had changed since the time when she entered into the profession in the 1970s, Neema told me,

> Those from the past, that is us, we did work by referring to the past behind us. You provide care that you know, the basics, and a person is happy. But the nurses of today, really nursing is finished! Well, let's say that healthcare services are coming to an end because if they do- they've done it, the Ministry of Health, or department of health- so that health generally is like a job, like any other job. They have removed everything that was called *wito* [a calling]. Now, if there is no calling [to nursing], when you play with a person it is like you don't reach the goal.

The term *wito* means to be called to a profession in a way that indicates a deep personal meaning to the work. The older healthcare providers all lamented that nowadays, the people who entered the nursing profession did so as a result of family pressure or due to a lack of other options as dictated by secondary school test scores. Even community members suggested that healthcare providers were not invested in their profession, which was a profession that required deep caring—affective, not just technical—and compassion, but were merely looking for money and stable employment. In her explanation, Neema went on to explain the ways in which the previous generation of nurses had started their shifts in the morning by ensuring patients had everything they needed- medications, fresh air, a haircut, or even clipped fingernails. She said now, the nurses did not work this way and had forgotten some of the very principles of nursing care. She went on to tell me about the ways in which nursing care of the past emphasized close contact with the patient, including very hands-on bodily care and even washing soiled linens. Nowadays, these tasks were left to the patient's relatives, shifting certain forms of care practices

that required less technical expertise, but also greater emotional proximity, into the domestic sphere and out of nursing.

The Rukwa Regional Reproductive and Child Health Coordinator (RRCHCO) was also a very experienced nurse and had practiced for many years. In fact, when I returned to Mawingu in May 2016, I found her happily smiling about town as she told me she had recently retired. She echoed Neema's observations about the current generation of nurses and added an example of the ways in which these newer nurses sought to remove themselves from direct patient care:

> Me, I see that they don't have a calling [*wito*]. If they had a calling, they would- first, these type of people, look at even at their client management- is she giving the client the kind of care she deserves? These days, I tell you, us that studied a long time ago, we're different than those who have studied in these recent years… A [nurse] can stay on the labor ward, she is using her phone, she is chatting while a mother is in pain over there. Then, this same nurse will claim 'My rights have been violated!' What rights?! Those that studied recently, so often they have gone into this profession of nursing like they lacked another place to put themselves… A lot of them, their minds are thinking, 'If I go to study more, I will arrive, I should be at a high level. This patient, let me not touch her.'…These trained personnel should be very close to the patient…but she who has studied a lot is far from the patient [these days] and it's not right.

The RRCHCO's comments show the perceived selfishness of the younger nurses but also illustrates the ways in which she thought these nurses sought to escape the more emotionally laden work of intimate care in close proximity to patients by increasing their technical care abilities. The older nurses all remarked upon the growing reliance on technology as a replacement for other forms of caring, which were more about the humanity of the patient and their needs as fellow humans, as in haircuts, instead of simply being passive subjects, receivers of care, in the form of more technically skilled expertise.

All the other experienced nurses with whom I spoke independently told the same narrative of the decline of nursing care and such practices that were in place to ensure good patient outcomes through close attention to detail; care with less distance. In *A History of*

Nursing in Tanzania (Mhamela 2013), this type of methodical nursing is referred to as process

nursing and, in this book, Mhamela writes, it has its origins in the nursing methods started by

Florence Nightingale herself (Mhamela 2013). However, as time has passed and the length of

training programs has decreased and the demand for more healthcare personnel does not flag,

nursing education and, in turn, practice, has evolved. The younger nurses did not often speak to

me about nursing more generally as a profession, though some would talk about it in terms of

how their current work environments did not allow them to use all the book knowledge they had

acquired in the classroom. They did not have access to the technology, tools, or experts they may

have heard about while in school. Care in nursing education may now focus more on technical

expertise, but nursing students still learned the ideals of Florence Nightingale, as well as up to

date codes of ethics from the Tanzania Nurses and Midwives Association (2009). Their care

practices began to change as soon as they stepped into the wards and sought to mirror the

experienced embodied practices of the older, more skilled nurses. Sometimes these older nurses

demonstrated a true calling for nursing and a commitment to close patient care. Other times, the

chaotic and under-resourced environment of the hospital, combined with a nurse's own

personality, home situation, and persistent feelings of lacking care from the institution employing

them, led nurses to hastily breeze through interactions with patients, with limited emotional

engagement, and a type of caring that appeared, from the outside, to be emotionally distant or

even abusive. Yet, these behaviors were the product of an environment with very little room for

other options. Younger nurses began to mirror these behaviors, too.

6.16 Conclusion

Overall, the environment of health facilities in the Rukwa region and, undoubtedly,

Tanzania more generally, strained healthcare providers in a number of ways, leading to low

morale and motivation. They were often under severe financial, physical, and emotional stress as they sought to continue striving to provide high quality care that complied with hospital and Ministry of Health guidelines for pregnant women. Nurses on the maternity ward repeatedly told me they perceived the hospital nursing administration to be uncaring, unresponsive, and out of touch with the needs of the ward staff and their very difficult working conditions. However, these same administrators were often severely constrained by bureaucratic protocols handed down from NGOs, national, and international policies that were often out of date or impractical in their setting. This conflict, for all the providers and administrators, between guidelines or protocols and everyday lived reality contributed to deep-seated feelings of resentment and demotivation. Poor communication and leadership styles that conflicted with the desires of the staff exacerbated these feeling. Many of the nurses and some of the doctors told me they found it hard to build "good" lives for themselves, in which they were able to meet the needs of their families, such as school fees and other daily needs, due to a lack of money and few opportunities for advancement and recognition in the work place.

The bottom line, as the Medical Officer In Charge pointed out, was that money was always a problem. Poor cash flow and slow disbursal of funds from the central government meant the hospital was unable to further invest in infrastructure, training, or hiring of staff members. Individuals working within this system were not necessarily uninterested in or unable to provide high quality care- very often it was a confluence of structural factors that delayed, deterred, or demotivated, thereby affecting how women and their babies experienced the hospital and the ways in which the nurses, doctors, and administrators understood what it meant to be a government healthcare provider in the Rukwa region. The ways in which the central government's bureaucratic procedures intersected with, and caused, scarcity at the Regional

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Hospital, combined with biobureaucratic expansion, took providers' attention away from caring for women in ways that complied with guidelines. There were instances in which the delay in care or the delay in receiving a medication or procedure resulted in the woman's death; other times she died as a direct result of a lack of a specific piece of equipment, such as an adult sized Ambu bag for resuscitation, or no way to remove the fluids from her lungs which she aspirated once on the operating table, leading to her eventual death. With their previous experiences of the bureaucracy, the shortages, and the system that forcefully resisted any change, the providers came to work in a way that suggested the environment itself precluded many forms of care, such as some of those which were required by "high quality" care guidelines.

Chapter 7: "No Zebras on Your Fingernails!": Uniforms, Looking "Smart," and the Professional Comportment of "Good" Nurses

What kind of work will you do, really? Nail polish, colors, I don't know, little pictures, zebras, I say! What kind of work will you be doing as a nurse? This, nursing work that you're doing isn't like this.

-RMO in a maternal death audit meeting, December 2014

7.1 Introduction

Building on the previous chapter's description of Mawingu Hospital's environment and the working conditions, in this chapter I delve into some of the ways in which the maternity ward nurses and the hospital administration conceived of what it meant to be a "good" nurse. Here, I use the word good to include a number of concepts related to nursing including, but not limited to, a nurse's ideal core attributes (moral, technical, and social), her[1] skill set, her comportment, her mannerisms, and the ways in which the community perceives her. I draw on Goffman's (1959) dramaturgical theory of the self and impression management, as well as Hardy and Corones' (2016) suggestion that nursing uniforms are ethopoietic fashion—character making. For nurses, the image they present to community members and other medical professionals was important for accomplishing a number of goals, both those officially stated, such as professionalism, but also more informal goals, such as increased social status in the community. Goffman (1959:238) writes that "within the walls of a social establishment we find a team of performers who cooperate to present to an audience a given definition of the situation" and, in the context of Mawingu Hospital, the nurses were the largest group of performers upon whom the reputation of the hospital depended. Hardy and Corones (2016:16) write, "Wearing the

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[1] I will often refer to the nurse as "she" due to the fact that in Tanzania, still, the majority of nurses are women. However, there were a number of male nurses working at Mawingu Hospital during the period of my fieldwork and I will touch on some of the gendered aspects of this profession, as well.

[nursing] uniform is a complex experience encompassing the projection, reception and awareness of nursing identity," which I present through the discussion in this chapter. The complex valiances of meaning associated with nursing uniforms, and the nurses' prominent role in care provision in the hospital, produced an environment in which the individual nurse's dress and behavior could threaten to undermine the legitimacy of the entire institution. It is with this in mind that I analyze the importance of debates over nursing uniforms and dress.

Ultimately, this chapter serves to highlight an ongoing conflict centering around the ways in which the nurses on the Mawingu Hospital's maternity ward were wearing their uniforms but it was a clash that illuminated much deeper struggles between nurses and hospital administrators. The conflict surrounding proper uniform wearing epitomized, more broadly, the hospital's refusal to acknowledge, accept, and accommodate the uniquely complex nature of maternity work. The regional and hospital administration tried to administer the maternity ward like every other ward of the hospital. This approach created blind spots that did not accommodate the needs of the providers engaged in this work, thereby affecting the care women received and, ultimately, their outcomes.

In their analysis of a conflict over nursing uniforms in a unit in an American hospital, Pratt and Rafaeli (1997:863) suggest the conflict was rooted in a fundamental conflict over "why the nurses were there (their mission), whom they served (their patients), what services they provide (their roles), how they were to be seen in the medical hierarchy (their status), and who should be making key decisions regarding the organization." Of these points of tension, issues related to the mission of nursing, the unique medical needs of maternity patients, status and hierarchy, and roles all resonate with the conflict that ensued on the Mawingu maternity ward. Uniforms, in this context, were about an enactment of state power and nursing hierarchies, but

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also allowed for new hierarchies and prestige among the nurses, as well as between the nurses and the women present on the maternity ward as patients. The conflict was also about roles and about administrative recognition for the demanding, risky, and uncertain work of providing care for pregnant women without the desired levels of supplies, medications, infrastructure, and administrative support. That is to say, the conflict was also about institutional care for employees.

On a state and global level, this conflict over uniforms was a microcosmic representation of all the ways in which a fixation on bureaucratic guidelines, a lack of flexibility in the execution of certain guidelines, and failure to attend to local realities could thwart the success of maternal health interventions. These guidelines and policies related to uniforms did not attend to the practicalities of maternity work, specifically, but also failed to encompass more fundamental issues at the heart of uniforms, such as how these conflicts could be, in fact, over "issues innate to the social identity" (Pratt and Rafaeli 1997) of nurses, and the ways in which this identity could be in flux, contested, or actively renegotiated through bodily practices and clothing.

7.2 Nursing Origin Stories

In all of the in-depth interviews I conducted with the healthcare providers in the Rukwa region, I asked them how they had come to be in their current profession- why had they wanted to study nursing? Or go to medical school? Or become a medical attendant? In many cases, the nurses responded to this question by telling me that since a young age they had had their hearts set on nursing. Despite what the older generation of nurses suspected, even the younger nurses gave this as an answer. Across both age groups, a very common origin narrative centered on the nursing uniform, or at least, made reference to it, similar to the way one of the older nurses, Aneth said:

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During that time, I didn't know what was inside nursing [the profession]. The clothing just made me happy! [*She laughs*.] The clothing made me happy because in those days we were wearing caps on our heads. Therefore, I was seeing nurses, if she passes by she is wearing shoes and socks, her *white* gown, and cap. That is, my heart was really lighting up [when I saw them]!

Significantly, this fits with what Roper (1976, cited in Bridges 1990:850) writes about why a profession's image is important, "Projection of the profession's dominant image is considered by psychologists and sociologists to be important because career choices are made early in life," which is a claim supported by the narratives of many of the nurses and other health professionals with whom I spoke. The "smart" uniforms of the well-kept nurses portrayed an image of cleanliness, expertise, and professionalism, which, particularly for women with few similar routes to professional recognition in the past, would have been very appealing. Nurses were immediately recognizable and community members could tell that the nurse was someone who had studied and who was responsible for caring for others.

7.3 Uniforms and the Nursing Profession

Uniforms, within the medical professions, have long been the site for the performance and enactment of professional expertise, status, and authority. In the United States, for example, walking into a teaching hospital, one is presented with a variety of uniforms including scrubs of varying colors or patterns, white coats of varying lengths, different types of shoes and head coverings, name tags and ID badges, to name just a few items. Simply conducting a search online or in a research database leads to thousands of articles in nursing journals about the role of the uniform in various settings and across time periods. The dress of nurses and doctors both helps to create and reinforce the wearer's professional comportment and expertise. Many of the more contemporary articles on the subject in nursing journals are concerned with the ways in

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which the public and clients perceive nurses, their level(s) of competence and professionalism, and, more broadly, the reputation of nursing as a profession.

Throughout time, as nursing developed into a profession, the women who chose to serve in a capacity that society would later recognize as nurses were often subjected to a number of stereotypes, which have remained, due to the media, well into the 21st century. Some of the stereotypes can be traced back to Florence Nightingale to whom scholars and nurses themselves often refer as the founder of modern nursing. Nightingale was said to have had a saint-like commitment to her work and patients, putting their needs before her own (Bridges 1990; Mhamela 2013). Florence Nightingale's influence in nursing was prominent during the Crimean War. Nurses gained more attention in the subsequent American Civil War and, afterwards, World War I. Nightingale laid out tasks that were to specifically be the domain of the nurse and act as a complement to the work of the doctor. She also trained her students in submissiveness, encouraging them to adhere to the patriarchal norms of the Victorian era through unquestioning subservience to the doctor in their quest for a cure for patients (Bridges 1990). Nurses often learned to emulate her dedication and this reverence of her commitment led to what scholars and researchers of nursing call the "angel" stereotype (Bridges 1990). This stereotype depicts women- for it was women who were best suited to the nurturing subservience needed in this line of work- as selfless and comforting, hardworking and without self-centered career ambitions for advancement, but focused only on the work of caring for patients (Bridges 1990). The angel stereotype seems to also reference and draw upon the religious roots of much of nursing (Bridges 1990). Indeed, in Tanzania, both historically and in the contemporary period, women from various religious orders have often been involved in nursing or nurse training- a natural

extension of ideals of Christian charity and care for the sick. In their roles as subservient to (male) physicians, nurses came to fill the role of doctor's "handmaiden."

The "battle-axe" stereotype became more apparent in the 1960s and 70s, and offered a stark contrast to the nurse of the Nightingale ideal. The "battle-axe" is used to refer to authoritarian senior nurses who wield their power, over junior nurses and patients alike, to enforce discipline among the nursing staff and demonstrate their position over (male) patients (Bridges 1990). Jinks and Bradley (2003:122) suggest the battle-axe stereotype is the "modern day inheritor of the Victorian 'lady nurse' figure and the mid-twentieth century Matron type character." This often includes the portrayal of middle-aged, unmarried women who are controlling and dowdy, for which they were often made fun in media portrayals, because they did not conform to ideal gender roles of the time (Bridges 1990).

The last stereotype is that of the "whore." Without much further explanation regarding the origin of this stereotype, Bridges (1990:851) writes, "During the late 19th century, a need was recognized to raise the status of the nurse above that of the drunken prostitute commonly recorded," and goes on to describe how this led to the recruitment of women and girls with "the most excellent of personal qualities." There is evidence that in some areas, like Bellevue in the United States, women who were picked up as prostitutes were allowed to serve a ten-day sentence caring for the sick at an adjoining hospital as their punishment; this institution in Bellevue later became a nurse training school (Houweling 2004). Much of the anxiety about nurses being whores likely revolved around the fact that nurses worked outside of their homes and mixed with both female and male patients. This idea extends from a particular historical period in which the sexuality of women and girls was constructed as something to be feared and tightly regulated. In the second half of the 20th century, and beyond, the whore stereotype is often

reinforced in popular media portrayals of nurses as sexual objects-think skimpy nurse "uniforms"

sold as Halloween costumes or intended for use in role playing during sexual encounters.

In a comprehensive letter written in 1946 about the state of nursing and midwifery care in

Tanganyika (TNA 108/9/169C), Dr. Esther Jackson, posted in the Western Zone (of which

Sumbawanga and Ufipa was a part; see chapter 3) wrote about nurse training schools, saying:

> Residential, well-supervised accommodation for girls in training is an absolute pre-requisite for getting a comparatively decent type of girl for training. The freedom of student nurses in 1946 in England is out of place in Tanganyika and the girls here need supervision of their ordinary lives, as strict as that of Florence Nightingale's day. In such an institution not only is there opportunity for character training but we may hope to recruit girls of good family and good character and in time raise the idea of serving the sick and of health visiting from the present standard which accepts as satisfactory a woman half sweeper and half prostitute. Parents' fears of girls becoming prostitutes is not a mere bogey of pious missionaries; pagan, moslem [sic] and Christian fathers have all expressed their fears for their own daughters and their scorn of the present "ayah." It will probably be necessary to make some sort of financial agreement with parents. To pay a price to the family so that the date of marriage may be postponed for a few years would be better understood and more readily accepted than the present system of paying a girl a monthly wage and leaving her to fend for herself in a town.

Here, Dr. Jackson acknowledges the concerns community members in Tanganyika may have had

about their unmarried daughters taking part in a boarding school situation at nursing schools. Dr.

Jackson also refers to Florence Nightingale, always the paragon of nursing. She references the

"whore" stereotype in Tanganyika but in relation to missionaries and their invocation of this

trope. Of note is the fact that Dr. Jackson feels the student nurses of Tanganyika required more

supervision than their counterparts in England. Here, she seems to be invoking the "savage"

trope, which was used broadly throughout the colonial period to question the extent to which

indigenous people were civilized and autonomous, capable of good comportment. In suggesting

girls in a training school in Tanganyika would require greater supervision than those in a similar

situation in the metropole, Dr. Jackson highlights the thinking of the time related to the

inferiority of African colonial subjects.

Historically, particularly in countries with a British colonial history, the nursing profession carried a multivalent identity and was often portrayed by British colonial health planners and policy makers as a key route for the dissemination of "civilized" morality and behaviors, including those involved in personal hygiene and education. The rest of Dr. Jackson's paragraph on nurse training programs goes on to say that even if trainees soon leave the service to be married, the programs will have already served the purpose of educating more girls about hygiene, childcare, and midwifery, which she says, "is [money] well spent in educating a woman to properly care for her own children, the future citizens of the Territory" (TNA 108/9/169C) (see also chapter 3).

With an understanding of these historical stereotypes attributed to nurses, it is possible to see the significance of the uniform in either supporting or negating these ideas. Women's clothing marks them (Tannen 1993, in Cohen 2007:409-15) in particular ways, sending non-verbal messages about who they are and what they believe. This non-verbal communication extends to uniforms, which went through a numbers of changes over the course of the mid-19th century to the present day (Houweling 2004). These changes evolved to accommodate changing desires, ranging from modesty and appropriate female dress in the 19th century, to the increasing demands of cleanliness to prevent the spread of infections, and comfort and utility needed for the physical demands of the profession (Houweling 2004). Fundamentally, the uniform acts to "deindividualize" the wearer (Lurie 1981:18) and acts as a form of social control (c.f. Parsons 2006 on boy scout uniforms in colonial Kenya). With less concentration on these attributes of control and deindividualization, which might be construed as less positive, Hardy and Corones (2016) focus more on the productive role of uniforms. Nursing uniforms are, they suggest, generative, helping to demonstrate the roles and status of nurses, while also affording them, in

the early days (in the Victorian era), a sense of security and safety in public, even when unaccompanied, due to the uniform's wide recognizability (Hardy and Corones 2016).

7.4 Development of Nursing Uniforms in Tanzania

In Tanzania, the Tanganyika Nurses and Midwives Council (TNMC) decided initially, in 1953, that they did not need to regulate nursing uniforms and individual training institutions and hospitals were allowed to decide what was suitable so long as the uniform complied with the very general guideline "that the dress had to be of washable material with short sleeves" (Mhamela 2013:285). Beginning in 1951, the start of more formal nurse training programs by the British colonial government, nursing students who passed their final exams in the preliminary course wore a pink and white striped gown (Mhamela 2013:287).

As far as nursing students go, a letter from July 8th, 1952 (TNA 46/19/413) mentions that student nurses spent three years in training for their certificate in General Nursing, "during this time she receives board, lodging and uniform, and a training allowance." If the student, at that time only women were accepted into nurse training programs, wished to become a midwife, she would continue with one more year of training. In 1954, TNMC did require all nurses to start wearing uniform badges (Mhamela 2013:288). Generally, from this time until nearly 50 years later, there were less comprehensive and cohesive uniform requirements governing the nurses and midwives of Tanzania, with no records of any standardized guidelines, beyond the most basic requirements for short sleeves and washable material, mentioned by Mhamela (2013) in his account of the history of nursing in the country. It was not until 2005 that the TNMC standardized uniforms, including the material from which they were to be made, and abolished the caps (Mhamela 2013:289). Despite the fact that, at the time of my fieldwork, the cap had not been a part of nursing uniforms for nearly ten years, many nurses and administrators invoked the

cap in a number of ways, particularly in nostalgic allusions to a remembered past in which nurses were less casual about their profession and dress.

7.5 Uniform Requirements

Beginning with the TNMC meeting in 2005, uniforms for nurses and midwives working in the government system, the public sector, were to follow certain standard regulations. Mhamela (2013:289) (Fig. 7.1) cites the following from the meeting minutes:

> Taking into consideration the social changes, weather conditions during night duties in some parts of the country, and the global movement for change of nurses' uniforms, the TNMC ruled that the type of the uniform that nurses should be wearing, irrespective of the institution in which they work, should be as follows (Minute item 47: 2005): 'Nurses will no longer be required to wear caps as part of the uniform. Female nurses to have the option of wearing either a gown or pair of trousers with a tunic. Male nurses will wear a "kaunda" design suit. The type of fabric to be used in making the uniforms will be "tacron" cloth material. Nurses-in-charge of hospitals (Matrons and Patrons), District Nursing Officers, Regional Nursing Officers and Heads of schools of nursing to wear dark blue uniforms; and all other nurses to wear white uniforms. Nurse teachers to wear white uniforms when mentoring in clinical areas. Female student nurses to wear pink gown uniforms and male student nurses to wear white trousers and white shirts. Health attendants to wear light green uniforms.
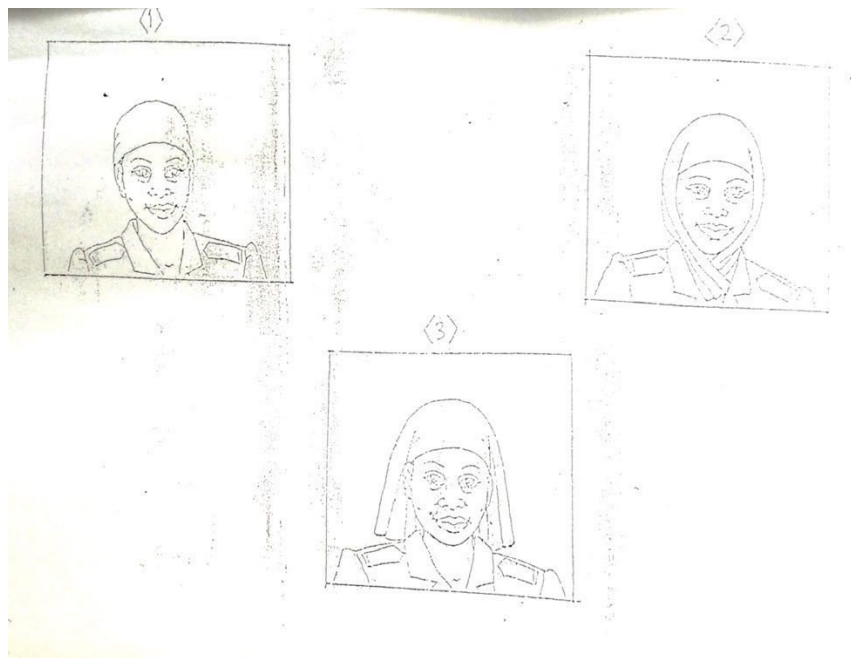
Fig. 7.1 "Kaunda" uniform; Gown uniform style; Examples of head coverings

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These continue to be the guidelines for nursing uniforms and, at the Mawingu Hospital, the hospital Patron regularly referenced the standard rules and regulations in order to highlight the ways in which specific nurses or, more broadly, an entire ward was failing to comply with these regulations. At the Regional Hospital, nurses were supposed to embroider their rank (EN or RN) on the epaulettes of their uniform in blue thread so those with different levels of training and expertise could easily be recognized and differentiated. In addition to the different colored fabric, as described above, this requirement highlighted and reinforced the difference in ranks between nurses. However, on a practical level, this was more meaningful for insiders (i.e. the hospital personnel themselves), as opposed to helping patients and family members recognize the skill levels of providers. Beyond the EN (enrolled nurse) and RN (registered nurse) designations, there was a third class of nurses who were called Nursing Officers (NOs) and had a higher level of education and specialized training than the RNs, usually a university degree or completion of upgrading courses. The maternity ward's Nurse In Charge at the time told me that they were not supposed to indicate NO on their epaulettes, only RN, despite the fact that there was a meaningful difference between these two ranks. She told me in other hospitals, the nurse leaders (*wauguzi viongozi*) all were allowed to wear the dark blue uniforms but in Rukwa it appeared only those nurses who "sat in the offices" wore these uniforms that clearly distinguished them from their subordinates. She continued to tell me that it was not clear why only certain nurse leaders were allowed to wear these dark blue uniforms and they had received no explanation of why NOs could not write "NO" on their epaulettes; she suspected it was in an effort to homogenize the nurses but did not offer a reason as to why this might be desirable for the administration. I probed further and she told me that other regions of the country, east of Mbeya (the neighboring region), the nurses wore different color uniforms to indicate status.

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Administrators clearly used uniforms to connote status and their higher position in the ranks of the hospital but they did not allow ward nurses access to these same forms of prestige. It is unlikely that most patients knew the difference between the blue and white nurses' uniforms but the different colors conveyed a world of meaning to insiders. The administrators' strategic use of the different colored fabrics allowed them to further limit the ways in which ward level nurses might seek to gain more recognition within the system, even if their technical expertise and educational background might have allowed them entry to higher levels of status. Those nurse administrators sitting in their offices had a vested interest in reinforcing their higher position particularly, as the maternity nurses accused, if they did not any longer have accounts of their prowess in everyday patient care practices on which to draw for respect, prestige, or recognition.

In practice, many of the nurses improvised on the uniform requirements for a variety of reasons. Some made aesthetic improvements to their uniforms, adding ruffles or lace, belts or more embellished buttons. In lieu of the blue thread to embroider their rank, I watched many maternity ward nurses draw on their letters with blue ballpoint pen. Due to the cool weather in the Ufipa plateau where the hospital is located, many nurses wore a variety of types of sweaters or jackets with their uniforms, most of which were not white, thereby violating the guidelines. On the night shift, when temperatures could dip into the 40s (Fahrenheit), I often saw nurses wearing sweatpants or jeans under their gowns for warmth. In the above quote, there is no mention of hairstyles, make-up, or fingernails, but all of these came to play an important role in the uniform conflict that took shape starting in September 2014 and ebbed and flowed over the next nine months while I was still at the hospital. During this time, a number of the requirements became the basis for accusations of unprofessional dress and administrators used nurses' sloppy

dress as evidence that their other professional qualities might not be up to standard, such as their technical abilities, but also their deference to the hospital authorities, with proper respect for their position lower down in the hierarchy.

7.6 Maintaining a Professional Image for the Community

There were other guidelines which the Patron frequently referenced, including the suggestion that nurses not wear their uniforms on their way to and from work but, instead, change into their uniforms after arriving at the hospital. As Martin (2009:33) writes of Ugandan nurses changing into their uniforms while already at work, "according to the nurses themselves, the reason is to maintain a high level of hygiene, but there is also a concern that nurses' off-duty behavior might discredit the profession, giving nursing a bad public reputation and leading people to lose confidence in the nurses' medical authority." Poor behavior while wearing the uniform which easily identifies someone as a healthcare professional, specifically a nurse, would violate the desired ethos these performers sought to portray about healthcare personnel and services, one which conveys integrity, experience, and quality. In September 2014, the Regional Medical Officer told those hospital employees gathered at the morning clinical meeting that the nurses should leave their uniforms at work, changing when they arrived and again before they left. He said, "On the way [to work], it's not necessary that every person along the way knows that you're a nurse or doctor by your uniform!" However, many nurses continued to routinely wear their uniforms on their commute, often wrapping a *kitenge* cloth around their waists to prevent dirtying their white uniform while on public transportation.

Aside from pragmatic concerns about being late due to changing into their uniforms before reporting to the morning clinical meeting, I propose there are a variety of other reasons nurses might choose to wear their uniforms outside of the hospital setting. Due to their

recognizability, members of the public could easily tell who was a nurse. In town, nurses gained a certain amount of social capital from their positions as government employees, particularly in a profession connected with healing ailments. Additionally, it is a strategic move to try to befriend healthcare providers in the hopes of gaining access to treatments or advice outside of the hospital setting or for receiving preferential treatment when reporting to the hospital for a more major illness. Nurses were capitalizing on these perceptions in order to garner more prestige in the community. This quest for social capital and prestige helps to explain why it was that nurses often wore their uniforms to the bank or the regional offices if they decided to go during their shift, which they often did due to the times at which these places were open during the day, which coincided with the morning shift. In addition to social capital, nurses wore their uniforms in public, non-hospital spaces in order to advertise their professional status, which might have helped them to gain customers for private pharmacies, thereby bringing in additional, badly needed revenue.

A week later, after the RMO's comments, in the clinical meeting, the hospital Patron again reminded the nurses to properly wear their uniforms while on duty at the hospital. This was only one day after he had met with the entire nursing staff of the hospital and reminded them about the importance of properly wearing their uniforms. He said that not wearing their uniform, or not wearing a proper one, was disrespectful. I was particularly intrigued by this comment because Patron did not continue on to describe what or who nurses were disrespecting when they did not properly wear their uniforms. However, I understood this comment to mean that it was disrespectful to the profession or office of the nurse more generally.

7.7 Uniforms and Village Healthcare Providers

Outside of the regional hospital, uniforms were equally important and, sometimes, at least to administrators, seemed to be even more so than at the hospital, as other markers of difference between healthcare providers and their patients broke down or ceased to exist in the community setting. While on a supportive supervision visit to several villages throughout the Nkasi District, I witnessed the District Reproductive and Child Health Coordinator (DRCHCO) reprimand and question a number of providers working in village dispensaries. One young man became quite distraught as the DRCHCO continued to question him about the state of his hair and whether or not he had brushed it that morning. Despite his insistence that he had, she continued to accuse him of neglecting his duty to look clean and, thereby, neglecting his duty to uphold and perform the image of respectability, cleanliness, and competence that was to characterize the medical profession and its denizens. In many villages, especially those that had not received prior notification of our visit, we would see the dispensary personnel wearing only part of their uniform (e.g., the pants but not top) or some modified version of their uniform. When my research assistant and I traveled to the eleven villages I selected for more extended research (see chapter 3), we almost always saw at least one of the providers in street clothes (Fig. 7.2). Sometimes, they were entirely indistinguishable until some other person from the community introduced us.

Fig. 7.2 The three healthcare providers are indistinguishable from the Village Chairman, who is second from the right

For the healthcare providers working in communities, their uniforms played different roles in different settings. Within their communities, they might not have felt the uniform was entirely necessary to distinguish them from other people, because the village was small enough that everyone knew who the healthcare professionals were. However, these providers would come to the regional hospital and we would interact with them on the maternity ward. This usually came about as a result of an official, formal referral they had initiated at the dispensary level. These providers would often arrive on the maternity ward, still in their street clothes, with their patient, a woman with a condition or complication they did not feel they could manage at the dispensary (or health center), and stay until the woman had gone through the admission procedures on the ward. These providers ideally arrived with a formal letter of referral and they

had, hopefully, initiated any possible basic management before or during the trip to the regional hospital.

More than once, I happened upon a stranger, usually a woman I did not recognize, sitting in the labor room or wandering about. The hospital had a strict policy which prohibited anyone other than the nurses and doctors of the ward to wander through the labor room where women were often in various states of distress and undress. In a maternal death audit meeting in December 2014, the meeting participants were discussing referral procedures and the trouble with certain aspects of the process, which referring providers did not often follow. One of the nurses present, representing the maternity ward, commented that many of the referral cases came to the hospital without an IV or a catheter and were often accompanied by a medical attendant, or other unskilled personnel, and often these people were not wearing their uniforms. She said, "You find others come in pajamas and their hair is like this! They're frightening!" As she motioned to show the untamed nature of the person's hair. Here, not only did she emphasize the lack of uniforms from the standpoint of being able to recognize the accompanying providers as such and not a relative, she also emphasized the way in which she felt some of these providers' disheveled appearances were off-putting. The way in which these providers came to draw attention and criticism is representative of the way in which nurses often talked about those would did not present themselves well and were, as an extension, poor representatives of the profession. Returning to Goffman (1959), I view these comments, and the conversation itself, as a way of policing the members of the healthcare professions whose refusal, inability, or unwillingness to comply with ideal uniform wearing so as to reduce the damage they might do in the future (or were currently doing) to the image of competent and reliable medical expertise in the medical spaces.

Using this frame of spaces, from my extensive experience since 2008 in village dispensaries, it is also possible to see the ways in which the boundaries between medical space and community space may blur in these community-level facilities. This is because the providers lived within the community, often for many years, may have had extended or immediate family from that community, and were often engaged in other income-generating activities that also served to blur the boundaries between medical person/space and community space. In these settings, the dispensary staff members were on-call 24 hours a day, seven days per week and community members often went straight to their places of residence in times of emergency if it was after normal government working hours (7:30am to 3:30pm). At the regional hospital, it would be unlikely for a patient to be able to go directly to a provider's home, unless they were already a neighbor and therefore knew the person worked at the hospital. This created more of a separation between the medical and community spaces, even if the activities that took place in each domain bled into the other (see also the discussion of this in Martin 2009:103)[2].

From the point of view of healthcare administrators, given these prevailing circumstances in the village setting, it became all the more important to distinguish oneself as a provider from non-medical community members and to represent the broader profession in a way that upheld its loftiest ideals deeply rooted in the history of nursing. In all settings, these providers were also representatives of the Tanzanian government because of their employment in public, government-run healthcare facilities. This meant that, in addition to representing the medical professions, they were also representing the government. This may be another reason why administrators considered it highly inappropriate or disrespectful to not wear a "smart"- looking

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[2] Here she discusses the ways in which nurses often use their professional skills at home in service to relative or neighbors, and are often considered resources for the use of family members, thus blurring the boundaries between workplace and home-place.

uniform, despite the reduced significance uniforms seemed to hold for the village healthcare providers themselves in determining their mission, roles, and status (Pratt and Rafaeli 1997).

7.8 Maternity Care Necessitating Variations

Nursing care on the maternity ward differs in significant ways from nursing on other hospital wards. The maternity ward nurses were often engaged in physical work and frequently exposed to bodily fluid. The very act of delivering a baby often caused me to break out into sweat and nurses not infrequently mounted steps and climbed up onto beds in order to get a better angle and more leverage from which they would be able to assist the mother giving birth. From my arrival at the hospital in early February 2014 through the end of that year, the maternity ward used the main operating theatre whenever there was a C-section or other surgical procedure. Until the ward's operating theatre began functioning in later 2014, the nurses were often responsible for pushing heavy gurneys across the hospital, along concrete walkways that had rough patches and holes, and uphill to reach the working set of doors of the main theatre. This was also very physical work that required, minimally, two people.

Additionally, nurses on the maternity ward were exposed to far more bodily fluids than those working in any other area. Vomit, urine, feces, amniotic fluid, and vast amounts of blood were all a daily fixture on the maternity ward. On my first day on the maternity ward in 2014, I was on rounds as the night nurses handed over to the incoming day shift nurses. We went woman to woman and in the course of these proceedings we came to a woman who had been throwing up throughout the duration of her labor since she had arrived at the hospital. Not knowing this, I was standing near her bed, under which she had tucked her requisite plastic basin from home, when she once again began to vomit. I happened to be within vomiting range and found my shoe and left pant leg spattered. This was, I knew from previous experience, not an isolated encounter

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with bodily fluids. One had to adopt a sort of nonchalance about these encounters while still attempting to protect oneself as much as possible. Throughout my time at the hospital, there were many incidences in which I or the nurses only had barely enough time to hastily pull on one sterile glove before catching a baby or, while walking a woman to an empty bed, were splashed with amniotic fluid as her waters broke. Other times, nurses did not have the elbow length gloves they needed and would engineer elbow length protection from two wrist length gloves. They would then proceed to insert their arms nearly up to the elbow in a woman's body, in search of a placenta that had not fully detached from the woman's uterus. As one nurse told me, describing the ways in which amniotic fluid could splash or spray long distances when a woman was in the midst of a contraction while giving birth, "If you don't know the taste of amniotic fluid, you haven't worked long enough on maternity." Because it is impossible to predict when any woman might start throwing up or when water might break, there was a constant risk of coming into contact with unanticipated fluids.

In light of these conditions, it is clearly apparent that the conflict between the Patron and the maternity ward nurses over the uniform regulations was also about different interpretations of the patients for whom the nurses were caring. On other wards, the patients did not expel bodily fluids with such unpredictability and at such a high concentration. On the maternity ward, patients' bodies acted differently and, as such, demanded different forms of preparedness and care. In not allowing the maternity ward nurses to protect themselves and modify their uniforms in response to the patients they were serving, Patron was privileging his interpretation of the "normal" hospital patient for whom all nurses cared, without attending to the deviations from these norms presented by the bodies of women in labor. This normal patient certainly looked different that the hundreds of women who made their way through the maternity ward on a

monthly basis. Instead, this normal patient might be chronically ill, male, and older, suffering from high blood pressure or a severe case of malaria, and perhaps more in control of his own bodily processes.

7.9 Improvising the Standards

All of these conditions, combined with the sometimes cold weather of the region, meant the maternity ward nurses often donned a number of types of aprons, gowns, improvised scrub tops, masks, caps, or pants as they performed their daily duties. These items often helped protect the nurses from the bodily fluids with which they came into contact and they used what was available in lieu of more standardized items that were only unreliably present. Many of these items came from donations that individuals or organizations had made to the hospital in the past. This meant the pieces were often mismatched and often were meant, in other contexts such as the higher resource settings from which they came, to be disposable and were not washable. However, due to budget constraints, the nurses (rightly) feared if they disposed of their light plastic apron or gown they would never receive another one.

The lack of reliable personal protective equipment (PPE), such as boots, caps or aprons, also had other consequences, some of which were directly related to patient care. In order to protect herself, a nurse might wear a scrub cap from the operating theatre or she might awkwardly stand as far away from the patient as possible so as to prevent dirtying her shoes or her legs which were left exposed after the hem of her uniform skirt because there were not enough boots for everyone working on the ward. Certain uniform requirements limited range of movement and, because nurses were concerned with getting their uniform dirty, especially when they only had one or two sets, they limited their close physical contact with women in labor. Fearing contamination due to this lack of PPE, nurses also lashed out at women who touched

them while in the throes of a contraction. Nurse Peninah said a nurse might "fight with a woman, saying, 'You, mama, don't get blood on me! Why do you want to grab me?!'" for fear of getting blood or feces on her uniform. The lack of PPE, therefore, could contribute to a nurse's reluctance to touch a woman or even stand next to her in close proximity.

The PPE items that were available often hung in the ward break room or on hooks in an anteroom near the ward operating theatre. Sometimes they were spotted with blood, meconium, or other (unidentifiable) stains, highlighting their unsanitary nature. Some items were washable, such as dark green tops, bottoms, and caps that were intended for wearing in the operating theaters (and could be washed and sanitized in the hospital autoclave), but many other items were originally manufactured for one-time use and could not be sanitized appropriately. Some of the nurses would wear these green scrub-like tops, pants, or caps during their regular work on the ward. In other instances, a nurse would be assigned to discharge duty and come to the ward for one or two hours in the late morning to discharge women and their babies. These nurses often arrived from home in their street clothes which they wore while completing the discharge procedures and therefore they blended in with the mass of women and relatives who inundated the ward during the late morning visiting hours, which occurred at the same time.

If it was the case that a nurse was wearing some other item over her white uniform, she would often remain this way throughout her shift. In the event of a C-section or emergency surgery, the nurses would often go to the main operating theatre still wearing these protective gowns or aprons. Sometimes this was due to time constraints or simple practicality. In a discussion on the maternity ward about Patron's criticisms of the ways the maternity nurses wore their uniforms, one nurse emphatically stated she was not going to waste time changing her clothes during an emergency. Others agreed and decided Patron's criticism was most likely

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because they sometimes wore the various non-white gowns, aprons, and caps outside of the maternity ward, as in when they went with a patient to the operating theatre across the hospital. Sometimes, upon arrival in the theatre, the doctor operating would ask the nurse to take blood samples to the laboratory for testing blood type and hemoglobin levels or to fetch blood for a patient who was losing too much. This required the nurse to again travel across the hospital. In their conversation as a group, the nurses decided it must be this walking about the hospital and *being seen* in non-regulation clothes to which the Patron objected. However, emergency situations, more likely to happen in maternity than almost any other ward, necessitated quick action and most of the nurses agreed they would not waste time changing clothes and shoes before going to the lab or theatre.

The nurses were angry and offended that the guidelines related to nursing uniforms were given precedence over the immediate, and sometimes emergent, healthcare needs of the patient. The expectation that they would avoid being seen outside the ward in non-regulation clothing implied they would take time to change into their white uniforms every time they knew they were going to walk out the doors of the ward. However, Patron's expectations in this regard seemed to be fixated more on the symbolic importance of the white uniforms than the actual utility of the clothes the nurses in maternity wore. To the nurses, their primary role in the ward was to deliver timely, life-saving care and to be prepared to do so in whatever clothing they needed to protect themselves and care for the patients, particularly during surgery. This fundamental role was in conflict with what Patron appeared to be privileging in his discourse about uniform regulations—nursing identity related to appearance, over the active engagement in care and the improvisational clothing it necessitated. Here, too, the conflict was about who had the power to make decisions in the context of patient care, as well as in terms of priorities. To the

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Patron, the priority, as delivered to and interpreted by the nurses, seemed to be wearing a white, unsullied nursing uniform for the purposes of upholding appearances. The nurses themselves wished to prioritize patient care and needs, which, when done successfully, would arguably accomplish much more for the ward's legitimacy, and the hospital's by extension, than merely wearing certain, specific forms of clothing.

A lack of standard and readily available personal protective equipment (see chapter 6) meant the nurses did sometimes look mismatched, with each person using what they could get their hands on. Many of the nurses, including me, hid the best masks or protective gowns and aprons we could get our hands on. If I did not either take them with me or hide them in my box, I would find my hospital Croc shoes in a different place because someone else had worn them. Each nurse had a box in the changing room in which they stored such items (Fig. 7.3 and Fig. 7.4). I took to keeping my shoes, scrubs, surgical cap (brought from the U.S.), white clinical coat, stethoscope and blood pressure cuff in my box. However, putting shoes that had traipsed through blood or amniotic fluid in the same box as one's shirt was not ideal, particularly from an infection prevention control standpoint.

Fig. 7.3 Boxes of clothing and shoes   Fig. 7.4 More nurses' shoes, aprons, and boots

7.10 Continued Evolution of the Conflict

Though the hospital's Patron often made general remarks about proper uniform wearing in the morning clinical meetings, the maternity ward Nurse In Charge frequently received pointed criticism about her staff members. Sometimes, and with seemingly increasing frequency throughout the end of 2014, Patron would use the maternity ward as an example of what not to do. He brought up the maternity ward staff members as examples of ways of dressing that were not to be emulated by the other nurses. Through this repeating discourse and the use of the maternity ward as an example of uniform deviance, the hospital administration constructed the maternity ward and its staff members as problematic and entrenched in their noncompliant

defiance of uniform norms. While seemingly inconsequential, this conflict occurred against the background of conversations about the hospital's finances, which often focused on the degree to which maternity services were a drain on the institution's resources (chapter 6). On both levels, the prevailing institutional rhetoric was one which signaled that maternity was problematic, nonconformist, and a barrier to institutional solvency. By constantly focusing on the uniforms, the hospital administration also sent the message that maternity nurses were a threat to the legitimacy of the institution because of what they were signaling to the public when they traversed the hospital in non-regulation wear—sloppiness, carelessness, and, even, poor hygiene because of the fluid-stained gowns they wore over their white uniforms, all of which undermined the goals of professional nursing.

Prevailing social and organizational norms (see also chapter 8) often prevented administrators from making direct accusations about the behavior of individual nurses. This meant the criticism they provided to the maternity ward Nurse In Charge was in vague terms that were difficult to translate into action or change. One morning in September 2014, after the clinical meeting, the Nurse In Charge went back to the maternity ward to report on the discussions that had occurred in the clinical meeting. She called most of the present nurses into the changing room and we gathered there to hear what she had to say. Some of the nurses continued to change their clothes, looking forward to going home after a long night shift. Others had ducked into the room on the way to or from other locations, such as the lab or the storeroom. Once the fidgeting had died down a bit, the Nurse In Charge reported that the Patron had accused the maternity ward nurses of all just wearing their uniforms however they wanted or felt like wearing them, without regard for the regulations. The nurses erupted into indignant disagreement at this accusation, which came on the tail of the several other recent announcements warning the

nurses throughout the hospital to wear their uniforms properly, to not wear them to and from work, and to wear them in a respectful manner. The ward Nurse In Charge told everyone that the previous In Charge had told her of plans to provide everyone on maternity with green gowns to be worn over, or in lieu of, their white uniforms. However, these plans never materialized and only a couple of these outfits were ever available. Other nurses chimed in here, saying that even if they had green clothes, these would most likely create conflict if they wore them to the operating theatre (OT). This was because the OT staff members all wore green scrubs and the maternity ward nurses thought the OT staff would accuse the maternity nurses of stealing OT clothes, because this had occurred in the past. In the course of the conversation, it became apparent that the previous In Charge had decided to remedy this situation and prevent any such accusations by ordering light blue cloth for the maternity ward scrub clothes. This cloth had never materialized and even the idea of its existence was news to most of the nurses present in the office that morning. One of the most senior nurses, Mpili, who would later in 2015 become a second In Charge of the ward, suggested they request a meeting with Patron himself in order to learn more about the specifics of his accusations. An appointed spokesperson had delivered these criticisms to the Nurse In Charge of the ward because the Patron himself had been out of town at the time.

7.11 Gender, Bodily Embellishment, and Nursing Identity

Beyond just the wearing of the actual uniform clothes, Patron had also told the ward In Charge that some of her nurses were wearing their hair in styles that were not appropriate for nurses. Hairstyles became a recurrent theme and often led to nostalgia for the days of the nursing caps. The Regional Medical Officer said in a meeting in December 2014 that he preferred it when the nurses had had to wear caps because you could only wear your hair in a limited number

of styles and still have the cap sit properly atop your head. The caps, therefore, prevented the more exuberant and elaborate hairstyles that some women preferred to wear. Hairstyles was an issue that almost exclusively affected the female nurses. Males on the hospital staff almost always had very short cropped or shaved hair. Women, on the other hand, would go to salons to have their hair braided in the newest style, sometimes including weaves, other types of synthetic hair, or wigs. There were a few styles that made the hair stick out away from their heads and the administration did not feel this was appropriate, nor was hair that supervisors thought looked unkempt or uncombed.

In addition to hair styles, the RMO said, "What kind of work will you do, really? Nail polish, colors, I don't know, little pictures, zebras, I say! What kind of work will you be doing as a nurse? This, nursing work that you're doing isn't like this." By these comments the RMO was emphasizing the ways in which certain behaviors, modes of dress, and personal embellishments were not befitting to those in the nursing profession. In addition to hair and nail polish, the RMO also brought up nurses who wore too many rings on their fingers, what he considered to be excessive amounts of make-up (specifically mentioning lipstick), and suggested it was better for the female nurses to continue wearing dresses, as opposed to pants, as in the past. He emphasized that all of these modes of self-presentation were tied to the legitimacy of the nursing profession as a whole. Despite the unanimous laughter that erupted as a result of the RMO's comments about "zebras" on nurses' fingernails, the underlying message was that improper dress and self-presentation undermined the nursing profession and distracted from the profession's core goal of caring for patients: "…But when you are nearing work here, these things [makeup, high heels, elaborate hairstyles] are a lie. Such a lie. I don't know, you've encircled your lips until they have been colored, then you go to a patient! The patient is sick, is she going to look at these lips?

What time is she going to look at them? She doesn't see them!" Here, the RMO was also emphasizing a separation between domestic and professional space. It was acceptable for nurses to wear make-up, high heels, and the like, but only when they were not on duty because the role of the nurse was not to look pretty, but *to provide care*. In speaking against any forms of bodily embellishment, the RMO was also indirectly drawing on nursing ideals of the "angel" stereotype in which modern-day Florence Nightingales subsumed personal identity under their identity as nurse in order to selflessly serve patients. However, in only referencing forms of bodily embellishments or clothing worn by women, he was perpetuating nursing stereotypes, exempting men from criticism and these norms, and continuing to collapse the complexity of nursing, and who is a nurse, equating the field with the feminine.

When the Patron did meet with the maternity ward nurses in the middle of October 2014, after the nurses requested a meeting to address his comments, he said that nurses were wearing jackets and coats that did not comply with uniform regulations, as well as open-toed or high heel shoes (unsafe for nursing work). He also accused nurses of wearing short clothes and wigs that were inappropriate, though he did not specify what made certain wigs appropriate and others not so. In talking about short clothing, Patron joked, "Do the patients need to see short clothes to get well?" Here, he was also alluding to gendered categories, implicitly suggesting female nurses were dressing in any overly sexual way in the workplace, presenting temptation to patients who were, ironically in his telling, unable to appreciate their seductive charms, in the form of short hemlines. These veiled references to nurses' sexuality also bring to mind the "whore" stereotype, where the sexy nurse uses her physical and emotional proximity to (male) patients while engaged in the acts and practices of caring in order to seduce him. Though the Patron surely thought he was making a joke, he was, in effect, actively dismissing the concerns of the nurses while

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drawing on sexist stereotypes that called into question the expertise and professionalism of the all-female staff of the maternity ward.

And that was the end of the conversation related to uniforms; he provided little space for dialogue and effectively concluded that portion of the meeting without giving the nurses any real opportunity to respond to his accusations. In a different context in the same meeting however, Patron brought up the importance of wearing a uniform in good repair as part of "recognizing oneself" and he said, "… but also, as the Patron, it is necessary, like as a rule, that I wear clothes like the Patron…. As Patron, I should wear closed-toe shoes, it is necessary I wear those. Therefore, if I recognize myself this way, other people will see that that person is Patron, isn't it so?" In this way, he clearly outlines how he views proper dress and uniforms to be an integral part of identity formation and a key piece of the performance of the role of Patron, allowing others to recognize him in this role. By extension, the uniform requirements would have this same effect for the rest of the nursing staff, helping them to embody the role of good, competent nurses whose knowledge and expertise could be legible to and respected by patients and community members.

More broadly, the term "to recognize oneself," *kujitambua*, often surfaced in conversations among, particularly, government employees. Later, while writing, I asked the Medical Officer In Charge more specifically what the term meant. He told me,

> [It] means you should respect your job and the norms guiding it. Think of it this way, I'm a medical doctor. *Kama sijitambui* (if I don't recognize myself), I can't do what I'm really supposed to do! That is, I will mistreat my clients and my clients will mishandle me because I have accepted to be 'cheap.'

To which I asked, "OK, so this is a very important principle as a worker?" He responded that it was and it was important to "stick to the principles guiding your job." My partner, a Tanzanian government lawyer for the Prime Minister, told me *kujitambua* means, "A worker understands

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his duties and responsibilities and, of course, observes ethics and conducts governing his work or jobs." And, as another example, he said, "Say a father *anajitambua* (recognized himself), [it] means he is really a father who knows his responsibilities and does exactly what he is supposed to be doing as a father." For nurses, the uniform, and wearing it properly, was a key component of demonstrating that they recognized, and were working to uphold, all of the norms of their jobs and *respecting* the job, the office itself.

7.12 Uniforms and Institutional Care

While Patron, and other administrators, viewed the nursing uniform as a key piece of performing the good nurse, the ward nurses themselves had more mixed feelings and often complained that they lacked the money to be able to buy new shoes that complied with requirements or to have new uniforms sewn. Once, I watched as the ward In Charge and the weekly Nurse Supervisor confronted two of the younger ward nurses about Nurse Cecy's black Adidas-type jacket she was wearing in the chilly, wet weather of early December. Nurse Peninah said, "This is why we nurses aren't progressing, we are looking at sweaters and jackets!" Peninah asserted that this fixation on the strict uniform guidelines was inhibiting nurses' abilities to uphold the more important principles of their profession, namely actual care practices. Once again, the conflict was really over more fundamental questions of why the nurses were there (their mission), how they were seen within the hierarchy of the hospital, and whom they served, as Pratt and Rafaeli (1997) suggest. This tension between administration and ward-level nursing, as well as the tensions between practice and performance, were fundamental points of disagreement.

The Supervisor and In Charge continued to say the black jacket did not conform to the requirements, which stipulate white outer garments are to be worn with the uniforms. In a

blustery, angry response Cecy said, "I say, this hospital has problems! Truly, I don't have another jacket and my salary has already been used" to buy other items needed throughout the course of the month to sustain herself and her dependents. This was a common problem and many of the nurses complained bitterly about the fact that there was a double standard-administrators repeatedly reprimanded them for not complying with uniform regulations but, on the other hand, for at least two years, the hospital had not provided the nurses with their uniform allowance supplement to which they were entitled every few years. Nurses already struggled to make ends meet with their low salaries and having to buy new shoes, uniforms, or white jackets and sweaters was an additional burden for which the hospital was responsible. Therefore, they were being punished for something they were not being paid enough to be able to afford and for items which they could not, practically, wear in other activities outside the hospital. A white sweater, for example, would have been very difficult to keep clean and therefore would likely be reserved solely for the hospital.

Starting in 2015, nurses frequently brought up the issue of the uniform allowance. They continued to bring up the fact that, as workers, they were owed this allowance from their employer, just as the Patron continued to remind the nursing staff that they were responsible, to their employer, for wearing their uniforms in ways that complied with the guidelines. In the beginning of January 2015, Patron reminded the hospital staff during a morning clinical meeting that approximately a week earlier, on December 31, 2014, there had been an all nursing staff meeting in which they (by which the Patron meant the nursing staff as a whole) had agreed to return to the guidelines related to uniform wearing. He went on to say that if the nurses were deemed to be violating these guidelines they would be sent to Patron's office and Patron could return them "to the one who brought them," i.e. the one who employed them in the first place,

meaning the Regional Medical Officer or the Regional Nursing Officer. He continued, "Everyone must be wearing their full nursing uniform. Nurses have a uniform allowance but for right now, we haven't been given it. If you finish school, you don't graduate with the school uniform, [but] you should sew a new one." By this statement, Patron suggested that if even an unemployed, new school graduate could be expected to report to work in something other than their student uniform, the employed nurses should also be able to find the means to be appropriately appareled in the workplace.

The delay in the uniform allowance was because the Regional Administrative Secretary (RAS) had not given it out, most likely due to delays in funds coming from the central government and/or Ministry of Health. Patron then told the group gathered in the meeting, mostly nurse managers and physicians, that the issue of uniforms had come up in the maternal death audit meeting that had taken place in December, before Christmas. He turned to the maternity ward Nurse In Charge and asked her to tell everyone what the Regional Medical Officer had said about uniforms in the meeting. She proceeded to summarize the RMO's comments but Patron told the group that she was sugar coating the comments. Patron said, "RMO was talking about uniforms that people wear *ajabu ajabu.* This is why I will return people to RMO because he is the one who brought you here to be employed." Strictly translated, "ajabu" means wonderful or extraordinary however, in this case, its meaning might be more closely interpreted as strange or anomalous, but in no way was this language that one could perceive as condoning the current state of creative uniform wearing. In a clever power play, the Patron asked the maternity ward Nurse In Charge, responsible for all of the nurses most condemned for deviant uniform wearing, to explain the comments the Regional Medical Officer had made about uniforms. The Nurse In Charge was forced to publicly discuss the RMOs

comments while knowing her subordinates, those she managed and for whose behavior she was responsible, had repeatedly been the recipients of criticism. In this venue, in front of her peers and superiors, the Patron was effectively forcing her to repeat the wrongdoings of her staff and the ways in which the highest ranking medical administrator in the region had told her that her nurses were unprofessional. In light of a culture of saving face and preventing others from experiencing public embarrassment that usually prevailed, the Patron's demand that the Nurse In Charge repeat the RMOs criticisms was, I would argue, a way for him to publicly shame her.

Less than a week later, the hospital RNs had a meeting with Patron and were, yet again, reminded about properly sewing and wearing their uniforms. After the meeting, Nurse Peninah was back on the ward and described to the other nurses present about what they had discussed in the meeting. Two nurses who had worked at the hospital for less than a year and one, more experienced nurse were present and all lamented that they had never once received their uniform allowances. Peninah said, with great frustration, "Issues of on call allowances, uniforms, night [duty]- they are not understandable here!" The general estimate from the nurses was that they had not received their uniform allowance in at least two years. No one ever told me they had received this money more recently. When I interviewed the RMO, the issue of the uniform allowance came up as I was giving examples of the ways in which lack of transparency around money matters at the hospital had created a great deal of suspicion that the money was being used improperly and these rumors fostered dissatisfaction among the nurses with whom I spent much of my time:

> A: OK. And me, I didn't think but, you know, because people don't have an answer they start to think "This money, why haven't we gotten the uniform allowance for many years, or why- "
> RMO: *interrupting* Ah now, them- it's because they don't come to the meeting and the In Charges don't tell them. For example, the question of the uniform allowance, the uniform allowance, you can't take it out of the cost sharing money.

A: Yes

RMO: Uniform allowance, it's place is here [*indicating the Other Charges section of the budget on a piece of paper he is holding*]. Now, this amount, this amount I don't want to cite it but ahh this is nothing. You can't take money out of this little thing, this trifle here, to say you'll take the uniform- I mean, first, even it won't be enough for how many?

A: Uhuh, yes.

RMO: Now, it means [if you do take it out of there] you will have shut down all other work. You see? Therefore, we will be looking at the ability for them to be given- if we have the goodness of the uniform allowance, let's say there's another time when we're lacking money but we use another route, a good one, such that because we are served a certain amount of money at MSD, if we see we have a balance of money at MSD until, for example, right now we are reaching the end of the financial year 2015 and it is starting another, 2016. Now, if we see we have a good balance over there for MSD, they at MSD, indeed they are the ones who supply cloth, that cloth for the uniforms. We can ask for it from there! "Sir, we ask for this cloth." If they bring it for us, we measure them [the staff]- you, how many meters are enough for you? Two. Okay. You, how many? There. Now, individually, you will look at you will sew it for how many shillings because the sewing here in our parts isn't bad, it's small money. Therefore, they should be able to be in uniform. Of course, there are who have been indicated directly by the rules they should be given 120,000 shillings so they buy themselves [clothes] and shoes they buy themselves. And if those monies, we don't have, we will use this route from MSD. So that they don't walk around naked all the time - Yeah?

The end of his response about uniform allowances went back to the importance of attending meetings however, his response did demonstrate that the administration was aware of the issues and looked for ways to "jump the red tapes," as the RMO had said about his job, in order to provide the staff members with what they were owed. The nurses did not, in the 2015 fiscal year, receive their uniform allowance. The (un)availability of this money was a separate issue from that of being reprimanded for not wearing a uniform that complied with the guidelines. However, as should be apparent, rarely could the challenges facing the hospital be extricated from their financial roots. In this instance, it was the nurses themselves who pointed to the lack of the uniform allowance as yet another way in which the hospital administration was unable to appropriately care for them as employees, violated their rights as workers, and was unable to provide them with the money which was their due. To compound the injurious effects of the institutional lack of funds, which was already causing the nurses to struggle to meet their

personal and professional goals, the hospital administration reprimanded nurses for a situation—an inability to comply with uniform requirements—that the institution had created. The conflict also highlighted the primacy of appearances, of performance of professional identity, over the actual practices of caring for patients, which often, on maternity, violated idealized norms and required fast action and improvisation. The Regional Medical Officer acknowledged the importance of trying to accommodate the nurses' needs for uniforms while also balancing bureaucratic procurement procedures and fiscal constraints. However, the hospital Patron appeared to be more fixated on maintaining strict professional hierarchies and controlling the public's perception of nurses, thereby prioritizing actions or guidelines that would feed into his own power, prestige, and status. He may not have actively realized it, but by fixating on enforcing uniform regulations to the letter of the bureaucratic law, he was engaged in undermining the maternity ward nurses' access to the very means of recognition and respect they sought- the provision of timely, technically proficient care.

7.13 Conclusion

Most often, it was the maternity ward that epitomized the struggles between the hospital administration and ward staff. The physical nature of maternity care, combined with a work environment characterized by scarcity, necessitated improvisation and innovation particularly as related to clothing- uniforms and personal protective equipment. In order to keep their clothes clean on a ward that saw the highest patient load and some of the messiest and most unpredictable cases, maternity ward nurses often deviated from uniform protocols, wearing aprons or blue gowns or the stray scrub top that may have arrived at the hospital via a donation and which the nurse had uncovered in a box in the store room. Undeniably, the hospital's financial constraints while I was present partly serve to explain why there was not enough

personal protective equipment or why the elusive light blue cloth for maternity ward scrubs never arrived. The nurses were left in a kind of double bind in which their employer was not providing them with money for new uniforms and was unable to supply them with enough PPE and yet, on a fairly regular basis, the maternity ward nurses were singled out as negative examples, held up as the height of uniform non-compliance over and over again.

Maternity care was unique in its demands and processes. The maternity ward included the largest number of nursing staff members of any department in the hospital and experienced emergency situations with greater frequency than perhaps all other departments, save the operating theatre. This meant that the nurses had to focus a great deal of their attention on accomplishing complex tasks under stress or during these emergencies when truly the life of a mother and her baby hung in the balance. This may partially serve to explain why it was that the maternity ward nurses felt frustrated by the ways in which details of uniform requirements, and the ways in which they were worn seemed to, in the minds of the hospital administration, supersede the importance of the ward's needs, which would have helped to them to *work* more effectively and not just *perform* the role of effective and skilled nurses. Particularly because these nurses worked in a government health facility, their ability to appropriately perform the role of highly skilled midwives was of interest to, not only their immediate supervisors (the ward Nurse In Charge), but also to the hospital and regional health administration. The institution of the regional referral hospital could only be legitimate when all its constituent parts served to bolster this image. Nurses who did not embody the ideals of Florence Nightingale and the professionalism expected of instruments of the state effectively undermined the credibility of the institution.

The inflexibility of the uniform guidelines, which made no concessions for different ward environments or service on different wards, had an increased effect on the maternity ward nurses. The administration's pointed refusal to make any allowances for the anomalous uniforms in maternity can be read as a continuation of the ways in which the hospital administration, and the Tanzanian government more generally, did not make concessions for or take into account the increased complexity of maternal healthcare provision. Fixation on the *appearance* of legitimacy and the performance of the role of the "good," or professional, nurse seemed to garner more attention than the actual actions or environmental factors that necessitated the deviations. Attention to those causes could have opened the way for reform of either a) the work environment or, perhaps more practically, b) the ways in which the nursing uniform guidelines were enforced on maternity. Freeing the nurses from this conflict over uniforms in order to truly address underlying working conditions or the ways in which uniform requirements were inconsistent with the demands of the work would have enabled the nurses to engage more effectively in caring practices and might have enabled them to improve the quality of the care they were able to provide to be more in line with the benchmarks, protocols, standard operating procedures, and guidelines to which they themselves told me they aspired. Once again, shortcomings of the ward and institutional environment made the realization of national and international guidelines and protocols impossible, even as it was these very bodies that created such an environment that demoralized and demotivated the nurses most necessary for improving healthcare services and caring for patients.

The conflict also demonstrated the fundamental separations between the hospital administration and the nurses working "in the trenches." The disagreements over uniform regulations could be read simply as a struggle for appearances but it was, more fundamentally,

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about questions of social and organizational identity on the ward. The conflict was about the appropriateness of forms of dress for the varying, and conflicting, tasks at hand. Was it more important to *look* like a clean, organized, professional nurse or to actually *act* as one regardless of hairstyle or the color of one's uniform? Was the target audience the patients or the public, more broadly construed? Maternity ward nurses acted in ways that prioritized the needs of the women, the patients, on their ward, regardless of what types of clothing they did or did not have, including personal protective equipment. They worked to *be* technically skilled care givers but, in so doing, the hospital administration read the maternity ward nurses' actions as a threat to the hierarchy and status of the institution as a whole. The Patron routinely worked to ensure the maternity ward nurses, and the Nurse In Charge, did not overcome his authority or undermine the prestige which his position brought him and monitoring (female) bodies for uniform deviance fulfilled these needs.

This conflict served to disempower the maternity ward nurses in their work environment and held them to restrictive, inflexible guidelines, while highlighting administrative blind spots in regards to maternal healthcare provision. Ultimately, this hierarchical, gendered, and inflexible environment constrained the forms of care nurses could provide to women. When combined with material scarcity, this collective environment resulted in fraught interactions between nurses and women and a decreased quality of patient care. As the quote from Martha in chapter 5 suggested, nurses were liable to take their frustrations and feelings of being abused out on women when the administrators repeatedly disrespected the nurses. Nurses might even have strategically neglected patients as they sought to undermine the administration as retribution for the ways in which they felt the administration had mistreated and disrespected the nurses who were caught in an impossible situation between performance and care in practice.

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Chapter 8: "Bad Luck," Lost Babies, and the Structuring of Realities

8.1 Introduction

Simple technologies that can be rolled out in low resource settings continue to be a major focus within the fields of public health, medicine, and engineering. Another, more recent focus, has been on evidence-based interventions, which are predicated on the results from vast amounts of data across a variety of settings. Data also serve to bolster plays for resources or to support institutional and state claims about improvements in healthcare services. However, in this chapter, I challenge the straightforwardness or neutral aspects of data and simple technologies by demonstrating the ways in which they can be, and must be, manipulated for different purposes in different settings. Separated from the places in which technologies and data collection tools are concocted and planned, nurses often must work harder to use these items in ways that come close to complying with their intended purposes. In the process, healthcare providers in these low resources settings manipulate documents and technologies to serve other purposes and accomplish other social or institutional goals, beyond the intended use of the item. Primarily using the example of the partograph, I argue that these documents and technologies cause nurses to act in certain ways or do certain things but the nurses, in turn, appropriate these tools for alternative purposes which are dictated by the unpredictable, under-resourced, and demanding environment of the maternity ward. Their appropriations often have both intended and unintended consequences, serving the needs of different actors at different times and enacting different modalities of accountability and responsibility, and drawing, in the process, on differing conceptions of what makes good care.

8.2 The Case of Pendo's Baby[1]

We were crowded into the Nurse In Charge's office, in a meeting the doctors had called to address a case that had unfolded over three days. Normally, these types of meetings did not draw many of the nurses. Most did not view the often long and meandering meetings as sufficient reason to give up their precious time on their days off or did not relish the idea of coming to the ward in the morning when they were already scheduled to report for the evening or night shift later the same day. However, in this instance, the small office was fuller than usual, with nurses squeezed onto long wooden benches and sharing chairs, each one half on and half off, which was at least better than standing the entire time. The Medical Officer In Charge, who also worked on Maternity, had called the meeting and the mood was serious.

I had more information about the meeting and the case than others because I had been present since the beginning. I had been helping to care for Pendo since she had arrived at the hospital two days before. She was a pleasant, quiet client in her first pregnancy. She had come from Dar es Salaam, where she was living with her husband, to give birth at Mawingu in order to be closer to family during this important event in her life as a woman and in their lives as a married couple. She had arrived at the hospital in early labor, with more than enough time to spare before giving birth. I often saw nurses reprimanding women for arriving in the second stage of labor, as she was almost ready to give birth. However, Pendo was in the early stages of active labor and therefore avoided any possible accusations from the nurses that she was late to report to the hospital. The nurses would complain that women in the region often did not want to be at the hospital for long periods of time and therefore delayed arriving until well into active labor. Sometimes this meant a woman would arrive on the ward and almost immediately give

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[1] Portions of this section have previously appeared on my blog as part of the post entitled "Ethical Dilemmas and Medical Malpractice," (Strong 2014).

birth. The ideal, as the nurses suggested, was for a woman to arrive while in early active labor, giving plenty of time for monitoring and ensuring the nurses would be able to identify and address any potential complications. The day Pendo arrived, the nurse on the ward responsible for admissions had written her name in the admission notebook, examined Pendo, and started a partograph[2] for her. I had seen her later in the afternoon when she was quietly walking around the ward, waiting for a nurse to tell her to enter the labor and delivery room. I remember noting to myself near the end of the morning shift that we would not need to examine her again but the evening shift would definitely need to conduct another vaginal exam to check her progress and cervical dilatation. Hopefully, she would give birth sometime in the night. The nurses had asked one of the doctors to review Pendo because they were concerned perhaps she would need a C-section. The doctor deemed her likely to give birth vaginally without complications and so, there was nothing else for us to do but settle in to wait for Pendo's body to decide it was ready for the baby to come out.

The next morning, I arrived around 8am and, having missed the shift change report that day because I had been in the morning clinical meeting, started looking around the ward for any signs of activity. I went to fetch supplies from the In Charge's office, carefully signing out the quantity of each item in blue pen inside the battered, worn notebook. Eventually, I found a moment to look over the antenatal clinic cards and current partographs sitting on the desk in the labor room. This was the paperwork of the women who were now either under observation or in the last stages of labor before giving birth. Pendo's paperwork caught me by surprise. I looked around and, sure enough, she was the same woman who had been present with us the day before.

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[2] A graph on which nurses plotted the progress of the mother's labor, most importantly cervical dilatation and the descent of the baby's head into the pelvis, which are rough indicators of how long until the woman gives birth. Delays in progress can be indicators of problems that healthcare professionals need to address. More details on the partograph can be found later in the chapter. (See Fig. 8.1)

I thought that seemed odd, especially because the doctor had told us he thought she would give

birth without any problems. Added to that fact was the absence of any further information on the

partograph, as would be required by best practice[3]. The oft-repeated phrase "not documented, not

done" rattled around in my head. Although, what one of the nurses later called "neglect," seemed

possible, my first thought was perhaps they had just been very busy in the evening and overnight.

Maybe the nurses on these shifts had examined Pendo again but had simply failed to find the

time to write down the results as sometimes happened. Nurse Gire was working the morning

shift that day and I drew her attention to the nearly blank partograph. She also remembered

Pendo from the day before because we had been working together then, too. Nurse Gire

examined Pendo and the following is from my field notes:

> Pendo, a patient from yesterday, is still in labor and by 12pm she still hadn't
> delivered. Gire did a [vaginal exam] again and decided Pendo was at 9cm and was
> obstructed... She has long passed the action line[4] and should probably have had a
> [C-section] last night or evening. Now, she no longer has a discernable fetal heart
> beat … It seems likely the baby was in distress and has already died. I asked Gire
> why the other people … might not have detected that it was cephalopelvic
> disproportion (CPD)[5] and why other nurses don't use partographs? …Pendo is
> just finishing in the theatre now at 1:45pm and the baby was stillborn. [Nurse]
> Rebeca says the baby was macerated[6] but I'm skeptical.

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[3] As throughout the dissertation, I use "best practice" to refer to hospital, national, or global guidelines for care, which had been taken up by the Mawingu Regional Hospital as the standard for ideal practice. The nurses and doctors often referred to these guidelines and the hospital (and each ward) had a Quality Improvement Team (QIT), which was responsible for ensuring they were implemented.

[4] The action line on the partograph is based on the premise that when in truly active labor, one centimeter of cervical dilatation takes one hour. If a woman's progress is appropriately plotted on the partograph and crosses the action line, it indicates that her labor has stalled and something may be wrong. The line is so named because action needs to be taken to investigate and rectify the situation so mother and baby can be safe and healthy.

[5] Cephalopelvic disproportion is a primary cause of obstructed labor and is a mismatch between the size of the baby's head and the mother's pelvic outlet, determined by the bony structures of the pelvis, making it difficult, if not impossible, for the mother to give birth vaginally.

[6] Macerated stillbirths were those in which the baby had died some time prior to delivery and the tissue was often starting to break down and decay *in utero*, leading to the name.

After her surgery, I stopped by Pendo's bed to see how she was doing. At the time, it was visiting hours and her mother-in-law, Mama Hassani, was present. We exchanged some words about how it was a very sad situation and Mama Hassani told me Pendo's husband had been very upset about everything but she, as his mother, had been trying to explain to him that these things happen and it was just bad luck, *bahati mbaya*, and the couple would have another baby. Pendo had not awoken yet after her surgery but Mama Hassani was there, looking after her. In that moment, as we were chatting, Mama Hassani's phone rang. It was her son, Pendo's husband, across the country in Dar es Salaam. I was the only "staff person" around and so she passed the phone to me when he wanted to talk to someone who worked at the hospital. Immediately, he began demanding answers, wanting to know how a baby who was fine could suddenly be *not* fine and why hadn't his wife had an operation sooner and he did not believe it was *bahati mbaya*, bad luck. He wanted to know if I had done the surgery. I explained that no, I had not. In fact, the surgeon was the Medical Officer In Charge of the entire hospital. Nothing had gone wrong during the surgery. I tried to tell him that I was not the one to whom he should be talking, that he should talk to the Nurse In Charge of the ward or the Medical Officer In Charge and they would be better able to explain to him what had happened.

The truth of the matter was that I knew exactly what happened and had been involved since the very beginning, though the course of events that transpired had nothing to do with anything I did. All I felt I was able to do, due to my position as a researcher at the hospital, was to tell him he needed to talk to someone other than me, someone who actually worked for the hospital. While he was still on the line, I tried to hand the phone to the Nurse In Charge of the maternity ward who was sitting in the labor room. She waved her arms, refusing to take the phone, as did Gire, who was sitting next to her. I then called the Medical Officer In Charge who

suggested Pendo's husband call back in two days, on Friday. The next day, I told Pendo her husband could call again on Friday to talk to the Medical Officer In Charge. She told me he didn't want to talk to anyone anymore and they had been able to explain to him that this kind of "bad luck" happens.

8.3 To Know His Face: Stillbirth and Coping

About a month before Pendo's arrival, Zuhra had been in the hospital. She had come after already visiting her local, village dispensary where the providers[7] had sent her on to the hospital without any documentation or proof that a medical professional had even seen her. Due to the way the regional hospital organized and documented referrals, Zuhra slipped in, looking like someone who had just come from home because she lacked official referral paperwork. Busy nurses bustled through the ward and admitted Zuhra without taking time to ask if she had come straight from home or had sought care elsewhere before arriving. They assumed she had come from home, as most women did, and therefore did not ask her the questions that might have elicited the fact that she had been in labor for more than 24 hours before her arrival at the hospital. This one fact might have changed the trajectory of her care because it would have been a sign that her labor was not progressing as would be expected for a woman in her fourth pregnancy. When they examined her, she had not projected the image of a woman in active labor-she was too quiet, too calm- therefore, she did not receive a more thorough examination of the current state of her labor. Despite comprehensive guidelines for the initial intake exam and interaction (see Tanzania MoHSW 2013), the maternity ward often had a heavy patient load and not enough nurses, which led to these shorter-than-ideal exchanges in which experienced nurses

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[7] Without knowledge of the specific facility, it is difficult to know if these providers were nurses, clinical officers, or medical attendants. Many village facilities were staffed by medical attendants who had less (or no) training in midwifery and often struggled to appropriately diagnose complications and danger signs.

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relied upon their quick assessment of the woman to guide their opinion of her state. While every woman was examined physically, it was often the medical history that was left to the wayside with the justification that it took too long to go through all the questions for every woman.

The nurse then sent Zuhra to the antenatal waiting room and, according to Zuhra and corroborated by her medical file, no doctor came to see her for more than 24 hours. The nurses never again conducted a vaginal exam to see how she was progressing. In the middle of her third night at the hospital, Zuhra told me she had gone into the labor room to tell one of the nurses that her contractions were getting stronger, the only time she had been bothered by the pain. Zuhra told me prior to that moment, her contractions had not been like in other pregnancies, they came and went without any strength or regularity. The nurse brusquely waved her off and told her that they would examine her in the morning. The nurse told her, "It's not you who decides when you should be examined! We will tell you when!" This interaction demonstrated how the nurses reinforced their expertise as authoritative, dismissing Zuhra's knowledge of her own body's needs (Jordan 1993; Davis-Floyd and Sargent 1997).

When the doctor finally reviewed Zuhra on ward rounds on her third day, he was struck by how soft her belly was, different from the taught skin and hard, contracting bellies of other pregnant women. Her uterus had ruptured and the baby was floating in her abdominal cavity, no longer contained and protected by her womb. Due to delayed diagnosis, poor communication, and inadequate history taking, Zuhra's baby died. The family had whisked away the baby's body while Zuhra was half awake, still coming out of anesthesia from the operation needed to save her life. For many weeks afterwards, Zuhra's relative, a nurse on another ward of the hospital, told me that Zuhra was in a depression, unwilling to leave the house and constantly sad. Zuhra's greatest cause of sadness? She had not seen her baby boy and, therefore, could never know what

he looked like, would never "know his face," as she told me. Despite the hospital staff's neglect in her case, Zuhra and her family never decided to pursue any action against the hospital[8]. This was despite the fact that her relative, who was a nurse, told me she could have easily provided medical insight into the course of events. She told me she knew Zuhra's care had not gone as it should have, as evidenced by delays in getting a blood transfusion after surgery and Zuhra's reports of not being seen by the nurses in the night. Poor documentation and shift hand-overs may also have contributed to the lapses in her care.

Based on this previous experience with Zuhra, I thought Pendo might like to hold her baby, to know his face, or at least to have the choice. I asked her and she looked at me with gratitude in her eyes and said, yes, she would like to hold him. I went with Mama Hassani to retrieve the small corpse that had been bundled in bright *kitenge* fabric and was lying on a counter near the door, looking like a healthy newborn except that the fabric had been pulled up over and around where the baby's face was and the bundle was not moving. I transferred the small body to Mama Hassani's arms and she carried him back to Pendo. As I watched the 22-year -old taking pictures of her stillborn son with her cell phone camera and asking her mother-in-law to see the baby's feet, I contemplated the key role the simple partograph had (or had not) played in this case. There was no electronic fetal monitoring to alert nurses to a baby in distress, there were no call buttons to push in an emergency, only the vigilance and diligence of the nurses, who were overworked and understaffed. Less than thorough reports during shift changes

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[8] The idea of legal action was mostly hearsay in this region but a medical student visiting from the much more affluent Kilimanjaro Region in 2013 told me that people were starting to take medical providers to court with the help of attorneys. A more likely outcome of complaints at Mawingu would have been an investigation of the provider by their national governing and licensing body, which could have resulted in the revocation of their license to practice in the country.

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and inconsistent use of partographs as a key technology to chart a woman's progress in labor seemed to be contributing factors, among others, to this baby's death.

But now, in Pendo's case, the partograph had gone missing. Without that documentation it would be virtually impossible to prove any wrong doing, as the doctors in the meeting discussed. The Nurse In Charge of the ward was certain someone had hidden the partograph or otherwise disposed of it, and told me this happened every now and again. The very lack of information on the partograph after her admission was an indication that Pendo's care had not proceeded in a way that complied with standard operating procedures and, in fact, might have been a case of neglect and malpractice.

Back in the meeting to discuss Pendo's case, the partograph became of central importance. According to best practice, regularly monitoring the mother's vital signs, including the duration, strength, and frequency of her contractions, in addition to the baby's heartbeat, were essential and simple techniques used to quickly identify fetal (or maternal) distress before it became dire. All this technique required was some kind of watch with a secondhand (or a cell phone stopwatch) and a fetoscope (a.k.a. Pinard horn), usually wooden or plastic and available in every facility I visited, including the most remote dispensaries, which was used to listen to the fetal heartbeat. The nurses (or other providers) were then supposed to record the information from this monitoring on a partograph (Fig. 8.1[9]) to plot the woman's labor progress. If properly used, the partograph was a reliable tool for tracking the advancement of a woman's labor and ensuring that nurses or doctors intervened at the first sign that there might be a complication. The partograph traveled through the ward with the woman and providers conceived of the piece of paper as a continuous record of her labor, despite shift changes. It was the one mode of

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[9] Figure included after the text.

communication that was supposed to be present even if, as the Medical Officer In Charge accused the nurses in the meeting, verbal communication at shift changes was less than ideal or proved to be ineffective.

In Pendo's case, the partograph could also implicate the hospital staff in the death of her previously healthy baby. Many women never questioned the "bad luck" that resulted in the death of their babies while still *tumboni*, or "in the stomach." Unfortunately, this is because intrauterine and neonatal deaths have historically been so common in Tanzania and continue to be so (Afnan-Holmes et al. 2015; McClure, Nalubamba-Phiri, and Goldenberg 2006). Pendo's husband's adamant insistence that healthy babies do not *just* die made him more of a threat to the hospital staff, particularly when combined with the blank partograph which would not be able to refute any of Pendo's husband's claims that the nurses had neglected his wife. He might act on this hunch and initiate some type of investigation or lodge a formal complaint with the Medical Officer In Charge. This suspicion that Pendo's husband demonstrated was not uncommon for patients' families, however it was, as medical personnel told me, usually brought up by families or patients who were more educated or were from the urban district of the region. These parties often had more experience with the hospital setting and healthcare providers. Additionally, many women told me they were afraid if they made a complaint about a nurse, that nurse would refuse to help them if they ever had to return to the hospital again in the future. Nurses exerted their power over patients or their relatives in this way, often by forcing people to wait for care. Throughout my time in both the Rukwa and Singida regions of Tanzania, I have witnessed this play out in healthcare facilities ranging from village dispensaries to regional hospitals. On the maternity ward, these social sanctions and punishments sometimes resulted in women giving birth unassisted, alone in the midst of a full ward.

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For these reasons, even if they suspected something had gone wrong with the care their relatives had received in the hospital, the Medical Officer In Charge told me most people never moved much beyond suspicion to make a formal complaint. This was often due to strong cultural norms related to not embarrassing others, maintaining smooth social relations, and saving face. This extended to the point that not receiving redress, even in the form of an apology, for suffering, neglect, or malpractice was preferable to the act of naming a negligent provider or initiating a case against them. Other researchers have documented this same preference and face saving ethos in other East African settings. Whyte and Siu (2015:28) write that in Uganda, "open criticism is often suppressed at intimate, institutional, and broader political levels," which was also reflected in the institutional context of the Mawingu Regional Hospital. As I suggested in the previous chapter surrounding the uniform conflict, even top hospital administrators were loath to name names of specific individuals who had violated uniform regulations, a much less dire problem than neglecting patients. In any instance of mistakes in patient care, the nursing administrators and the ward Nurse In Charge usually met privately with the person who had made the mistake. These values related to minimizing public embarrassment were integrated into the hospital's management style at all levels. The social value placed on minimizing conflicts and not directly accusing others of wrongdoing made it especially difficult for families, already lacking power and authority within the biomedical system, to come forward with accusations of neglect or complaints about bad care.

8.4 Informal Systems of Accountability

Zuhra's case was another example of the ways in which a number of small lapses in communication or care could result in dire consequences. I include it here to provide more details about the ways in which care unfolded on the maternity ward and to highlight the fact that

Pendo was not the only woman to lose her baby through a series of unfortunate events. Zuhra's

case also serves as another example of the ways in which women, their relatives, and the hospital

staff struggled with the consequences of stillbirth and issues of accountability. In Zuhra's case,

the family told me they did not feel like it would even be useful to complain. They were, instead,

resigned to the hospital's status quo and lacked faith in the hospital administration's ability to

create change within their institution. Zuhra's relative, who was a nurse, intimately knew the

administrative workings of the hospital and was not convinced filing a complaint would be

useful. I also suspect she may have been concerned doing so would affect the way she was

perceived within the hospital by her fellow staff members and superiors. Reporting on the

mistakes of one's fellow providers was not well received and one nurse told me it was common

to not report mistakes, unless the administration somehow found out about them. I asked all of

the nurses to tell me what occurred if someone made a mistake. Nurse Peninah told me,

> If the employee makes a mistake, the first thing, if she hasn't already gone to Patron, or
> to the In Charge, you find that we ourselves, if we are there on the ward, we'll sit and ask
> each other, 'man, here we messed up, you did this but let's do this.' And if you see that
> it's not entering [into a person's head], what they should do, you find that other people
> will tell the In Charge that, 'This person, is like this and this and this and we have been
> there with her.' The In Charge will call her personally. You see? In Charge, if she isn't
> able to handle the person at all, then she goes to the leadership now. But things like that
> take place rarely, really everyone finishes here but now, you find those things that have
> been called by Patron there, either a person went out from [the ward] and they have gone
> to tell about it there or Patron himself has arrived here and encountered someone doing
> something and called them there [to his office]. But, many times, you find that the issue
> is finished here, here inside. Maybe only if a person is really violent or argumentative
> [the issue goes to Patron].

Peninah's description was not so much about the formal procedures for disciplining employees

who made mistakes as it was about the informal ways in which the maternity ward nurses

worked to regulate themselves and their colleagues in order to keep their ward issues within the

family, so to speak. The maternity ward drew enough criticism and negative attention as it was

that they did not also need to bring further criticism for mistakes. These sorts of self-regulatory mechanisms also helped to maintain smooth social relations among the nurses on the ward, as well as reducing conflict between management levels within the hospital.

Peninah's comment about the infrequency with which issues were called to the Patron's office suggests that for a maternity nurse to report directly to the Patron was a violation of an unspoken agreement the nurses had to keep their problems or mistakes to themselves. This *modus operandi* was largely for practical purposes, in order to protect themselves professionally and not have to spend a long period of time sitting in a meeting in the Patron's office. But, this standard way of handling mistakes within the nurses also was most certainly a reaction to Patron himself and the administration more generally. Past interactions with the hospital administration had demonstrated to nurses time and again their low position in the institutional hierarchy, nearly always prioritizing the accounts of physicians and patients' relatives over those of the nurses until an inquiry was initiated and the nurses were brought into a meeting to account for the details of a case. In these meetings, the nurses would repeatedly assert their innocence, often in opposition to the accounts of lay people (relatives) who were not present in the meeting. The system truly seemed set up in a way that systematically disadvantaged the nurses and reinforced their sense of powerlessness in the institution. With these interactions in mind, it is no wonder that the maternity nurses had questionable trust in their superiors and sought to deal with mistakes among themselves first by enacting a more informal system of accountability.

8.5 The Partograph and Good Care as Documented Care

By making the partograph disappear, the nurses had irrefutably protected themselves from possible disciplinary or legal action, which could not advance without evidence, even if someone should overcome their social reluctance to embarrass, name, or punish. Reluctance to

name transgressors was pervasive and often appeared to debilitate the hospital administration's efforts to address subordinate's bad behavior. Indeed, a number of nurse managers told me of their frustration with this practice. For example, instead of saying "Nurse X verbally abused a patient on Saturday, the 23rd," the nursing Patron would tell the maternity ward's Nurse In Charge, "People are using bad language" and then expect her to prevent her staff from committing the same sin again. A number of different healthcare personnel told me they felt this type of behavior was not helpful in improving the quality of the services provided.

In the meeting about Pendo's case, the Medical Officer In Charge (MOIC), however, was insistent that the nurses produce the partograph from wherever it had been hidden,

> MOIC: Where have you all hidden the parto[graph]? I'm asking you all for the parto[graph]. I want that parto[graph].
> Nurse 1: I was given these [partographs] by a person from the night shift, they were [over] there.
> MOIC: Look for it for me.
> Nurse 2: Me, I didn't encounter it.
> MOIC: Now, there, we are being destructive. Now, bring it, let us see it. Here we are not talking about it to argue.
> *(Many people start talking)*
> MOIC: Now, fine. But I remember [what happened], even if you all have hidden it. Me, I have to tell you, you all should know that, for this, I am not happy at all.

The meeting continued and the issue of the partograph emerged again and again, deployed in order to question the nurses' practices during shift changes. During these times the nurses were supposed to give complete reports on each patient and then the nurses on the incoming shift were responsible for the continued monitoring of the women, including vital signs (pulse, respiratory rate, blood pressure, and temperature) and progress of labor as indicated by the fetal heart rate and cervical dilatation. Maintaining organized documentation and handing it over to the incoming shift was a key part of interactions between incoming and outgoing shift members. One of the ward doctors also reminded the nurses,

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> Then, another thing, the partograph can be a legal thing, that is, actually, if you fill it out it helps you. Now, if you examine the patient and then you haven't filled it out- not documented, not done. This is in the open, therefore, even if you have examined her, [if] the results aren't available, you could start the way [for legal consequences]… (Dr. Deogratus)

In saying they could start the way for legal consequences, the doctor was alluding to the possibility that a patient or her relatives could bring a lawsuit against the hospital, taking the responsible providers to court. The lack of documentation, the missing information on the partograph, was in and of itself evidence of wrongdoing, of treatment and care that did not comply with the guidelines and failed to meet the larger biobureaucratic demands for documentation and data. Erikson (2012) also relates the ways in which healthcare providers in Sierra Leone used ledger of data as "'proof' that women and infants in the clinic were receiving maternal care that met international standards" and that, less formally, the record books served as "hedges against any future accusations of corruption and mismanagement" (Erikson 2012), much in the same role as the partograph when properly filled out. In instances when information was missing, or the partograph was blank, the document that could protect the nurses and doctors could also undermine them, their actions and decisions, throwing their professional expertise into question.

While I heard mention throughout my time at the hospital of the possibility of such "cases," which were called such in English, I never heard of a case ever actually reaching the court system. Usually any complaints against the staff members that moved beyond simply notifying an administrator were mediated and the hospital providers preferred to sort out the sequences of events in meetings, the findings of which were relayed back to the people who had made the complaint. I saw this happen particularly in regards to the availability of supplies (see chapter 6) and was most often simply due to misunderstandings or miscommunication on both sides, as

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opposed to what might be termed malpractice. However, both doctors and some of the nurses expressed distress about Pendo's case in which they said there had been a clear error in medical judgment and which they named as neglect.

The meeting about Pendo's case continued with impassioned explanations from both the Medical Officer In Charge and the nurses who had been on duty while Pendo had been on the labor ward. I have spent an extensive portion of this chapter explaining the events that occurred in Pendo's case because it is a representative example of what thousands of women in the Rukwa region, and Tanzania more generally, underwent on a regular basis. In the remainder of the chapter, I analyze the ways in which providers used the partograph and the significance of these uses, as well as discuss the ways in which the providers attempted to create accountability in the absence of easy to use formal procedures.

Hospital procedures and healthcare provider actions often served to deny women and their families answers when their babies did not survive. It was clear from Zuhra's case, too, that women's subjective experiences of loss were not allowed to be made manifest. Sometimes women found it hard to come to terms with the loss of their child who was stillborn. Nurses did not routinely give women the option to see or hold their stillborn babies, instead whisking away the body and then repeatedly instructing the mother to stop crying, not make noise, and wipe away her tears. Cecil (1996:2) writes, "The feelings concerning simultaneous birth and death, the death of one who never was, may be virtually impossible to convey," and, indeed, in this setting, the nurses were not in the habit of creating a space for women to express their thoughts, feelings, and needs during this experience. Part of this *modus operandi* can perhaps be attributed to constructions of the origins of personhood and socially acceptable physical spaces of mourning, as well as, perhaps, the concept of toughening de Klerk (2013) mentions in Northern Tanzania. It

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was not particularly appropriate for a woman to openly mourn in front of strangers in, what was essentially, the public space of the maternity ward. I would also argue that what is often termed compassion fatigue[10] (Boyle 2011) most likely contributed to the ways in which nurses appeared to disengage with these women, allowing them to cry silently after taking away the baby. In their interviews, nurses told me, "If I concentrate too much on the deaths, how can I keep caring for the other women and their babies?" Creating emotional distance between themselves and the patients was a way for the providers to protect themselves and to enable them to keep providing care for hundreds of women every month, particularly in an environment that was physically, mentally, and emotionally draining due to shortages of human and material resources. Another nurse told me, "What would the patients think if they see a nurse crying? They will say, 'Is that really a nurse?'" thereby arguing showing any kind of sadness about these deaths might, in effect, undermine the nurses' professional credibility. All of the maternity ward staff members with whom I spoke told me they did, in fact, feel these deaths deeply and often ruminated for days on ways in which they might have prevented these types of stillbirths or the deaths of the mothers themselves (see also chapter 9). However, what often appeared, from the outside, to be nurses limiting compassion for the women caused many community members- men and women- to accuse nurses of not caring for or about pregnant women who were in the hospital. These suspicions and beliefs led to a deep cynicism and dissatisfaction with the only care available to most community members. Instead, this lack of free emotional response to the deaths of women or babies was more part of how nurses saw their professional responsibilities. By remaining

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[10] Compassion fatigue is said to often result from the secondary trauma of treating or working with patients who are suffering. Apathy, cynicism, desensitization, callousness, disorderly work, absenteeism and a desire to quit may all be symptoms of compassion fatigue in nurses (Boyle 2011). There are others who would argue that compassion is not a resource that can be depleted and therefore this is not an appropriate term (L.L. Wall, personal communication October 2015).

stoic, they sought to reassure women that they were in the hands of capable nurses who would not lose the ability to think clearly and calmly, even in the face of a death.

8.6 The Partograph as Uncertain Technology and its Role in Constructing Realities and Responsibilities

In a different setting, a woman, Sarah, approached me after the end of a community focus group discussion in her village. She said, "What's wrong with me? What could be wrong that is causing all my babies to die?" I asked her more questions about what had happened during her last pregnancy and she explained, "When I went to the dispensary, I was lying on the [delivery] table and I could still feel the baby moving inside of me. Then, when the baby was born, it was already dead." Two other pregnancies had ended similarly for her. I told Sarah it sounded like she was experiencing stillbirths as a result of some lack of provider experience or knowledge in her local healthcare facility and recommended she try to plan to give birth in another facility in the future, if at all possible. Pendo's case at the regional hospital exemplified these types of intrapartum stillbirths, which were often a result of delayed recognition or improper treatment of delivery complications. These types of stillbirths were prevalent throughout the Rukwa region and did not occur only in the Regional Hospital.

If a woman came to the maternity ward and the nurses were able to discern a stable fetal heartbeat upon arrival, then that meant the baby was alive. Subsequently, there were a number of clinical problems that could later result in fetal distress and, if not addressed with an appropriate intervention, could end in what the hospital staff members called "fresh stillbirths" or "fresh SBs." Sometimes the baby's death was due to obstructed labor, as was most likely the reason in Pendo's case, or to a very tight nuchal cord,[11] for example. The social dynamics of the maternity

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[11] A nuchal cord is simply when the umbilical cord becomes wrapped around the baby's neck. In relatively rare cases, the cord becomes very tight and essentially cuts off the baby's oxygen supply.

ward and the structural processes at play intersected with these clinical symptoms and could easily turn a relatively treatable problem into a life-threatening crisis for both mother and baby. Nurses struggled to remember which women needed to be monitored at what time, because each woman was on a different schedule and the nurses continued to be shorthanded. Sometimes, more urgent cases occurred which could take all available nurses away from the less critical work. A woman might not have her cervix or fetal heartbeat checked because the nurses were dealing with another woman who was hemorrhaging, for example. However, at the very least, the nurses listened to and recorded every woman's fetal heartbeat during the shift handing over procedures.

In order to understand the centrality of the partograph in the discussion of Pendo's case, as well as in the daily life of the maternity ward at the regional hospital, I will take a moment here to outline both the official uses of the partograph, how to fill it in, and the informal, improvisational ways in which it was often employed. In a setting in which other technologies could not be relied upon and were in short supply, photocopies of partographs made their way into nearly every health facility. The District Medical Officers and the District Reproductive and Child Health Coordinators were responsible for distributing these papers, sometimes even if providers did not request them. Despite their ubiquity, during a total of five weeks of supervision visits during which I accompanied clinical experts from a multi-NGO project operating in the Rukwa region, it became clear there were many healthcare providers who might be described as hazy on the details of proper partograph use, often due to lack of knowledge or training. There were many others who simply could not be bothered, either due to lack of mentoring and monitoring, or due to being overburdened with other vital tasks. This, then, meant that healthcare providers were often not employing the first line tool for preventing stillbirths. Healthcare

providers across all levels were almost universally overburdened in the Rukwa region. This partially derives from a recent expansion of healthcare facilities which was a central goal of Tanzania's president, Jakaya Kikwete when he was reelected in 2010. The shortage of healthcare providers in Rukwa can also be traced back to the region's long history of isolation (see chapter 3). Even in places where the providers had more time to spend with each patient, sometimes women arrived late in their labor and the provider had to begin delivering the baby before having the opportunity to start documenting the woman's progress with the partograph.

Though a deceptively simple piece of paper, we should not ignore the ways in which partographs not only became key technologies in the care of women, but also in accomplishing a number of diverse social goals, which I outline below. As a technology, it was only accessible to certain people and was employed with greater or lesser degrees of success and expertise by different actors. When problematic bodies defied the order of the partograph, by not following the convention of one centimeter of cervical dilatation in one hour, nurses and doctors had to use their judgment and experience to decide if they should let a woman continue to labor or if they should do something to intervene. The partograph was also a central aspect of teaching nursing and clinical officer students during their time on the maternity ward. Nurses and physicians presented the partograph as the anchoring tool in the midwife/obstetrician's toolbox and they imbued it with an almost occult power to predict when a woman or her baby needed help. But, there was always one caveat- the partograph must be used properly in order to be effective.

Sometimes, nurses would use the partograph, and their careful documentation on it, as a way to make a bid for the doctor's attention in an effort to secure care for the woman. If the nurses felt a woman should have a C-section or that the doctor needed to examine her in order to rule out the need for a C-section, they would write on the partograph "Dr. to review" and then

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wait for his judgment call. On the day or evening shift, the doctor would usually come to the ward within a short time of receiving a phone call from the ward nurses notifying him of a patient. On the night shift, this process worked in a different way. The nurses had to call the Nurse Supervisor who then called the doctor on call. The Nurse Supervisor sent the hospital car and driver to pick up the doctor at his house and bring him to the hospital. This could take more than an hour depending on where the car and driver were and on the (un)willingness of the doctor to return to the hospital after having worked the entire day. Instead of calling the maternity doctor on call, the Nurse Supervisor could also notify the Out Patient Department (OPD) doctor on the night shift and s/he would review the woman. This was problematic because, though already present at the hospital, the OPD doctors had significantly less expertise in obstetrics and several were Assistant Medical Officers with less training than the Medical Officers.

More than once, nurses felt a doctor needed to review a woman but there were delays in his arrival or, once on the ward, he refused to examine the woman. In one case, the nurses reported he had passed through the ward, refusing to even touch the patient, but still proclaiming that she would be able to give birth without problems (this was not, in the end, true). In such cases, the nurses used the partograph's back page to document the events that transpired in order to protect themselves from accusations of inaction when the inaction was, in fact, due to some delay or refusal on the doctor's part. Nurses frequently expressed that doctors were never blamed when things went wrong. Nurses took to using the partograph and other documentation as a way to protect themselves and to prove the doctor's culpability. Nurse Peninah told me about such documentation practices she had learned at her previous posting before coming to Mawingu and continued to do, "The doctor, you have called him at such and such time, you write it. I started to

look for him at such and such time. He hasn't arrived since several hours have passed, you write it: 'Since I called for him, maybe two hours have passed, he hasn't arrived.' Therefore, you're on the safe side." In this way, Nurse Peninah sought to protect herself and strategically draw attention to the role doctors played in provision of care that was delayed or otherwise not up to standards. Faced with these constraints and their dependence on physicians, as well as operating theater staff members, the nurses might even have strategically neglected to say a woman needed to be reviewed if they thought she might be borderline and able to give birth vaginally. I suggest this as a possibility given the number of barriers nurses faced when trying to obtain care for the women in their charge. Combined with material and personnel shortages that often delayed the start of a C-section (chapter 6), the Medical Officer In Charge was constantly talking about trying to reduce the number of C-sections in order to save supplies, pointing out that the surgeries were not always necessary but often due to impatience on the part of the nurses or other physicians. The Medical Officer In Charge stressed that C-sections were not supposed to be quick fixes for recalcitrant patients, but carefully considered interventions that took place only when 100% necessary in order to reduce the already considerable strain on the hospital's resources.

Peninah's strategic use of the document to record the roles and responsibilities of other actors in the patient's care was also a way in which she was utilizing the little formal power available to her within the hospital's hierarchy, which tended to privilege the more specialized or technical knowledge of the doctors. Additionally, the hospital desperately needed to retain as many physicians as possible and, I would suggest, the administration was unlikely to reprimand them unless they grievously endangered a patient's life or directly caused their death. On another level, within biomedicine's paternalistic system, the hospital Patron, a man, managed the mostly

female nursing staff in a way that played to gendered stereotypes and undermined the nurses'

female perspectives, needs, and considerable knowledge.

In other cases, nurses filled in the partograph *ex post facto* due to a push by the hospital

administration for better documentation or due to a supervision visit from an outside agency

(Ministry of Health representatives or NGO program officers, in most cases). During these visits,

the outsiders entreated the ward staff to try harder to check off the boxes in the record book of

births, making sure to appropriately wrote "yes" or "no" in the column about whether or not they

had used a partograph. Nurses would, by rote, simply write "yes" regardless of the actual

existence of a partograph for that particular woman, copying what they saw in the row above

their entry. In this way, the *idea* of the partograph was being invoked in order to accomplish

bureaucratic documentation requirements and in an effort to project high quality care that

complied with national and international recommendations and rules. Good care came to be

synonymous with good documentation regardless of the particulars of the care that women

actually received. By writing that they had used the partograph in the officially sanctioned

government record book, the nurses legitimated their care practices and conformed with

guidelines. In these moments, a culture of accounting for compliance with guidelines

overshadowed a culture of actual care practices in which the nurses could have been engaged.

While an ideal tool due to its simplicity and ready availability, the environment of the

maternity ward forcefully limited and redefined the ways in which the nurses were able to use

the partograph. Some of the examples above were inevitable due to the low staffing levels of the

hospital, as well as poor communication. Particularly when there were nursing or clinical officer

students present on the maternity ward, it was often unclear who was responsible for filling out

each woman's partograph. Students frequently neglected to sign their names or ask a nurse if

they were unsure about how to complete the paperwork. In the spring of 2015, several newly graduated nurses joined the maternity ward. They often left the hospital as soon as their shift was over, without properly completing the paperwork for their patients and they did not take an active part in delivering reports to the incoming nurses at the shift handing over. This was to what the Medical Officer In Charge was referring in the meeting when he was telling the nurses to make sure there was good communication between shifts. Other nurses were unsure about when to start the partograph due to their relative lack of experience in maternity care. If the nurse started the partograph too early, when the woman was not actually in "active" labor with regular contractions, they opened the door to a host of potential problems. A woman who was in active labor should progress regularly, again, ideally following the rule of one centimeter per hour. If she was not in active labor when the nurse started her partograph, it could appear as though the woman was spending much too long in labor and needed an intervention to help her. Collectively, these problems all constructed a great deal of uncertainty.

This uncertainty was productive (Cooper and Pratten 2015:2) and, as Cooper and Pratten (2015:2) suggest, uncertainty "produce[s] new social landscapes and social horizons." Instead of being an objective technology which nurses and doctors employed to track women and tame their laboring bodies, the partograph became a form of improvisation and a relational strategy, open to interpretation, re-creation, and disappearance. In terms of the nursing and clinical officer students, they often did not have the skill level to measure cervical dilatation and determine the relative strength of contractions in order to accurately determine if a woman was in active labor, and therefore indicating that they should start the partograph. These cases often resulted in the more experienced nurses correcting the students' mistakes in measurement by redrawing the partograph lines or starting a new one entirely. If the partograph started at the wrong time, when

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a woman was not actually in active labor, it could skew the nurses' reading of the graph and their interpretations of when they should undertake some action in order to ensure the mother was able to give birth to a healthy baby. Though a simple technology on the surface, only those nurses with sufficient skilled expertise were able to access the multiple meanings and uses of the partograph in an artful and improvisational way. In the hands of students, the partograph was more a piece of paper with uncertain veracity used to record numbers.

In Pendo's case, the partograph became, or had the potential to become, a legal document, as Dr. Deogratus noted during the meeting. One way the nurses dealt with this was to make the partograph disappear. In this case, we never did find it though, Nurse Gire and I both mentioned in the meeting that we had seen the blank partograph before Pendo went for surgery. In other cases, I saw nurses reconstructing an alternative partograph that hid either mistakes in measuring cervical dilatation, as with the nursing students, or delays in care, most often without any malicious intentions. In so doing, they were reconstructing an alternate reality, one in which the woman's care followed the expected trajectory. After rewriting the partograph, the nurses would often throw away the original and would tell me they were doing so in order to reduce confusion or correct mistakes from when someone had initially started the partograph. These actions were an example of Annemarie Mol's (2002) interpretation of the ways in which realities are constantly being formed and reformed. The act of re-creating the partograph was a way in which the nurses attempted to reshape their reality on the maternity ward, bringing it into line with desired bureaucratic or best practice expectations and goals. Similarly, we should view the partograph itself, a document and technology, as having productive capabilities. The partograph contributed to the production of care on the maternity ward, as well as actively constituting

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social realities[12]. The document, due to its origins as a way to prevent prolonged labor and poor fetal outcomes[13], enlisted providers in a broader fight to reduce intrapartum stillbirths. The partograph created the nurses to be disciplined providers and subjects of the global public health complex.

Often, the people who arrived on the ward for supervision visits may have been trained in maternity care but most recently were stationed in offices, creating protocols and reviewing care guidelines. In their offices on the other side of the country, far removed from this remote hospital, they, and their protocols, constructed worlds in which maternal healthcare was dispensed along straight lines, in wards and hospitals with enough staff members and a slow, evenly distributed stream of patients, which allowed for long interactions and exchanges between woman and provider. The lived reality on the ward at the Mawingu Regional Hospital was that care was dispensed in fits and spurts, along lines that deviated from protocols and included and required vast amounts of improvisation due to the scarcity that characterized the work environment. The environment in which they were working created a space for nurses to improvise the use of the partograph in order to accomplish more goals than simply tracking and preventing possible obstructed labor. The nurses on the maternity ward of the Mawingu Regional Hospital had to work significantly harder than policy planners and public health practitioners realized in order to make the partograph function in their environment.

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[12] For a similar example of the productive capabilities of bureaucratic documents, see Hull, 2012.
[13] The World Health Organization (WHO) recommended wide use of the partograph starting in 1993 and 1994 and a WHO working group subsequently implemented a study involving over 35,000 pregnant women to determine the effects the partograph had on labor management and maternal and fetal outcomes (World Health Organization Maternal Health and Safe Motherhood Program 1994).

8.7 Modalities of Accountability

Pendo and Zuhra's cases illustrate the on-going challenges facing the healthcare system in Tanzania. Work environments were characterized by scarcity of people and supplies (see chapter 7), as well as sometimes poor communication practices and few routes for holding healthcare providers accountable for mistakes due to bureaucratic and structural constraints. Stillbirths like those of Pendo, Zuhra, and Sarah were a particularly grim consequence of these challenges. Afnan- Holmes et al. (2015) write that, while Tanzania seems to have made progress on the Millennium Development Goals related to reducing child mortality, there were other areas in which Tanzania did not fare as well, including, "poor progress in reducing stillbirths, with around 47, 550 stillbirths per year, of *which 47% are intrapartum, which is a sensitive indicator of poor-quality care at birth*" (emphasis added). This statistic indicates that the challenges leading to stillbirth were not confined solely to hospitals such as the Mawingu Regional Hospital, but were occurring throughout the country.

The state and global guidelines expect healthcare providers such as those at Sarah's village dispensary and in the regional hospital to be partners in the reduction of these stillbirths, the fresh stillbirths that Pendo and Sarah experienced. "Macerated stillbirths," another classification, were displaced onto other forces. This type of stillbirth, macerated, received its name due to the appearance of the baby, who had usually died sometime prior to birth as a result of intrauterine fetal death, most times of unknown cause. The baby's flesh was often mottled, peeling off, or necrotic, and sometimes the small body was severely misshapen. If in an advanced state of decay, women were at a heightened risk for infections. These births, the

delivery of a macerated stillbirth, often took much longer[14] and were emotionally, as well as

physically, difficult both for the mother and the nurses involved in assisting the woman.

Sometimes the woman had to stay, lying on her back, for hours while the deceased baby's body

was partially protruding from, but not fully expelled by, her body. Instead of the nurse's quick,

deft movements which often freed the living baby at this stage, both mother and midwife steeled

themselves for the tortuous appearance of a being who had long since ceased to live. However,

there was never any talk of who was to blame in these cases; it was generally accepted that the

fetus had died of unfortunate causes, natural or otherwise, that were unrelated to the actions of

the providers at the health facility.

8.8 Accountability as Viewed from the Outside

People working in NGOs and in the government on maternal and neonatal health projects

and policies told me that they thought nurses fabricated the state of stillborn babies, writing

down more macerated stillbirths than "fresh" as a way of protecting themselves and producing

statistics that showed themselves in a more favorable light. Here, providers were acting in a way

that sought to comply with the demands for documentation of improvement, as well as

complying with national, and global, demands for data collection. However, they were

subverting the original purpose of these data collection initiatives by fabricating outcomes and

events, thereby throwing into question all data produced by similar facilities throughout the

country. Fewer fresh stillbirths implied, as Afnan-Holmes et al. (2015) suggest, that there was

better care during the intrapartum period of the woman's labor and delivery. I did not, in fact,

have to look even to outsiders of the maternity ward for this insinuation. One of the Nurses In

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[14] In the normal mechanics of birth, the baby actually assists the mother's body in moving it through the birth canal. A dead fetus is unable to do so and the process is often much longer in the second stage of labor- from full dilatation (10cm) to the complete emergence of the baby.

Charge told me quite frankly that she was convinced her subordinates were writing down babies as macerated when they had not been. Nurse Rebeca had been in Pendo's surgery and commented that she thought the baby was macerated, which would have shifted the responsibility for the baby's death away from the ward staff and onto other forces, before Pendo had arrived. Differing interpretations of whether or not a stillborn baby was fresh or macerated could have accounted for many of the misattributed stillbirths. After all, how mottled and necrotic does a baby have to be to be macerated? Sometimes it was abundantly clear, as when the small body oozed fluids and the skin easily peeled off, and, other times, the distinction was rather less easily made and the nurses had to use their best judgment to decide if the baby should be classified as a fresh or macerated stillbirth. Rather than a reading of the nurses' actions in a more duplicitous light, which suggested they were purposefully trying to fabricate the numbers, perhaps sometimes it was simply a matter of different interpretations of the state of the stillborn baby's body. Nurses with more training or experience would have been able to more accurately differentiate between a truly macerated stillbirth and one that was more borderline fresh. Regardless of the degree of interpretation required, the bottom line was that nurses had an incentive to conceal fresh stillbirths, which would reflect poorly on the care they had been able to provide.

I suggested, in January 2014, that the maternity ward set some goals for the coming year, which they might design together as a group. Dr. Deogratus asked me for an example and I suggested working to reduce these fresh stillbirths. He thought it was a good idea but, because I did not type anything up or get the opportunity to present the idea in a meeting, nothing more happened with this idea. Certainly, the nurses and doctors would have all liked to see a reduction in the number of fresh stillbirths but it was easier for them to switch their priorities to accounting

for poor care by concealing the true number of fresh stillbirths, or by hiding partographs that would indicate neglect or other wrongdoing, rather than fundamentally change their operating procedures. This was, at least in part, due to the difficulty they encountered on the procedural, administrative, and bureaucratic levels every time they sought, as a ward, to initiate changes. Such resistance from individuals and the system further disincentivized efforts to improve outcomes and reduce deaths. At the hospital level, a real commitment to fundamentally improving care in order to reduce intrapartum stillbirths would have required prioritizing maternity care and investing in continuing education, mentoring, and supervision. All of these needs would have been inconvenient, as well as simply being unsustainable due to budget constraints and lack of personnel.

8.9 Accountability, Language Use, and the Making of Morality and Ethical Responsibility

Even in Pendo's case in which the nurses and doctors admitted neglect, they still skirted around the issue of blame and there were no direct consequences for the providers' actions or lack thereof. The Medical Officer In Charge told everyone gathered in the meeting, "So in fact… take it that way that there isn't a person who is going to come here to take action against you, nor will we write you a [disciplinary] letter, now we will not do anything." In the same monologue he touched not only on communication, handing over practices between shifts, disciplinary procedures, the trust patients had in the hospital's services, motivation, and staff scarcity, but also spoke in a pained manner about the ethical consequences of their collective (in)action in Pendo's case. These were pervasive themes that arose in all aspects of my participant observation and interviews. Here, he invoked these themes all at one time in an attempt to motivate his staff to work for improved care. His rhetorical techniques also aimed at awakening

the nurses to the repercussions of their actions and care for the women and families directly affected.

I came to know the Medical Officer In Charge to be a man who often, if not continuously, thought about ways to elicit the complaints and grievances of clients and their families in order to improve the care his hospital offered. In other discussions, he confided that he wished someone would encourage a patient who had been wronged to come forward with a formal complaint, demanding some form of restitution for, in these types of cases, the loss of their child. He suggested that even one such legal case against a provider at the hospital would awaken all the providers anew to their responsibilities, hopefully making them more careful and compassionate in the future. The fact of the matter was that the Tanzanian Ministry of Health and Social Welfare had strict guidelines and protocols for disciplining healthcare providers. As a doctor working for an NGO told me, his family was surprised when he chose to leave the government system because there were no real ways to fire people; the job security was excellent. They asked him if going into the private sector was a good choice due to leaving his job "that is almost guaranteed [he] would have until [he] chose to retire." The Medical Officer In Charge explained this situation further to me, giving these disciplinary procedures as an example of the ways in which the bureaucracy above him, over which he had no control, affected how he was able to work:

> Some of them completely misbehave, ok, but I cannot take action. I would comment that this person is misbehaving, but I have to start with a lot of issues; say, ok, from the department, make sure you document his mistakes, and thereafter, when you feel like now you are tired, you bring it to me, I have again to sit with him, discuss once, twice or thrice. From there, and then I have to give some warnings- verbal, then written, then thereafter I cannot say 'Now! You're fired!' I have to recommend that, 'I have this employee who had so and so, please take action against him,' or I just bring him before you for your attention. And then you will decide. Yeah? And then you will decide, whether to take action or not. You see?

The people who would ultimately decide the fate of the employee in question were the Regional

Medical Officer (RMO) and, as the last step, the Regional Administrative Secretary (RAS) who

was responsible for the hiring and firing of all government employees in the region. What most

often seemed to be the result of these procedures, if they were even initiated, was the transfer of

an employee from one department or post to another in which the Medical Officer In Charge or

the nursing administration felt he or she would be able to do less damage. For example, while I

was present, one lab technician was suddenly moved to the medical records department and then

to the mortuary. The prevailing rumor was that he was constantly drunk while at work and, being

unable to fire him, the hospital leadership had transferred him to departments in which less

expertise and specialized competency were necessary. Speaking generally, the Medical Officer

In Charge told me that he had recently been dealing with an employee who had been unable to

fulfill his duties but they were also unable to dismiss. He was continuing to look for ways in

which the situation might be best resolved so as to protect patients and the other staff members

who might rely on that provider.

Left without an official avenue through which to discipline his staff, the Medical Officer

In Charge, back in the meeting, instead entreated the maternity ward nurses, telling them,

> But me, I'm telling you, if we continue on this way, you should all really know
> that this heaven, it's there, just we aren't going there. We help a lot of people but
> we will do just one mistake and we won't go there, there, where all those who
> believe in God should go, but *even if* we don't believe in God, humanly [as
> humans] it is not acceptable. Therefore, I saw that I should deliver this message,
> that let's just not continue this way or we see that there is no punishment that we
> can get and we just do that but it's not a good thing. Why should you *not* do
> something [only because] you will be punished?

In the last sentence, he was making an effort to center the responsibility for the events squarely

on the nurses, instead of employing other rhetorical devices to provide them with a more

comfortable distance from the neglect and negligence. Instead of a mindset in which one only refrains from doing something because he will be punished, the Medical Officer In Charge wanted the nurses to start thinking in a more positive way, using their actions to accomplish good care, as opposed to simply refraining from providing bad (or no) care because there was not incentive (or disincentive) for doing otherwise. He went on to tell them that they should make changes in the way they think of patients and share reports, particularly during shift changes, so that no patient was forgotten again in the way they forgot about Pendo. No woman should become lost in the shuffle of the busy ward as had happened to Pendo and her baby.

In an earlier effort to explain to the nurses, to try to convince them to sympathize with Pendo, and other, similar, patients, he told the nurses two metaphors about why one person might be able to do a bad thing to another. In the first, he suggested that people without children might be jealous and resent other people having children, thereby preventing them from doing so. He likened this to two people who are trying to share a 10,000 Shilling bill but, unable to share one bill, they tear it in half so that instead of one person having money, they now both have none. In the second metaphor he said,

> Second scenario, me, I have money or isn't that right? Yes. Therefore, you don't feel the pain of a person that doesn't have money, okay? So similarly, you have a child, you don't see the pain of a person that doesn't have a child. You think, like, a baby, you can go to the market and buy a baby and so you are being comfortable.

All of these quotes were rhetorical tools the Medical Officer In Charge employed in an effort to persuade the nursing staff members that their actions were unacceptable. Within Swahili speech patterns, metaphor is very common. In the most practical sense, speakers often employ metaphor in order to criticize another party. The use of metaphor is crucial for the social act of saving face because the veiled nature of the criticism leaves room for the speaker to remove

themselves from the criticism and creates a space for the listener to not understand the veiled

implications (Vierke 2012). He also drew on religion, something to which all the nurses and

doctors told me they ascribed, as well as humane practice ("humanly, it's not acceptable," using

the Swahili word *kiubinadamu*, which is derived from the word for humanity) and invoked their

own childbearing or reproductive pasts.

In an effort, once again, to impress upon the nurses the gravity of the situation, the

Medical Officer In Charge said,

> "I had already finished writing my lie here 'poor progress of labor' and I
> conclude[15] [it was due to]… but I'm protecting people here. You all should know
> I'm doing it because I don't want it to get out of our hands, out of this house, OK?
> But I'm sure, me, I'm taking on another sin for writing a lie and I vowed that I
> shall not relay this but, friends, if we do this, it is not good."

Here, his open transparency about his actions was a shift away from veiled, metaphorical

language as he tried to make an example of himself. Again, in the repetition of "sin," he used

language heavily laden with religious significance, which was his particular frame of reference

for morality. Before studying to become a doctor, he had started studying to become a priest and

was still, when I met him, an observant Catholic. In these attempts to express upon the nurses the

gravity of the situation, we can see what Michael Lambek (2015: xi) so aptly refers to as "living

the gap," or "what it means to live in a world with ideals, rules, or criteria that cannot be met

completely or consistently." The Medical Officer In Charge often struggled, in a deeply personal

way, with the constraints of the bureaucratic system in which he worked and how they prevented

him from enacting the highest ethical standards of patient care and discipline. Instead, the system

itself increased the probability of poor service or more extreme cases of neglect, such as Pendo's.

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[15] I have intentionally left out the specifics of what he wrote in the rest of the post-operative report in
order to protect him and because these details are not important for the point I am putting forth here.
However, poor progress of labor was an accurate diagnosis, regardless of the ultimate cause.

In the development of this argument, it is of the utmost importance that we remember these were not simply personal faults of individual providers but clashes of many groups of individuals and facilities with far mightier institutions. Financial, medical, and sociocultural processes and institutions constrained and limited the ways in which care came to be practiced in the Mawingu Regional Hospital.

The Medical Officer In Charge also told the nurses in the meeting that even if they made mistakes, mistakes were not a reason to stand on the sidelines the next time they encountered a difficult case. Instead, each nurse or doctor was responsible for putting forth their best efforts to care for patients but, they were additionally responsible for reminding their colleagues to complete tasks such as documentation. Here, again, he was attempting to impress upon his listeners, the nurses, that not only were they responsible for their own actions, but they were also responsible for the actions of their colleagues and everyone was collectively accountable for the care the hospital provided to patients. (See chapter 6 for other ways in which structural constraints limited care possibilities.)

In a divergent manner of speaking about the case, Nurse Gire asked to make a statement before they concluded discussing Pendo's case. She said they should also acknowledge the good work they do and she proposed the "compliment sandwich" in which you deliver good news, bad news, good news, always making sure to end on an encouraging note. She then proceeded to say,

> …Those challenges, what do they do? They stimulate you all to build yourselves anew. This case is a challenge. I think, now, it has already balanced us, if we were already starting to slack off… it's necessary for there to be challenges so you all do well. Don't depend on it, that every day you will do everything well, this philosophy doesn't exist. Therefore, take the challenges as challenges and let us not be content for them to repeat and repeat themselves. If it happens through *bad luck*, like these, we can't avoid bad luck, friends. To break a cup, aren't you holding it? You want it not to break but you find that it slips away from you... Therefore, challenges like these, let us accept but let us not entertain them [happening again] apart from accepting them. (emphasis added)

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There are a number of significant differences in the ways in which Gire talked about the course of events that contributed to the death of Pendo's baby. Gire was involved in Pendo's care from the very beginning but, though she earlier in the meeting clearly stated they neglected Pendo, she did not use the same impassioned rhetoric as the Medical Officer In Charge. Gire's comments were much more representative of the ways in which providers commonly discussed stillbirth. Instead of calling these events a tragedy or sin as the Medical Officer In Charge had, she used the much more neutral term "challenge" (*changamoto*) which speakers often employed throughout my time at the hospital to present areas for improvement but which they did not wish to convey as the more negatively construed word "problems" (*matatizo*). In her comments, Gire also used metaphor to convey the inevitability of "bad luck" (*bahati mbaya*), which was likely to befall the ward from time to time. Using metaphor here may have had the same saving face application. It was perhaps a poetic way of reassuring her colleagues that they needn't feel too bad for what happened to Pendo.

Gire's use of the term "bad luck" is especially significant here. At no time in the discussion of the case did either of the doctors use bad luck as a way of explaining what had happened. They were much more clearly focused on dysfunction in the ward, particularly as related to documentation and communication practices. In all of the doctors' comments, the responsibility for the death of Pendo's child was lain clearly at the feet of the nurses and, more generally, the maternity ward staff. Gire, whose comment was the last in relation to Pendo's case, displaced some of the blame from the nurses. She much more gently told them that sometimes cases like these were inevitable but that they should not be satisfied to let such things happen over and over again. By using the term bad luck, she very clearly was acting to move responsibility and blame onto other, less controllable and more indeterminate forces.

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Gire's use of "bad luck" was much more similar to the ways in which Pendo and her mother-in-law were using the term. The term drew upon feelings of resignation regarding events that have long been common experiences for women and families in their childbearing years. This resignation was a common response for women and their families, who might not have shared healthcare providers' exposure to or belief in the authoritative biomedical explanatory models, or may not have experienced other possibilities for pregnant women. However, for the nurses, who were trained in the management of difficult births and abnormal deliveries, when they employed the term bad luck, it was not in the absence of other ways of understanding the event. It seemed to be a way to shift responsibility and blame away from themselves and onto larger, more diffuse forces during these tragic events, possibly as part of the face-saving strategies discussed earlier. Likewise, nurses often referred to stillbirths as "missing" the baby (*amemiss mtoto*). This term is a bit more difficult to decipher and, while clearly a carryover from English, the meaning could be very different in another context in which the speaker might mean the woman "misses" her child (because she has not seen them in a long time, etc.). This construction is also a particularly interesting way in which to disembody the actions or events that led to the stillbirth, simply suggesting the woman "missed" her baby like how one might "miss" out on an opportunity.

When providers, patients and their family members called neglect or malpractice "bad luck," they were effectively enabling providers to continue to evade accountability and responsibility for their actions, which was part of a broader bureaucratic and systemic challenge regarding accountability. In the Tanzania Nurses and Midwives Council's (2009) *Code of Professional Conduct for Nurses and Midwives in Tanzania*, it clearly states, in section 4, that:

> The nurse and midwife is responsible for maintaining professional standards for quality care and *be accountable* for her action. Therefore, she shall observe the

following: …4.3 accountability for her actions or omissions through formal lines of authority and responsibility, 4.4 respecting and complying with rules and regulations in a manner that promote *public confidence,* the integrity of nursing and midwifery services and profession… (emphasis added)

However, as the Medical Officer In Charge wrestled with nearly every day, how can nurses be held accountable through formal lines of authority and accountability in meaningful ways when the government and Ministry of Health have effectively constructed disciplinary procedures that were so bureaucratic and prolonged as to be nonthreatening and absolutely ineffective? Matthew Hull (2012:36) suggests that (bureaucratic) documents are "mechanisms for protecting the integrity of the government," but, "are often the means through which it is undermined." In the hospital maternity ward, the partograph played a similar role. Various healthcare providers and experts idealistically conceived of the partograph as a way to protect their integrity because it helped them to make timely and accurate diagnoses of problems. When the maternity ward doctor referred to the partograph as a legal document that could protect them, he was referring to this component of the technology. However, alternatively, these very documents were also the perfect evidence of wrongdoing, either as left blank or inappropriately filled in. The partograph then undermined and called into question providers' expertise, communication skills, decision-making and, ultimately, public confidence in their services, in direct violation of the *Code of Professional Conduct* cited above. Documents and documentary practices, such as those surrounding the partograph, sometimes took on a life of their own, "returning in the transitional moment to incriminate their producers," despite providers' other intentions and goals for the document (Hetherington 2011:77).

In an effort to provide a framework for ethical action and caring in the absence of easily accessible formal mechanisms for enforcing sanctioned ethical standards, the Medical Officer In Charge drew on his own morality. In a singular and truly unique manner, he tried to embody and

convey the moral and ethical physician who takes responsibility for his actions, even as he lives

the gap. Despite being unable to initiate a case against the nurses due to bureaucratic constraints,

he reflected on the ways in which his actions (or lack thereof) eroded his moral scaffolding. The

way the hospital treated Pendo shook the foundations of goals he valued, such as the ultimate

goal of reaching heaven, and his responsibilities to his patients. In the absence of formal lines of

authority and responsibility to ensure ethical and moral conduct, the Medical Officer In Charge

was attempting to construct another avenue for impressing upon his staff how unacceptable their

actions had been. Were his words weakened without the force of concrete disciplinary

consequences behind them? Perhaps. However, through his rhetoric he was embodying the

caring physician who was deeply wounded by this neglect of Pendo. My interpretation of part of

the reason why so many of the hospital staff members respected and liked the Medical Officer In

Charge is because he was not afraid to face these types of cases head on and was a genuine

person as well as an authentic leader. In his discussion of Pendo's case, he did not simply yell at

the nurses, reprimanding them for their inaction or incompetency but he put himself into the

conversation, placing his moral being on the line together with theirs.

8.10 Conclusion

As I have demonstrated through the cases of Pendo, Zuhra, and Sarah, subjects

interpreted stillbirth in multiple ways. Providers and women imbued this unfortunate event with

different meanings that, then, had different consequences for their projects of constructing

morality, responsibility, and accountability across different levels. As policy makers and experts

conceived of the partograph, it was meant to be a tool in reducing stillbirths and complications

for the mother. The partograph invoked the healthcare providers as allies in this struggle and in

the global health goal of reducing preventable stillbirths, holding providers accountable for

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providing good care that would reduce these deaths. Data on these intrapartum stillbirths, or a *documented* reduction in them, then worked to help states account for healthcare policies that conformed to global initiatives, such as the Millennium Development Goals. The partograph was a technology that monitored bodies but it could also be problematic if a woman's body and labor did not follow the prescribed pathway of birth, one centimeter of cervical dilatation in one hour. Her body could be difficult to interpret and plot on the partograph if she gave birth extremely quickly or if her labor became delayed in some way, thereby complicating understandings of who was skilled enough to be in charge of these deceptively simple pieces of paper as technology.

Sometimes, the doctors and nurses created and re-created new realities by plotting and re-plotting a woman's labor on the partograph. Due to poor communication and differing levels of provider expertise on the maternity ward, the partograph created uncertainty. Most often, if a woman was progressing slowly in labor, the providers immediately suggested that the first person who had examined the mother upon admitting her to the hospital had measured her cervical dilatation inaccurately, overestimating how many centimeters she had reached. Therefore, they had started the partograph too early. This uncertainty about the expertise of the examiner undermined some of the power of this simple tool. In other situations, the nurses used the partograph to try to make bids for the doctor's attention, to protect themselves from a physician's lack of cooperation or judgment, or to conceal wrongdoing and neglect. The partograph was a physical reminder, in black and white, of when care did not go as imagined or desired, resulting in the death of babies. One way in which nurses could make the situation ambiguous, in the event of stillbirths such as these, was to either rewrite the partograph or make it disappear. This makes stillbirth a perfect case study for accountability and responsibility.

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Stillbirth and the partograph demonstrate the ways in which the hospital staff and administration constructed alternative avenues for assessing morality and ethics in the absence of a formal disciplinary mechanism. They were often understaffed and lacking many of the crucial supplies needed for their ideal, best practices of maternity care. These struggles, combined with the ways in which the larger biobureaucratic system imposed standardized rules and guidelines for disciplinary proceedings, documentation, and data collection, led to incredibly difficult situations that occurred on nearly a daily basis.

Fig. 8.2: Five bodies of deceased babies lying on a table in the maternity ward of Mawingu Regional Hospital.

The tiny bodies of stillborn babies were perhaps the best indicator of how well a particular shift performed or how skilled a labor ward was, or perhaps, by extension, how well equipped physically the ward was. In the Regional Hospital's labor and delivery room, nearly every morning I was met by the tiny bodies of stillborn babies lying on a table near one of the doors (Fig. 8.2). I could always tell if it had been a good night or a bad night by the number of bundles present on that table. While the Medical Officer In Charge passionately discussed what

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had gone wrong in Pendo's case and was transparent about the ways in which he tried to cover up their wrongdoing and neglect, this was most often not the case. Instead, nurses and families referred to "bad luck," a rhetorical strategy related to accountability, which allowed the nurses to not directly address the underlying problems in their department and on their ward. Several healthcare providers, working both within and outside of the government healthcare system, told me they sometimes felt healthcare providers and administrators were reluctant to name and discuss problems in a straightforward manner and that this made it difficult to address these issues and improve their care, the ultimate goal to which all of them ascribed. Instead of changing the tangled thicket of bureaucratic communication and documentation practices to ensure women did not slip through the cracks, nurses and doctors sometimes changed diagnoses, intraoperative findings, and partographs in order to hide evidence of substandard care. Sometimes, as in Pendo's case, many providers were complicit and knew of the mistakes that had occurred. However, in other cases, an individual nurse might have made a mistake and, fearing confrontation with either the patient's family or the nursing administration should her mistake become known, she would hide the evidence of her error. Due to the shortage of resources which extended beyond the sole control of the hospital, extending to regional and national levels, the providers were often severely constrained in what they were or were not able to accomplish.

What work did these actions do for the providers? In the absence of disciplinary threats or recourse, we might view tampering with evidence as more of a social act, meant to prevent criticism and embarrassment of the ward's staff members, thereby ensuring smooth social relations in this highly interdependent community of nurses and doctors. Additionally, social ideals about not losing face and not causing others to lose face (particularly through public

embarrassment and criticism), may have dissuaded patients from making formal complaints and led to discipline as an impossibility. This impossibility was further reinforced by strict and convoluted bureaucratic guidelines for dispensing warnings and disciplinary action within the government healthcare sector. All of these processes contributed to a system that did not easily adopt changes to routines. Instead of receiving acknowledgement of wrongdoing or medical errors, the patients were left with no real choice other than to engage in the cognitive work of shifting blame once again. They shifted it from themselves onto luck and God in an attempt to come to terms with a tragedy that was still all too common in their communities. Ultimately, patients were left with no other avenue for coping with these events due to the ways in which healthcare providers, administrators, the system more broadly, and its documentary accoutrements, as epitomized by the partograph, constructed the realities of stillbirth. In this environment that made change or reformation feel nearly impossible, the nurses and doctors had little possibility of revolutionizing their care practices. Instead, they were swept up into a global system that promulgated the idea that good care was documented care, incentivizing accounting for deviations from guidelines while simultaneously disincentivizing changes in practice that would result in different care for women and babies. Within this system, maternal and neonatal deaths, as well as intrapartum stillbirths, were not simply eventualities, they were nearly impossible to avoid.
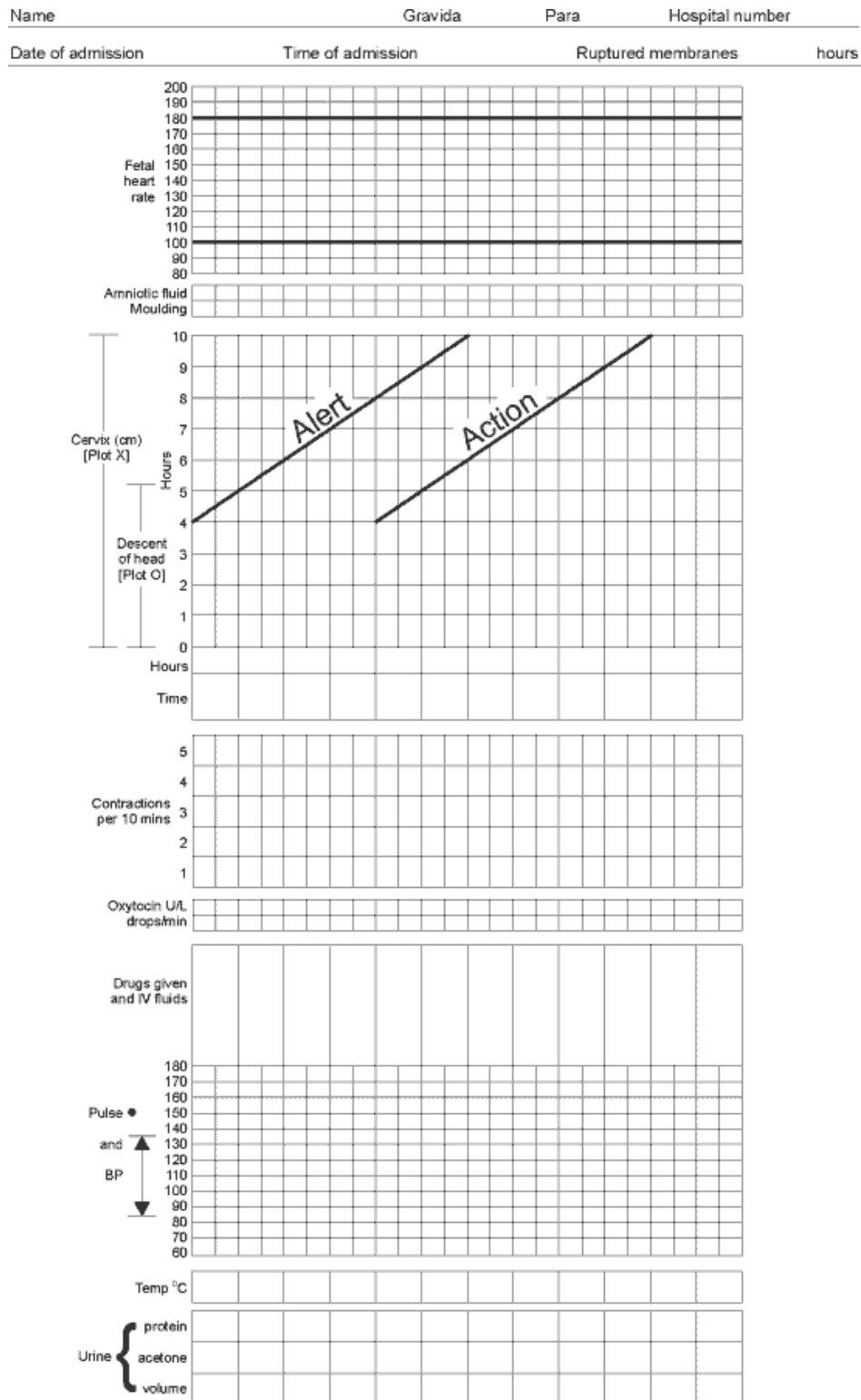
Fig. 8.1: A partograph identical to the version the healthcare providers in the Rukwa region were using. There are spaces to chart vital signs, the descent of the baby into the pelvis, the fetal heartbeat, and cervical dilation, among other things, all on the y-axis. The x-axis is time in hours. The "action" line alerts providers to the need for an intervention to help the woman give birth, if she has not done so before crossing that line. (WHO Maternal Health and Safe Motherhood Program 1994)

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Chapter 9: The Stories We Tell About the Deaths We See

9.1 Introduction[1]

The meeting always ends with the same question: was this death preventable? Nine times out of ten, the answer is yes, this death was preventable. What varies vastly between deaths is the way in which it occurred, what transpired on the woman's slow or rapid road to death, and who is, ultimately, responsible for ensuring such a death does not happen again in the future. Despite the fact that maternal deaths in Rukwa, in Tanzania, and many parts of the world, have declined since the 1990s, nearly 300,000 women still die each year, most in low resource settings, and most from just a small handful of causes. Since the advent of the Safe Motherhood movement in the 1980s, there has been a focus on measuring maternal deaths more accurately. Counting maternal deaths was one of the first steps the global health community took to elucidate the extent of the problem of maternal death and address it. In Tanzania, the Ministry of Health and Social Welfare issued standardized guidelines for facility-based maternal and perinatal death reviews in 2006, though these have been taking place in some facilities since as early as 1984 (Commonwealth Secretariat 2008; Tanzania Ministry of Health and Social Welfare 2006).

During a maternal death audit meeting, the designated healthcare providers and/or administrators go over the details of women who have died due to pregnancy-related causes. A WHO publication (Mills 2011:1) describes the maternal death audit in this way:

> A maternal death audit is an in-depth, systematic review of maternal deaths to delineate their underlying health, social, and other contributory factors, and the lessons learned from such an audit are used in making recommendations to prevent similar future deaths. It is not a process for apportioning blame or shame but exists to identify and learn lessons from the remediable factors that might save the lives of more mothers in the future.

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[1] A table with all the deaths that occurred while I was at the hospital in 2014 and 2015 is located after the text at the end of this chapter.

And the WHO (Danel, Graham, and Boerma 2011:779) suggests, building on its seminal text

on maternal death audits from 2004:

> A national maternal death surveillance and response system should draw upon two main sources of information. Within the health system, facilities should be required to report all deaths of women during pregnancy, delivery and the postpartum period. All such deaths should be routinely reviewed or audited as an integral aspect of healthcare quality improvement…This approach not only takes advantage of innovations in statistics reporting, but simultaneously improves response mechanisms to avoid future deaths. Over the past years, many low-income countries have introduced action-oriented review mechanisms, described under various names including maternal death enquiry, review, or audit. These require analysis of the circumstances of each death, identification of avoidable factors and action to improve care at all levels of the health system, from home to hospital. Much of the responsibility for follow-up actions lies with district and local health authorities.

While this process can be employed in any setting, in any country, it is particularly useful in

countries that lack reliable vital statistics and civil registry systems or where a lack of resources

may make it difficult to accurately diagnose the cause of death in a more immediate way. The

audit process provides a picture that extends beyond the individual healthcare facility in which

the woman died. During the meeting, the participants also discuss potentially contributing factors

extending from the woman's family, community, or referring health facility. These types of

discussions also allow district health administrators to analyze the ways in which the referral

system, infrastructure, and communication can be improved in the future in order to save more

lives. At the end of the discussion of each woman's case, the group would agree on an "action

plan" to be carried out in the ensuing months in order to address the preventable aspects of the

woman's death. These meetings play an important role in collecting data, legitimating state

efforts to reduce maternal deaths, and demonstrating the efficacy of individual healthcare

institutions.

Since 2012, I have participated in or been present at a total of four such meetings. While

Tanzanian Ministry of Health guidelines, as told to me by the administrators and providers at

Mawingu, suggest hospitals or regional health administrations hold these meetings on a quarterly basis, in practice, the meetings occurred much less frequently. Sometimes the regional hospital would go for more than seven months without convening such a meeting. By the time the Maternity Ward In Charge, a physician, called the meeting and notified all the appropriate district and regional-level administrators, the details of each woman's case were long forgotten, turned into an indistinct blur by the passing time. The women were, in a sense, brought back to life in the meeting through their patient records, the files that had been compiled over the course of their treatment and stay at the hospital. No two women's deaths followed the same trajectory, making each case unique but with all too common underlying similarities. It is these commonalities that the death audit system is designed to pick up and turn into action plans and points of intervention.[2] In this way, no death is in vain; each woman leaves behind lessons that can be carried forward to prevent the death of another from the same breakdowns.

In an era of audit and accountability, of counting and an obsession with metrics as the next global health panacea (Adams 2016:23; Erikson 2012), the maternal death audit meeting holds a new space, a new and loftier spot as a way to track these deaths, count them, enumerate the "true" extent of the problem that is maternal death, and collect data on the on-going causes of these deaths. These data are purported, by extension, to provide policy makers, governments, and global health practitioners with the keys to reducing or eliminating such deaths. While the numbers and the forms are meant to strip the dead women's lives down to their clinically important constituent parts, these tools of audit culture are in no way value free, no matter how much their inventors might wish this to be so (Adams 2016:36).

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[2] A number of institutions and countries use this audit system, including the UK, which periodically produces reports based on the findings of their confidential audit meetings (Knight et al. 2015).

Much like the partograph, a mutable document twisting and morphing, becoming and being, disappearing and reemerging, reconstructed in new form, the numbers and tick-boxes of maternal death audit meetings cannot be divorced from the values, ethics, and social and institutional powers which brought them into being in the first place. These forms are meant to standardize but, in fact, what they do is strip down, reducing complex lives to "yes" or "no" answers, stuffing bodies-mothers and babies- into check boxes that cannot possibly contain the messiness and conflicting narratives of lives lived and died through different lenses, from different perspectives, and within diverse contexts. When I read Form B, the second form of a two form set sent to the Tanzanian Ministry of Health after each audit meeting, with one copy kept in the maternity ward records, I could discern almost nothing about the course of the woman's illness, how she came to be at the hospital, the context in which she had lived, and, ultimately, anything about her interactions with the government hospital other than her diagnosis. Armstrong et al. (2014:1089) also noted that, in Tanzania, despite an emphasis on a qualitative, in-depth analysis of each death, the Ministry of Health forms do not provide much space for elaboration of details and, "the structured reporting forms…are designed to collect mostly medical causes of death and as such are less suitable to guide the team through an analytical discourse on the gaps in service provision, nor stimulate action-oriented dialogue in the forum."

Typically, the meeting started with some opening remarks from the RMO and then the Maternity Ward In Charge, the physician, would begin going through the case files. He read through each woman's medical record from beginning to end, pausing for questions or comments on her diagnosis or course of treatment, as others present in the meeting asked for clarification. People would point out delays in the care, question the quality of history-taking, or ask about the events that preceded the woman's arrival at the hospital. The first cases received more careful

consideration and discussion, with the district level administrators interjecting with comments about a facility lower down the referral chain, or how we might determine if the woman had received adequate prenatal care. However, I, too, like Armstrong et al. (2014) found, particularly as the meetings dragged on for many hours, the attendees began to focus more and more on simply filling in the blanks on the form. The action plans began to be copied from one woman's form to the next by rote, without any commensurate discussion of the plan's appropriateness. This was also due to the fact that the meeting's attendees identified similar problems in many of the cases. Even the diagnosis is not the thing of certainty that it is meant to be, that the medical sciences conceive it to be. Without much of the diagnostic equipment that would be needed, and in the absence of a pathologist, even these determinations, sometimes presented as facts, were merely interpretations based on experience, gut, and best guesses due to the ways in which a woman's illness presented itself, what little information could be gleaned from accompanying relatives, and the woman herself before her death. More an art than a science.

These interpretations composed the narratives of the deaths that pass through the Mawingu Hospital maternity ward. The deaths leave traces on families, on healthcare providers, and on communities that continue to retell the most gruesome or heartbreaking accounts long after the woman herself is gone, telling me stories of tying the limbs of a corpse to your own when driving a pregnant woman to a health facility on a motorcycle only to find en route she has died and must be secured to the vehicle in some fashion. These narratives discussed in the hospital ward, sanitized and transformed in the meeting room, lovingly kept alive in communities, intersected with policies, documentation requirements, and care to make their marks on the minds and bodies of those whose lives they touched.

In this chapter, I deconstruct some of the narratives which community members and healthcare providers told me, or that I witnessed first-hand, in order to examine how we[3] make meaning out of the deaths of pregnant women. In returning to some of the themes I discussed in earlier chapters (see Part II), the process of maternal death audit meetings is derived from a larger global health project related to amassing vast quantities of data- primarily quantitative- related to a wide swath of global health challenges. Without much of a stretch, it is plainly clear that maternal death audit meetings are one cog in the global health audit culture- a machine churning out data, based on the gold standard of the randomized control trial (Adams 2016:34), with a relatively new goal of producing profits in addition to improved health outcomes (Erikson 2012). Armstrong et al. (2014:1089) note that Tanzanian MoH audit guidelines include very little description of the actual review meeting, instead focusing much more extensively on "hierarchical reporting structure, technical committees, and administrative management of the data." As the authors in Vincanne Adams' 2016 edited volume suggest, the metrics of global health have come to have paramount importance, overshadowing or precluding more concerted consideration of the complexity of the lives of individuals and even institutions. Wendland (2016) clearly deconstructs the mathematical formula used to sanitize, extrapolate, and "smooth" the number produced by statistics in countries such as Malawi and Tanzania, which have incomplete vital registry systems and political-economic structures badly in need of the support of outside donors. The numbers never tell the whole story.

Nor do the narratives we produced in these maternal death audit meetings because, for a variety of reasons, we distort the truth to ourselves and most certainly for the consumption of

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[3] I use "we" here to include myself in these narratives because I witnessed many deaths and was witness to the trauma of those who had experienced many more. I also was observer, and then active participant, in four maternal death audit meetings. Therefore, I cannot extricate myself from the process of story-telling in the wake of maternal death in its various forms.

others. Mattingly and Garro (2000:15) suggest that examining underlying narrative structures can help researchers see more clearly the underlying "imprint of institutionalized practices and ideologies," which is what I seek to do here. "Narratives shape action just as actions shape the stories told about them;" stories also "suggest the course of future actions" (Mattingly and Garro 2000:16-17). The narratives we construct about maternal deaths operate and perform on a variety of levels, including the interpersonal, the institutional, the regional, national, and international, each of which I address here. In this chapter I examine the ways in which these narratives were constructed in the maternal death audit meetings, but also by individual nurses and doctors, and how these narratives could work to normalize poor reporting or the number of deaths that occurred in the region.

9.2 Reporting and Data Collection

I had a chance to observe these reporting structures once in January 2015 when I was in Dar es Salaam. In May 2014 I had met a woman working in the Ministry of Health's Reproductive and Child Health Section headquarters in Dar. In January, I visited her in her office and we discussed what types of activities she did as part of her job. At that particular time, her boss was away and she was in charge of compiling the weekly reports based on data coming from the regional level. These reports are available online from the Ministry and are distributed on a regular basis. As I was sitting in her office she received an email with the data from the entire country. There were two deaths under the Rukwa region and under location it said Sumbawanga. I asked her if there was any other information about these deaths because I had just come from Sumbawanga and would have been present during the time period represented in the report. She speculated the deaths had occurred at Mawingu, while I knew of no deaths that had occurred at the hospital during that same period. While it is possible the deaths under the

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heading of Sumbawanga could have occurred elsewhere in the municipal district, I told her those data made me uncertain about the rest of the information she must have been getting. She told me she would call the Rukwa region Reproductive and Child Health Coordinator to clarify the details of the deaths and where they had occurred. This was a particularly clear demonstration of the uncertainty that can be part of these reporting structures. If I had not been present to question the data due to my experiences in the region in question, she would not have made a follow-up phone call and the deaths could have been misattributed to the regional hospital.

Reporting requirements were routinely a challenge for many of the healthcare facilities in the Rukwa region. Some of the doctors at the regional hospital told me they were unsure about how to properly fill out the MTUHA (Mfumo wa Taarifa za Utoaji Huduma za Afya, System of Reporting of Provision of Healthcare Services) books for the end of month reports for their wards. The hospital was often late in submitting reports to the regional or Ministry levels and this was a major area targeted for improvement during my time there. Maternal death audit meetings also often opened with the Regional Medical Officer reminding the district administrators to submit their reports of deaths in a timely fashion. At the meeting held in May 2015, the RMO said[4] that everyone was to report the number of maternal deaths every week and if the report was reaching the Ministry, it should also be reaching the RMO's office. He said it was very important to be following these reporting guidelines because it was an order that came directly from the mouth of the President himself in 2014. Even if the districts reported zero, the Ministry would be satisfied. After this proclamation, two of the District Reproductive and Child Health Coordinators (DRCHCOs) admitted they had not yet turned in all of their data and one

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[4] All the quotes from the meetings that I use in this chapter are paraphrased. Due to the confidential nature of the audit meetings, I was not allowed to record the discussions and frequently do not have verbatim quotes. All such paraphrased quotes are not in quotation marks.

had been late to the meeting because she was trying to find the relevant information from her office.

He went on to draw attention specifically to the Sumbawanga Rural District (Sumbawanga DC) for their consistently later reporting, which had been a problem for more than a year. The RMO then proceeded to relate a story highlighting the important role these data could play. He said that in 2014, when the Regional Commissioner had been at a Parliament session, she sent a request back to the RMO asking for the number of maternal deaths in the region. RMO told her that the maternal mortality ratio (MMR) was 116 per 100,000. Later, when he finally received the tardy data from Sumbawanga DC, he had to tell the Regional Commissioner that actually, the real number for the year was 142 per 100,000, which was, in fact, an increase over the previous year's rate of 139 or 138 per 100,000. The RMO then pointedly asked the Sumbawanga DC representative at the meeting if she thought the Regional Commissioner would be understanding if they continued to provide her with bad data to use in front of Parliament and the President. With the arrival of the late data, the RMO and Regional Commissioner were forced to admit their region had not seen any significant reductions in maternal mortality despite the passing of another year. Not only did the RMO consider Sumbawanga DC's tardiness to be problematic and disrespectful, but he saw it as a threat to the region's reputation on a national stage. By providing the Regional Commissioner with data of dubious veracity, the RMO was also threatening her credibility while in public and in front of her superiors.

There were any number of ways in which reporting could go wrong. There were a number of instances in which I became confused about how the hospital was counting deaths and who was supposed to take responsibility for which deaths. In theory, any woman who died at the

hospital was supposed to be counted and documented as a hospital death. This sounded, to me, like a fairly black and white system. Either she was alive when she arrived, or she was not. However, in practice, there was a much less distinct line. The hospital did not want to look as though they were also not making progress in improving care and reducing deaths and so they often were selective in the way they counted the deaths.

Below, I quote at length from my field notes from July 2, 2014 to demonstrate some of the difficulties of accurate reporting and accounting of maternal deaths. I had been away from the hospital in the end of May 2014 due to a trip back to the United States and then, after returning to Sumbawanga in June, participated in two weeks of supportive supervision trips with a multi-NGO project. At the beginning of July, I began to try to follow-up and collect information on the maternal deaths that had occurred while I had been away from the hospital.

7/2/14
I'm trying to follow-up on some of the deaths from the end of May and beginning of June before I got back. I asked Dr. Charles first and he said if the deaths hadn't occurred here in the maternity ward, she hadn't been technically admitted already, then the death would be recorded in OPD, not here. It's hard to follow-up with deaths in OPD but maybe a good place to start would be to go to supervision and see if they have a record because they usually write down all the deaths that occur. I wanted to know then who is responsible for discussing the death and making follow-up, doing the death review. He said it depends on where the woman came from, but the districts are supposed to do death reviews to follow-up, too.

So, I went to supervision, found the supervisor, and she told me to ask another nurse who is in charge of data collection. She said we should go together to OPD to try to follow-up. We went to ask Dr. Salome. Dr. Salome said she remembered one case from April, the woman arrived from the village, was treated for [pregnancy induced hypertension] and went home to stay with relatives in Edeni, here in town. She then developed further problems, relatives brought her back to the hospital and she died on the way [to the hospital]. Dr. Salome verified the death and wrote on a piece of paper and sent the body to the mortuary. Technically, then the death didn't occur at the hospital and the death is sent to the district from which she came.

Dr. Salome doesn't remember any similar death from June or the end of May but she said maybe it was someone else, another doctor, that had received the case. They said they don't have an MTUHA book for deaths there in OPD. The nurse said these OPD deaths are really difficult to trace. If I knew the dates, we could look at the roster to see who was working there. But I don't know the dates, so then what am I supposed to do? She told me I should go back to the maternity

ward to check. But I said they didn't reach maternity to be admitted so where are these deaths counted? Deaths *za wapi*? (deaths from where?) All the doctors in the OPD office at that moment agreed that it was an OPD death but it would be difficult to find even the woman's name. I asked, what about a report from supervision? The nurse told me that often those reports are given orally, if the person hasn't been admitted to the hospital, so there probably wouldn't be any further documentation on the part of supervision. And with that, she told me to come back to maternity and to look to make sure there was no documentation here. They haven't yet gotten the data from June because the month just finished. And I return here [maternity] to the start with no further information about these two deaths. I still want to know who gets the pertinent info about the death and who is then responsible for the follow-up and discussion??

Back in the ward, I was ranting to Nurse Gire about this problem. She said she was there for the one who arrived here and almost immediately died, it was eclampsia she thinks. Dr. Charles said, just now on my way back to maternity, that the woman came and was already "gasp, gasping" and then died after only a very short time. Gire said that if the woman hadn't been included in the admission book then perhaps it wasn't recorded here. If she was in the book, then it's required that her death be recorded here. If she dies in OPD, then the info, her files, etc., go back to the district she came from and they are supposed to follow-up there.

Gire was telling me that at one point she was the Reproductive and Child Health Coordinator and at that time she started a form to collect better data at the village level about maternal and neonatal deaths. She got better info and requested the forms be brought to her every 1st of the month for the previous month. She got much higher numbers than other were getting and told the RMO at the time that this was a severe problem that needed to be addressed. She says now she doesn't think those forms are still being used and the data that is being reported currently is certainly not accurate. She doesn't believe that deaths have been reduced and even the number for Tanzania seems like it is unbelievable. "We see here in this hospital!" She said she does this work related to maternal mortality from her heart but that it's hard and makes your heart heavy.

Gire then asked me if we've done the maternal death audit meeting yet and I said, no, still not yet since last year in October or November and we probably have about 20 cases to discuss, we can't finish them in one day anymore. She said we should check if the RMO is around and get him to push the meeting so it happens within the next week or so, to bring some pressure so it finally happens. The longer we wait, the more details of the cases that have been forgotten. I agreed and said then it's not very useful for us in order to improve care (if no one remembers the details of the case)…

I just asked Nurse Kinaya about those deaths and she said the MOIC knows about them and he's the one who said not to document them because "*tunaongeza vifo, siyo vya kwetu*" [we are increasing deaths that are not ours], it looks like we've killed them but they came already in a bad condition, said Nurse Kinaya. I'll have to ask the Medical Officer In Charge.

That day I did not receive other information about the women's names, where they had come

from (i.e. their home villages) or any other details that would have made it possible for me to

follow-up. When I asked the Medical Officer In Charge, he simply explained that they kept no records of such deaths at the hospital because the women had not been alive long enough after arriving at the hospital to actually be officially admitted. He, and others at the hospital with whom I spoke, did not feel the hospital had any responsibility to count these types of deaths of women who arrived "already dead," either literally or figuratively. I asked him if there was even any record of the names of the women or where they had come from and he said no. I suggested perhaps it would be useful just to have a record in order to be able to verify later that her death had been accounted for at the district level. As the system currently functioned, it was feasible that her name would be impossible to find again and her death might go unrecorded at any level. This experience was another instance that caused me, and others such as Nurse Gire, to be suspicious of any reported declines in maternal death at the hospital, in the region, or in Tanzania more generally. This narrative that the women arrived "already dead" was one which would surface over and over again in both maternal death audit meetings, but even more so in the narratives the nurses and doctors constructed when they gave me a more individual explanation of the phenomenon of maternal death in the regional hospital. I will return to this below.

9.3 Rukwa Region Maternal Death Audit Meetings

In the Rukwa region, maternal death audit meetings were the responsibility of the regional hospital. I asked more than once if the districts, three rural and one urban, also were supposed to hold such meetings to discuss the deaths in their settings, those that occurred in district-level health facilities or in the community, but I never received a clear answer on this. Some people told me the districts were also supposed to discuss the deaths that occurred at that level, while others were unsure. The only aspect of the protocol that was readily apparent was the role of the regional hospital. The maternity ward In Charge was responsible for calling the

meeting and, with the support of the Regional Medical Officer's office, he sent letters to all of

the District Medical Officers (DMOs), District Reproductive and Child Health Coordinators

(DRCHCOs), the Regional Reproductive and Child Health Coordinator (RRCHCO), and the

relevant regional hospital staff members. The regional hospital was generally represented by the

Medical Officer In Charge, the Maternity Ward Doctor and Nurse In Charge, a selection of

approximately three maternity ward staff nurses, the other physicians assigned to maternity, and

perhaps a representative from the pharmacy or the laboratory. After attending my first two death

audit meetings, and spending significant time on the maternity ward, I began to strongly

recommend the Outpatient Department (OPD) In Charge be included in the meetings. This never

happened while I was present in 2014 and 2015. I firmly believed this to be important for the

continued improvement of the obstetrics and gynecology services at the hospital because it was

often the OPD staff who received women in crisis in the middle of the night or who were the first

to triage her during the busier morning shifts. Without including the OPD, it would be, in my

observation, impossible to reduce the wait times between OPD and admittance to the ward, the

time needed for sometimes critical blood tests, and continuity of care that would ensure a woman

in critical condition did not become lost in the shuffle of busy wards. The essential nature of the

OPD is also clear in the above description from field notes about my quest to locate information

related to the two women who had died at the hospital but of whom there were no records.

For those deaths that occurred at night, the first person to see the woman, if the maternity

ward nurses were faced with an emergency, was often from the OPD. The OPD also was

responsible, particularly at night though, technically at all times, for triaging incoming patients

and determining whether or not they should be admitted to the maternity ward or gynecology

ward, or elsewhere. At this time, as part of triage, the OPD personnel would write a preliminary

diagnosis and differentials, as well as order lab tests and any medications or procedures they thought necessary. Therefore, in order to understand delays and their part in the process, I always felt the OPD doctor In Charge would have added a great deal to the conversations that took place during the maternal death audit meetings. Likewise, laboratory personnel were important because they were the ones responsible for ensuring there was blood available for emergency transfusions. The lab was also responsible for confirming any of the diagnoses put forth, most notably malaria in pregnancy or infections. Without including representatives from all of the departments with which maternity worked, it was difficult to adequately address any delays or gaps in care that had occurred at the hospital.

Due to the large number of people who were supposed to be present at these meetings, it was no surprise that they only occurred infrequently. When one of the officials was traveling on other business or on their annual leave, the meeting might either be postponed or the official would send someone else in their place as their representative. As of July 2016, there had been only one maternal death audit meeting for the entire year, the one prior was held sometime in the end of 2015. The infrequency of the meetings was easier from a scheduling standpoint but the infrequency made the individual meetings more of a burden. Instead of spending an hour discussing one or two cases, the meetings generally lasted for six or seven hours and sometimes were supposed to include a discussion of nearly 20 deaths. What I found this meant was that the cases we discussed in the beginning received full and thorough consideration, while those towards the end were treated in a cursory manner, at best. It also meant that, for the sake of time, the oldest cases were not discussed at all, or those present tried to make a case for one or more of the deaths not "really" being a maternal death. They might try to suggest this if it appeared the woman had had preexisting or underlying health problems. However, the WHO also includes a

category of deaths called pregnancy-related deaths for cases when the cause of death is difficult

to determine precisely. Physiologically, nearly any preexisting health problem can be

exacerbated by pregnancy due to the increased demands the pregnancy places on all of a

woman's systems (D.A. Schwartz, personal communication August 2015). For example, to

accommodate the fetus, a woman has expanded blood volume throughout the pregnancy, which

can put extra strain on her heart or lungs. Once again, deciding to not include a pregnant

woman's death in the data on maternal deaths from the hospital was as much strategic as it was

borne of a genuine belief that her death had not been caused by her pregnancy. In other cases, the

determination to exclude a woman from the count of maternal deaths could be a result of

inadequate knowledge of pathology and the complex physiological effects of pregnancy. During

these meetings, until the last one I attended in May 2015, we did not have a doctor who was

specialized in obstetrics and gynecology and the hospital has never had, to my knowledge, a

pathologist. The doctors were already too shorthanded to even consider taking on the additional

work of post-mortem examinations of women who had died as a result of pregnancy related

causes. Once again, the system itself prohibited some of the very processes that could have

helped the hospital gain access to the additional information necessary for improving care.

9.4 Case Files

While it was the physician in charge of the OBs/Gyn department who was responsible for

calling the meeting, it was his nursing counterpart who was responsible for maintaining the

paperwork and preserving the medical records of the women who had died. In theory, the

maternity ward Nurse In Charge was to keep the files of the dead women together in one place,

maintaining them until such a meeting happened. However, before almost every meeting, there

was a panic as the In Charge came to realize one or more case files had gone missing. In these

instances, perhaps differently than in the case of missing partographs (previous chapter), there were rarely any accusations about foul-play involved in these disappearances. Instead, it was poor organization combined with poor communication and a lack of standard procedures for the storage of these files. Inevitably, one or more files would have made their way back to the Medical Records department or been lost in a hand-over that was never completed. In practice, the files were never allowed to leave the hospital grounds but it was not at all uncommon to be unable to find a patient's records. Doctors borrowed the files to do a more thorough case review or to try to puzzle out why a particularly difficult case had "defeated" them. Sometimes the medical attendants were responsible for opening a patient file after the woman had already died, carrying the papers that might perhaps have been stapled together (or not) to Medical Records. She was then supposed to return to the maternity ward with the new file, the loose papers now tidily constrained, held within the card stock covers with staples or piece of string onto which hole punched pages were strung. It was more than possible that some files never made it back to the maternity ward after this detour to Medical Records. Or, alternatively, they may have made it back to the ward but were then subsequently misplaced when no one knew why a file had been left lying around. I once cleaned out the cabinet in the large, worn wooden desk in the admission room and found unopened lab results, antenatal cards, partographs, referral letters, and files of women who had long since passed through the ward. There was also at least one box in another cabinet on the ward that housed abandoned antenatal cards from women who had either not taken them back or had lost them or, sometimes, had left the hospital without being discharged. Joining these stacks of inexpensive paper notebooks and worn antenatal cards would be the occasional file that had been misrouted or, for some other reason, had been "filed" in the box instead of some other more formal filing system. No one working on the ward wanted to go

through this box either because it was in a part of the ward that became the home to swarms of mosquitoes, particularly at night and during the rainy season. Looking for a card or file that had gone astray often made me feel like, in an ironic twist of fate, I was more likely to contract malaria while *inside* the hospital instead of other locations stereotypically considered to be less salubrious by healthcare providers and public health officials (poorly ventilated, dank houses; swampy, poorly drained fields, etc.).

These files were, themselves, characterized by missing information- the wrong times or dates, written hastily while doctors buzzed from one patient to the next on ward rounds. Incomplete medical histories neglected to include details of previous pregnancies and their outcomes. Scrawled doctors' notes in, at least, three different handwritings wove a carpet of barely legible English instructions, differential diagnoses and observations on the patient's condition. In every audit meeting we had a discussion about the quality of the medical histories and were implored to improve intake interviews and time keeping- often portrayed as a systemic problem keeping the hospital from further improving care. Herein, between the cardboard covers upon which the woman's name was often misspelled at the will of the Medical Records personnel, was brought into being a woman in critical condition- a life, or death, hanging together or falling apart on the pages.

When I returned to Mawingu Hospital in May 2016, it had been at least seven or eight months since they had held a maternal death audit meeting. As I spent time in the ward nursing office looking over the records from mid-2015 through May 2016, the Nurse In Charge was scrambling, once again, to find files and understand the Ministry of Health forms that were the required output of a maternal death audit meeting. She was relatively new in the position, though had been working on the maternity ward for several years. She was the fourth Nurse In Charge

the maternity ward had had since May of 2014. Once, in 2014, during a period of handing over

between the incoming and outgoing Nurses In Charge, we discovered the files meant for the

maternal death audit meeting were locked in the ward store room, the keys to which only the

outgoing Nurse In Charge possessed, and she had traveled out of the district. Instances such as

this, and a lack of more formalized training on the purpose and conduct of maternal death audit

meetings, led to a great deal of lost or missing information as the ward staff members scrambled

to prepare for these infrequent meetings.[5]

It is against this backdrop of uncertainty and barely contained file chaos that the actual

meetings themselves were held. Due to the length of time that often passed between a woman's

death and the review of her case, the files were all the meeting attendees had when assessing the

progress of the woman's clinical condition, overall health, decision making skills, family

dynamics, and her reception and treatment at the hospital. Needless to say, a certain amount of

extrapolation occurred based on where she was from, how many previous pregnancies she had,

or the state in which she arrived at the hospital. For example, the antenatal clinic cards and

several of the hospital forms, such as the doctor's notes page, include a line at the top for the

patient's religion. The woman's religion was also one of the blanks that needed to be filled on

the Ministry of Health forms. Often, the woman's antenatal card did not indicate her religion and

the meeting attendees would infer her religious affiliation based on her name or that of her

husband, i.e. Asha, married to Mohamed was almost certainly a Muslim, whereas Anna was

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[5] As an aside, technically the hospital should also have been conducting perinatal death audit meetings but, as I was once told by a ward In Charge, there were so many of these deaths (drastically more than those of pregnant women) that it would have drastically increased the number (or duration) of death audit meetings. Never once did I see or hear of one of these meetings being held at any point from 2012 through 2016. Perinatal death reviews would have provided insight into the causes of neonatal deaths that occurred in the hospital, as well as intrapartum stillbirths, giving the hospital some insight into how to further improve services to reduce these deaths, too.

more likely to be a Christian. Once, during one of the audit meetings, a couple of the participants carried on a side conversation about whether or not the woman's religion really mattered, the doctor asking, "OK, what illness do Christians get?" and the nurse maintaining religion mattered. In my reading of these forms, the woman's religion could be more helpful in coding important clues about the kinds of support she might have had, the number of children she planned on having, or the woman's ability to engage in autonomous decision making. However, the government of Tanzania does not record religion as part of national censuses and is generally reluctant to make statements about the religious composition of the country in order to prevent divisions based on this classification system. As it was, in both the Rukwa and Singida regions where I have worked, people of either religion tended to have strong opinions about those in the opposite group. While I never witnessed religion playing a part in whether or not a woman received timely care in the hospital, several of the nurses were highly religious and would pray loudly over patients or, on the other hand, lecture women about family planning based on their particular religious ideals.

In addition to the uncertainties about such missing individual attributes or demographic information, there was often some uncertainty about the way the course of the woman's obstetric emergency had unfolded. If the details of her treatment within the hospital were certain, those events which preceded her arrival often were not clear, aided only by what had been gleaned from relatives or the woman herself before her condition had taken a turn for the worse. Occasionally, the woman arrived at the regional hospital accompanied by a referral letter and, maybe, even a representative from the referring health facility. In these cases, more information about what occurred before arrival at the hospital was available but there were also many times when the person accompanying the woman knew little about what had transpired or, even if a

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health provider, did not have many details about the woman's condition. This was sometimes due to the short period the woman had stayed at the referring facility or, in other cases, was due to a lack of skills and knowledge on the part of a referring provider. If they did not have training in the recognition and treatment of obstetric emergencies they might not even have been able to identify the exact complication beyond the fact the woman was bleeding, or she had been unable to give birth after a prolonged period of time, for example.

In other instances, the woman arrived at the hospital perfectly healthy and her death came as a sudden and unexpected shock even to the healthcare providers involved in her case. While no one ever expected a woman to die, there were some women who arrived at the hospital in obviously poor health, perhaps with Stage IV HIV, whose decline and subsequent death were less of a surprise to the ward staff members. In one particularly bad week in March 2014, just one month after I had arrived at the hospital, several women died within the span of a few days. The most shocking of these deaths was that of a woman, Paulina, who had reported to the hospital for a scheduled C-section before her labor started (also the subject of the Preface). She was in her mid-20s and had had her previous two children via C-section, which was a standard indicator for another surgical delivery. With increased scar tissue in the abdomen and multiple previous incisions in the uterus, there is a greater risk of uterine rupture if the woman experiences strong contractions during labor. The doctors also took into consideration the cause of a woman's previous C-sections. If it was because the baby had been lying transverse, as opposed to head down, or maybe even breech, then it was not a given this would occur in a subsequent pregnancy. However, if the previous operations had been done due to concerns about CPD (cephalopelvic disproportion) then it was likely to be a concern for later pregnancies, too. In this case, Paulina had arrived early and I was with the doctor on his rounds when he saw her

and decided to schedule her surgery for the following day. When I arrived on the maternity ward

the next day after attending a meeting and making a trip to the gynecology ward to follow-up on

any deaths that had occurred there, I was told Paulina was still in surgery. I had seen her as the

nurses were taking her to the operating theater at 8:30am and, when I returned to the ward after

collecting some information from files on a different ward, it was already 1:15pm. The fact that

she was still in surgery after nearly five hours indicated to me there were probably

complications. Ordinarily, the doctors sought to complete C-sections in the shortest time possible

in order to expose the baby to as little of the anesthetic drugs as possible and reduce the time the

mother was open on the table. Often, from start to finish, the operation could take less than an

hour total.

   The nurse who had gone with Paulina to the operating theater in order to take care of her

baby came back to the maternity ward around 1:45pm, at which point Nurse Lucy told us Paulina

had died. They had had to take her back to the theater after the initial C-section when they

realized she was continuing to bleed internally. This second operation, a laparotomy was done to

locate the source of the bleeding and after closing her again they took her to the ICU. She needed

a blood transfusion due to the amount of blood she'd lost but she was blood type O negative, a

rare type that is only compatible with other O negative blood. There was not enough blood

available at the hospital because there was also another patient on the gynecology ward at the

same time requiring the same blood type for a transfusion. Therefore, Paulina only received one

unit of blood and subsequently died, perhaps due to hypovolemic shock due to her prolonged

internal bleeding. The nurses who were present on the ward that day were clearly shaken by the

way in which Paulina had rapidly descended into death when she had been so apparently healthy.

The nurses were dazed and, in the days afterwards, the doctor who had seen Paulina from the

time of her arrival at the hospital, was adamant about implementing changes to procedure to make sure such a death did not occur again in the future. He had told me he would be suggesting that in all cases of non-emergency C-sections the clinical staff needed to have the results of blood typing, Hb levels, and cross-matching tests, as well as an indication of the availability of blood for transfusion, before even starting the surgery. To my surprise, when we later discussed Paulina's case in the audit meeting, there was no mention of this protocol, nor was it included in the action plan created at the end of the discussion. It was clear to me that once a death lost its immediacy, the nurses, doctors, and administrators quickly returned to the status quo and often there was little visible follow-up to address the changes that might have reduced future deaths from similar causes.

The hospital's Quality Improvement Team (QIT) should also have participated in organizing on-job training to improve skills, as well as follow-up on the requisitioning of needed supplies, such as resuscitation equipment. However, during the majority of my time on the ward, the QIT was more of an idea than a functioning body, at least within the confines of the maternity ward. No one was 100% positive about who the maternity ward representatives were and it was unclear about whether or not they were actually meeting and/or implementing any activities. This lack of certainty about who was responsible for following up or for implementing new protocols or guidelines led me to feel as though the paperwork resulting from the maternal death audit meetings was lost in an opaque and unknowable bureaucratic quagmire. The amount of bureaucracy constructed, at both a national and local level, around systematically measuring maternal deaths, accounting for them, and implementing programs to reduce these deaths would lead one to believe that the outcomes of such efforts would be consistent and replicable declines in pregnancy-related deaths. After all, dependable replicability is, or was at one time, the

objective of bureaucracy- systematization for replicable, predictable, and efficient outcomes (Weber 1947:215). However, the outcomes were more often arbitrary (Gupta 2012:24-25), under-analyzed, and lacking causal certainty; perhaps declines in maternal death were due to actions on the part of the healthcare providers and administrators or, just as likely, any declines were simply a chance occurrence upon which a facility, region, or the country could not depend to repeat itself again in the future.

9.5 The Futility of Action (Plans)

The outcome of the maternal death audit meeting was supposed to be action plans decided upon by all the people present during the meeting. The underlying premise, once again, was that these action plans could structure next steps within the hospital and at the district health level which would prevent reoccurrence of maternal deaths from the same causes. As an example, if a woman was delayed in arriving at the regional hospital because the staff at a referring facility needed to call an ambulance from the district but did not have a working radio call system, the action plan might look something like the following:

> Problem: no working radio call so later referral
> Solution: Fix radio call
> Person responsible: District Medical Officer
> Timeline: Within six months
> Outcome indicator: Will be able to call for ambulance with a working radio call system.

Sometimes the woman's death could have been prevented by the presence of a specific supply or something as easily remedied- i.e. there was no adult resuscitation equipment in the operating theatre nor anyone with the knowledge of how to prevent the woman open on the table from aspirating secretions she started to produce during the surgery into her lungs. She died, they speculated, due to this aspiration of fluids into her lungs. A relatively straightforward problem with an equally straightforward solution- make sure the resuscitation equipment was present and

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in good working order and ensure there were adequately trained surgical nurses or others who were versed in recognizing the signs that would necessitate intubation, suction, or other forms of resuscitation (see Marwa and Strong 2015:197-213 for further discussion of this particular maternal death).

More often than not, the problems the meeting participants decided to include in the action plan boxes on the last page of the Ministry of Health's audit form were not so concrete and self-contained. The needs the meeting participants identified often went along the lines of "better education of pregnant women during the antenatal clinic" and the corresponding outcome indicator was simply left as "a decrease in maternal deaths." Beyond simply being impossible to measure the success of prenatal education in this way, the plan did not actually delineate specific steps to be taken in order to reach "better education," nor any intermediate indicators that the plan was on the right track. Clearly, this method of creating action plans that are unactionable most serves the administrators who would be in the responsible position. That is to say, those who would be in charge of reevaluating the way their subordinates conduct themselves and the services being offered to pregnant women, were the ones who were creating such action plans. With little to no time dedicated to actually producing steps that would lead to the accomplishment of the action item, the administrators sitting around the table at the maternal death audit meeting were ensuring they did not generate more work for themselves. On-job training was another popular action item, meant to increase providers' skill levels or knowledge of particular procedures, conditions, or interventions. However, actually conducting on-job training meant coordinating nursing and clinical staff who were often unmotivated to attend meetings, and rarely invested their time in continuing education unless there was a financial incentive on offer. This environment created preconditions for any attempt at on-job training.

Most administrators felt any sort of long meeting or training required, at the very least, food for the participants in order to incentivize attendance. In a region and a hospital that was financially precarious, the prospect of having to provide food for thirty or more maternity ward staff members in order to conduct a training severely limited the possibility of in-house trainings without additional support from NGOs or the Ministry of Health.

Less cynically, if we assume district health administrators did implement the action plans, in one way or another, in their districts after the audit meetings, it would have been only those administrators who were privy to what had been done or the outcomes of said activities. The audit meetings were held so infrequently that they only barely had a standard format. In most other, formal meetings at the hospital, the meeting had a typed agenda and nearly always commenced with the reading of the minutes from the previous meeting. During the course of discussing the previous meeting minutes, responsible parties would often report on what they had accomplished with their assigned tasks. However, due to their infrequency, there were so many cases to discuss at each new audit meeting that, due to time constraints at the very least, the Maternity In Charge did not dedicate any time to reviewing steps taken since the previous meeting. Never once did I hear a report on whether or not progress was being made towards accomplishing the action plans created in a prior meeting, nor did I ever hear any reports on the stated outcome indicators. Therefore, I came to the conclusion that the action plans primarily fulfilled reporting requirements and were treated largely as rhetorical documents, as opposed to plans with the real potential to generate change in the system and prevent deaths.

9.6 Audit Meeting Outcomes and Ward Nurses

In general, the proceedings and outcomes of these meetings were never available to the maternity ward staff members, other than those who had actually been present during the

meeting. I specifically asked the nurses what they knew about the number and causes of maternal

deaths on the ward in the previous year and all responded with very vague comments, indicating

a lack of access to this information. Nurse Halima said,

> Because, if you tell me- me I've seen that the deaths are few. Why? Because I don't
> know. Today, I'll be on duty, I see one, because it's possible that last month, maybe I
> know it's only one [death] that occurred last month. But if you ask me for the year, I
> can't know. For the whole year, I can't know because I don't have data and those people,
> we aren't told, we aren't welcome to participate in their meetings. Their meetings they do
> themselves, those who aren't even doing work [on maternity]. Therefore, they themselves
> have cut themselves off in secret, they talk, they talk and it's finished. But those of us
> whom this issue concerns, we aren't there in those meeting. Therefore, you can't know
> unless maybe you go to the records or are doing a report.

Halima reflected more than some of the other nurses on the reasons why she did not have access

to more information about the number of deaths that occurred on the ward but her answer is

representative. What follows is a representative conversation that was repeated multiple times in

my interviews with the maternity ward nurses:

> AS: How do you feel about the number of maternal deaths on the ward?
> Nurse: I haven't really followed-up very much but I see that there are only a few.
> AS: Mhm. I can tell you that last year we have nearly thirty pregnant women who died.
> Nurse: Hmm that's a lot. It shows there is still some *uzembe*, laziness that is continuing.

Most of the nurses were unaware of the number of deaths that had occurred but because they

may have only been working on the ward during a couple of the deaths that had transpired, they

felt it to be a small number. When I told them the actual number of women who had died at the

hospital of pregnancy-related causes in 2014, most of the nurses were surprised and felt the

number still seemed high. In the first five months of 2015, there were significantly fewer women

dying than during the same period in 2014. However, no one was able to say if they thought

there was a particular reason for this decline in deaths on the ward.

Another conversation went as follows:

> AS: Deaths of pregnant women. How do you see the number of deaths?

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Nurse Neema: Last year we had about 5 deaths of mothers.
AS: You think it's only 5? Here together with ward 5 it was close to 30.
Neema: Eh?! Well, that's really a lot if it's for a whole year. I think I have remembered 5 because those were the ones discussed in the meeting in February and that also is a challenges that when they do a maternal auditing, staff from the maternity ward never participate like is supposed to happen. You find maybe only the In Charge and two nurses therefore we are lacking accurate data. But also feedback about why the deaths took place. But for this month I remember it is two, again they died in the following way: there's one who died with her baby inside, another it was PPH, it was in the beginning of April. I don't know before that.

Neema was able to remember the deaths for which she had be present or that she had more recently thought she'd heard about during a meeting. However, most of the ward staff members had no concept of how many women were actually dying every year or the causes of the deaths and how they could be prevented. This gap in communication or lack of reporting back to the ward rank and file after a maternal death audit meeting was not only frustrating to the ward staff, but also prevented them, those who were in the closest proximity to patients, from having the answers about the causes of deaths so that they could try to prevent similar deaths in the future.

The lack of feedback and communication about action plans, progress made, or interventions planned amplified the sense that any changes in the number of maternal deaths was simply a random occurrence. Perhaps it was luck. Perhaps it was due to different staff members. Perhaps it was due to the weather in the region. The Doctor In Charge of the maternity ward, as well as the Medical Officer In Charge of the hospital, repeatedly told me I was the only person in the entire hospital who actually used any of the data that the hospital collected in order to try to draw attention to trends within the hospital. I repeatedly suggested that the ward try to use the data they collected, and had to use for reports every month, to help them set goals for care on a quarterly or yearly basis. When I was working in the Singida region, the Nurse in Charge of maternity had had great success in reducing the incidence of intrapartum stillbirths on his ward through a committed tracking of data and by using it to show his staff trends in the number of

these stillbirths, which are nearly always an indicator of bad care during labor and delivery (see chapter 8). Instead of using this data, being produced to service the demands and reporting requirements of the central government, as well as NGOs and multilateral programs, for their own ends, the hospital logged these data in the officially required books and rarely looked at them again.

9.7 Coping with Maternal Deaths Through Narrative

Several nurses repeatedly told me they thought the women who died primarily came from far off villages and arrived in such a poor state that their deaths were not so much attributable to the hospital or the ward as opposed to the community or family from which she came. Out of curiosity, in May 2015 I went back to the records of all the deaths that had occurred in 2014 and 2015 to see from which districts or villages the women had come. In direct opposition to what the nurses had told me, the majority of the women who died at the hospital had listed their home as someplace within the urban district in which the hospital is located. Some cases were of women who had traveled long distances to arrive at the hospital but these were rarer. There are a number of ways to read this line: 1) They actually believed this to be true; 2) In reframing deaths as women who were unable to be saved by the time they arrived, the nurses effectively divested themselves of responsibility; and 3) The nurses used this discourse as a way to alleviate the personal emotional burden that was the result of being unable to prevent women's deaths due to systemic constraints, lack of resources, and support.

Common responses that emphasized the fact that women arrived already dead tended to follow this comment from Nurse Peninah who flatly stated, "Let's say, for this year maybe, since we have started in January, we have had only two deaths. And a lot of them that happen aren't of here. You find there are referrals, they come from far away and they come here and they do

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what? They die." While Nurse Rukia went into greater depth with her insistence that these deaths came from afar,

> Rukia: The number of pregnant mothers who are dying, it's decreasing. If you compare with the past, it's decreasing. Another time we, we get deaths, patients are brought, they're not from inside here. Eh. She comes that way in critical condition, you'll do top to bottom but you can't do anything.
> AS: So deaths come from-
> Rukia: They come from the villages, honestly. Those people in the villages, many times they always have the habit of always delivering them there, at the *wakunga wa jadi*, they deliver them there, if they deliver they see that they have been defeated…I mean, they are there, it's too late. And those, a lot of times, we get cases like that.
> …
> AS: OK, why do you think- even if the number is decreasing, why do you think women continue to die here, along with babies?
> Rukia: The reason is just that. People come in late condition. Mhm. That is, pregnant women come in very bad condition. Eh. People die. Maybe another thing, maybe another time she has come with a severe infection, you can use an antibiotic and whatnot, but it's not possible because she is in the severe [stages] of the disease. You see, yes? They die.

Throughout the conversation, Rukia resolutely denied the idea that women died because of the care being offered on the maternity ward. There were other nurses, like Nurse Halima, who were much quicker to admit that there were serious delays or a lack of emergency care at the hospital. When I asked these nurses what the hospital would need in order to continue reducing the number of maternal deaths, they focused on concrete suggestions and the locus of control was very much within the hospital itself, though not often actually centered on the staff of the maternity ward. Their responses tended to focus on supplies and medications, or in the Halima's response, the need for better triage at the OPD because the hospital lacked an emergency department.

There were, without a doubt, times when women arrived in very poor condition due to long delays seeking help, finding transportation, or being referred to the regional hospital. However, many times these deaths were not even counted in the number the hospital recorded, as explained earlier in this chapter. Therefore, the nearly thirty deaths I was mentioning to the

nurses did not include those of these other women whose deaths had not been recorded at the hospital. Therefore, the narrative itself must be examined in order to understand how the nurses were employing it.

Halima described her process of acclimating to the maternity ward and how she learned more about how deaths were occurring once she was assigned to work on maternity. Halima said,

> …I was feeling really sad. Fine, after that, I was moved here to maternity. [I] came to see, to discover more. The deaths that happen, here, here at this regional hospital are few, I mean those that are caused [by things] here, and they die here. And those, those that occur, I'm always sad, but many of the deaths, really they come from the villages. Now, there in the villages, I don't have the ability to do anything, to go and do what? I don't have anything I can do.

She remained pragmatic about the situation, framing the deaths of the women coming in poor condition from the village as those over which she had no control and, therefore, she tended to not feel quite as bad when confronted with one of those deaths. Halima's explanation suggests that, in addition to removing the locus of institutional control and responsibility from the regional hospital, the nurses might also have been using this narrative of "already dead" women in order to help lessen the more personal burden of these deaths. The fact that no one at the hospital made data available to the ward staff or reported on the quarterly or yearly number of deaths in a venue that was open to all staff members allowed this narrative to continue in the maternity ward. The continued presence of this narrative made it easier for the maternity ward staff to remove themselves from accountability for the deaths that occurred and simply continue to hold the districts, or individual women and their families, responsible for the woman's death.

The fact of the matter was that the vast majority of the deaths in 2014 and 2015 were of women who listed their home residence as a location within the urban district, immediately surrounding the hospital (see Appendix D for maps). Table. 9.1 at the end of this chapter

indicates from which district each woman came. Fully half of the deaths, 17 of 34 on which I had data, were of women who came from within the urban district. This means that transportation and bad roads, long distances, and access to facilities were not the causes of these women's deaths. There were, oftentimes, other delays that slowed a woman's arrival at the regional hospital but the truth was that these women were not coming from the far reaches of the region; they were from the hospital's own backyard.

9.8 Self-Reflection and Remembering

When I first arrived on the maternity ward in February 2014, there was a spate of deaths in my first month. To me, it felt as though I could barely process one death before another woman died. I was still trying to gather the information to reconstruct the trajectory of the first woman's demise when another would arrive and subsequently die. It felt as though it was a veritable flood. However, the nurses only once ever let on that they too were moved by the number of deaths on the ward and, in fact, were sometimes deeply affected. As an outsider, it more often appeared as though the nurses were barely touched by the deaths of women and even less so by the daily deaths of neonates. In interviews, we discussed why it might look like, from the outside, that the nurses were unaffected by these deaths when, in actuality, they told me they were all pained by the deaths of women on the ward, as well as the deaths of the babies. Their responses generally coincided with the responses from the two nurses below:

> Nurse Sokota: Meaning, that now you, there's that sympathy and empathy, right? A nurse shouldn't, you know, shouldn't be really sad, to the point that…[chuckles] well therefore you can be sad, alright, finish with that mother, continue with another. Therefore, it's not that maybe you've left one mother and continued with another, maybe you're not hurt, really you're hurting. I don't show a lot…[because] the women will say the nurse has started to cry tears on the ward, now you, you're not a nurse. You see?

> Nurse Peninah: Yeah. So it is always which? You should wear the shoes of that patient. It's empathy. Usually empathy, I don't know, sympathy, one of those. Therefore, yes, the patient; when you are said, don't show her a lot, that sadness to take her there. If she

loses the desire and you, you lose the desire, there's nothing that can be done to help. Therefore, you reach a time a person just takes that, honestly it hurts a lot. But now, this mother, let's not show her so much that even I am hurting then she herself won't be able to cope "[with the fact] that my child has died, the nurse too she is sad, therefore you find there isn't any help." Therefore, a person should be hurt but she stays there at that time to help that other person who is doing what? Who has the problem.

In both their responses, Sokota and Peninah described the ways in which they could feel bad for the woman, or her family, and experience sadness but outright demonstrations of this sadness were antithetical to the nurses' needs for professional comportment. Crying in front of patients could undermine their professionalism and expertise, while also closing the distance between the women and their providers, an undesirable outcome that could, in other encounters, undermine the nurse's authority in the ward setting. Instead, the nurses saved the outward manifestations of the internal upset for other venues and more domestic, as opposed to professional, spaces.

Additionally, the nurses primarily ascribed to the idea that pregnancy is not an illness. Due to this thinking, pregnant women were not expected to die when they came to the hospital for care. This was different from patients on some of the other wards, as Nurse Happy explained,

> Honestly, it's really painful. Because a pregnant mother, honestly- it's not good if she dies. Nor her baby. Because a pregnant mother isn't sick. It should be that a mother comes and she leaves safely. Therefore, this death, it takes us by surprise. Honestly, I worked on ward 10 [male medical ward] and there they were dying just normally. We say, 'this man came with his illness, it wasn't possible [to heal] and he has die.' But for a pregnant mother, it really hurts, it hurts a lot. It's painful for us, all of us nurses, because even if I wasn't on duty today, like today I'm resting at home, there [at the ward] if a death happens, I find that the news spreads, you're called on the phone, 'Today we have a death!' So, it surprises every person.

Repeating the idea that pregnancy is not a condition from which a woman is expected to die,

Nurse Aneth said,

> Of course, I can't feel good. It's a death that, ok, she died, and other people, on other wards, they died. Fine. But that death [of a pregnant mother] is one which is somehow exceptional because if you tell me a man on ward 10 [male medical] died, a woman on ward 8 [female medical] died, obviously s/he came and s/he was sick, indeed that's the reason s/he came to the point of being admitted. But pregnancy is not a sickness.

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Pregnancy is not an illness. We usually depend on the fact that this mother comes when she's pregnant, she gets her baby, and she returns home. Without worrying about where she got [the baby]. Therefore, it's- of course, I always feel bad. It's not nice. And you think about a lot of things. Yeah. You really think about a lot of things. You will think this, you'll think this, you'll think this. But enough, it has happened.

The fact that the nurses remarked upon the deaths of women whenever they happened, and called each other on the phone to spread the news of a death, suggested that the deaths were still a relatively rare occurrence even despite the comparatively high numbers of maternal deaths in the hospital. The deaths also took nurses by surprise because of the sometimes sudden onset of complications and the woman's rapid demise, which differed from other wards on which patients might linger, suffering from the effects of a chronic or slowly progressing condition.

While they clearly were impacted personally by the deaths of women on the ward, the nurses found it important to maintain this professional comportment in front of the patient and her family (in the case of a baby's death, chapter 8) or in front of a deceased woman's family, in the case of her death. The nurses saw their stoicism in the face of a tragedy as part of demonstrating to the patients that they were in control of the situation and they could be the ones on whom to rely for continuing care. The nurses told me if the patients saw nurses who had broken down and were crying in front of the patients it might undermine the patients' faith in the professionalism and skill of the nurses. The good nurse suppressed her own feelings and any outward show of them until a more appropriate, private time. Nurse Peninah said, "People have become used to it because every day- let's say, what have people gotten used to? That every day you encounter deaths? You see people have died, babies have died, but... [when] they [the nurses] are sitting … alone, for example like there in the tea room, they start 'why did this baby die? This baby, why did he died?'" This reflection that the nurses mentioned most often occurred

while they went about their daily activities and could follow them home as they continued to think on the events that had transpired and what they might have done differently.

During the interviews in April and May 2015, I pointedly asked the nurses how seeing these mothers die on the ward made them feel and if they had any type of coping mechanism. I was also interested to learn if their experiences with a relatively high number of deaths caused them to ever question their line of work or their desire to continue working in maternity care. Nearly every nurse related at least one account of a woman for whom she had been caring who had died. Nurse Faraja told me in vivid detail,

> I feel really bad, you can even cry. I mean, if you see a mother, she came here, she was speaking well and then she dies because she doesn't get blood, PPH, or her condition just changes, it really hurts a lot. I remember there is one day when all the nurses that were on shift, we cried. One mother came, she was in the second stage. She was a grown woman, with her health. So, anyway, she was delivered, she pushed out the baby. I mean, in the act of just pushing the baby, she straightened out right there and died. And she had come talking a lot and really we remained there asking ourselves what was this thing. OK, there was another day, she came, one sister, now and her child is the same as my daughter Ester. It was her first pregnancy, she had come and stayed two days on the ward. The third day her contractions increased and she gave birth to a baby girl who weighed 3.5kg. After that, we were talking with her like normal. Now, she got PPH, yeah and there was no blood in the blood bank, no relatives. Well, we were talking with her and then she said, "Nurse, I'm feeling tired." She had been sitting drinking tea so I told her to lie down. I say, that lying down, it was silence right away. It hurt us so much and her baby was crying so much, like she knew her mother had died. So that was last year in March. Her baby is still there, she's called Enjoy and now she's learning how to walk.

Nurse Rachel told me,

> Honestly, I always feel bad because it has even happened to me that one night I was on the night shift and I was working with a lot of new people [nurses]. Honestly, I struggled with that mother from admission until she passed away and it was during my shift [that she died]. Honestly, I lost the desire to work. I felt totally like I couldn't do work after that mother died. Then she died around the time of midnight therefore I felt the work was really hard until it came to be 6:30 am [end of night shift].

In their explanations, it is clear that these cases often stuck with the nurses and caused them to ruminate on the details of the woman's care and illness, or the events leading up to her death.

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Many nurses explained this was their coping mechanism for coming to terms with the deaths of women on the ward. Rachel even suggested that she might lose the motivation to work due to being preoccupied with the details of what had gone wrong and emotionally frustrated due to the lack of information she had and the lack of ability to more effectively aid the woman in order to save her life. The nurses consistently worked in this same environment that hobbled along as best it could. For most women, who did not have any complications, they were able to give birth and leave the hospital without any adverse events; they received care that was *good enough* and the system operated similarly. However, it was in the cases of complex problems or emergencies that the fault lines and weaknesses that were always present, on the maternity ward and throughout the hospital, became obvious, resulting in death.

The nurses nearly all told me they tried to *fuatilia*, or follow-up, when they saw there had been a death. It seems as though this task was mostly done in the case of a stillbirth or neonatal death, but the nurses nearly all mentioned following-up as what they did in the wake of any death. In talking about maternal deaths, Nurse Rachel said,

> Me, I always really try to do that follow-up, like what did I miss? What mistake did I make? What should I correct? Maybe for that mother, what should I have given her so that she didn't die. Like that day I was supposed to give her hydrocortisone but there wasn't any. I sent a person to the pharmacy but there wasn't any, but I was feeling like if I could give this mother hydrocortisone it would be able to support her. I mean, I really worried about all her treatment but it wasn't possible (imeshindikana). Therefore, another challenge for maternity is supplies… it should have all the important medications and everything that has to do with care, I mean, we would at least be able to save lives.

One important linguistic note, in many of the original transcripts the nurses used the word "*imeshindikana*," which I have translated as "it was not possible." However, this translation does not effectively capture the nuance and the sense of the original Swahili. In the original Swahili construction, the sentence does not indicate a subject or responsible entity. This is perhaps indicative of another move on the nurses' part to remove the locus of control from themselves

and onto some external entity be it chance, bad luck, the will of God, or some other force. I prefer to think this turn of phrase reflects the general state of the system. It was not something such as luck that prevented the woman's life from being saved but, instead, it was the broken healthcare system itself that impeded her treatment and possible recovery, together with the bureaucratic, under-resourced environment of the hospital. Rachel specifically mentioned the poor availability of supplies which had caused her to be unable to resuscitate the woman on her deathbed.

Nurse Aneth, when talking about the deaths of babies, started by saying, "Mm well here, really the thing to do is- you know, a lot of people, these questions that you're asking me, I don't think that my colleagues, how they answered you but I think a lot maybe have answered you theoretically. She just thinks, 'I can do- I can do-'but that thing, has she ever done it even once? The thing that you do, first you follow-up." She went on to give me an example of what she would do to try to make sure a woman got some answers about why her baby had died in utero, including suggesting testing for the woman and her partner. This explanation about following up was nearly universal for the nurse with whom I discussed this topic. Problematically, because most of the nurses were not included in the maternal death audit meetings, most often they did not even have the opportunity to go over the case of a woman's death with the physicians or their fellow nurses. While they were left ruminating on the deaths to which they may or may not have contributed, the physicians and administrators were holding maternal death audits every seven or eight months, including only a couple nurses from the ward, and not returning a report of the results of the audit to the full ward staff. In the absence of answers or other mechanisms for discussing or debriefing cases of deaths, the nurses almost universally told me that their coping strategy was to go over the details of the cases with themselves, in their heads. One of the older

nurses did also mention prayer and her faith as helping her to cope with the deaths that she saw.

9.9 Access to Information

More generally, access to information was a chronic problem for the nurses in the context of the Regional Hospital. One section of questions in the CWEQ was centered around assessing access to information. This section had the lowest average score of all the survey sections, resulting in just 2.08 out of 5. The nurses' responses to the questions in this section clearly trended towards "no knowledge" or very little knowledge, 2. The nurses indicated that they did not receive the amount of information that they would like, including that which was related to the goals of the hospital, as well as their own ward. Additionally, they indicated, in question 7, an almost complete lack of information related to salary and, in question 8, little to no knowledge of how other departments at the hospital perceived them. I include these results here in order to further demonstrate the poor communication and feedback mechanisms that more generally pervaded the hospital. The outcomes and action plans from maternal death audit meetings were no exception to the rule of poor communication. Only nurses who were more senior or had leadership duties tended to participate in the audit meetings and had, more generally, more access to information about hospital policies, procedures, goals, and values.

SECTION 2: ACCESS TO INFORMATION

Legend: ■No knowledge ■Little knowledge ■Some knowledge ■More than some but not a lot ■Know a lot

Y-axis: NUMBER OF RESPONDENTS
X-axis: QUESTION NUMBER (1–8)

How much access to information do you have in your present job?

1 = No Knowledge	2	3 = Some Knowledge	4	5 = Know A Lot

		1	2	3	4	5
1.	The current state of the hospital	1	2	3	4	5
2.	The relationship of the work of your unit to the hospital	1	2	3	4	5
3.	How other people in positions like yours do their work	1	2	3	4	5
4.	The values of top management	1	2	3	4	5
5.	The goals of top management	1	2	3	4	5
6.	This year's plan for your work unit	1	2	3	4	5
7.	How salary decisions are made for people in positions like yours	1	2	3	4	5
8.	What other departments think of your unit	1	2	3	4	5

Fig. 9.1 CWEQ Access to Information results

In this context of little to no information about the details of women's cases or the results of the maternal audit meetings' analysis of these cases, it is easy to imagine the ways in which nurses could become demoralized and lose motivation as they continued to encounter the deaths of women and babies on a regular basis. Without the necessary information to confirm the ideas they had worked out in their mental walkthroughs of the cases, they were less able to act on their

ideas for improving outcomes in similar cases, even if they had come up with practical and concrete ways to do so. The poor communication back to the rank and file on the maternity ward after these audit meetings was another way in which the institutional environment of the hospital inhibited efforts to improve care and prevent maternal deaths. Nurses did not change their behaviors because the administration did not empower them with the necessary information to affirm their individual analyses of the problems that led to women's deaths. The lack of communication in these cases also suggests the hospital and regional health leaders were primarily using the meetings to fulfill biobureaucratic requirements and considered the purpose fulfilled when the paperwork was complete. This perspective created no expectation for actions beyond the bounds of the paperwork, which was why the information stopped at the administrative level. These results of the audit meetings were yet another example of the ways in which top down approaches to solving complex health service challenges were ineffective in this setting.

9.10 Caring for the Carers

In a meeting on disrespect and abuse in maternity care held in Dar es Salaam in July 2015, one of the presenters, Dr. Brenda D'Mello, talked about "caring for the carer." In a large hospital in Dar es Salaam she had been working to implement a program for the nurses working on maternity to be able to discuss cases and express concerns, frustrations, and challenges within their environment, emphasizing "no shame, no blame, no name." Giving the nurses a formal mechanism for voicing their struggles with grief due to encountering deaths or due to working in high pressure/high volume work environments was one way in which Dr. D'Mello and her teams have been trying to grow hospital staff support programs. At the Mawingu Hospital, as of the end of 2015, there were no such support mechanisms for the nurses and physicians working on the

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maternity ward. In the absence of formal avenues for coping with the stress of seeing women and babies die on a regular basis, combined with the under-resourced work environment, and overall poorly functioning healthcare system, the nurses often comforted themselves through narratives of hopeless cases, women arriving already dead from far off villages. The nurses comforted themselves by repeatedly examining the trajectory of a woman's care and subsequent death in the hospital, once again turning to narrative as a way of creating order and understanding in these tragic experiences.

The hospital missed out on another opportunity to care for its employees as they continued to confront the deaths of both women and babies. The administrators could have improved communication in order to provide the nurses with reassurance that a death was not a direct result of their care or confirmed the nurses' individual assessments of what had gone wrong. While the nurses sought to do what they could in the event of an obstetric emergency, the institutional forms of care—supplies, supportive supervision and mentoring, protective equipment, timely and responsive communication—all continued to be lacking, further demoralizing and demotivating the nurses who were left with narrative and their religious beliefs as their coping mechanisms.

9.11 Conclusion

Maternal death audit meetings are another tool, much like the partograph, that has been constructed and conceived of by people outside Tanzania and which is meant to aid providers and administrators as they work to continue reducing maternal deaths in their settings. And yet, much like the partograph, the audit meetings rarely took the ideal, immutable form they were meant to have. Due to long periods of time between the meetings, and due to the difficulty of gathering together busy, overworked administrators, the meetings threatened to become so long

that the women's cases discussed towards the end of the meeting often received only cursory attention. As the smells of the waiting rice, chicken, and chapati wafted over to the meeting table, the participants rushed through the details of cases, attempting to rule out a death as related to or cause by pregnancy and simply advising each other to copy the details of the action plan from previously discussed cases. In this way, it often felt that those present were going through the motions of the audit, fulfilling accountability and data generation requirements from the Ministry of Health and Social Welfare, but not meaningfully devising ways to change practices in health facilities throughout the region. The administrators, nurses, and doctors sitting around the table seemed to be engaging in a performativity of the meeting as bureaucratic requirement, as opposed to a tool for changing their ways of practicing care and serving pregnant mothers. Lack of reporting on activities undertaken since the previous meeting reduced the accountability of administrators and enabled them to continue on with business as usual, reinforcing an opaque system and contributing to the general feeling that any decline in maternal deaths was simply attributable to chance (or the late arrival of data), as opposed to replicable change and improvement.

Overall, while the Rukwa region was, on paper, meeting the demands of the Ministry of Health, and other organizations, for surveillance and reporting of maternal deaths, the fulfilled bureaucratic requirements belie the brokenness of the region's maternal death audit system. This is one tool that could, relatively easily, be utilized to much greater effect in the region. While I was present in the meetings, I did make suggestions for more appropriate outcome indicators, recommending ways to survey women in order to gain a true picture of the quality of education they were receiving at the antenatal clinic, for example. However, my suggestions were often met with resistance, particularly from the district reproductive and child health coordinators who

accused me of not knowing what care really looked like in village dispensaries. When I

mentioned this reaction to my comments, a friend told me she felt it was most likely because

those administrators did not want to admit to being responsible for the shortcomings of care in

the dispensaries, nor did they want to make more work for themselves by surveying women

instead of simply posting "schedules of antenatal education" in clinics and dispensaries. The

status quo certainly seemed to serve some of the administrators well and they were not quick to

look for ways to increase their workloads by implementing new programs, policies, or even

through restructuring maternal death audit meetings in order to incorporate reports on progress to

date. Other administrators talked a good game but were perhaps not directly in control of

implementing other changes. They were forced to rely instead on subordinates who worked in

peripheral areas of the region, often in places far from their families, without amenities such as

electricity or a community of similarly educated peers. It is no wonder then that such

administrators were unable to implement all the changes suggested or alluded to during the audit

meetings. However, what this means is that every subsequent meeting will see the emergence of

the same barriers, the same challenges, gaps, and pitfalls as have repeatedly been identified in the

past. The momentum of the system is more in the way of maintaining the status quo than in favor

of radical change for improvement.

Table. 9.1 Deaths that occurred during the field period.
I have also included others from 2014 that preceded my arrival. Some women's case files went missing before I could record the details of what happened. These deaths included those that occurred on the maternity ward, as well as the few that occurred on the gynecology ward, women who were less than 28 weeks pregnant or had been admitted post-abortion.

 Key
G= Gravida
P= Parity
**= Ruled not a maternal death during the maternal death audit meeting but upon consulting an obstetric pathologist in the United States, Dr. David A. Schwartz, we determined, based on the information available, the renal failure was a result of her pregnancy, thereby qualifying her death as a result of a pregnancy-related cause
***= Ruled not a maternal death during the maternal death audit meeting

APH= Antepartum hemorrhage
CCF= Congestive cardiac failure
DIC= Disseminated Intravascular Coagulopathy (causes blood to clot excessively and then leads to an inability to clot, leading to severe bleeding)
Dx= Diagnosis
IUFD= Intrauterine fetal death
PPH= Postpartum hemorrhage
PV= Per vagina

Note: It is possible there was a low number of deaths from Nkasi district because critical cases from that district were referred to the district hospital, in Namanyere, before ever making it to Mawingu Hospital. For several years the Namanyere hospital has had full CEmONC capabilities, with working theater and physicians. The hospital is also partially supported by religious organizations.

	District	Number of Deaths
†	Sumbawanga Rural (DC)	8
*	Kalambo	8
§	Sumbawanga Urban	17
◊	Nkasi	1

DATE OF DEATH	FROM	AGE	G	P	CAUSE OF DEATH	OTHER COMPLICATIONS
1/8/14	NO DATA	--	--	--	--	--
1/13/14	Kisumba Kasote*	35			APH abruptio placentae	Cardio pulmonary arrest
2/7/14	Isesa§	25			Dx as anemia??	
2/16/14	Kizwite§	35	2	2	Malaria, Pulmonary TB	Stage IV HIV/AIDS
2/23/14	Samazi*	21	1		Eclampsia	
2/25/14	Edeni§	22	3	2	Hypovolemic shock	Incomplete abortion
2/27/14	Chanji§	23	1	0	?	Heart disease? Anemia?
3/4/14	Kasekela†	26	3	3	Anesthetic complications, aspiration	
3/5/14	Malangali§	23	3	3	PPH, surgical complications	Anemia, blood supply
4/6/14	Mkole◊	23	2	2	Anemia, CCF	
4/9/14	Katusa (Swanga town)§	24	2	1	Suspected embolism	
4/19/14	Malolwa†	30	5	5	PPH, retained placenta	anemia
4/27/14	Mwimbi*	34	6	5	IUFD, ruptured uterus	Late referral, DOA
5/30/14	Madibila/Ilolesha*	37	10	9	Obstructed labor, IUFD	
6/5/14	Mtimbwa§	30	?	?	? Suspected sepsis	Malaria suspected
6/9/14	FILE MISSING	--	--	--	--	--
6/23/14	Kifone*	22			Malaria in Preg	
7/1/14	Chelenganya§	24	3	3	Sepsis	Native drug intoxication
7/12/14	Kizwite§	20	1		Embolism	
7/31/14	Katonto†	20	1		PPH, eclampsia	Anemia
8/12/14	Mazwi§	26			Abortion, Septic shock	
8/14/14	Laela/Mshani†	40	7	6	APH, PPH	Anemia, shock
9/21/14	Lowe†	18	1	0	Sepsis	
9/22/14	Sumbawanga Asilia§	30	7	6	Severe anemia, PV bleeding	
9/24/14**	Kizwite§	35			renal failure	
10/12/14	Lua/Maomba/Bakwata RC§	19	2	1	Malaria in preg	
10/20/14	Legezamwendo*	33	7	6	APH, ruptured uterus	Anemia
10/22/14***	Legezamwendo*	32			Intestinal obstruction	HIV/AIDS Stage 4
11/20/14	Kilimahewa§	28	3	2	APH, abruptio placentae	PMTCT 1
12/31/14	Sandulula†	21	2	1	Embolism??	
2015	**From**	**Age**	**G**	**P**	**Cause of Death**	**Other Complications**
1/26/15	Isesa§	22	3	3	septic shock	cardiorespiratory failure?
2/22/15	Ilemba†	20	2	2	Sepsis? Malaria? Pneumonia?	HIV +
2/23/15	Mpui†	28	3	2	Eclampsia	obesity
3/5/15	Mazwi§	24	1	1	Embolism?	
4/15/15	FILE MISSING	?	?	?	--	--
4/15/15	Isesa§	30	?	?	Hypovolemic shock	
4/17/15	Kanyezi*	36	9	9	PPH, DIC	Local herbs

Chapter 10: Conclusion and Recommendations

10.1 Introduction

  I sat in the hall at the hospital where we normally had the morning clinical meeting. It had been transformed into a festive event hall for the evening in celebration of International Nurses Day, May 12th, Florence Nightingale's birthday, with brightly colored bunting and rows of plastic chairs facing the head table which was covered in various beverages in glass bottles. In the midst of the din from the enormous speakers, I looked around at the hospital staff members, everyone dressed up in evening finery, patterns and colors filling the room. With less than a month left in Sumbawanga, I began to feel like I was disembedding from the maternity ward and the hospital. I had begun interviewing the maternity ward nurses and was feeling humbled and honored by what they chose to share with me and to which they had allowed me to bear witness. While I was absolutely unable to begin to analyze the full complexity of everything I had heard and seen over the preceding fifteen months, I did feel, more than ever, a need to put forth the voices of the healthcare workers who were so often demonized in popular press in Tanzania or written about as the opposition in women's stories of interactions and experiences during pregnancy and childbirth. Instead, it might be more appropriate to think of them as a sort of antihero; unkind at times, yes, selfish, surely, but also with the strength, tenacity, resilience, and ingenuity that kept a system moving along. All the hospital staff members were undeniably human, with all the attendant needs, desires, flaws, and aspirations. I hope that I have shown some of their individual characters while also demonstrating the ways in which a system constrained by political economic processes with deep roots shaped their (in)ability to enact change or provide care that fulfilled both the technical and emotional needs of their patients, colleagues, and subordinates.

Here, I briefly put forth some conclusions of this research and its contributions to the field of anthropology, as well as outlining the work's implications for further analysis and investigation. I have also included a section on recommendations for policy and administration across the hospital, district, regional, and state levels. Some of the recommendations are those I presented at a Hospital Management Team meeting in May 2015, while others are products of subsequent analysis after returning to the United States.

10.2 Putting the Care Providers Back into Healthcare

While others have sought to put the "M" back in MCH (maternal child health) (Rosenfield and Maine 1985) or the "mother" back in Safe Motherhood (Berry 2010:190), I started from a different point entirely because, as Berry (2010:192) points out, interventions have come to target improving the skills of biomedical providers. These people are the ones who "would encounter the failing pregnant, or birthing bodies" (Berry 2010:192). But while anthropologists have been busy conducting research with women and their families, exploring the meanings of pregnancy and birth, they have had a tendency to flatten out healthcare personnel, separating these providers from their social connections and their broader political economic milieu, even as researchers were working so hard to explicate these very factors and their influences in the lives of pregnant women. The direction of policy has not shifted to be more woman-centered, if anything the new Sustainable Development Goals and strategies for Ending Preventable Maternal Mortality focus even more explicitly on healthcare facilities, promoting systems approaches to improving care and reducing deaths (WHO 2015a). And yet, there is still much work to be done in order to build more comprehensive and accurate understandings of the ways in which healthcare providers are just as embedded in networks and

systems that fundamentally affect their care practices and what they are able to offer to their patients.

In September 2016, *The Lancet* published a series on maternal mortality that focused on "the mismatch between burden [of maternal death] and coverage" of biomedical healthcare services for women and girls. As part of this series, Lynn Freedman (2016:4) writes, "this mismatch exposes something else as well: a dangerous disconnect between the way the global health community has framed problems, exposed strategies, and pushed solutions, and the lived experience of people and providers" and she calls for a greater range of empirical data which will be able to "speak a different truth to power." That, then, is what I have sought to do here by demonstrating that even though policy planners or experts at the WHO, in charge of designing recommendations for best practice, and the nurses and doctors at Mawingu Hospital share a common belief in the powers of biomedicine, there is a wide gulf separating them. Freedman goes on to state, "the point is not that global strategies, evidenced-based guidelines, or high-level monitoring and accountability initiatives are inherently wrong or unnecessary. But when they consume most of the oxygen in the room, drowning out voices and signals coming from the ground, they distort both understanding and action" (Freedman 2016:5). Here I have presented an antidote which has made clear many of the forces behind deviations from WHO or Tanzanian Ministry of Health guidelines and initiatives. I have also sought to demonstrate the ways in which much broader systems have, in fact, necessitated these deviations and continue to incentivize accounting for these deviations over actually improving care in significant and lasting ways.

10.3 The Complex Reach of Scarcity and Imperfect Care

The scarcity with which nurses and doctors struggled everyday generated an expectation that ideal care was nearly impossible to provide. This environment led to reduced expectations that providers and hospital administrators could solve clinical or systemic problems, constrained as they were by a system that currently, and historically, makes it so difficult to do so. Acting within a complex of demands for data collection and metrics, combined with the scarcity around them, improvisation and the justification of deviation from guidelines became a fact of everyday life. Providers shifted their efforts from providing care to accounting for deviations from ideal care, which was set out in guidelines and standard operating procedures generated in other parts of the country or world. Good outcomes often happened by chance and could not be replicated, defying the bureaucratic policies and procedures in place meant to standardize, which instead resulted in uneven, unpredictable results (Gupta 2012). An accounting culture, focused on justifying deviations from high quality care or collecting data, replaced a caring culture, one in which both patients and hospital staff members received the care they needed in order to survive and thrive.

The dissertation demonstrates the ways in which biomedical institutions characterized by a level of scarcity that permeates all aspects of the healthcare system are frequently unable to break routines or implement new initiatives to improve maternal healthcare. Situated in a global and national health complex that emphasizes data collection, healthcare providers find themselves constrained by an "accounting culture," as opposed to working in a "caring culture," like the vision presented to them during their education and training. Nurses, in particular, also desired to be part of a "caring culture" on the institutional level in which administrators demonstrated their care for and appreciation of nurses. Nurses particularly wished for this caring

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culture, for institutional care, when they were putting their own bodily and professional integrity on the line in the course of caring for pregnant women during emergencies, exposed to potentially infectious bodily fluids without the necessary personal protective equipment. Nurses provide the vast majority of the care to pregnant women but had access to the least amount of power within the hospital hierarchy— their efforts often were undervalued and overlooked. They used alternative means to try to gain certain outcomes or resources for their patients (chapter 8), drawing on informal routes to influence or social capital through manipulating documents or other means, such as strategically wearing their uniforms in public, non-hospital settings (chapter 7). An institutional lack of care contributed to the continued production of nursing care that gave the appearance of lacking motivation and compassion as nurses said they were demoralized by their lack of visibility within the hospital structure. The care nurses were able to provide and the care practices in which they engaged were also influenced by the demands of the personal lives, which they were not always able to leave behind them when they walked out the door for work. Interactions with hospital administrators conditioned nurses to be secretive and self-regulatory when they made mistakes in care, further producing an environment in which open discussions about care practices and nurses' needs were not discussed.

Healthcare providers at all levels were forced to modify, to improvise, and cut corners so that women get at least some care, care that is good enough (Mol, Moser, and Pols 2010:12). The constraints of their work environment produced conditions that were not amenable to quick action or early intervention; the nurses and doctors came to see early, efficient intervention as a near impossibility. In other cases, global guidelines about respectful maternity care might hold nurses in violation of the idealized forms of practice. In their lived experience, nurses believed they were indeed caring for women, engaged in a set of actions and practices—yelling, hitting a

woman— that they have employed solely for the purpose of making sure a woman's baby emerges alive; what good are kind words and comforting touches if a woman's baby is stillborn? Yet, patient trust in the system was undermined by these negative interactions which they did not always fully understand. Women entered the hospital setting after a lifetime of gender inequity and differential access to education, respect, and decision-making powers. They came to the ward conditioned by their own stories, and those of other women, about biomedical providers, which too frequently centered on cases of neglect, negligence, extortion, or corruption. Collective memory recited stories of blood being sold to families when a life was on the line, or village nurses telling families they needed to buy gloves and then magically producing a pair for sale, or conjured images of drivers carrying pregnant women's lifeless bodies back home, limbs strapped to limbs, to keep the corpse on the back of the motorcycle.

In villages, on the hospital ward, and on the national stage, Tanzania continues to play out the battle first recorded in the colonial era: where is the proper site for childbirth— the home or the hospital? While global public health studies and interventions have disavowed the skills, knowledge, and social roles of local indigenous midwives, they have uncritically accepted young, barely trained, healthcare providers of the biomedical tradition. Because it is nearly impossible to predict who will develop a complication during an otherwise problem-free pregnancy and childbirth, the government, and the global community, has adopted the stance that every woman should be under the supervision of institutional biomedical care. In the colonial era, the biggest barrier to allowing all women to give birth in facilities was a lack of trained personnel and infrastructure, buildings, that would not accommodate so many women. Nearly 80 years later, the same problems continue to plague the Tanzanian government, whose push to send women to institutions outpaced its recruitment and support of the necessary providers.

Criminalizing home birth by charging fines to those who do not manage to give birth in a health facility, due to accident or intent, serves no purpose other than fostering additional ill-will in communities with already strained relations between women, their families, and healthcare providers.

Governments and NGOs alike seem to be looking for quick fixes, for the magic bullets that will stop the more than 8,000 maternal deaths that occur in Tanzania every year and send shockwaves into families and communities. Yet, maternal health is a systemic problem and when a woman dies in a health facility, her death is a culmination of all the structures that have influenced her life to that point, as well as a product of the complex, bureaucratic, and socially tense environment of the facility itself. Sending ever-increasing numbers of women to facilities that are poorly stocked, suffer from supply chain problems originating at the national level, have inadequate funding mechanisms due to the unequal effects of decentralization, and which systematically perpetrate violence against the staff members by keeping them living in poverty, subject to abuse by superiors, denigrated on the basis of their gender, and kept in ignorance due to poor communication, lack of transparency, and lack of respect, will do nothing to reduce the numbers of women dying. After all, without the supplies and skills, a hospital is just a guest house—full of beds and nothing else; it is, essentially, home.

10.4 Unintended Consequences and Perversion of the System

In the end, each of the chapters demonstrates a different example of the ways in which a system meant to prevent death and suffering can, in fact, result in worse outcomes for women and their babies. Chapter 4 shows that more and more women were accessing biomedical services as the government makes it impossible to access any other forms of care, such as the services of *wakunga wa jadi*, or TBAs. Through discourse and attendant regulations that have

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imposed fines on women who give birth outside the biomedical system, the power of biomedicine is instantiated over and over again, effectively creating these facilities as the only safe place for a woman to give birth. However, the increased demand for these services has outpaced the supply of skilled providers and the material goods—medications and equipment—needed to sustain biomedical practice. With the expectation that women will receive high quality care in these facilities, community members were frequently disappointed when their expectations were not met because of a system that could not support the level of demand at village dispensaries. The poor care at these most proximate facilities drove more and more women to bypass them for the services of higher level facilities, such as the Mawingu Regional Hospital. The hospital's maternity ward then became flooded with patients, assisting in more and more deliveries every year yet struggling to keep abreast of the demand with necessary physical infrastructure and human and material resources (chapters 5 and 6). When Mawingu was unable to keep up, women's care suffered, effectively making the safest place increasingly less safe, in an ironic perversion of government and public health goals. Beyond just unintended consequences, the increased demand without the necessary increase in resources made the hospital more dangerous in cases when women arrived without money or relatives and catheters, antibiotics, sutures, or anesthesia were out of stock.

In other instances, the accountability and monitoring systems the hospital and the Tanzanian government put in place to help ensure high quality care that met international standards actually helped to undermine care and was subverted for other, social purposes, as with the partograph in chapter 8, or in order to perform effectiveness through maternal death audit meetings, in chapter 9. Often, these monitoring or accounting techniques were imposed from above, by NGOs or the central government, and the healthcare workers on the ground at

Mawingu tried to make space for themselves and their lived realities in between the lines of the graphs and in the blanks of the forms and log books. In the end, the data making its way to the central government was highly unreliable, produced with important social histories that were concealed by the "objective" numbers on the page.

This evidence suggests that institutionalizing birth is not, in and of itself, the solution to reducing maternal deaths in any setting. Clearly, many of the ways in which the system in the Rukwa region and Mawingu Hospital was undermined and perverted, to the detriment of high quality, guideline-compliant care, concerned a level of scarcity that was deeply engrained and entangled with the rapid expansion of biomedicine in Tanzania. Through efforts such as reducing the training time for Enrolled Nurses the government sought to improve services by increasing the absolute number of skilled providers. However, the real result was the proliferation of new graduates who had official certificates, book knowledge, and little else in the way of problem solving skills or training in handling obstetric emergencies. Quick fixes such as that continue to undermine the system and care for women. The government must move beyond rhetoric and draconian punishments that prevent women from plural forms of care when what they propose women use instead systematically disempowers both women and those healthcare workers meant to be assisting them and protecting their health and lives in times of emergency. Mawingu itself was a flawed institution, struggling with competing demands and the proliferation of government-imposed bureaucratic guidelines but, it found itself in a much more broadly dysfunctional system, the country's healthcare sector as a whole. Within this context, the individuals at the hospital, and the hospital as an organization, sought to make due and provide care that was good enough. Pervasive scarcity often undermined their efforts to improve maternal health outcomes but, until the central government prioritizes solving supply chain

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problems, and improving the candidate pool for nursing training, for instance, hospital birth with remain an incomplete solution to the problem of decreasing the deaths of pregnant women.

10.5 Limitations of the Study and Implications for Further Research

In the future, it would be useful to examine hospitals within Tanzania that have succeeded in significantly improving the care they are able to provide. In a comparison with lower resource settings, or those hospitals with worse outcomes, new variables or lost cost changes might become clear. The findings from the current project reveal a number of avenues for further research, particularly related to topics such as the role of NGOs on maternal health and healthcare worker retention. Additionally, the research findings from Mawingu Hospital may not be generalizable to hospitals in other, more urban or higher resource settings, even within Tanzania. The specific regional identity of Rukwa also influenced many of the events that occurred, as well as the development of biomedicine in the region. Therefore, in other regions, the trajectory and specific challenges of similar institutions, are bound to be different, with regionally particular implications for maternal healthcare.

This research has a wide variety of implications for the study of institutional dysfunction across sectors because many of the variables—communication, bureaucracy, disciplinary procedures, routinization, motivation, staff morale—are common to many types of complex organizations. Better understandings of the ways in which lower-level workers negotiate institutional hierarchies of power and control can inform research in a variety of settings, for example.

10.6 Recommendations

The following recommendations are based on my experiences at the regional hospital and while traveling to communities throughout the Rukwa region. They have also been informed by

my analysis presented in herein and I have shaped them in ways that may be useful to providers, administrators, and policy makers at a variety of levels both within Tanzania and globally.

10.6.1 Communities

The main challenges in communities were related to poor infrastructure, lack of resources for education, oversight mechanisms for teachers and healthcare providers, and gendered expectations that affected both men and women. In communities that lack formal mechanisms for teaching sexual education in school or other venues, healthcare providers should organize youth education days in which they either attend schools or host informational sessions at the dispensary. A number of organizations have sought to implement "youth corners" and youth friendly spaces in health centers and other facilities, but these activities need to be made available on a wide scale. Along these lines, health administrators could work with community and religious leaders to build support for teaching teenagers, and other unmarried people, about the different forms of birth control that are available. Women most wanted to ask questions about birth control and this is another serious need at the community level. The number one way to prevent maternal deaths is to prevent pregnancies. Providers need to continue to receive training that is comprehensive and enables them to answer questions, suggest alternatives, and inspire confidence in the proffered methods. In addition to better education about birth control, communities and the Tanzanian government need to find ways for adolescents to have access to meaningful and productive life options after the end of schooling. This might mean extending free education by creating a track for students who do not pass the exams necessary for entrance to government secondary schools. It might mean greater access to vocational training in rural areas. The bottom line is that youth need options other than staying at home and farming or being sent to towns to work as house help because, in both situations, teens are more likely to start

exploring sexual relations and girls can become pregnant at an early age, another risk factor for dangerous complications in pregnancy and childbirth.

Additionally, gender norms and ideals continue to influence the ways in which both men and women seek care, interact with each other, and contribute to their households and communities. There needs to be more attention concerning the ways in which masculinity and masculine identity formation contribute to intimate partner violence, demanding workloads for women, and inequity in household decision making in which women often expressed their partners did not listen to their voices even if the women had more information about the necessary healthcare services. Bridewealth is a deeply rooted and highly respected institution throughout society in Tanzania but it appears to have ambiguous effects on gender relations and women's empowerment. More research is necessary in this area to further understand the multiple effects of bridewealth exchange in the contemporary setting.

10.6.2 District Health Administration

The primary need at the district level which the study revealed was the need for better community education about the Community Health Fund (CHF). Community members and village leaders did not know enough about how this program was intended to work and the mechanisms whereby the CHF was intended to improve services. As a result, the entire program is debilitated due to a lack of buy-in from communities with only a very low percentage of households contributing to the fund. This disconnect is a self-reinforcing problem. Community members do not contribute, therefore the dispensary cannot buy sufficient supplies, community members who have contributed find they are still purchasing their own medications in private pharmacies due to the lack of supplies, and subsequently decide to not reinvest in the CHF. The problems related to adequate supplies at the dispensary level create aftershocks that travel

through the healthcare system and are magnified as they move up the referral chain. A lack of supplies and a failure to adequately explain why there are not enough supplies in the dispensary undermines the community's trust in the government healthcare system. These feelings of mistrust are amplified when pregnant women and others seeking care interact with healthcare providers who illicitly engage in activities such as selling supplies or charging bed fees for exempt populations. Improving community education about the ways in which the CHF is supposed to function, and could function with high levels of buy-in, could significantly improve community willingness to contribute, particularly if these explanations are combined with transparent discussions of the funding problems which delay or limit the availability of supplies.

In order to retain more, and more highly qualified, providers in remote areas, district health administrations need to reevaluate their retention efforts. For example, many providers use significant portions of their salary just trying to *reach* their banking town in order to access their funds. In an era in which mobile banking and programs like M-Pesa have significantly reduced the need to access banks, district health administrators should consider more streamlined ways to deliver salaries. Not only is there significant expense related to traveling to banking towns, but many providers in remote areas use these trips as an excuse to spend time in town. Even if they do not prolong their stays, they can still lose minimally one week of work, *every month*, simply trying to obtain their salary. Absenteeism is a chronic problem in these remote locations. Increasing supportive supervision visits to healthcare providers in village dispensaries, particularly those who are newly appointed and lack experience, would also greatly improve morale and has the potential to improve provider skill levels.

10.6.3 Regional Hospital

The change with the potential for the greatest impact is also free. Communication was the number one problem that, if improved, could prevent a host of challenges related to intra-organization strife, mistrust, and employee dissatisfaction with their work environment. Currently, nurses expressed a desire for more information across all levels about the hospital policies, budget, and goals. Administrators used lack of attendance at regular staff meetings as an excuse for the nurses' lack of information about the hospital. Instead of taking poor attendance as a given and subsequently improving communication via other methods, the administrators shifted the responsibility for information-seeking onto the already-overburdened nurses. For any non-confidential information, a simple solution could include just posting budget information on a bulletin board which is accessible to all staff members. Similar feelings of discontent surrounding the issue of continuing education and training seminars. Nurses were generally unclear on the selection mechanisms, which led to rumors of favoritism and unfair selection bias by the hospital leadership. Again, posting the selection procedures in a visible, public location and making rosters of upcoming participants available to the staff members could improve understanding and help decrease the nurses' feelings that the hospital leadership was systematically discriminating against certain wards or individuals.

Also, in regards to continuing education opportunities and trainings, the hospital should foster a culture of reporting back via presentations and other information dissemination activities. While the hospital has, in the past, irregularly tried to implement continuing education activities in which each ward rotated the responsibility for presenting a new topic, this was only taken up by two departments. Unless the Medical Officer In Charge was present and constantly reminding people to present, these brief seminars did not occur. Instead, the Hospital

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Management Team should be responsible for constructing a unified hospital policy regarding the frequency of such continuing education opportunities and expectations for presentations meant to fit this purpose. Aspects of the policy to consider should include: How long should the presentation be? How many presenters will there be? How will staff receive relevant handouts? Who should attend? What are the consequences for not following the schedule or failing to present within X number of days after return from a seminar or training? Once again, this is a low cost change that could improve providers' knowledge and access to up to date information.

Functionally speaking, the hospital should prepare an on-call room for maternity doctors and theater staff members. By having a place at the hospital for a doctor to sleep at night while he is on-call, could significantly reduce the delays in initiating emergency C-sections or other procedures at night, the time when many patients die. Convincing doctors to use this room would constitute a significant change in current hospital culture but would be incredibly beneficial for patient outcomes.

The interviews with the maternity ward nurses and doctors revealed that many providers have had at least one incident in which they were exposed to HIV positive bodily fluids, generally due to a stick with sharps or a cut from a surgical blade. However, even though post-exposure prophylaxis (PEP) is available, the majority of providers did not complete their PEP protocol. Given the fact that providers viewed lack of institutional support for personal protective equipment, and lack of administrative recognition of the risk inherent in maternity care, as major indicators of the ways in which the hospital did not care for or value them, increasing support for PEP should be considered an important priority. Staff members did not follow through with PEP because of the side effects, some of which could have been minimized or prevented if they had had institutional support. This support could have come in the form of allowing the providers to

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have a more flexible work schedule during the course of the PEP treatment, which would allow them to plan and time appropriate meals, for example. Accommodating tardiness as a result of drug side-effects could also help providers feel more able to complete their treatments and ensure they do not contract HIV through occupational exposure. Generally improving the availability and quality of personal protective equipment would also improve interactions between nurses and their patients, as well as increasing nurses' perceptions that the hospital administration cares for and about them and the risks they face in their work environment.

Motivation and morale should continue to be key areas of importance for the hospital administration. Without successfully improving morale, the hospital stands to continue losing many of their most highly skilled providers across cadres. First of all, on the maternity ward, generating and posting yearly and/or monthly goals for improving care could help to anchor staff members and present a visual account of their efforts via graphs or charts of the incidence of stillbirths, for example. The nursing staff, together with the maternity ward Doctor In Charge could design such goals at the first department meeting of the year. The hospital administration could also use the CWEQ survey throughout the other departments in order to assess the nursing staff's perceptions of they work environment and key areas for improvement. On the maternity ward, the survey data suggest that nurses would like to receive verbal recognition for their work, particularly if they successfully managed a difficult case or went the extra mile in providing care. The situation, while I was present at the hospital, tended more towards a reliance on punishment instead of recognition. The only time nurses thought their superiors "saw them" was when they had made a mistake, even if this was only one time out of one hundred. Implementing a more robust system hospital-wide for recognition of high performing staff members might help improve staff morale. However, this system should not include monetary incentives, which, due

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to NGO programs such as those to recruit staff to HIV testing and counseling programs, have created the expectation that all work should be compensated even if it is within the bounds of the employee's normal job description. What has resulted is the expectation that all activities, beyond the most basic nursing functions, deserve extra monetary compensation. Changing this "seminar culture" which permeates other initiatives, as well, can only effectively and sustainably be done if the central government also increases the base salaries for healthcare providers. Additionally, due to convoluted and bureaucratic disciplinary mechanisms, most nurses and doctors do not necessarily worry about consequences for unprofessional or medically negligent actions. A lack of consequences has created an environment in which nurses skip ward meetings that are, ostensibly, mandatory because they know they will not suffer any consequences as a result of their absenteeism. Actions such as these contribute to the poor communication that abounds within the hospital.

In order to improve relations between the hospital administrators and the ward nurses, the nurses expressed a desire to see the administrators spending more time on the wards. Their presence alongside the nurses, even for thirty minutes once in a month, would help the nurses to feel as though the administrators have an accurate picture of the situation on the ward. Currently, the nurses perceive the administrators to be out of touch and disconnected from the daily realities of patient care, particularly as related to the consequences of new, bureaucratic hospital procedures and supply chain problems. While administrators are significantly overburdened with work themselves, it could be possible to rotate such an observational duty, with them paying particular attention to the maternity ward, which is a good litmus test for the state of the rest of the hospital.

Last, the hospital should continue to strive to improve patient feedback mechanisms to ensure patients and their relatives feel their healthcare providers are listening to them and their concerns are being met and dealt with, leading to improved care and satisfaction. One approach might also include more active community outreach and engagement. The hospital could work with community and religious organizations or NGOs to educate patients about hospital procedures and their rights in the hospital. This will increase accountability among the staff if patients start to demand their rights and follow-up if they feel they have not gotten them. The hospital administrators and providers should not be afraid of this, but help to encourage it so community members can be partners in improving quality of care. For example, on the maternity ward, if women feel more empowered about hospital procedures and ward flows, they might be more likely to say something when they have not received care for several hours or experience a change in their condition. This is not a change that will happen quickly but should be a longer term goal for the hospital and the region, and will go hand in hand with community-level initiatives, as well.

10.6.4 Regional Health Administration

The regional health administration in Rukwa has been striving to continually improve services and organization throughout the region, particularly with number of initiatives the current Regional Medical Officer started since his appointment in 2012. Therefore, I have less to say about the regional efforts to reduce maternal health. However, one outstanding area for improvement remains the maternal death audit meetings used to review the cases of death at the regional hospital. Stakeholders from the district and regional levels also participate in these meetings so I am treating them as a regional-level issue. Improving the audit process would certainly generate more work for the region, across all levels, not just within the regional

hospital. However, reforming this system would also create the possibility of real, and lasting, improvements in lowering the maternal mortality rate in the hospital and across the region.

a. The maternity ward Doctor In Charge should discuss every death with the nurses within 24 hours of occurrence. A summary of the events as well as the content of the discussion should be written up within no more than one week. This summary can then be used as part of the hospital Maternal Death Audit Meeting. Improving the initial data collection process for each death will improve the level of details involved parties are able to remember and record. This additional information will enable the hospital, and all those present in the meeting, to more effectively and accurately evaluate the sequence of events leading to the woman's death and how to rectify any on-going problems.

b. At the start of every Maternal Death Audit Meeting, all stakeholders should be required to give a report on progress made and points of the action plan that they have been able to achieve since the previous meeting. This includes all District Reproductive and Child Health Coordinators (DRCHC/Os). Even if the deaths occur at the hospital, they are not only hospital deaths. This is supported by the high number of referrals and the general belief among staff that many of the deaths come to the hospital from outlying areas, "already dead."

c. Meeting participants should construct action plans using verifiable indicators and the plans should take into account the expertise of those discussing the deaths, i.e. someone with public health knowledge should contribute to the design of action plans to verify they can actually be implemented and effective. Because measurement continues to be an important emphasis throughout the health sector,

being able to accurately record data indicating improvements in care would benefit the region's standing at the national-level, which could potentially result in increased investment. While these improvements in action plan design would generate more work, particularly at the district levels, the returns on investment would be great.

d. All discussion should be presented back to the maternity ward and Ward 5 staff as soon as possible and no later than the next monthly meeting. Nurses on both wards have no concept of the number of deaths or the predominate underlying causes of the deaths. Currently, they only remember those deaths with which they were directly involved, which leads them to continually underestimate the number of deaths that are actually occurring at the hospital. With improved feedback to the ward level, the nurses would have the knowledge and opportunity to further improve their own work. Feedback is particularly important given the fact that most nurses reported their primary coping mechanism was repeatedly examining case details in search of where they might have improved care in a way that could have prevented the woman's death. If the nurses all had access to the outcomes of the maternal death audit meetings, they would be able to see that the discussions in which others are engaged corroborate (or conflict with) their own experiences of the woman's care.

10.6.5 National Level and Implications for Global Policy

On the national level, the results from this study can offer insight into broader, systemic changes that continue to be necessary. None of the aforementioned recommendations can be accomplished without support from the central government and the Ministry of Health and

Social Welfare. Additionally, at the national level, the country needs to continue to reevaluate nurse training programs in order to produce high quality providers, not just increasing the volume of people providing services. Many of the other systemic needs are directly related to finances. The health sector is particularly sensitive to delays in funds. Tanzania also needs to ensure funds are being spent in ways that actually provide appreciable improvements in care. This means evaluating the needs on the ground in the diverse areas of the country. Rolling out one size fits all programs will continue to produce mismatches that lead to wasted time, wasted funds, and less than optimal improvements in the system or in care and patient outcomes. Once again raising the prestige of healthcare providers, like they might have felt in the early days of the Nyerere era when they were enlisted as key actors in accomplishing socialist goals in the country, could also help to improve morale and lead to the recruitment of more highly talented nursing and medical students.

On a global level, the current fixation on evidence-based interventions and data has silenced many of the voices coming from the grassroots level. Improving maternal health and reducing pregnancy related deaths is not a one size fits all endeavor. Health sector employees produce data under highly constrained systems which make much of the data unreliable, at best, and significantly misleading, at worst. Integrating the work of social scientists in the design and implementation of public health and policy interventions could improve the fit with local conditions, needs, and realities in places like Tanzania. Systems approaches which do not simply tell women to go to healthcare facilities but also comprehensively support providers would also go far in improving the situation. In order for such an approach to be a reality, states need to be actively involved in generating the needs assessments in their countries. Policy makers and health administrators should not feel as though they are unable to reject unnecessary

interventions for the fear of long-term loss of support or investment. A greater understanding of the ways in which healthcare providers and administrators are, themselves, embedded in social and kin networks, as well as networks of prestige and power, just as are the women seeking services, will help to more comprehensively address their needs. In turn, with their needs met, they will be more capable of providing care that meets with idealized, global guidelines. Quick fixes and top down interventions will not provide sustainable, lasting improvements in the healthcare system.

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Appendix A: Interview Schedules

Interview Questions for Retired/Longtime Healthcare Providers

1. Kwanza niambie kidogo kuhusu elimu yako. Ulisoma nini, wapi, kwa muda gani? *First, tell me a bit about your education. What did you study, where, for how long?*
2. Uliajiriwa mara ya kwanza mwaka gani? *What year were you first hired?*
3. Umewahi kufanya kazi na vitendo wapi na wapi? *Where have you ever worked or done practicals?*
4. Ulianza kufanya kazi hapa Rukwa mwaka gani? *What year did you start working in Rukwa?*
5. Kama wewe si mtu wa Rukwa, ulijisikiaje ulipoambiwa kwamba ulipangiwa hapa Rukwa? *If you are not originally from Rukwa, how did you feel when you were told that you had been assigned here to Rukwa?*
6. Mazingira yalikuwaje hapa siku hizo za nyuma? *What was the region like in those days of the past?*
7. Ulipoanza kazi, unakumbuka tulikuwa na changamoto za aina gani hapa Rukwa? *When you started work, do you remember what kind of challenges there were here in Rukwa?*
8. Ukiweza kukumbuka, niambie kidogo kuhusu hali ya hospitali/kituo ulipoanza kazi. *If you can remember, tell me a little bit about the state of the hospital/facility when you started work.*
9. Ukiweza kukumbuka, nini kilikuwa tofauti baada ya mwisho wa muda wa Mwalimu Nyerere? *If you can remember, what was different after the end of Mwalimu Nyerere's time?*
10. Huduma za afya zilikuwaje wakati wa Nyerere? *How were healthcare services under Nyerere?*
    a. Ali Hassan Mwinyi?
    b. Mkapa?
    c. Sasa hivi na Kikwete? *Now with Kikwete?*
11. Kipindi kipi kilikuwa kizuri zaidi? Kwa nini? *Which period was the best? Why?*
12. Nimesikia sana kwamba wahudumu wa afya siku hizi hawako motivated sana. Ilikuwa tofauti zamani? Kwa nini? Nini kimebadilika? *I have heard a lot that healthcare workers these days are not very motivated. How was it different in the past?*
13. Kwa ujumla, umeona mabadiliko ya aina gani toka ulipoanza kufanya kazi hapa Rukwa? *Generally, what changes have you seen since you started working here in Rukwa?*
14. Tumepata matatizo mapya siku hizi ya aina gani? *What kinds of new problems have we gotten these days?*
15. Unafikiri serikali kuu na Wizara ya Afya inaweza kufanya nini siku hizi kuendelea kuboresha huduma za afya kwa ujumla? Na kwa wajawazito? *What do you think the central government and the Ministry of Health can do to continue to improve healthcare services generally?*
16. Tunahitaji nini zaidi kutusaidia kutoa huduma bora siku hizi? *What else do we need to help us provide good care these days?*

Interview Questions- Healthcare workers in Dispensaries and Health Centers

General Characteristics

1. Cheo

2. Umri *Age*

3. Jinsia *Gender*

4. Kabila *Tribe/Ethnicity*

5. Ulizaliwa wapi? *Where were you born?*

6. Unakaa wapi (sehemu gani)? *Where do you live?*

7. Dini/unasali wapi? Unaenda kanisani/mskitini mara ngapi kwa wiki? Je, wewe ni kiongozi? Ni shughuli zipi zingine huwa unafanya kanisani au mskitini? Ni masaa mangapi kila wiki kwa kawaida? *Where do you worship? How often do you go to church/mosque per week? Are you a leader? Do you have other activities at church/mosque? How many hours per week usually?*

8. Hali yako ya ndoa? (Ameoa/ameolewa; talikiwa; mjane/mgane; tengane) Kama ndiyo, kwa miaka mingapi? Kama hapana, una mpenzi/mchumba? *What is your marital status? (Married; divorced; widow/er; single). If married, for how many years? If no, do you have a boyfriend/girlfriend or fiancé?*

9. Una watoto wangapi? *How many children do you have?*

10. Watu wangapi wanakaa nyumbani kwako? *How many people live in your household?*

11. Umejenga nyumba wewe mwenyewe? Au nani aliijenga? Umepata mkopo kulipia nyumba? Umeshamaliza kulipa? *Did you build your house yourself? Or who built it? Did you get a loan to build? Have you finished paying it?*

12. Mshahara unawahi kwa kawaida? Nielekezee utaratibu wa kupata msharaha. Umeajiriwa na nani? Una nafasi kupandishwa cheo? Baada ya muda gani? Mnapata hela ya extra duty au kitu kama hicho? Mshahara unatosha kwa matumizi yako yote? Unafanya biashara gani nyingine kupata hela ya kutosha kwa matumizi yako ya maisha? *Is your salary usually on time? Explain to me the procedure for getting your salary. Who employs you? Do you have the opportunity to be promoted? After how long? Do you get extra duty pay and things like that? Is your salary enough to meet all your needs? What other business do you do in order to get enough money for your life needs?*

Training

1. Una kiwango gani cha elimu? *What level of education do you have?*

2. Ulisoma wapi? Kwa muda gani? *Where did you study? For how long?*

3. Naomba unielekezee kuhusu elimu hiyo. Ulisoma nini? Nani alifundisha? Ulifanya (vitendo) practical wapi? *Please explain to me about that education. What did you study? Who taught you? Where did you do practicals?*

4. Kwa nini uliamua kusoma ukunga/mambo ya afya? *Why did you decide to study midwifery or health subjects?*

5. Uliajiriwa mwaka gani baada ya kumaliza shule? *What year were you hired after school?*

6. Umewahi kufanya kazi wapi pamoja na vitendo (practicals)? *Where have you worked together with doing your practicals?*

7. Unapata nafasi kwenda kusoma mambo mapya? Labda kwenye semina? *Do you get the opportunity to go to study new things? Maybe in seminars?*

Work in the Village

1. Kwa nini umekuja kufanya kazi huku badala ya sehemu nyingine? *Why did you come to work here rather than another location?*

2. Unaonaje hali ya afya kwa ujumla kijijini hiki? *How do you see the state of health generally in this village?*

3. Kuna upungufu gani kwa upande wa huduma za afya hapa? *What kind of deficiencies are there with healthcare services here?*

4. Kuna changamoto gani kufanya kazi hapa na kuhudumia wagonjwa? *What kind of challenges are there for working and caring for patients here?*

5. Ukiwa ungeweza kuwaambia watu wa serekali kitu kimoja kuhusu kijiji hiki, ungewaambiaje? *If you were able to tell people in the government one thing about this village, what would you tell them?*

6. Ungeomba nini? *What would you ask for?*

7. Nini kinaweza kukusaidia kufanya kazi yako vizuri zaidi? (vifaa, ujuzi, majengo, hela, n.k.) *What can help you to do your work better? (supplies, knowledge, buildings, money, etc.)*

8. Niambie kuhusu siku ya kawaida hapa kazini. Unaanza saa ngapi? Unafanya kazi gani? Unawasaidia wagonjwa wangapi? Unawaona wagonjwa wa aina gani? Unamaliza saa

ngapi? Baada ya kumaliza hapa, unaenda kufanya nini? Unajaza vitabu vya aina gani kukusanya takwimu? Takwimu za aina gani kuhusu wateja wenu? *Tell me about a typical day at work here. What time do you start? What do you do? How many patients do you care for? What kinds of illnesses do you see? What time do you finish? After finishing here, what do you go to do? What kinds of books do you fill to collect data? What kind of data about your clients?*

9. Nani anatoa elimu kwa mama wajawazito? Elimu ya afya kwa ujumla? Kwa kawaida, mtatoa elimu kuhusu nini? Kwa nini mnatoa elimu ya afya? *Who provides education for pregnant mothers? Health education generally? Normally, about what do you give education?*

10. Unasikia maswali ya aina gani kutoka na mama wajawazito au wakina mama kwa kawaida? *What kinds of questions do you hear from pregnant mother or women generally?*

11. Wewe unahitaji nini kuendelea kutoa elimu vizuri? *What else do you need to continue to do a good job providing education?*

12. Matatizo gani ni kawaida zaidi kwa wajawazito huku? *What sorts of problems are most common for pregnant women here?*

Obstetric Emergencies:
13. Umewahi kumhudumia mama mjamzito aliyepata dharura wakati wa kujifungua au wakati wa ujauzito? Mara ngapi kwa mwaka? *Have you ever cared for a pregnant woman who developed an emergency while giving birth or while pregnant?*

14. Naomba ukumbuke mara ya mwisho ulipokuwa na mjamzito ambaye alipata dhararu. Nielekeze nini kilitokea. Alitoka nyumbani au wapi? Nani aligundua kwamba alikuwa na matatizo? Wewe ulijuaje alikuwa na matatizo? Ulianza kufanya nini? Kwa nini? Ulitumia vifaa gani? Ulikosa vifaa gani? Kwa nini? *Please remember the last time who you had a pregnant mother who developed an emergency. Explain what happened. Did she come from home or where? Who discovered that she had problems? How did you know that she had problems? What did you start to do? Why? What equipment did you use? What equipment were you lacking? Why?*

15. Umewahi kumrufaa mama mjamzito? Kwa nini? Nielekeze nini kilitokea. Kwa nini uliamua kumrufaa? Alienda na usafiri gani? Ulifanya nini kumwandaa kwenda sehemu nyingine? *Have you ever referred a pregnant mother? Why? Explain to me what took place. Why did you decide to refer here? What form of transportation did she use? What did you do to prepare her to go to another location?*

16. Ulimsindikiza? Kama hapana, kwa nini? Nani alimsindikiza? Unajisikiaje ukihitaji kumrufaa bila kumsindikiza? Alilipa shilingi ngapi kufika kituoni kingine? Ilitumia muda gani kumwandaa na alitumia muda gani kufika kituo cha afya kingine? *Did you accompany her? If no, why? Who went with her? How do you feel if you have to refer her*

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without being able to accompany her? How much did she pay to go to another facility? How long did it take to prepare her and how long did she take to reach another health facility?

17. Umewahi kuwa na mama mjamzito ambaye alifariki hapa kijijini? Nini kilitokea? Aliamua kujifungua wapi? Nani alitambua kwamba alikuwa amepata shida? Wakafanya nini? Walimpeleka wapi? Mwishoni, akafariki kwa sababu gani? Inawezekana kuzungumza na familia yake? *Have you ever had a pregnant mother who died here in the village? What happened? Where did she decide to give birth? Who recognized that she was having problems? What did they do? Where did they take her? In the end, what was the cause of her death? Is it possible to talk with her family?*

18. Wakunga wa jadi wapo hapa? Wanafanya nini? Mnafanya kazi ya aina gani nao? *Are there traditional birth attendants here? What do they do? What kind of work do you do with them?*

Communication and connection with District and Government

19. Unawasiliana na watumishi wengine ambao wanafanya kazi wilayani au mkoani? Kwa sababu gani? Mara ngapi kwa wiki? *Do you communicate with other employees who work for the district or region? Why? How many times per week?*

20. Nini kinakusababisha kutofuata utaratibu rasmi wa rufaa au wa huduma kwa mama mjamzito wakati wa dharura? *What can cause you to not follow the official referral procedures or procedures for care for a pregnant mother with an emergency?*

21. Niambie zaidi kuhusu changamoto za kufanya kazi hapa. *Tell me more about the challenges of working here.*

22. Nielekezee kuhusu utaratibu wa kuagiza dawa na vifaa. Mnahitaji kufanya nini? Mnajaza fomu za aina gani? Nani anakusaidia? Unaagiza vifaa na dawa mara ngapi kwa mwaka? Mnapata vifaa vya kutosha? Kama hapana, kwa nini mnashindwa kupata vifaa vya kutosha? Mnahitaji nini (msaada, hela, ujuzi, n.k.) kuwasaidia kupata vifaa vya kutosha? *Explain to me about the procedures for ordering medications and equipment. What do you have to do? What kinds of forms do you fill in? Who helps you? How many times do you order drugs and supplies per year? Do you get enough supplies? If no, why are you unable to get enough supplies? What do you need (money, help, knowledge, etc.) to help you get enough supplies?*

23. Serekali (kwa mfano hata DMO) inaweza kufanya nini kukusaidia na kurahihisha kazi yako? Unawategemeaje watu wa wilaya au mkoa? *What can the government (for example, even the DMO) do to help you and to make your work easier? How are you dependent on people from the district or region?*

24. Nielekezee maoni yako kuhusu serekali ya Tanzania na ahadi zao kuhusu huduma za afya. Je, watu wa serekali wanafikisha ahadi zao? *Tell me about your opinions of the*

Tanzanian government and its promises about healthcare. Do people from the government fulfill their promises?

25. Serekali kwa ujumla ingeweza kufanya nini kuboresha huduma za afya kwa wananchi? *Generally, what can the government do to improve healthcare services for citizens?*

26. Kijiji kinaweza kufanya nini kuboresha huduma za afya? *What can the village do to improve healthcare services?*

27. Serekali inahitaji kufanya nini kuboresha hali yako ya ufanisi wa kazi? *What does the government need to do to improve your workplace empowerment?*

28. Watu wa wilaya wanakuja hapa mara ngapi kwa mwezi? Kwa mwaka? Wanakuja kufanya nini? *How many times per month do people from the district come here? Per year? What do they come to do?*

29. Umeridhika na kiasi hicho cha egemeo hilo? Kwa nini ndiyo au la? *Are you satisfied with this amount of supervision? Why yes or no?*

30. Wangeweza kufanya nini kuwasaidia ninyi watumishi wa hapa na wananchi wa kijiji hiki? *What would they be able to do to help employees here and citizens of this village?*

31. Niambie kuhusu BEmONC. Nani wa zahanati hii alienda kwenye semina? Mmefanya nini kujaribu kufanya BEmONC? *Tell me about BEmONC. Who from this dispensary went to the seminar? What have you all done to try to do BEmONC?*

32. Mmefanikiwa kuanzisha nini baada ya kujifunza zaidi kuhusu BEmONC? *What have you all succeeded in implementing after learning more about BEmONC?*

33. Mmeshindwa kuanzisha huduma gani za BEmONC? Kwa nini umeshindwa kufanya kila kitu cha BemONC? Nini kinakusababisha kutoweza kutumia ujuzi wote wa BEmONC? *What have you all been unable to implement of the BEmONC services? Why have you been unable to do all the BEmONC guidelines? What prevents you from being able to use all your BEmONC knowledge?*

Questions for Lab Worker about the blood supply

Tafadhali nielekeze kazi yako. Wewe ni nani hapa maabara? Majukumu yako ni yapi? *Please tell me about your work. Who are you here in the lab? What are your responsibilities?*

Tuongee kidogo kuhusu upatikanaji wa damu hapa hospitali ya mkoa.
Inatakiwa maabara iwe na unit ngapi za damu muda wote? Ni kawaida kuwa na unit ngapi? *Let's talk a bit about the availability of blood here at the regional hospital. How many units of blood should the lab have at all times? It's normal to have how many units?*

Tunapata damu kutoka wapi? Kwa kawaida nani anajitolea damu? *Where do we get the blood from? Normally, who donates blood?*

Kuna changamoto gani kuhusu kupata damu ya kutosha? *What kind of challenges are there related to getting enough blood?*

Nielekeze utaratibu wa kupata damu kuanzia na mtu ambaye amekuja kudonate. Kuna vipimo gani? *Please explain to me the procedures for getting blood, starting from when a person decides to donate. What kind of tests are there?*

Aina za damu ni kawaida sana hapa? Ngumu kupata? (AB or O- etc.) *What are the most common blood types here? Difficult to get?*

Unawasiliana na watu wa Red Cross? Mnagawana damu? Kwa utaratibu upi? *Do you communicate with people from the Red Cross? Do you share blood? By what procedures?*

Kwa kawaida inachukua muda gani kuandaa damu kwa ajili ya transfusion wodini? *Usually, how long does it take to prepare blood for a transfusion on the ward?*

Kwa kawaida nani anakuja kujitolea damu? Kwa nini? Red Cross wanaenda wapi kupata damu (kanisani, shuleni, n.k.)? *Normally, who comes to donate blood? Why? Where does the Red Cross go to get blood (churches, schools, etc.)?*

Comment nyingine? *Other comments?*

Interview Questions for Katibu wa Afya wa Mkoa (Regional Health Secretary)

1. Naomba tuanze na elimu yako. Ulisoma nini, wapi, kwa muda gani? *Let's start with your education. What did you study, where, for how long?*

2. Kabla ya kuanza kazi hapa Rukwa, umewahi kufanya kazi wapi? *Before starting work here in Rukwa, where have you worked?*

3. Ulianza kazi hapa Rukwa mwaka gani? *What year did you start work here in Rukwa?*

4. Naomba uniambie kidogo kuhusu kazi yako. Katibu wa afya wa mkoa ana majukumu yapi? *Please tell me a little about your work. What responsibilities does the Regional Health Secretary have?*

5. Umeona changamoto za aina gani hapa Rukwa kwenye sector ya afya? *What types of challenges have you seen here in Rukwa, in the health sector?*

6. Changamoto zipi ni ngumu au kubwa zaidi kuliko nyingine? Kwa nini? *Which are the biggest or hardest challenges? Why?*

7. Umeona mabadiliko ya aina gani au maboresho ya aina gani toka ulipoanza kazi hapa? *What kinds of changes have you seen or what kinds of improvements since you started working here?*

8. Unafikiri tunahitaji nini zaidi kuendelea kuboresha huduma za afya hapa? *What else do you think we need to continue improving healthcare services here?*

9. Wewe ni kiongozi wa hospitali na huduma za afya mkoani. Niambie kidogo kuhusu uongozi wa huduma za afya hapa. Viongozi wanafanya nini vizuri? Wanaweza kufanya nini vizuri zaidi? *You are a leader of the hospital and the regional healthcare services. Tell me a little bit about the leadership of the healthcare services here. What are the leaders doing well? What can they do better?*

10. Nakumbuka umewahi kuongea kuhusu kupokea malalimiko kutoka wagonjwa (mzee mmoja hakupata taarifa kuhusu siku ya kliniki, hakuelewa maneno ya wahudumu wa afya). Naomba uzungumze kidogo kuhusu mawasiliano kati ya wahudumu wa afya/hospitali na jamii/wagonjwa. *I remember that you once talked about receiving complaints from patients (one elderly man didn't get information about the clinic day, he didn't understand the words of the healthcare provider). Please tell me a bit about communication between providers/hospital and the community/patients.*
    a. Bado tuna changamoto za aina gani? *What challenges do we still have?*
    b. Tunaweza kufanya nini kuboresha mahusiano kati ya hospitali na wagonjwa/jamii? *What can we do to improve relations between the hospital and patients/the community?*

11. Watumishi wa hapa Rukwa wanalalimika zaidi kuhusu nini? Kwa nini? *Employees here in Rukwa complain most about what? Why?*

12. Nimesikia mara nyingi kwamba watumishi wa hapa si motivated sana. Kwa nini unafikiri watu wananiambia hivyo? Tunaweza kufanya nini kuwasaidia zaidi? *I have heard many times that employees here are not very motivated. Why do you think people tell me that? What can we do to help them more?*

13. Naomba uniambia kuhusu utaratibu wa kupandisha cheo/daraja. Unakuwaje? Nani anaamua? Kwa nini kuna watu ambao wananiambia hawajapandishwa cheo kwa miaka minane au zaidi? *Please tell me about the procedures for promotions. What's it like? Who decides? Why are there people who tell me they haven't been promoted for eight or more years?*

14. Mtumishi, akitaka kurudi shuleni kujiendeleza anafuata utaratibu upi? *For an employee, if they want to return to school to further themselves, what procedures do they follow?*

15. Wakati wa kujaribu kufanya kazi yako unapambana na urasimu? *How do you encounter bureaucracy while trying to do your work?*

16. Naomba uniambie mawazo yako mengine kuhusu huduma za afya hapa. Kuna maswali mengine nimesahau kukuuliza? *Please tell me any other thoughts about healthcare services here. Are there any other questions I have forgotten to ask?*

Interview Questions for District Medical Officers (DMOs) and Regional Medical Officer (RMO)

1. Ulisoma nini shuleni? Mpaka ulianza kazi ya RMO/DMO ilikuwa unafanya nini? Wapi? Umeanza kufanya kazi ya DMO/RMO mwaka gani? Ulikuwa unafanya kazi wapi kabla ya Rukwa? *What did you study at school? Before you started working as DMO/RMO what were you doing? Where? What year did you start working as DMO/RMO?*

2. Majukumu ya RMO/DMO ni yapi? *What are the responsibilities of the DMO/RMO?*

3. Ulianza kufanya kazi Rukwa mwaka gani? Kwa nini ulihamishwa huku? *What year did you start working in Rukwa? Why were you moved here?*

4. Ulipoanza kufanya kazi hapa, uliona kuna changamoto gani Rukwa? *When you started working here, what challenges did you see in Rukwa?*

5. Umeona maboresho au mabadiliko gani? Matatizo yanayobaki ni yapi? Kwa nini bado yapo? *What improvements and changes have you seen? Which challenges are still remaining? Why are they still problems?*

6. Nielekezee kidogo kuhusu hali ya afya ya watu wa Rukwa kwa ujumla. Wanapata magonjwa gani, kwa mfano? Wakina mama wanapata matatizo gani au matatizo gani ni kawaida zaidi kuliko mengine? *Explain to me a little bit about the state of health of the people of Rukwa generally. What kinds of diseases do they get, for example? Women get what kinds of problems? Or what problems are most common?*

7. Nielekezee kuhusu upungufu wa watumishi/wahudumu wa afya katika mkoa huu. Kwa nini unafikiri ni shida? Kwa nini ni tofauti sasa kuliko miaka iliopita? Nani anaajiri watumishi wapya? Ukitaka kuongeza wahudumu wa afya ndani ya mkoa huu unahitaji kufuata utaratibu gani? *Explain to me about the deficit of healthcare workers in this region. Why do you think it's a problem? Why is it different now than in years past? Who employs new workers? If you want to increase the number of providers in the district/region what procedures do you have to follow?*

8. Unafikiri wahudumu wa afya wa Rukwa wanaonaje mazingira ya kazi huku? Nielekezee majibu yako. Tungeweza kufanya nini kuwasaidia vizuri zaidi wafanikiwe? *How do you think healthcare workers in Rukwa view their work environment here? Explain your responses. What could we do to help them to be more successful?*

9. Naomba uniambie kidogo kuhusu usimamizi wa huduma mkoa huu. Watu wanaongea sana kuhusu supportive supervision. Kwa nini ni muhimu? Inatusaidiaje? *Please tell me a bit about the supervision of services in this district/region? People talk about supportive supervision. Why is it important? How does it help us?*

10. Wewe binafsi, kama kiongozi, unapata changamoto za aina gani wakati wa kufanya kazi yako? *For you personally, as a leader, what kinds of challenges do you face while doing your work?*

11. Unapata ushirikiano na msaada wa aina gani kutoka Wizara ya Afya? Ofisi za Mkuu wa Mkoa? *What kind of assistance do you get from the Ministry of Health? The Office of the Regional Commissioner?*

12. Serekali inaweza kufanya nini kukusaidia zaidi na kazi yako? Kwa nini? *What can the government do to help you more with your work? Why?*

13. Unaonaje mipango ya serekali kuhusu kupunguza vifo vya mama wajawazito? *How do you view the government's plans for decreasing the deaths of pregnant mothers?*

14. Tunaendeleaje na mipango hiyo? Tutaweza kufanikisha Millennium Development Goals? *How are we proceeding with those plans? Will we be able to accomplish the Millennium Development Goals?*

15. Unapata changamoto zipi wakati wa kujaribu kuanzisha miongozo mpya kutoka serikali kuu? *What kind of challenges do you face when trying to implement new guidelines/procedures from the central government?*

16. Kulingana na mikoa mingine, sisi tunaendeleaje hapa na huduma za mama wajawazito? Na vifo? *Compared to other regions/districts, how are we doing here with healthcare services for pregnant women?*

17. Kuna shida za vifaa mkoa huu? Ya kiasi gani? Vifaa gani havipatikani? Kwa nini? Na kijijini? *Is there are problem with supplies in this region/district? To what extent? Which supplies are not available? Why? And in the villages?*

18. Nimeona upatikanaje wa vifaa umekuwa mbaya zaidi toka nilipofika hapa mwaka uliopita. Kwa nini? Nini kimebadilika? *I have seen that the availability of supplies has gotten worse since I arrived here last year, why? What has changed?*

19. Niambie kuhusu utaratibu wa kufuatilia mama mjamzito akifa. Nani anafanya nini kufuatilia? *Tell me about the procedures for following up on the death of a pregnant woman. Who does what to follow-up?*

20. Kuna changamoto gani kuhusu kukusanya data nzuri za vifo vya wajawazito? Kwa nini? Nini ingeweza kupunguza changamoto hizi na kuhakikisha tunapata data bora zaidi? *What kinds of challenges are there around collecting good data on the deaths of pregnant women? Why? What could help reduce these challenges and ensure we get better data?*

21. Unaona bado kuna mahitaji gani katika jamii za mkoa huu kuhakikisha kwamba tunaweza kuboresha huduma za afya na kupunguza vifo vya mama wajawazito? *What needs do you still see in the communities of this region if we are to ensure that we improve healthcare services and reduce the number of deaths of pregnant women?*

22. Hospitali bado inahitaji nini zaidi kuendelea kupunguza vifo vya mama wajawazito? Na mkoa kwa ujumla? *The hospital still needs what in order to continue decreasing the deaths of pregnant women? And the district/region generally?*

23. Utawala wa Hospitali unafanya nini vizuri? Unaweza kufanya nini vizuri zaidi? *What does the hospital administration do well? What can it do better?*

24. Watumishi (wahudumu wa afya) wa Rukwa na hospitali wanapata motisha ya aina gani? *What kinds of motivation do healthcare providers in Rukwa and at the hospital get?*

25. Kwa nini unafikiri watu wengi wameniambia kwamba watumishi wa hapa siyo motivated sana? Unafikiri tunahitaji kufanya nini kuboresha hali hii? *Why do you think that a lot of people have told me that the employees here are not very motivated? What do you think we need in order to improve this state of things?*

Interview Questions for Medical Officer In Charge (MOI/C)

1. When you started working here, what kinds of challenges did you see? What kind of improvements have you seen since then?
2. Tell me a little bit about the way the hospital functions, its organization. For example, I'm interested to know about the responsibilities of the HMT and the Therapeutic Committee, as well as your responsibilities as the MO I/C.
3. Tell me about some of the difficulties you get now as the Medical Officer In Charge. What things are most challenging as you try to run the hospital?
4. What kind of support do you get from other offices or sources? Financial, supplies, human resources, etc.
5. Tell me a bit about the financial state of the hospital. How is it? What further challenges does this provide? In getting supplies? In paying people?
6. Is it possible to get a copy of the cost-sharing guidelines and regulations?
7. As the Medical Officer In charge, it is partly your responsibility to make sure the hospital and its staff are implementing and following national guidelines and policies.
8. How do you try to do this?
9. What challenges does this provide?
10. What kind of experiences do you have with red tape and bureaucracy in this setting?
11. How does bureaucracy affect your ability to be effective in your job?
12. Tell me a bit about the difficulties of staffing the hospital. How do you find and recruit new staff?
13. Why might someone be reluctant to come work here in Sumbawanga?
14. How has this caused difficulties in the past?
15. How do you evaluate the quality of work people are doing? Is this effective or do you think there might be a better way? What would you like to do differently?
16. How do you think the work environment is here?
17. Why do I hear that people are not motivated here (especially the doctors saying this about the nurses)?
18. What sorts of challenges do you face as a leader here at the hospital?
19. Tell me a bit about the administration of the hospital. What do the administrators do well? What can they improve? What should be done to help them operate more effectively?
20. What happens if a doctor or nurse makes a mistake? Cases of malpractice?
21. What are the disciplinary procedures? How do these regulations make it difficult to address wrongdoing?
22. You've told me before that you sometimes wish someone would bring a case against the hospital so you would be able to go further with disciplinary measures. Why would this be necessary? Why is it not likely that people are willing to come forward with a formal complaint? What kind of challenges do these procedures pose for accountability for bad outcomes and poor practice?
23. What do you think of the number of maternal deaths that we've had in the last year or so?
24. Why do you think women continue to die here at the hospital?
25. What else does the hospital and/or the region need to continue to decrease these deaths?
26. How effective is the maternity ward?
27. What do you think about the maternity ward leadership? What do they do well? What could they do to continue to improve?

28. How effective are the national policies related to reducing maternal deaths? Are they helpful? What do they miss or overlook? What might you change or do differently if it were up to you?
29. Tell me a bit about on-job training and continuing education here at the hospital. What are the policies? Why do we only very infrequently have continuing education presentations?
30. We talk a lot about on-job training as being necessary for improving the care of pregnant women. Who is in charge of organizing this? Why doesn't it happen?
31. After the maternal death audit meetings, who is responsible for following-up on the action plans and making sure it happens? Do you receive reports of the outcomes of these activities?

Interview Questions Regional Nursing Officer (RNO)

1. Ulisoma nini? Wapi? Kwa muda gani? *What did you study? Where? For how long?*

2. Umewahi kufanya kazi wapi kabla ya kuwa RNO? *What kind of work did you do before becoming the RNO?*

3. Ulipoanza kazi hapa, uliona changamoto za aina gani hapa Rukwa? *When you starting working here, what kinds of challenges did you see here in Rukwa?*

4. Nina kimebadilika? Tumekuwa na mafanikio ya aina gani toka ulipoanza? *What has changed? What kinds of successes have we had since you started working?*

5. Bado changamoto zipi zipo? *What challenges are still remaining?*

6. Majukumu ya RNO ni yapi? *What are the responsibilities of the RNO?*

7. Tuzungumze kidogo kuhusu upungufu wa watumishi hapa Rukwa. Kwa nini bado ni tatizo? Kwa nini watu hawataki kufanya kazi hapa? *Let's talk a bit about the deficit of employees here in Rukwa. Why is this still a problem? Why do people not want to work here?*

8. Hapa Rukwa, unaonaje mazingira ya kazi? Tunaweza kufanya nini kuendelea kuboresha mazingira haya kwa watumishi wote, hata kijijini? *Here, in Rukwa, how do you see the work environment? What can we do to continue to improve that environment for all employees, even in the villages?*

9. Wakati wa kufanya kazi yako ya uongozi unapambana na changamoto zipi? *In your leadership role, what kinds of challenges do you face?*

10. Wauguzi wa hapa kwetu wanalalimika kuhusu nini? Wanataka nini zaidi kuwasaidia kufanya kazi vizuri? *What do the nurses here complain about? What else do they want to help them to work better?*

11. Unafikiri utawala wa afya wa mkoa unafanya nini vizuri? Nini kinaweza kuboreshwa? Kwa nini? *What do you think the hospital administration does well? What can it improve? Why?*

12. Una mahusiano ya aina gani na wilaya? Wao wanafanya nini vizuri? Wanaweza kuboresha nini? *What kind of relationship do you have with the districts? What do they do well? What can they improve?*

13. Unaona bado kuna mahitaji gani kwenye jamii na hospitali kutusaidia kuendelea kupunguza vifo vya mama wajawazito?

14. Nadhani unamsaidia RMO kuhakikisha watu wanatekeleza miongozo na sera za serikali   na Wizara ya Afya, sindiyo? Wakati wa kujaribu kufanya kazi hii, mnapata changamoto   za aina gani? Kwa nini? *I believe that you help the RMO to ensure that people are implementing guidelines and rules from the government and the Ministry of Health, right? While trying to do this work, what kinds of challenges do you all face?*

15. Una mawazo mengine kuhusu huduma za afya za hapa Rukwa? *Do you have other thoughts about the healthcare services here in Rukwa?*

Interview Questions- Healthcare Administrators, Patron/Matron

Training

1. Una kiwango gani cha elimu? *What is your level of education?*

2. Ulisoma wapi? Kwa muda gani? *Where did you study? For how long?*

3. Unaweza kunielekeza kuhusu elimu hiyo? Ulisoma nini, nani alifundisha, ulifanya practical (vitendo)? N.k. *Can you tell me about your education? What did you study, who was the teacher, did you do practicals?*

4. Kwa nini uliamua kusoma ukunga/udaktari/uuguzi? *Why did you decide to study nursing?*

5. Ulianza kazi mwaka gani? *What year did you start working?*

6. Je, umewahi kufanya kazi wapi pamoja na mafunzo kwa vitendo (practical)? *Where have you worked and done practicals?*

7. Kwa nini umeamua kufanya kazi huku, Sumbawanga? Au ulipangiwa tu? *Why did you decide to work here in Sumbawanga? Or were you just assigned?*

8. Kabla ya kuanza kazi hii ya Patron/Matron ulikuwa unafanya kazi gani hapa hospitalini? *Before starting this work as Patron/Matrong, what work were you doing at the hospital?*

9. Ulianza kazi ya Patron/Matron mwaka gani? *What year did you start working as Patron/Matron?*

10. Najua una majukumu mengi, kwa kifupi, majukumu ya Patron/Matron ni yapi? *I know you have many responsibility, in short, what are the responsibilities of the Patron/Matron?*

Seminars and Continuing Education

1. Nani anachagua watu kuhudhuria semina? *Who chooses people to attend seminars?*

2. Manasi wote wamepata nafasi kuhudhuria? *Have all the nurses gotten a chance to attend?*

3. Nani hajawahi kwenda? Kwa nini? *Who has never gone? Why?*

4. Mnapata hela ya kiasi gani ukienda kwenye semina? Nani anakulipia kuhudhuria? *What amount of money do you all receive if you go to a seminar? Who pays for your attendance?*

5. Ukitaka kurudi kusoma zaidi, utaratibu ni upi? Unafanya nini kuomba nafasi kwenda? *If you want to return to school, what is the process? What do you do to ask for the chance to go?*

6. Nimesikia kuhusu "on-job" training na continuing education, kwa mfano wakati wa kikao ya maternal death audit. Nani anafundisha? Nani anaamua tukihitaji on-job training? *I have heard about on-job training and continuing education for example, during the maternal death audit meeting. Who teaches this? Who decides if we need on-job training?*

Work Environment
1. Nielekeze kuhusu mazingira ya kazi hapa hospitalini. *Explain to me about the work environment here.*

2. Kuna mapungufu ya aina gani? (Upatikanaje wa vifaa na dawa? Idadi ya watumishi?) *What kinds of deificiencies are there? Availability of equipment and drugs? Number of employees?*

3. Kuna changamoto za aina gani za kazi yako ya kila siku? *What kinds of challenges are there in you everyday work?*

4. Utawala ungeweza kufanya nini kuboresha matatizo hayo? *What could the administration do to improve these problems?*

5. Mnahitaji nini zaidi kuwasaidia kuendelea kuboresha huduma? *What else do you all need to help you continue to improve services?*

6. Mazingira ya kazi yanasababisha matatizo gani upande wa ubora wa huduma? *What kinds of problems in quality of care can the work environment cause?*

7. Unaonaje ubora wa mawasiliano hospitalini? *How do you see the quality of communication at the hospital?*

   a. Kati ya manesi na madaktari? *Between nurses and doctors?*
   b. Kati ya wodi ya wazazi na wodi nyingine? *Between the maternity ward and other wards?*
   c. Kati ya watumishi wa wodi na utawala? *Between ward staff and the administration?*
   d. Kati ya watumishi na wagonjwa? *Between patients and providers?*

8. Nimesikia kwamba wauguzi wa hapa siyo motivated sana. Kwa nini unafikiri watu wameniambia hivyo? *I have heard that the nurses here aren't very motivated. Why do you think people have told me that?*

9. Nini ingekuwa motisha nzuri kuwasaidia watumishi kuendelea kufanya kazi kwa bidii? *What would be good motivation to help employees continue working hard?*

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Maternal and neonatal mortality

1. Unaonaje idadi ya vifo vya mama wajawazito? *How do you see the number of maternal deaths?*
   a. Na watato wachanga? *And newborns?*

2. Kwa nini unafikiri bado mama wajawazito wanaendelea kufariki hospitalini? *Why do you think pregnant mothers are still continuing to die at the hospital?*

3. Hospitali inahitaji nini kuendelea kupunguza idadi ya vifo vya mama? Watoto? *What does the hospital need to be able to continue reducing the number of maternal deaths?*

4. Jamii inaweza kufanya nini kupunguza vifo hivi? *What can the community do to decrease these deaths?*

5. Serikali kuu inaweza kufanya nini zaidi kupunguza vifo vya mama wajawazito na watoto wachanga? *What else can the central government do to decrease the number of maternal and newborn deaths?*

Hospital Administration

1. Unaonaje viongozi wa wodi ya wazazi? *How do you see the leaders of the maternity ward?*
   a. Wanafanya kazi gani vizuri? *What do they do well?*
   b. Wanashindwa kufanya nini vizuri? *What do they fail to do well?*

2. Viongozi wa wodi wangeweza kufanya nini kuboresha kazi yao? Kuboresha wodi? *What could the ward leaders do to improve their work? To improve the ward?*

3. Wodi ya wazazi ina matatizo au changamoto gani siku hizi? Mara nyingi nasikia kwenye morning report kwamba wao wameitwa au wamekosea. Kwa nini sana ni wodi hii? *What kinds of problems or challenges does the maternity ward have these days? Another time, I hear in the morning report that they have been called or they have made mistakes. Why is it so often this ward?*

4. Kwenye dodoso la hali ya ufanisi wa kazi, watu wengi waliniambia kwamba hawajawahi kupongezwa kwa kazi bora. Kwa nini hii ni shida/ haijawahi kufanyika? Utawala ungeweza kufanya nini kurekebisha tatizo hili? *In the CWEQ survey, a lot of people told me that they have never been praised for good work. Why is this a problem/isn't done? What can the administration do to rectify this problem?*

5. Niambie kidogo kuhusu OPRAS. Unaitumia kwa ajili ya nini? Nani anajaza? *Tell me a little bit about OPRAS. What do you use it for? Who fills it in?*

   a. Asilimia ngapi wa wauguzi walijaza mwaka uliopita? *What percentage of nurses filled it out last year?*

b. Kwa nini wengine hawakujaza? *Why do a lot of people not fill it out?*

6. Ukisema kupandishwa cheo/daraja, maanake ni nini? *If you say "kupandishwa cheo" what do you mean?*

7. Nani anaamua kupandisha cheo cha mtumishi au la? Ni kawaida kupandishwa cheo kila baada ya miaka mingapi? Au baada ya kufanya nini (kurudi shuleni, n.k.)? *Who decides whether or not to promote someone? It's normal to be promoted after every how many years? Or after doing what (returning to school, etc.)?*

8. Nini kinatokea mtumishi akifanya kazi vibaya au akifanya makosa? Utawala unaweza kufanya nini? *What happens if a provider does bad work or makes a mistake? What can the administration do?*

9. Kwa nini mara kwa mara wauguzi wanahamishwa wodi tofauti? Au kwa sababu gani? Lakini wengine wanakaa idara moja kwa muda mrefu? *Why are nurses periodically transferred to a different ward? Or for what reasons? But other stay in one department for a long time?*

10. Wakati wa kuongoza, unapata changamoto za aina gani? *While leading, what kinds of challenges do you face?*

    a. Wauguzi wanafanya nini vizuri kwa ujumla? *Generally, what do the nurses do well?*
    b. Wana matatizo gani? *What problems do they have?*
    c. Ungependa wafanye nini tofauti? Nini kifanyike? *What would you like them to do differently? What should be done?*
    d. Una mahusiano ya aina gani na wauguzi wa wodi? *What kind of relationship do you have with the ward nurses?*

11. Tuzungumze kidogo kuhusu hospitali kwa ujumla. Utawala unafanya nini vizuri? Unahitaji kuboresha nini? Kwa nini? *Let's talk a little bit about the hospital generally. What does the administration do well? What does it need to improve? Why?*

12. Kuna changamoto gani upande wa utawala na uongozi? Kwa nini hizi ni changamoto? *What kinds of challenges are there on the side of administration and leadership?*

13. Changamoto hizi zinsababisha nini kwenye hospitali? *What problems do these challenges causes within the hospital?*

Health Care Provider Interview Questions- Regional Hospital (Doctors and Nurses)

Record number_____
Position (EN, RN, AMO, MO, etc.)_____

Basics
  1. Umri *Age*
  2. Jinsi *Gender*
  3. Ukabila *Ethnicity/Tribe*
  4. Dini/ Unasali wapi? *Religion/where do you worship?*

  Unaenda kanisani/mskitini mara ngapi kwa wiki? *How many times per week do you go to church/the mosque?*

  Je, wewe ni kiongozi? *Are you a leader?*

  Ni shughuli zipi zingine huwa unafanya kanisani au mskitini? *What other things do you usually do at church/the mosque?*

  Ni masaa mangapi kila wiki kwa kawaida? *How many hours per week, usually?*
5. Unakaa wapi (sehemu gani)? *Where do you live?*
6. Umeolewa/Umeoa? (Hali ya ndoa) *Marital status*

  Kama ndiyo, kwa miaka mingapi? *If married, for how many years?*

  Kama hapana, umewahi kuolewa? *If no, have you ever been married?*

  Talikiwa *(divorced)?*

  Mjane/Mgane *(widow/widower)?*

  Tengane (*separated)?*

  Una mpenzi/mchumba? *Engaged?*
7. Una watoto wangapi? *How many children do you have?*
8. Watu wangapi wanaokaa nyumbani kwako? *How many people live at your house?*
9. Umejenga nyumba wewe myenyewe? Au nani alijenga nyumba? *Have you built your house yourself? Or who built your house?*

  Umepata mikopo kulipia nyumba? *Did you get a loan?*

  Umeshamaliza kulipa? *Have you finished paying the loan?*
10. Kama hukujenga nyumba, je unapanga nyumba au chumba/vyumba? *If you didn't build your house, do you rent a house or rooms?*
11. Mshahara unawahi kila mwezi? Unatosha? Unapata hela ya kiasi gani kwa extra duty au on call? *Is your salary on time every month? Is it enough? How much money do you get for extra duty and on call?*
12. Unafanya biashara zaidi kuongeza hela kila mwezi? Na mume/mke wako? *Do you do other businesses to increase your earnings each month? And your husband/wife?*

Training
  1. Una kiwango gani cha elimu? *What is your level of education?*

  2. Ulisoma wapi? Kwa muda gani? *Where did you study? For how long?*

3. Unaweza kunielekeza kuhusu elimu hiyo? Ulisoma nini, nani alifundisha, ulifanya practical (vitendo)? N.k. *Can you please explain to me about your education? What did you study, who taught you, did you do practicals? Etc.*

4. Kwa nini uliamua kusoma ukunga/udaktari/uuguzi? *Why did you decide to study midwifery/nursing/medicine?*

5. Ulianza kazi mwaka gani? *What year did you start working?*

6. Je, umewahi kufanya kazi wapi pamoja na mafunzo kwa vitendo (practical)? *Where have you worked, together with doing your practicals?*

7. Kwa nini umeamua kufanya kazi huku, Sumbawanga? Au ulipangiwa tu? *Why did you decide to work here in Sumbawanga? Or you were just assigned here?*

Seminars and Continuing Education

1. Sasa, muda huu wa kufanya kazi Mawingu Regional Hospital, umepata nafasi kuhudhuria semina mbalimbali? Au kufundisha? *Now, this time of working at Mawingu Regional Hospital, have you gotten the opportunity to attend various seminars? Or to teach them?*

2. Kama ndiyo, semina gani/kujifunza nini? *If yes, which kinds of seminars, or to learn what?*

3. Nani amekuchagua kuhudhuria semina hizo? *Who chose you for those seminars?*

4. Watumishi wote wamepata nafasi kuhudhuria? *Do all employees get a chance to attend?*

5. Nani hajawahi kwenda? Kwa nini? *Who has never gone? Why?*

6. Kwa kawaida nani anachaguliwa kuhudhuria? Kwa nini? *Normally, who is chosen to attend? Why?*

7. Mnapata hela ya kiasi gani ukienda kwenye semina? Nani anakulipia kuhudhuria? *What amount of money do you get if you go to a seminar? Who pays you to attend?*

8. Ukitaka kurudi kusoma zaidi, utaratibu ni upi? Unafanya nini kuomba nafasi kwenda? *If you want to go back to study further, what are the procedures? What do you do to request the opportunity to go?*

Work Environment

1. Nielekeze kuhusu mazingira ya kazi na hali ya ufanisi wa kazi ya hapa hospitali. *Tell me about the work environment and your ability to succeed in your work here at the hospital.*

2. Kuna mapungufu ya aina gani? (Upatikanaje wa vifaa na dawa? Idadi ya watumishi?) *What kinds of deficiencies are there? Availability of equipment and drugs? Number of employees?*

3. Kuna changamoto za aina gani za kazi yako ya kila siku? *What kinds of challenges are there in your everyday work?*

4. Utawala ungeweza kufanya nini kuboresha matatizo hayo? Kuboresha mazingira ya kazi? *What could the administration do to improve those problems? To improve the work environment?*

5. Mnahitaji nini zaidi kuwasaidia kuendelea kuboresha huduma? *What else do you all need to help you all to continue to improve care?*

6. Mazingira ya kazi yainasababisha matatizo gani upande wa ubora wa huduma? *What kinds of problems can the work environment cause when it comes to the quality of care?*

7. Wakati wa kufanya kazi wodi ya Wazazi au wakati wa kupasua, inawezekana kuambukizwa na magonjwa mengi sana kwa sababu ya maji maji ya mwili. Wewe binafsi, unafanya nini kujilinda? *While working on the maternity ward, or while doing surgery, it's possible to be infected by a lot of diseases because of bodily fluids. You personally, what do you do to protect yourself?*

8. Umewahi kuogopa kwamba umeambukizwa? Ulifanya nini? *Have you ever been afraid that you have been infected? What did you do?*

9. Hospital inaweza kufanya nini kukusaidia kujilinda vizuri zaidi? *What can the hospital do to help you to protect yourself better?*

10. Watumishi wa idara gani za hospitali wanapata nafasi kubwa zaidi kuambukizwa? Kwa nini? *Employees of which hospital department have the greatest opportunity to be infected? Why?*

11. Unaonaje ubora wa mawasiliano hospitalini? *How do you see the quality of communication at the hospital?*

    a. Kati ya manesi na madaktari? *Between nurses and doctors?*
    b. Kati ya wodi ya wazazi na wodi nyingine? *Between the maternity ward and other wards?*
    c. Kati ya watumishi wa wodi na utawala? *Between ward staff and the administration?*
    d. Kati ya watumishi na wagonjwa? *Between employees and patients?*

12. Wewe binafsi, unahisi kwamba umefanikiwa kufanya kazi yako vizuri na kufanikisha malengo ya udaktari? Kwa nini ndiyo au la? *You personally, do you feel as though you*

have succeeded in doing your work well and accomplishing the goals of nursing/medicine? Why yes or no?

13. Nini ingekuwa motisha nzuri kukusaidia kuendelea kufanya kazi kwa bidii? Unahitaji nini kuendelea kuwa motivated? *What would be good motivation to help you continue to work hard? What do you need to continue to be motivated?*

14. Mara ya mwisho kupandishwa cheo ilikuwa lini? *When was the last time you got a promotion?*

14. Unahitaji kutumia ubunifu wako kufanya nini wodini? Kwa nini? *When do you need to use your creativity while working on the maternity ward?*

15. Mara ya mwisho kuhisi kamba hukuweza kutatua shida au ulishindwa kumsaidia mgonjwa ilikuwa lini? *When was the last time that you felt like you were unable to solve a problem or you were unable to help a patient?*

16. Umewahi kufanya kazi wodini lakini ulihisi kwamba ni kazi ya mtu ambaye hajasoma kama wewe au kwa mtu mwenye umri mdogo zaidi? Kwa mfano? Ulihisije? *Have you ever done work on the ward that you felt like was someone else's work, like someone who hasn't studied as much or is younger? For example? How did you feel?*

Maternal and neonatal mortality
17. Unaonaje idadi ya vifo vya mama wajawazito? *How do you see the number of maternal deaths?*
    a. Na watato wachanga? *And neonates?*

18. Unajisikiaje ukiona mama amefariki wodini? (Mara kwa mara nahisi kwamba wauguzi wengine hawajali au hawaumwi wakiona mama amefariki. Kwa nini? Au hawaonyeshi wanahisije?) *How do you feel if you see that a mother has died on the ward? Why might it appear that nurses aren't sad when a woman dies?*

19. Wewe binafsi unafanya nini kutovunjika moyo/kutokata tama ukigundua mama mwingine amefariki? *You personally, what do you do in order to not become discouraged if you discover another mother has died?*

20. Kwa nini unafikiri bado mama wajawazito wanaendelea kufariki hospitalini? *Why do you think pregnant mothers continue to die at the hospital?*

21. Hospitali inahitaji nini kuendelea kupunguza idadi ya vifo vya mama? Watoto? *What else does the hospital need in order to continue to decrease the number of maternal deaths? Deaths of babies?*

22. Jamii inaweza kufanya nini kupunguza vifo hivi? *What can the community do to decrease these deaths?*

23. Serikali ya mkoa inaweza kufanya nini kupunguza vifo? *What can the regional government do to decrease these deaths?*

24. Serikali kuu inaweza kufanya nini zaidi kupunguza vifo vya mama wajawazito na watoto wachanga? *What else can the central government do to decrease the deaths of pregnant mothers and newborns?*

Hospital Administration
1. Unaonaje viongozi wa wodi ya wazazi? *How do you see the ward leaders?*
   a. Wanafanya kazi gani vizuri? *What do they do well?*
   b. Wanashindwa kufanya nini vizuri? *What do they fail to do well?*

2. Viongozi wa wodi wangeweza kufanya nini kuboresha kazi yao? Kuboresha wodi? *What could the ward leaders do to improve their work? To improve the ward?*

3. Kwenye dodoso la hali ya ufanisi wa kazi, watu wengi waliniambia kwamba hawajawahi kupongezwa kwa kazi bora. Kwa nini hii ni shida/ haijawahi kufanyika? Utawala ungeweza kufanya nini kurekebisha tatizo hili? *In the CWEQ survey, a lot of people told me that they have never been congratulated for good work. Why is this a problem/has never been done? What could the administration do to rectify this problem?*

4. Ukisema kupandishwa cheo, maanake ni nini? *If you say "kupandishwa cheo" what do you mean?*

5. Nani anaamua kupandisha cheo cha mtumishi au la? Ni kawaida kupandishwa cheo kila baada ya miaka mingapi? Au baada ya kufanya nini (kurudi shuleni, n.k.)? *Who decides to promote an employee or not? It is common to be promoted after every how many years? Or after doing what (to return to school, etc.)?*

6. Nini kinatokea mtumishi akifanya kazi vibaya? Utawala unaweza kufanya nini? *What happens if an employee does bad work? What can the administration do?*

7. Kwenye dodoso la hali ya ufanisi wa kazi, watu wengi waliniambia hawapati taarifa ya kutosha kuhusu malengo ya hospitali. *In the CWEQ survey, a lot of people told me they don't get enough information about the goals of the hospital.*

   a. Ungependa kupata taarifa zaidi kuhusu nini kamili? Kwa nini? *What other information would you like to get? Why?*

8. Niambie kuhusu uongozi wa Patron. *Tell me about Patron's leadership.*

   a. Anafanya nini vizuri? *What does he do well?*
   b. Ana matatizo gani? *What problems does he have?*
   c. Ungependa afanye nini tofauti? *What would you like him to do differently?*

9. Niambie kuhusu Medical officer in charge. *Tell me about the Medical Officer in Charge.*

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a. Anafanya nini vizuri? *What does he do well?*
b. Ana matatizo gani? *What problems does he have?*
c. Ungependa afanye nini tofauti? *What would you like him to do differently?*

10. Nielekeze zaidi kuhusu utawala wa wauguzi. Kuna matatizo gani? Wewe ungependa nini kifanyike? *Explain to me more about the nursing administration. What kinds of problems are there? What would you like to be done?*

11. Tuzungumze kidogo kuhusu hospitali kwa ujumla. Utawala unafanya nini vizuri? Unahitaji kuboresha nini? Kwa nini? *Let's talk a bit about the hospital generally. What does the administration do well? What does it need to improve? Why?*

12. Kuna matatizo gani upande wa utawala na uongozi? Kwa nini haya ni matatizo? *What kinds of problems are there on the part of the administration and leadership? Why are these problems?*

13. Matatizo hayo yanasababisha nini kwenye hospitali? *What can these problems cause to happen within the hospital?*

14. Niambie kuhusu kiongozi mzuri. Hata kama hayupo hapa, angekuwa mtu wa aina gani? Au, kumbuka mtu ambaye umewahi kufanya kazi naye na alikuwa kiongozi mzuri; niambie alikuwaje. *Tell me about a good leader. Even if they are not here, they would be what type of person? Or, remember a person that you have ever worked with who was a good leader; tell me what they were like.*

Treatment of Patients
1. Mara kwa mara, tunaambiwa kwamba manesi wa wodi ya wazazi wanatumia matusi. Unajisikiaje mtu akisema hivyo? Ni kweli? *From time to time we are told that the nurses on the maternity ward use bad language. How do you feel if someone says that?*

2. Nadhani tayari unajua, lakini hospitali za Marekani ni tofauti kuliko hospitali za hapa Tanzania. Kabla ya kuja hapa, sikuwahi kukaa kwa muda mrefu kwenye hospitali ya Marekani. Naomba uniambie kuhusu utendaji wa wagonjwa huku Tanzania. *I think you already know, but hospitals in the United States are differnet than those here in Tanzania. Before coming here, I had never stayed for a long time at a hospital in the U.S. Please tell me about the treatment of patients here in Tanzania.*

3. Wakimfokea mgonjwa, wanamfokea kwa sababu gani au kufanikisha nini? *If they yell at a patient, why are they yelling and in order to accomplish what?*

4. Wakimpiga mgonjwa, wanampiga kwa sababu gani? Kumsaidia kufanya nini? *If they hit a patient, why are they hitting her? To help her do what?*

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Appendix B: Focus Group Discussion Questions

Questions for Focus Group Discussion- Women
General:
Tuzungumze kidogo kuhusu maisha ya kijiji hiki kwa ujumla. Watu wanaendeshaje maisha yao?
Let's talk a bit about life in this village generally. What do people do for a living?

Vipi kuhusu upatikanaje wa huduma mbalimbali za kijamii katika kijiji chenu?
What are the available community services in your village?

Ni ahadi gani ambazo serikali imewahi kuahidi kuzifanya katika kijiji chenu? Zipi zimekwishatimizwa na zipi bado?
What promises has the government ever promised to do in your village? Which have been accomplished which not yet?

Kuna mradi wowote wa kimaendeleo unaoendeshwa katika kijiji chenu na ninyi wenyewe/shirika fulani ama serikali?
Are there any development groups that are working in your village and are they from you all yourselves, an organization, or the government?

Kuna changamoto za aina gani hapa kwenye jamii?
What kind of challenges are there in this community?

Serikali ingeweza kufanya nini kuwasaidia hapa?
What could the government do to help you all here?

Relations between men and women:
Sasa naomba tuzungumze kuhusu mahusiano kati ya wanawake na wanaume.
Now, I ask that we talk about relationships between men and women.

Wanaume wana majukumu gani kwenye jamii? Ndani ya familia?
What responsibilities do men have in the community? In the family?

Wanawake wana majukumu gani? Kwenye familia? Kwenye jamii?
What responsibilities do women have? In the family? In the community?

Nafasi ya mwanamke ama nafasi ya mwanaume ni ipi kuhusiana na fursa za kupata elimu?
What kind of opportunities do women and men have regarding the opportunity to get an education?

Katika maisha yenu ya kila siku, ni nani au akina nani ambao huwa unawatumia kupata msaada katika kutatua matatizo na changamoto mbalimbali unazokutana nazo?
In your everyday life, who do you go to for help in resolving problems and or various challenges you encounter?

Healthcare:
Sasa, naomba tuzungumze kuhusu huduma za afya.
Now, I ask that we talk about healthcare services.

Hospitali/vituo vya afya/zahanati zipo kwa ajili ya kuhakikisha kwamba wananchi wanapata huduma bora za afya na kwa wakati. Je, huduma za afya zinazotolewa katika zahanati yenu ni bora?
Hospital/health centers/dispensaries are here for the purpose of ensuring that citizens get quality and timely healthcare. Are the healthcare services at your dispensary high quality?

Je, kuna mapungufu yoyote? Mapungufu ni yapi?
Is there anything lacking? What?

Nini kifanyike?
What should be done?

Tuzungumzie kidogo kuhusu maswala ya afya ya uzazi.
Let's talk a bit about the question of reproductive health.

Unafahamu nini kuhusu uzazi salama?
What do you know about "uzazi salama" (safe birth/reproduction)?

Unadhani elimu juu ya afya ya uzazi ni muhimu? Elezea umuhimu huo. (Ni upi?)
Do you think education about reproduction is important? Explain its importance.

Unapata elimu hiyo ya uzazi salama kutoka wapi/nani? Unaweza kumwuliza nani au akina nani kwa ushauri zaidi?
Where do you get education about safe pregnancy/reproduction? Who can you ask for more advice?

Wewe kama mwanamke unadhani una wajibu gani katika kuhakikisha afya yako iko salama (kwa mfano kipindi unapokuwa mjamzito n.k.)?
You, as a woman, think you have what responsibility to ensure your health is safe (for example, when you are pregnant)?

Nini ulikuwa unafanya kipindi ulipokuwa mjamzito?
What were you doing during the period when you were pregnant?

Katika kipindi au vipindi ambavyo ulikuwa mjamzito je, ulikuwa unahudhuria klinik? Kwa nini?
During the time or times that you were pregnant, were you attending the clinic? Why?

Je, unazionaje huduma za kliniki katika zahanati hapa kijijini kwenu? (Kwa mfano, elimu inaotolewa inajitosheleza kukuandaa vyema kwa ajili ya kujifungua salama? Unapata nafasi ya kuuliza maswali?)

How do you see the services at the clinic in the dispensary here in your village? (For example, is the education that is given enough to prepare you well in order to safely give birth? Do you get the opportunity to ask questions?)

Je, unafanya nini ukiona huduma za zahanati hazitoshi? Unaenda wapi kupata huduma zaidi?
What do you do if you see that the services at the dispensary aren't sufficient? Where do you go for more care?

Je, kuna changamoto zozote ambazo umewahi kukutana nazo au zimewahi kukuhamisha kuzifikia huduma za afya? Kwa mfano, kwenda kliniki kama ulivyopangiwa?
Are there any challenges that have every prevented you from reaching healthcare services? For example, to go to the clinic as was planned?

Katika kijiji chenu wanawake wanajifungulia wapi? (Wewe mara ya mwisho ulijifungulia wapi? Kwa nini?)
In your village, where do women give birth? (Where did you give birth the last time? Why?)

Wewe kama mwanamke, unadhani ni vitu gani ambavyo vikitokea kipindi cha ujauzito si vya kawaida (ni dharura au matatizo)? Huwa unafanya nini inapotokea?
You, as a woman, what things can take place during pregnancy that aren't normal (that are an emergency or problem)? Usually what do you do if it happens?

Ukiona umeanza kupata dharura au matatizo kabla, wakati, au baada ya kujifungua huwa unafanya nini?
If you see that you have started to get an emergency or problem before, during, or after giving birth, what do you usually do?

Nini kinaweza kumsababisha mama mjamzito kufariki wakati wa ujauzito?
What can cause a pregnant mother to die during pregnancy?

Questions for Focus Group Discussion- Men
General:
Tuzungumze kidogo kuhusu maisha ya kijiji hiki kwa ujumla. Watu wanaendeshaje maisha yao?
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What kind of challenges are there in this community?

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What could the government do to help you all here?

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What kind of opportunities do women and men have regarding the opportunity to get an education?

Katika maisha yenu ya kila siku, ni nani au akina nani ambao huwa unawatumia kupata msaada katika kutatua matatizo na changamoto mbalimbali unazokutana nazo?
In your everyday life, who do you go to for help in resolving problems and or various challenges you encounter?

Healthcare:
Sasa, naomba tuzungumze kuhusu huduma za afya.
Now, I ask that we talk about healthcare services.

Hospitali/vituo vya afya/zahanati zipo kwa ajili ya kuhakikisha kwamba wananchi wanapata huduma bora za afya na kwa wakati. Je, huduma za afya zinazotolewa katika zahanati yenu ni bora?
Hospital/health centers/dispensaries are here for the purpose of ensuring that citizens get quality and timely healthcare. Are the healthcare services at your dispensary high quality?

Je, kuna mapungufu yoyote? Mapungufu ni yapi?
Is there anything lacking? What?

Nini kifanyike?
What should be done?

Tuzungumzie kidogo kuhusu maswala ya afya ya uzazi.
Let's talk a bit about the question of reproductive health.

Unafahamu nini kuhusu uzazi salama?
What do you know about "uzazi salama" (safe birth/reproduction)?

Unadhani elimu juu ya afya ya uzazi ni muhimu? Elezea umuhimu huo. (Ni upi?)
Do you think education about reproduction is important? Explain its importance.

Unapata elimu hiyo ya uzazi salama kutoka wapi/nani? Unaweza kumwuliza nani au akina nani kwa ushauri zaidi?
Where do you get education about safe pregnancy/reproduction? Who can you ask for more advice?

Wewe kama mume unadhani una wajibu gani katika kuhakikisha afya ya mwenzio (ya mke) iko salama (kwa mfano kipindi anapokuwa mjamzito n.k.)?
As a husband, what kind of responsibility (accountability) do you have to make sure that your wife/partner's health is safe (for example when she is pregnant)?

Katika kipindi au vipindi ambavyo mke wako alikuwa mjamzito je, alikuwa anahudhuria klinik?
When your wife has been pregnant, was she going to the clinic?

Nini ulikuwa unafanya kipindi mke wako alipokuwa mjamzito?
What were you doing when your wife was pregnant?

(Nini ulikuwa unafanya ili kuhakikisha unapata taarifa kuhusiana na maendeleo ya ujauzito wa mke wako na afya yake kwa ujumla?)
What were you doing to ensure that you got information about the development of your wife's pregnancy and her health generally?

Katika kijiji chenu wanawake wanajifungulia wapi?
In your village, where do women give birth?

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Ukiona mke wako amepata dharura au ameanza kupata matatizo kabla, wakati, au baada ya kujifungua huwa unafanya nini?

If you see that your wife has developed an emergency or she has started to get problems before, during, or after giving birth, what do you do?

Interview questions for Village Leaders

No._____

Kijiji, Kata, Wilaya
Village, Ward, District

General background questions:
1. Wewe ni kiongozi wa aina gani kijijini? *What kind of leader are you in the village?*

2. Unaonaje hali ya kijiji chako? Kwa mfano, kuna changamoto gani hapa, za aina yoyote? Au mmekuwa na mafanikio gani tangu ulipoanza? *How do you see the state of your village? For example, are there challenges here, what kind? Or what successes have you all had since you started?*

3. Ukiwa ungeweza kuwaambia watu wa serekali kitu kimoja kuhusu maeneo haya, ungesemaje? Kwa nini?
    If you were able to tell people from the government one thing about this place, what would you say? Why?

General description of life in the village:
1. Watu wangapi wanaishi hapa? *How many people live here?*

2. Watoto wanaenda shuleni wapi? Ya msingi? Ya sekondari? *Where do children go to school? Primary? Secondary?*

3. Watu wa kijiji hiki wanafanya kazi ya aina gani kwa kawaida? Wanawake wanafanya kazi ya aina gani? Wanaume wanafanya kazi ya aina gani? *People in this village usually do what kind of work? What kind of work to women do? What kind of work do men do?*

4. Watu wanaenda wapi kuuza mahindi n.k.? Kununua matumizi/mahitaji? *Where do people go to see maize, etc.? Do buy supplies?*

5. Majukumu ya wanawake ni yapi? Majukumu ya wanaume ni yapi? *What are the responsibilities of women? Of men?*

6. Nini ni tofauti siku hizi kuliko zamani? Kwa nini? Maisha yamebadilikaje? Kwa nini/kwa sababu gani? *What is different now than in the past? Why? How has life changes? Why or because of what?*

Healthcare:
1. Magonjwa gani ni kawaida zaidi hapa kwa watu wote? *What kinds of illnesses are common here for everyone?*

2. Unaonaje huduma za afya za huku kwa ujumla? *How do you see the healthcare services here generally?*

3. Watu wanapataje dawa? *How do people usually get medication?*

4. Kijiji kinachangiaje hela kwa ajili ya huduma za afya? Kuna kamati ya afya hapa? *Does the community contribute money for healthcare services? Is there are health committee here?*

5. Kamati ya afya ina majukumu gani? Inafanya nini? *What responsibilities does the health committee have? What does it do?*

6. Akina mama wanapata matatizo gani? Wanajifungua wapi kwa kawaida? *What kinds of problems do women get? Where do they usually give birth?*

7. Wanaume wanafanya nini kuwasaidia wanawake wakati wa ujauzito na kujifungua? *What do men do to help women during pregnancy or giving birth?*

8. Nielekezee kuhusu huduma za afya za hapa kwa mama wajawazito. *Explain to me about the healthcare services here for pregnant women.*

9. Wanawake wana elimu gani kuhusu ujauzito? Na wanaume? Watu wanapata elimu hii kutoka wapi? *What kind of information do women have about pregnancy? Do men have? Where do people get this kind of information?*

10. Mama akipata dharura wakati wa ujauzito au kujifungua, anafanyaje? Mnamsaidiaje? Naomba ujaribu kukumbuka mara ya mwisho mama mjamzito alipata matatizo. Niambie nini kilitokea. Alikuwa na tatizo gani? Alienda wapi kwanza kutafuta huduma za afya? Baada ya hapo, akafanyaje? *If a woman develops an emergency while pregnant or during delivery, what does she do? How do you all help her? Please try to remember the last time a pregnant mother got problems. Tell me what happened. What kind of problem did she have? Where did she go first to find healthcare? After that, what did she do?*

11. Mama wajawazito wanapata matatizo mara ngapi kwa mwezi/mwaka? *Pregnant mothers get problems about how many times per month or year?*

12. Umewahi kuwa na mama mjamzito ambaye alifariki hapa kijijini? Kama ndiyo, mara ngapi kwa mwaka? Mara ya mwisho ilikuwa lini? Inawezekana kuongea na familia yake? Nini kilitokea? *Have you ever had a pregnant mother who died here in the village? If yes, how many times per year? When was the last time? Is it possible to talk to her family? What happened?*

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Traditional/Local Midwife Survey
Translated from the French (modified from Carolyn Sargent's original version)
Swahili translation added 11/8/14
Note: I did not ask all of these specific questions in this way, it was meant as an individual survey. I did ask most of the questions included but in an open-ended way, usually with more than one respondent at time.

1. Name_____
   Jina_____
2. Card number (N/A)
3. Place of residence
   Sehemu anapakaa/kijiji n.k.
4. Status of respondent (Midwife)
5. Education: None_____ 0-3_____ 3-6_____
   Elimu: Hajasoma_____ Darasa la 1-4_____ Darasa la 5-7_____ Sec_____
6. Read: yes_____ no_____
   Anaweza kusoma: Ndiyo_____ Hapana_____
7. Write: yes_____ no_____
   Anaweza kuandika: Ndiyo_____ Hapana_____
8. Marital status: Single_____ Married_____ Widowed_____ Divorced_____
   Hali ya ndoa: Hajaolewa_____ Ameolewa_____ Mjane_____ Talikiwa/tengane_____
9. Is you mother a midwife? Yes_____ No_____
   Mamako mzazi ni mkunga pia? Ndiyo_____ Hapana_____
10. You were taught how to deliver babies: by whom?_____ where?_____
    how?_____
    Ulifundishwa kuzalisha: Na nani?_____ Wapi?_____
    Vipi/Ulifundishaje?_____
11. How did you learn about the medicines?_____
    Ulijifunzaje kuhusu kutibu wajawazito/matibabu?_____
12. Are there other midwives in your family? Yes_____ No_____
    Kuna wakunga wa jadi wengine ndani ya familia yako? Ndiyo_____ Hapana
13. Relationship (to the respondent): Mother_____ Grandmother____ Other_____
    Nani?: Mama mzazi_____ Bibi_____ Mwingine_____
14. Midwife's number of pregnancies_____
    Umekuwa na mimba ngapi wewe mwenyewe?/Idadi ya ujauzito_____
15. Living children_____
    Idadi ya watoto amabao wapo hai_____
16. How old were you when you delivered your first client?_____
    Ulikuwa na miaka mingapi ulipomzalisha mteja/mama wako wa kwanza?_____
17. Payment: Money_____ In kind (exchange)_____ Both_____ None_____
    Malipo: Hela_____ Vitu vingine (sabuni/chakula/n.k.)_____ Vyote_____
    Halipwi_____
18. When are you paid? Before the birth_____ After_____ N/A_____
    Unalipwa lini? Kabla ya uzaliwa_____ Baada ya_____ N/A_____
19. Is the payment the same for a boy baby and a girl baby? Yes_____ No___ N/A____

Malipo yanalingana akiwa mtoto wa kiume na wakike? Ndiyo_____ Hapana_____
N/A_____

20. Is the payment the same for a primipara as for a multipara? Yes____ No____ N/A____
Malipo yanalingana kwa mama mwenye mimba ya kwanza na mama mwenye mimba ya
pili na kuendelea? Ndiyo_____ Hapana_____ N/A_____

21. Other sources of income: Commerce_____ Other activities_____ N/A_____
Unafanya shughuli zingine kupata hela?: Biashara_____ Mambo mengine_____
N/A_____

22. Number of deliveries per month? Recounted_____
Idadi ya uzalishi kila mwezi? Kwa kumbuko_____

23. Do you give women advice concerning:
    a. Their periods (blood lost every month) _____
    b. Sterility (women or men whom haven't had their own children)_____
    c. Pregnancy problems_____
    d. Infant health_____
    e. Female nutrition_____
    f. Female circumcision_____
    g. Other_____
    h. Don't give advice_____
    Unawashauri wanawake kuhusu:
        a) Siku zake (za kila mwezi)_____
        b) Matatizo ya kutopata watoto_____
        c) Matatizo wakati wa ujauzito_____
        d) Afya ya watoto wachanga/wadogo_____
        e) Lishe ya akina mama_____
        f) N/A
        g) Menginevyo_____
        h) Hatoi ushauri_____

34. Could you ask another midwife to come help you at a birth? Yes____ No_____
Ungeweza kumwuliza mkunga wa jadi mwingine kukusaidia wakati wa kuzalisha?
Ndiyo_____ Hapana_____

35. Who? _____
Nani?_____

36. If the answer is yes, for what reasons (would you call her):_____
Kama umejibu ndiyo, ungemwita kwa sababu gani?_____

37. From time to time do you decide to transfer a woman to the hospital? Yes____ No _____
Je, mara kwa mara unaamua kumwambia/kumpeleka mama zahanati/kituo cha afya?
Ndiyo_____ Hapana_____

38. If the answer to 37 is yes, in what cases? Prolonged labor_____; Hemorrhage_____;
Cord prolapse_____; Malpresentation_____; Premature rupture of
membranes_____; Edema_____; Eclampsia/eclamptic seizure_____;
Malaria_____
Kama amejibu 37 ndiyo, kwa nini/akiwa na matatizo gani? Amekaa muda mrefu bila
kujifungua_____; Kutoka na damu nyingi kabla au baada ya kujifungua_____;
Kitovu cha mtoto kimetangulia_____; Mtoto amelala vibaya_____; Chupa kimepasuka

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mapema_____; Amevimba kwa mwili (miguu, uso, n.k.)_____; Kifafa cha mimba_____; Malaria_____; Sababu nyingine_____

39. Do the midwives get together on certain occasions? Yes_____ No_____

　　　　Wakunga wa jadi wote wanakutana mara kwa mara? Ndiyo_____ Hapana_____

40. If the answer to 39 is yes, when? _____

　　　　Akiwa amejibu ndiyo 39, lini/kwa sababu gani?_____

41. How does one become a midwife? Criteria for choice:

　　　　a. From mother to daughter_____

　　　　b. Divine call_____

　　　　c. From grandmother to (grand)daughter_____

　　　　d. Personal preference/desire_____

　　　　e. Ability_____

　　　　Unafanya nini kuwa mkunga wa jadi?

　　　　　　　a. Mama kwa binti_____

　　　　　　　b.

　　　　　　　c. Bibi kwa mjukuu_____

　　　　　　　d. Anachagua mwenyewe_____

　　　　　　　e. Uwezo_____

42. In the case of difficulty, does the family of the woman make the call to another midwife? Yes_____ No_____

　　　　Matatizo yakitokea, familia inamwita mkunga mwingine? Ndiyo_____ Hapana_____

43. Are there special ceremonies for pregnant women? Yes_____ No_____ If yes, describe.

　　　　Kuna maadhimisho/sherehe kwa wanawake wajawazito? Ndiyo_____ Hapana_____ Ukiwa umejibu ndiyo, nielekeze.

44. Is the midwife invited? Yes_____ No_____

　　　　Mkunga anahudhuria? Ndiyo_____ Hapana_____

45. Do you look to see (know) if the baby is positioned normally? Yes_____ No_____ Unaangalia mtoto akiwa amelala vizuri tumboni? Ndiyo_____ Hapana_____

46. If number 45 is yes, how?: palpation_____ divination_____ internal exam_____ shape of the abdomen_____ consultation_____ other_____

Kwa kupapasa_____ Kwa maono_____ Uchunguzi wa ndani_____

Mwonekano wa tumbo_____ Kwa mahojiano_____ Mengineo_____

49. If a woman exceeds nine months, do you have a medicine to start labor? Yes_____ No_____

　　　　Mama akiwa na mimba kwa zaidi ya miezi tisa, una dawa kuanzisha uchungu? Ndiyo_____ Hapana_____

50. How many times should the sun set on a woman in labor?

　　　　Mama anaweza kukaa siku ngapi/masaa mangapi na uchungu kabla ya kujifungua?

51. Can you tell if the baby has died inside the mother? Yes_____ No_____

　　　　Unaweza kujua mtoto akiwa ameshafariki tumboni? Ndiyo_____ Hapana_____

52. If #51 is yes, how? _____

　　　　Kama 51 ni ndiyo, unajuaje?_____

53. If #51 is yes, what do you do?_____

　　　　Mtoto akiwa ameshafariki tumboni, unafanya nini?

54. When a woman wants to push, do you rupture the membranes? Yes_____ No_____

　　　　Mama akitaka kusukuma, unapasua chupa? Ndiyo_____ Hapana_____

55. If the woman is tired and she can't push, what do you do? _____

Je, mama akiwa amechoka sana na ameshindwa kusukuma, unafanyaje?_____
56. Can you accelerate a birth/labor? Yes_____ No_____

Unaweza kuharakisha uchungu/muda wa kujifungua? Ndiyo_____ Hapana_____
57. Which problems have you ever encountered during labor? Dechirures_____ Arrest of labor progress_____ Hypertonia/ violent pain_____ Hemorrhage_____
Absence of fetal descent_____

Umeona matatizo gani wakati wa kujifungua? Uchungu umeacha_____
Maumivu kali sana_____Kutoka na damu nyingi_____Mtoto ameshindwa kushuka vizuri_____
58. Which problems have you encountered after delivery? Breast abscess_____ Tetanus_____
Fever_____ Other_____

Umeona matatizo gani baada ya kujifungua? Kidonda cha ziwa_____Pepo
punda_____Homa_____Mengine_____

Added Questions for this Study: When was the last time you encountered a problem? Explain what happened. Mara ya mwisho ulipokutana na shida ilikuwa lini? Nielekezee nini kilitokea. How did you recognize that the mother had gotten a problem? Then what did you do? Why? Ulitambuaje kwamba mama alikuwa amepata shida? Halafu ukafanya nini? Kwa nini?

59. Who helps at birth?

Nani anasaidia wakati wa kujifungua?
60. Who helps during labor?

Nani anasaidia wakati wa uchungu kabla ya kujifungua?
61. Can a man help during the birth? Yes_____ No_____

Mwanaume anaweza kusaidia wakati wa kujifungua? Ndiyo_____ Hapana_____
62. If #61 is yes, who?

Kama ndiyo, nani?
63. Can a man help you in the course of a birth? Yes_____ No_____

Mwanaume anaweza kukusaidia wakati wa kujifungua/kumzalisha mama?
Ndiyo_____ Hapana_____
64. If #63 is yes, how?

Kama 63 ni ndiyo, vipi/anafanya nini?
65. Where does the women give birth? Her house_____ Your house_____ Other_____ A particular room_____

Mama anajifungua wapi? Nyumbani kwake_____ Nyumbani kwako_____
Sehemu nyingine_____ Chumba kimoja_____
66. After the birth, how long do you stay with the woman? To wash the baby_____
Other_____

Baada ya kujifungua, unakaa na mama kwa muda gani? Kumwogesha mtoto_____
Mengineo_____
67. How does the placenta come out? By itself_____ By abdominal pressure_____ Pulled by the cord_____ With the hand_____ Other_____

Kondo la nyuma linatokaje? Lenyewe_____Kwa kusukuma
tumboni_____Kwa kuvuta kitovu_____Kwa
mkono_____Mengineo_____
68. How long do you wait if the placenta doesn't come out?

Unasubiri kwa muda gani kama kondo la nyuma halitoki?

69. What do you do to make the placenta come out? Abdominal pressure_____ Pull by the cord_____ Search for it with your hand_____ Drive the woman to health care center_____

Unafanya nini kusababisha kondo la nyuma litoke? Sukuma tumboni_____ Vuta kwa kitovu_____Ingiza mkono ndani kulitafuta_____ Mpeleka mama kwenye zahanati_____

70. What do you do with the placenta? The family of the husband buries it_____ Other_____

Unafanya nini na kondo la nyuma?

71. Why?

Kwa nini?

72. What do you do to the baby at the moment of birth?

Unafanya nini na mtoto moja kwa moja baada ya kuzaliwa?

73. Who cuts the cord?

Nani anakata kitovu?

74. With what does one cut the cord?

Ni kawaida kutumia nini kukata kitovu?

75. How does one cut the cord? Close to the body_____ Far from the body_____

Unakataje kitovu? Karibu na tumbo la mtoto_____Mbali_____

76. What do you do if the baby doesn't cry?

Unafanya nini kama mtoto halii?

82. When does the mother start to breastfeed the infant? Right away_____ The next day_____ The same day_____

Mama anaanza kumnyonyesha mtoto lini? Moja kwa moja_____ Kesho yake_____ Siku ile ya kwanza_____

83. Have you ever had a case in which the woman had "glass" in her breastmilk? Yes_____ No_____

Umewahi kuwa na mama ambaye alikuwa na shida ya maziwa yake? Ndiyo_____ Hapana_____Shida gani?

86. Has it happened that after birth a woman becomes agitated and hides herself in the brush, etc.? Yes_____ No_____ Describe

Imewahi kutokea kwamba baada ya kujifungua mama amepotea akili na amejificha semehu (labda porini)? Ndiyo_____ Hapana_____ Nielekeze_____

87. Have you ever seen a woman die during birth? Yes_____ No_____

Umewahi kumwona mama ambaye amefariki wakati wa kujifungua? Ndiyo_____ Hapana_____

88. If yes, often?_____ Rarely? _____

Kama ndiyo, kawaida/mara nyingi?_____ Mara kwa mara_____

89. If a woman dies during labor, is it anyone's fault? Yes_____ No_____

Je, mtu anaweza kusababisha mama afariki kwa muda wa kujifungua? Ndiyo_____ Hapana_____

90. Why does she die? God_____ Evilness/bad actions of the woman_____ Evilness/bad will of another_____

Kwa nini anafariki? Mungu_____ Ubaya wa mama mwenyewe_____ Ubaya wa mtu mwingine_____

91. Is there a special ceremony for a woman who dies during childbirth? Yes_____ No_____
Describe.

Kuna sherehe/maadhimisho kwa mwanamke ambaye amefariki wakati wa kujifungua?
Ndiyo_____ Hapana_____ Nielekeze

Conception

97. Is it necessary to consult the midwife to know if you are pregnant? Yes_____ No_____

Ni lazima kumwona mkunga wa jadi kugundua mimba ikiwa imeingia? Ndiyo_____
Hapana_____

98. Can the midwife determine if a woman is pregnant? Yes_____ No_____

Mkunga wa jadi anaweza kujua mwanamke akiwa mjamzito? Ndiyo_____
Hapana_____

99. If yes, how?

Kama ndiyo, mkunga anajuaje?

101. Should the woman abstain from certain foods or drinks during pregnancy? Yes_____
No_____

Je, kuna chakula ambacho mama mjamzito haruhusiwi kula au kunywa? Ndiyo_____
Hapana_____

102. If yes, which?

Chakula kipi?

103. Can a pregnant woman have sexual relations? Yes_____ No_____ During certain
times_____

Mjamzito anaruhusiwa kufanya mapenzi? Ndiyo_____ Hapana_____

104. If yes, until what time in the pregnancy? 1-4 months_____ 4-6 months_____ 6-9
months_____

Kama ndiyo, mpaka mimba ina miezi mingapi? 1-4_____ 4-6_____
6-9_____

What are the common health problems for pregnant women?

Matatizo gani ni kawaida kwa wajawazito? (Wakati wa ujauzito, kujifungua)

<u>Name of the illness Jina la ugonjwa</u>   <u>Treatment Matibabu</u>

Additional Questions for my work:

1. Generally, these days, do women continue to use your services or where do they go? Is it
different now than in the past? Why? What has changed? Kwa kawaida siku hizi, wanawake
wanaendelea kutumia huduma zako au wanaenda wapi? Ni tofauti sasa kuliko zamani? Kwa
nini? Nini kimebadilika?

2. What challenges do you see with your work these days? Unaona changamoto gani na kazi
yako siku hizi?

3. Does every woman/family pay you? Without clients, where do you get money? Kila
mama/familia anakulipaje? Bila wateja, unapataje hela kutoka wapi?

4. How do you see the government regulations about not using TBAs? What can the government
do to help you? Unaonaje sera za serekali kuhusu kutotumia wakunga wa jadi? Serekali inafanya
nini kukusaidia?

Appendix C: Conditions for Work Effectiveness Questionnaire (CWEQ)

Dodoso la Hali ya Ufanisi wa Kazi

Je una fursa za namna gani katika kazi yako ya sasa?

1= Sina/ hakuna 2. 3. = kiasi 4. 5. = Nyingi/mwingi

1. Kazi ina changamoto	1 2 3 4 5
2.Uwezekano wa kupata ujuzi mmpya na maarifa kazini	1 2 3 4 5
3. Uwezo wa kupata programu za mafunzo ili kujifunza mambo mapya	1 2 3 4 5
4. Nafasi ya kujifunza jinsi hospitali inavyofanya kazi	1 2 3 4 5
5. Shughuli zinazotumia ujuzi na maarifa yako binafsi	1 2 3 4 5
6. Nafasi ya kupata kazi nzuri zaidi	1 2 3 4 5
7 Nafasi ya kukaimu majukumu mbali mbali yasiyohusika na kazi ya sasa	1 2 3 4 5

Je una uwezo wa kupata habari kiasi gani katika kazi yako ya sasa?

1= Hamna / sipati   2   3 Napata habari kiasi 4= Napata habari nyingi

1. Habari zinazohusu hali ya sasa ya hosiptali	1 2 3 4 5
2. Habari kuhusu uhusiano wa kazi ya kitengo chako na hosiptali	1 2 3 4 5
3. Habari za jinsi wafanyakazi wengine kama wewe wanavyofanya kazi	1 2 3 4 5
4. Habari kuhusu maadili ya uongozi wa juu wa hosiptali	1 2 3 4 5
5. Habari za malengo ya uongozi wa juu wa hosptali	1 2 3 4 5
6. Habari za mpango kazi wa mwaka huu wa kitengo chako	1 2 3 4 5
7. Habari za jinsi maamuzi ya mishahara ya watumishi kama wewe yanavyofanywa	1 2 3 4 5
8. Habari za jinsi idara nyingine zinavyofikiria kuhusu kitengo chako	1 2 3 4 5

Je unapata msaada kiasi gani katika kitengo chako?

1= Sipati 2   3   4 = Napata kiasi   5= Napata msaada sana

1. Msaada maalumu kuhusu vitu unavyofanya vizuri	1 2 3 4 5
2. Maoni maalumu kuhusu vitu unavyohitaji uboreshe	1 2 3 4 5
3. Dondoo muhimu au ushauri wa jinsi ya kutatua matatizo	1 2 3 4 5
4. Taarifa au mapendekezo juu ya upatikanaji wa kazi nyingine	1 2 3 4 5
5. Majadiliano kuhusu mafunzo au kujiendeleza kielimu	1 2 3 4 5
6. Msaada kunapokuwa na mgogoro wa kazi	1 2 3 4 5
7. Msaada wa kukutanishwa na watu ambao wataweza kufanikisha kazi	1 2 3 4 5

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8. Msaada wa kupata vifaa vinavyohitajika kufanikisha kazi   1 2 3 4 5

9. Napata tuzo na kutambulika pale unapofanya kazi nzuri   1 2 3 4 5

Je una uwezo kiasi gani wa kupata rasilimali katika kazi yako ya sasa?
1= Sina uwezo   2   3= Nina uwezo kiasi   4   5= Nina Uwezo mkubwa
1. Uwezo wa kupewa vifaa muhimu vya kazi   1 2 3 4 5

2. Uwezo wa kupata nafasi ya kuandaa ripoti   1 2 3 4 5

3. Uwezo wa kupata mda wa kukamilisha mahitaji ya kazi   1 2 3 4 5

4. Uwezo wa kupata msaada haraka mda mfupi pale unapohitaji   1 2 3 4 5

5. Uwezo wa kushawishi maamuzi kuhusu kuajiri wafanyakazi wa kudumu wa kitengo
    chako   1 2 3 4 5

6. Uwezo wa kushawishi katika maamuzi juu ya kupata mahitaji muhimu ya kitengo chako
                                                                    1 2 3 4 5

7. Uwezo wa kushawishi maamuzi juu ya kupata vifaa kwa ajili ya kitengo chako

                                                                    1 2 3 4 5
Katika mahali pangu pa kazi/mazingira yangu ya kazi
1= Hakuna   2   3=Kiasi   4   5=Mengi/ Nyingi
1. Majukumu mengi yanayoendana na kazi yangu ni   1 2 3 4 5

2. Tuzo kwa ajili ya utendaji mzuri wa kazi ni   1 2 3 4 5

3. Tuzo kwa ajili ya uvumbuzi katika kazi ni   1 2 3 4 5

4. Kiasi cha kuwa na mabadiliko ni   1 2 3 4 5

5. Kiasi cha vibali vinavyohitajika kwa ajili ya maamuzi yasiyo ya kila mara ni

                                                                    1 2 3 4 5
6. Uhusiano wa kazi yangu na maeneo ya matatizo ya sasa ya hosipitali ni   1 2 3 4 5

7. Kiasi changu cha ushiriki katika programu za semina/mafunzo ni 1 2 3 4 5

8. Kiasi change cha ushiriki katika kutatua matatizo ya nguvu kazi ni   1 2 3 4 5

9. Kiasi cha umuhimu wa shughuli zinazohusiana na kazi yangu katika hosiptali ni

                                                                    1 2 3 4 5
Una fursa kiazi gani kwa shughuli zifuatazo katika kazi yako ya sasa?
1= Sina   2   3=Nina Kiasi   4   5= Nina fursa nyingi
1. Kushirikiana na madaktari katika kumhudumia mgonjwa   1 2 3 4 5

2. Kupokea maoni muhimu kutoka kwa madaktari   1 2 3 4 5

3. Kushirikishwa na madaktari wanapokuwa wanachukua maelezo ya mgonjwa

                                              1 2 3 4 5

4. Kutambuliwa na madaktari kwa ajili ya kazi nzuri   1 2 3 4 5

5. Madaktari kuhitaji maoni yako   1 2 3 4 5

6. Msimamizi wako mkuu kukuomba ushauri kuhusu mambo mbali mbali ya kuiongoza
wodi   1 2 3 4 5

7. Msimamizi wako wa karibu kuhitaji maoni yako   1 2 3 4 5

8. Kupokea habari kutoka kwa msimamizi wako wa karibu kuhusu mabadiliko
yanayotegemewa kufanywa karibuni katika kitengo chako   1 2 3 4 5

9. Nafasi ya kuwa na ushawishi nje ya kitengo mfano kuchaguliwa mwanakamati muhimu
na msimamizi wako   1 2 3 4 5

10. Kupata mawazo kutoka kwa wafanyakazi wasaidizi wa kitengo kama makarani,makarani
wa wodi, na wafanya usafi   1 2 3 4 5

11. Kuweza kuwatambua wafanyakazi wasaidizi kama binadamu wa kawaida   1 2 3 4 5

12. Kutafuta mawazo kutoka kwa wafanyakazi wasaidizi nje ya kitengo kama makarani wa
mapokezi, mafundi   1 2 3 4 5

13. Kuombwa ushauri na mfanyakazi mwenzako   1 2 3 4 5

14. Kupokea maoni muhimu kutoka kwa wafanyakazi wenzako   1 2 3 4 5

15. Kuombwa maoni ya jinsi ya kumhudumia mgonjwa na wafanyakazi wenzako

                                              1 2 3 4 5

16. Kuombwa na wafanyakazi wenzako uwasaidie matatizo   1 2 3 4 5

17. Kubadilishana mawazo na wafanyakazi wenzako   1 2 3 4 5

18. Kutafuta mawazo kwa wataalamu wengine mbali ya madaktari kama vile
physiotherapists, occupational therapists, wataalamu wa lishe   1 2 3 4 5

CONDITIONS FOR WORK EFFECTIVENESS QUESTIONNAIRE-I

How much of each kind of opportunity do you have in your present job?

1 = None	2	3 = Some	4	5 = A Lot				

1. Challenging work — 1 2 3 4 5
2. The chance to gain new skills and knowledge on the job — 1 2 3 4 5
3. Access to training programs for learning new things — 1 2 3 4 5
4. The chance to learn how the hospital works — 1 2 3 4 5
5. Tasks that use all of your own skills and knowledge — 1 2 3 4 5
6. The chance to advance to better jobs — 1 2 3 4 5
7. The chances to assume different roles not related to current job — 1 2 3 4 5

How much access to information do you have in your present job?

1 = No Knowledge	2	3 = Some Knowledge	4	5 = Know A Lot				

1. The current state of the hospital — 1 2 3 4 5
2. The relationship of the work of your unit to the hospital — 1 2 3 4 5
3. How other people in positions like yours do their work — 1 2 3 4 5
4. The values of top management — 1 2 3 4 5
5. The goals of top management — 1 2 3 4 5
6. This year's plan for your work unit — 1 2 3 4 5
7. How salary decisions are made for people in positions like yours — 1 2 3 4 5
8. What other departments think of your unit — 1 2 3 4 5

How much access to support do you have in your present job?

1 = None	2	3 = Some	4	5 = A Lot				

1. Specific information about things you do well — 1 2 3 4 5
2. Specific comments about things you could improve — 1 2 3 4 5
3. Helpful hints or problem solving advice — 1 2 3 4 5
4. Information or suggestions about job possibilities — 1 2 3 4 5
5. Discussion of further training or education — 1 2 3 4 5
6. Help when there is a work crisis — 1 2 3 4 5
7. Help in gaining access to people who can get the job done — 1 2 3 4 5
8. Help in getting materials and supplies needed to get the job done — 1 2 3 4 5
9. Rewards and recognition for a job well done — 1 2 3 4 5

How much access to resources do you have in your present job?

1 = None	2	3 = Some	4	5 = A Lot				

1. Having supplies necessary for the job — 1 2 3 4 5
2. Time available to do necessary paperwork — 1 2 3 4 5
3. Time available to accomplish job requirements — 1 2 3 4 5
4. Acquiring temporary help when needed — 1 2 3 4 5
5. Influencing decisions about obtaining human resources (permanent) for your unit. — 1 2 3 4 5
6. Influencing decisions about obtaining supplies for your unit — 1 2 3 4 5
7. Influencing decisions about obtaining equipment for your unit — 1 2 3 4 5

In my work setting/job: (JAS)

|	1 = None	2	3 = Some	4			5 = A Lot		
1. the amount of variety in tasks associated with my job is					1	2	3	4	5
2. the rewards for unusual performance on the job are					1	2	3	4	5
3. the rewards for innovation on the job are					1	2	3	4	5
4. the amount of flexibility in my job is					1	2	3	4	5
5. the number of approvals needed for nonroutine decisions are					1	2	3	4	5
6. the relation of tasks in my job to current problem areas of the organization is					1	2	3	4	5
7. my amount of participation in educational programs is					1	2	3	4	5
8. my amount of participation in problem solving task forces is					1	2	3	4	5
9. the amount of visibility of my work-related activities within the institution is					1	2	3	4	5

How much opportunity do you have for these activities in your present job: (ORS)

	1 = None	2	3 = Some	4			5 = A Lot		
1. Collaborating on patient care with physicians					1	2	3	4	5
2. Receiving helpful feedback from physicians					1	2	3	4	5
3. Being sought out by physicians for patient information					1	2	3	4	5
4. Receiving recognition by physicians					1	2	3	4	5
5. Having physicians ask for your opinion					1	2	3	4	5
6. Being sought out by supervisor for ideas about ward management issues					1	2	3	4	5
7. Having immediate supervisor ask for your opinion					1	2	3	4	5
8. Receiving early information of upcoming changes in work unit from your immediate supervisor					1	2	3	4	5
9. chances to increase your influence outside your unit e.g., nomination to influential committees by supervisor					1	2	3	4	5
10. Seeking out ideas from auxiliary workers on the unit, e.g., secretaries, ward clerks, housekeeping.					1	2	3	4	5
11. Getting to know auxiliary workers as people					1	2	3	4	5
12. Seeking out ideas from auxiliary workers outside of the unit, e.g., admission clerks, technicians					1	2	3	4	5
13. Being sought out by peers for information					1	2	3	4	5
14. Receiving helpful feedback from peers					1	2	3	4	5
15. Having peers ask your opinion on patient care issues					1	2	3	4	5
16. Being sought out by peers for help with problems					1	2	3	4	5
17. Exchanging favours with peers					1	2	3	4	5
18. Seeking out ideas from professionals other than physicians, e.g., physiotherapists, occupational therapists, dieticians					1	2	3	4	5

Appendix D: Maps
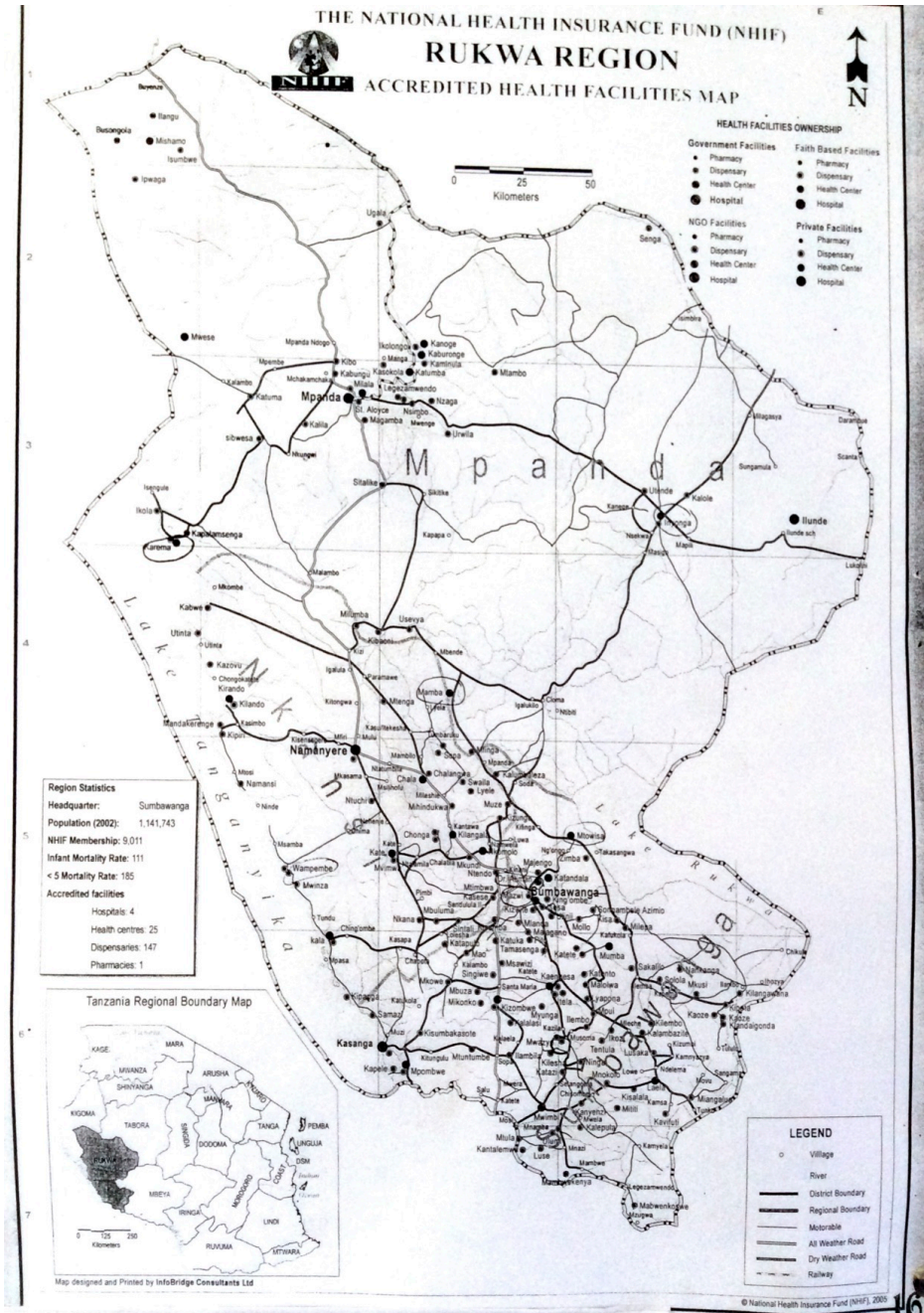
1: Map of Rukwa and Mpanda Regions (formally one region, Rukwa)

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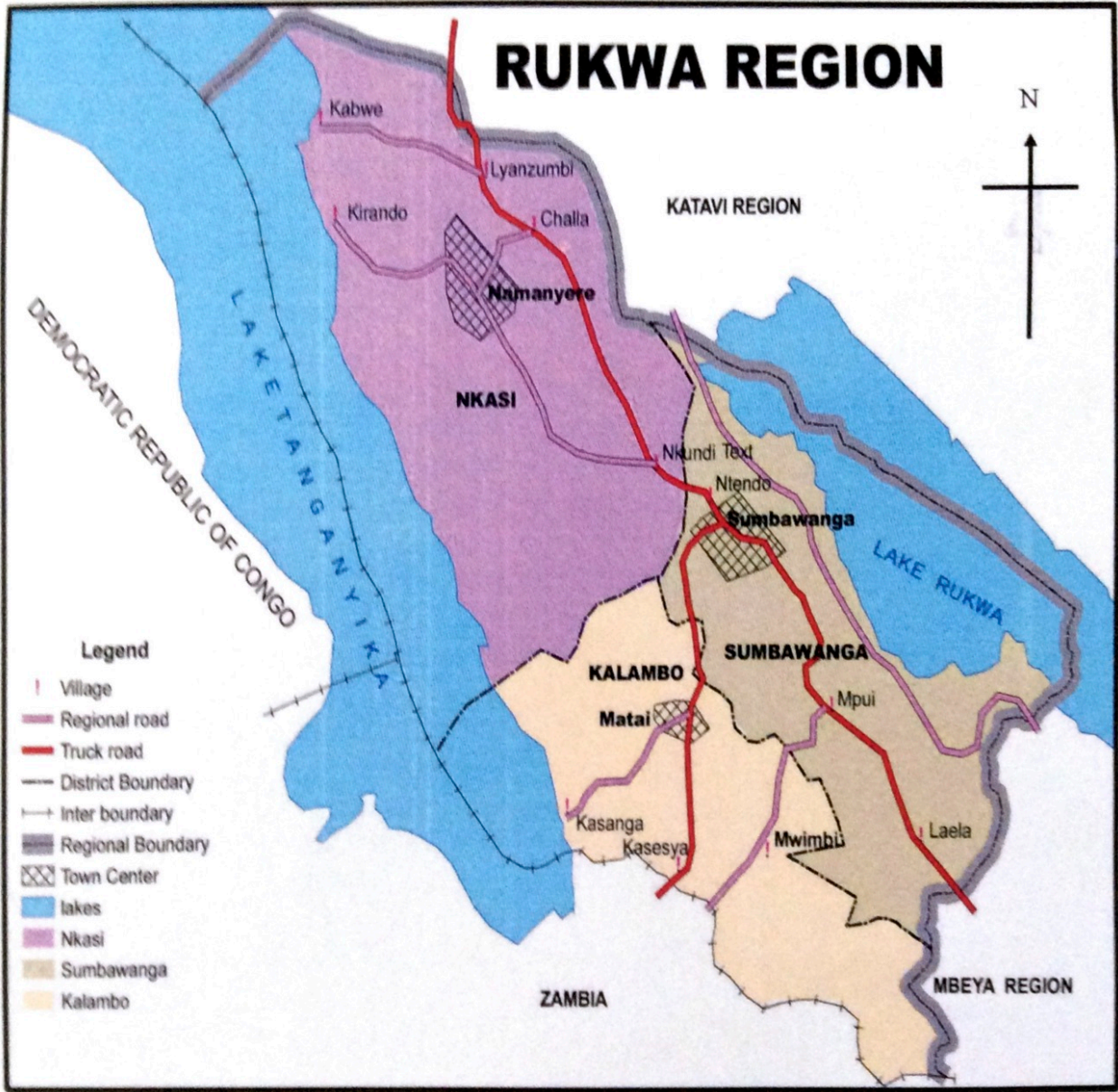
2: Map of Current Rukwa Region with Roads

3: Map of Sumbawanga Urban District

4: Map of Nkasi District
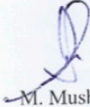
5: Map of Sumbawanga DC/Rural District
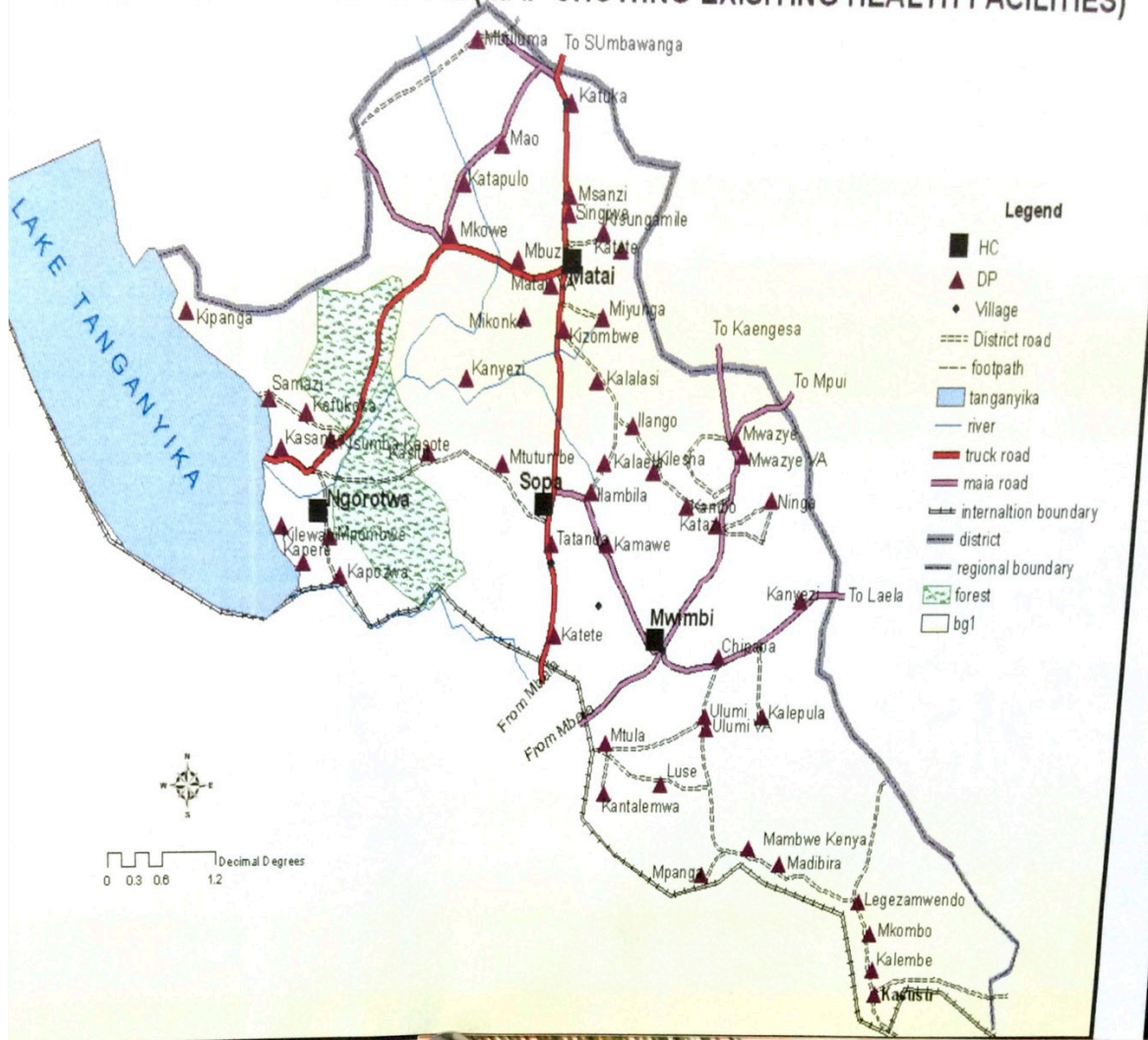
6: Map of Kalambo District

Appendix E: Research and Ethical Clearance Documents

TANZANIA COMMISSION FOR SCIENCE AND TECHNOLOGY (COSTECH)

Telephones: (255 - 022) 2775155 - 6, 2700745/6
Director General: (255 - 022) 2700750&2775315
Fax: (255 - 022) 2775313
Email: rclearance@costech.or.tz

Ali Hassan Mwinyi Road
P.O. Box 4302
Dar es Salaam
Tanzania

RESEARCH PERMIT

No. 2014–07-ER-2013-10   22nd January 2014

1.   Name :   **Adrienne Elizabeth Strong**

2.   Nationality   :   **American**

3   Title   :   **Childbirth as a Site of Negotiation: Tradition, Modernity and Maternity Practices**

4   Research shall be confined to the following region(s): **Rukwa**

5.   Permit validity from: **22nd January 2014 to 21st January 2015**

6.   Contact /Collaborator: **Dr. Jasper Nduasinde, Chief Medical Officer, Sumbawanga, Rukwa**

7.   Researcher is required to submit progress report on quarterly basis and submit all Publications made after research.

M. Mushi
for: **DIRECTOR GENERAL**

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TANZANIA COMMISSION FOR SCIENCE AND TECHNOLOGY (COSTECH)

Telephones: (255 - 022) 2775155 - 6, 2700745/6
Director General: (255 - 022) 2700750&2775315
Fax: (255 - 022) 2775313
Email: rclearance@costech.or.tz

Ali Hassan Mwinyi Road
P.O. Box 4302
Dar es Salaam
Tanzania

RESEARCH PERMIT

No. 2015–09-ER-2009-31   19th January 2015

1.   Name   :   **Adrienne Elizabeth Strong**

2.   Nationality   :   **American**

3   Title   :   **Childbirth as a Site of Negotiation: Tradition, Modernity and Maternity Practice**

4   Research shall be confined to the following region(s): **Rukwa**

5.   Permit validity from: **19th January 2015** to **18th January 2016**

6.   Contact /Collaborator: **Dr. Samuel Marwa, Sumbawanga Regional Hospital, Rukwa**

7.   Researcher is required to submit progress report on quarterly basis and submit all Publications made after research.

M. Mushi
for: DIRECTOR GENERAL

THE UNITED REPUBLIC OF
TANZANIA

National Institute for Medical Research
P.O. Box 9653
Dar es Salaam
Tel: 255 22 2121400/390
Fax: 255 22 2121380/2121360
E-mail: headquarters@nimr.or.tz

Ministry of Health and Social Welfare
P.O. Box 9083
Dar es Salaam
Tel: 255 22 2120262-7
Fax: 255 22 2110986

NIMR/HQ/R.8c/Vol. II /378

28th Aug, 2014

Adrienne Strong
Department of Antropology
Washington University in St Louis
Box 114 St Louis Missouri, USA
C/O Dr Gasper Nduasinde, Regional Medical Officer
P O Box 413, SUMBAWANGA, RUKWA

APPROVAL FOR EXTENSION OF ETHICAL CLEARANCE

This letter is to confirm that your application for extension on the already approved proposal: Child Birth as a Site of Negotiation: Tradition, Modernity and Maternity Practices (Strong A et al), whose local Investigator is Dr. Jasper Nduasinde, RMO, Rukwa Region, has been granted ethics clearance to be conducted in Tanzania.

The extension approval is based on the progress report received 01st Aug, 2014 on the project, Ref NIMR/HQ/R.8a/Vol. IX/1610 dated 19th Aug, 2013. Extension approval is valid until 17th Aug, 2015.

The Principal Investigator must ensure that other conditions of approval remain as per ethical clearance letter. The PI should ensure that progress and final reports are submitted in a timely manner.

Name: Dr Mwelecele Malecela

Signature

**CHAIRPERSON
MEDICAL RESEARCH
COORDNATING COMMITTEE**

Name: Dr Donan Mmbando

Signature

**CHIEF MEDICAL OFFICER
MINISTRY OF HEALTH, SOCIAL
WELFARE**

CC: RMO
        DMO

THE UNITED REPUBLIC OF
TANZANIA

National Institute for Medical Research
P.O. Box 9653
Dar es Salaam
Tel: 255 22 2121400/390
Fax: 255 22 2121380/2121360
E-mail: headquarters@nimr.or.tz
NIMR/HQ/R.8a/Vol. IX/1610

Ministry of Health and Social Welfare
P.O. Box 9083
Dar es Salaam
Tel: 255 22 2120262-7
Fax: 255 22 2110986

19th August, 2013

Adrienne Strong
Department of Anthropology
Washington University in St Louis
Box 114 St Louis Missouri, USA
C/O Dr Jasper Nduasinde, Regional Medical Officer
P O Box 413, SUMBAWANGA, RUKWA

CLEARANCE CERTIFICATE FOR CONDUCTING
MEDICAL RESEARCH IN TANZANIA

This is to certify that the research entitled: Childbirth as a Site of Negotiation: Tradition, Modernity and Maternity Practices, (Strong A et al), whose Local Investigator Dr Jasper Nduasinde, RMO, Rukwa Region, has been granted ethical clearance to be conducted in Tanzania,
The Principal Investigator of the study must ensure that the following conditions are fulfilled:

1. Progress report is submitted to the Ministry of Health and the National Institute for Medical Research, Regional and District Medical Officers after every six months.
2. Permission to publish the results is obtained from National Institute for Medical Research.
3. Copies of final publications are made available to the Ministry of Health & Social Welfare and the National Institute for Medical Research.
4. Any researcher, who contravenes or fails to comply with these conditions, shall be guilty of an offence and shall be liable on conviction to a fine. NIMR Act No. 23 of 1979, PART III Section 10(2).
5. Sites: Rukwa Region.

Approval is for one year: 19th August 2013 to 18th August 2014.

Name: Dr Mwelecele N Malecela

Signature
CHAIRPERSON
MEDICAL RESEARCH
COORDINATING COMMITTEE

Name: Dr Donan Mmbando

Signature
CHIEF MEDICAL OFFICER
MINISTRY OF HEALTH, SOCIAL
WELFARE

CC: RMO
       DMO

THE UNITED REPUBLIC OF TANZANIA

PRIME MINISTER'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT AUTHORITIES

RUKWA REGION

Tel. No 025 280 2078/2251
Fax No. 025 280 0224

Regional Office,

Health Department,

P.O. Box 413,

SUMBAWANGA

Ref No: GHS/R.100/6/30

31/07/2014

National Institute for Medical Research
P.O.Box 9653
Dar es salaam

Dear Sir/Madam,

RE: **RESEARCH ACTIVITY IN RUKWA REGION**

Sumbawanga Regional Referral Hospital strongly supports research proposal by Adrienne Strong who visited our hospital in March to May 2013 to introduce her research proposal.

We feel her research outcome i.e. *"Childbirth as a site of negotiation: Tradtion, Modernity and Maternity Practices"* will lead us to future intervention towards improving accessibility of our services so as to reduce the high maternal mortality rate in our region.

I have taken over the responsibilities of Local Investigator for this project from Dr Jasper Nduasinde, who has now retired.

We hope you support her for the completion of her research.

Dr Samwel Marwa
FOR REGIONAL MEDICAL OFFICER
RUKWA
THE REGIONAL MEDICAL OFFICER
P. O. Box 41•
SUMBAWANGA/RUKWA

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THE UNITED REPUBLIC OF TANZANIA

PRIME MINISTER'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT AUTHORITIES

RUKWA REGION

Tel. No 025 280 2078/2251
Fax No. 025 280 0224

Regional Office,

Health Department,

P.O. Box 413,

SUMBAWANGA

Ref No: GHS/R.100/6/31

01/08/2014

National Institute for Medical Research
P.O.Box 9653
Dar es salaam
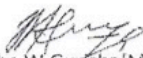
RESEARCH ACTIVITY IN RUKWA REGION

Regional Medical Officer Rukwa supports research proposal by Adrienne Strong who is in our Region since March to May 2013 to introduce her research proposal.

We hope her research outcome on *"Childbirth as a site of negotiation: Tradition, Modernity and Maternity Practices"* will lead us to future intervention towards improving accessibility of our services so as to reduce the maternal and child mortality rate in our region.

The Medical Officer In charge of the regional hospital Dr Samwel Marwa will take over the responsibilities of Local Investigator for this project from Dr Jasper Nduasinde, who has now retired.

We hope you will support her for the completion of her research.

Dr John W.Gurisha(Msc.IH)

REGIONAL MEDICAL OFFICER

RUKWA

THE REGIONAL MEDICAL OFFICER
RUKWA REGION

TANZANIA COMMISSION FOR SCIENCE AND TECHNOLOGY
(COSTECH)

Telephones: (255 - 022) 2775155 - 6, 2700745/6
Director General: (255 - 022) 2700750&2775315
Fax: (255 - 022) 2775313
Email: rclearance@costech.or.tz

Ali Hassan Mwinyi Road
P.O. Box 4302
Dar es Salaam
Tanzania

In reply please quote: **CST/RCA 2009/31**
Director of Immigration Services
Ministry of Home Affairs
P.O. Box 512
DAR ES SALAAM

19th January 2015

Dear Sir/Madam,

RESEARCH PERMIT

We wish to introduce **Adrienne Elizabeth Strong** from **USA** who has been granted Research Permit **No. 2015–08-ER-2009-31** dated **19th January2015**

The permit allows him/her to do research in the country **"Childbirth as a Site of Negotiation: Tradition, Modernity and Maternity Practice"**

We would like to support the application of the researcher(s) for the appropriate immigration status to enable the scholar(s) begin research as soon as possible.

By copy of this letter, we are requesting regional authorities and other relevant institutions to accord the researcher(s) all the necessary assistance. Similarly the designated local contact is requested to assist the researcher(s).

Yours faithfully

M.Mushi

for: **DIRECTOR GENERAL**

CC:

1. Regional Administrative Secretary: **Rukwa**

2. Local contact: **Dr. Samuel Marwa, Sumbawanga Regional Hospital, Rukwa**

3. Co-Researcher: **None**

TANZANIA COMMISSION FOR SCIENCE AND TECHNOLOGY
(COSTECH)

Telephones: (255 - 022) 2775155 - 6, 2700745/6
Director General: (255 - 022) 2700750&2775315
Fax: (255 - 022) 2775313
Email: rclearance@costech.or.tz

Ali Hassan Mwinyi Road
P.O. Box 4302
Dar es Salaam
Tanzania

In reply please quote: **CST/RCA 2013/10/2013**   **26th March 2013**

Director of Immigration Services
Ministry of Home Affairs
P.O. Box 512
DAR ES SALAAM

Dear Sir/Madam,

RESEARCH PERMIT

We wish to introduce **Adrienne Elizabeth Strong** from **USA** who has been granted
Research permit **No. 2013–98-NA-2013-10** dated **26th March 2013**

The permit allows him/her to do research in the country **"Childbirth as a Site of
Negotiation: Tradition, Modernity and Maternity Practices"**

We would like to support the application of the researcher(s) for the appropriate
immigration status to enable the scholar(s) begin research as soon as possible.

By copy of this letter, we are requesting regional authorities and other relevant
institutions to accord the researcher(s) all the necessary assistance. Similarly the
designated local contact is requested to assist the researcher(s).

Yours faithfully

M. Mushi
For: DIRECTOR GENERAL

CC: **1.** Regional Administrative Secretary: **Rukwa**

   2. Local contact: **Dr. Jasper Nduasinde, Chief Medical Officer,
   Sumbawanga, Rukwa**

   3. Co-Researcher: **None**

HALMASHAURI YA WILAYA YA SUMBAWANGA
(BARUA ZOTE ZIANDIKWE KWA MKURUGENZI MTENDAJI)

MKOA WA RUKWA
SIMU: 025-2802133
FAX: 025-2800301
Email ded_sba@yahoo.com

Unapojibu tafadhali taja:

Kumb. Na.SDC/T.60/12 VOL VII/42

Sanduku la Posta 229
SUMBAWANGA.
TANZANIA

18/04/2013

MAAFISA WATENDAJI KATA WOTE
S.L.P. 229,
SUMBAWANGA.

YAH:UTAMBULISHO WA NDUGU ADRIENNE E. STRONG.

Tafadhali husikeni   na kichwa cha habari cha hapo juu.

Mtajwa hapo juu ni mwanafunzi wa PhD C huo kikuu cha Washington nchini
Marekani amekuja kufanya utafiti wa masomo yake katika Halmashauri ya Wilaya
ya Sumbawanga katika kata zote.

Hivyo, ofisi inawomba mpeni ushirikiano katika utafiti wake ili aweze kufanikisha
masomo yake.

Lazaro N.L,
Kny: Mkurugenzi Mtendaji (W),
SUMBAWANGA.

Nakala:
Ndugu. **Adrienne E Strong.**

JAMHURI YA MUUNGANO WA TANZANIA

OFISI YA WAZIRI MKUU

TAWALA ZA MIKOA NA SERIKALI ZA MITAA

Mkoa wa Rukwa

Anwani ya Simu: "*REGCOM*"
Simu: (025)-2802137,
2802138,2802187
Faksi Na. (025) 2802217 / 2802318

Unapojibu tafadhali taja:
Kumb. Na: CB.190/232/01/29

OFISI YA MKUU WA MKOA,
S.L.P. 128,
SUMBAWANGA.

16 Aprili, 2013

Makatibu Tawala wa Wilaya,
Kalambo, Sumbawanga na Nkasi,

Yah: **KIBALI CHA UTAFITI**

Katibu Tawala Mkoa amepokea barua Kumb. Na. CST/RCA.2013/10/2013 ya tarehe 26 Machi, 2013 yenye kumtambulisha Bi. Adrienne Elizabeth Strong aliyepewa kibali cha utafiti Na. 2013 – 98 – NA – 2013 – 10 cha tarehe 26 Machi, 2013.

Kwa barua hii naomba umpe ushirikiano utakaohitajika kukamilisha utafiti wake katika Wilaya yako.

Nakutakia kazi njema.

F. M. Mbenjile
kny: **KATIBU TAWALA MKOA
RUKWA**

Nakala:-

RAS   -   Aione ndani ya jalada.

"   Wakurugenzi wa Halmashauri,
Sumbawanga, Kalambo, na Nkasi.

"   Mkurugenzi wa Manispaa,
Sumbawanga.

TANZANIA COMMISSION FOR SCIENCE AND TECHNOLOGY
(COSTECH)

In reply please quote: **CST/RCA 2013/10/2013**   **26th March 2013**

Director of Immigration Services
Ministry of Home Affairs
P.O. Box 512
DAR ES SALAAM

Dear Sir/Madam,

RESEARCH PERMIT

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Yours faithfully

M. Mushi
For: DIRECTOR GENERAL

CC: 1. Regional Administrative Secretary: **Rukwa**

        2. Local contact: **Dr. Jasper Nduasinde, Chief Medical Officer, Sumbawanga, Rukwa**

        3. Co-Researcher: **None**

THE UNITED REPUBLIC OF TANZANIA
PRIME MINISTER'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

RUKWA REGION

Tel. No 025 280 2078/2251
Fax No. 025 280 0224

Ref. No. GHS/T.40/7/VOL.

Regional Commissioner's Office,
Health Department,
P.O. Box 413,
SUMBAWANGA

13/12/2012

DIRECTOR GENERAL,
COSTECH
P.O. BOX 4302
DAR ES SALAAM

RE: **RESEARCH ACTIVITY IN RUKWA REGION**

The Rukwa Regional Hospital Administration strongly supports Research Proposal by Adrienne Strong who visited our hospital in May and June 2012 to introduce her research proposal.

We feel her research outcome i.e. "cultural reasons affecting the use of maternal and reproductive health care service" will lead us to future interventions towards improving accessibility our services so as to reduce the high maternal mortality rate in our community

Dr.S. Nduasinde(MD,M-MED)
FOR REGION MEDICAL OFFICER
RUKWA

THE REGIONAL MEDICAL OFFICER
RUKWA REGION

IRB ID #:   201311098

To: Adrienne Strong

From: The Washington University in St. Louis Institutional Review Board,
          WUSTL   DHHS Federalwide Assurance #FWA00002284
          BJH   DHHS Federalwide Assurance #FWA00002281
          SLCH   DHHS Federalwide Assurance #FWA00002282

Re: The Bureaucracy of Birth: Life and Death on the Maternity Ward of a Tanzanian Hospital

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Approval Date: 12/30/13

Next IRB Approval
Due Before: 12/29/14

Type of Application:	**Type of Application Review:**	**Approved for Populations:**
☒ New Project	☐ Full Board:	☐ Children
☐ Continuing Review	Meeting Date:	☐ Signature from one parent
☐ Modification	☒ Expedited	☐ Signature from two parents
	☐ Exempt	☐ Prisoners
	☐ Facilitated	☒ Pregnant Women, Fetuses, Neonates
		☐ Wards of State
		☐ Decisionally Impaired

Source of Support:
   National Science Foundation
       No title- Graduate Research Fellowship

MATERIALS APPROVED

Consent/Assent Materials:
        Consent & Assent Forms
                IRB informed consent 2014.rtf

Recruitment/Advertisement Materials:
        Recruitment: Other
                Verbal Script for Recruitment 2014.rtf

Questionnaires:
        Subject Data Collection Instruments
                Oral History interviews.docx
                IRB interview questions 2014.docx
                CWEQ_II_Instrument.doc
                CWEQ_I_Instrument.doc
                Relative/Proxy Data Collection Instruments
                Questions for family members of women.docx

This approval has been electronically signed by IRB Chair or Chair Designee:
Mitchell Saulisbury-Robertson, BA, BA
12/30/13 1303

IRB ID #:   201311098

To: Adrienne Strong

From: The Washington University in St. Louis Institutional Review Board,
               WUSTL   DHHS Federalwide Assurance #FWA00002284
               BJH   DHHS Federalwide Assurance #FWA00002281
               SLCH   DHHS Federalwide Assurance #FWA00002282

Re: The Bureaucracy of Birth: Life and Death on the Maternity Ward of a Tanzanian Hospital

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Approval Date: 11/06/14
Next IRB Approval
Due Before: 11/05/15

Type of Application:	**Type of Application Review:**	**Approved for Populations:**
☐ New Project	☐ Full Board:	☐ Children
☒ Continuing Review	Meeting Date:	☐ Signature from one parent
☒ Modification	☒ Expedited	☐ Signature from two parents
	☐ Exempt	☐ Prisoners
	☐ Facilitated	☒ Pregnant Women, Fetuses, Neonates
		☐ Wards of State
		☐ Decisionally Impaired

Criteria for approval are met per 45 CFR 46.111 and/or 21 CFR 56.111 as applicable.
Project determined to be minimal risk per 45 CFR 46.102(i) and/or 21 CFR 56.102(i) as applicable.

Source of Support:
   Dept. of Education Fulbright-Hays Doctoral Dissertation Research Abroad
       Bureaucracy, Life, and Death on the Maternity Ward of a Tanzanian Hospital
   National Science Foundation
       No title- Graduate Research Fellowship

MATERIALS APPROVED

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Oral History interviews.docx
Relative/Proxy Data Collection Instruments
Questions for family members of women.docx

This approval has been electronically signed by IRB Chair or Chair Designee:
Erin Wingbermuehle, BA
11/06/14 1000

IRB Approval: IRB approval indicates that this project meets the regulatory requirements for the protection of human subjects. IRB approval does not absolve the principal investigator from complying with other institutional, collegiate, or departmental policies or procedures.

Recruitment/Consent: Your IRB application has been approved for recruitment of subjects not to exceed the number indicated on your application form. If you are using written informed consent, the IRB-approved and stamped Informed Consent Document(s) are available in *my*IRB. The original signed Informed Consent Document should be placed in your research files. A copy of the Informed Consent Document should be given to the subject. (A copy of the *signed* Informed Consent Document should be given to the subject if your Consent contains a HIPAA authorization section.)

Continuing Review: Federal regulations require that the IRB re-approve research projects at intervals appropriate to the degree of risk, but no less than once per year. This process is called "continuing review." Continuing review for non-exempt research is required to occur as long as the research remains active for long-term follow-up of research subjects, even when the research is permanently closed to enrollment of new subjects and all subjects have completed all research-related interventions and to occur when the remaining research activities are limited to collection of private identifiable information. Your project "expires" at midnight on the date indicated on the preceding page ("Next IRB Approval Due on or Before"). You must obtain your next IRB <u>approval</u> of this project by that expiration date. You are responsible for submitting a Continuing Review application in sufficient time for approval before the expiration date, however you will receive reminder notice prior to the expiration date.

Modifications: Any change in this research project or materials must be submitted on a Modification application to the IRB for <u>prior</u> review and approval, except when a change is necessary to eliminate apparent immediate hazards to subjects. The investigator is required to promptly notify the IRB of any changes made without IRB approval to eliminate apparent immediate hazards to subjects using the Modification/Update Form. Modifications requiring the prior review and approval of the IRB include but are not limited to: changing the protocol or study procedures, changing investigators or funding sources, changing the Informed Consent Document, increasing the anticipated total number of subjects from what was originally approved, or adding any new materials (e.g., letters to subjects, ads, questionnaires).

Unanticipated Problems Involving Risks: You must promptly report to the IRB any unexpected adverse experience, as defined in the IRB/HRPO policies and procedures, and any other unanticipated problems involving risks to subjects or others. The Reportable Events Form (REF) should be used for reporting to the IRB.

Audits/Record-Keeping: Your research records may be audited at any time during or after the implementation of your project. Federal and University policies require that all research records be maintained for a period of seven (7) years following the close of the research project. For research that involves drugs or devices seeking FDA approval, the research records must be kept for a period of three years after the FDA has taken final action on the marketing application, if that is longer than seven years.

Additional Information: Complete information regarding research involving human subjects at Washington University is available in the "Washington University Institutional Review Board Policies and Procedures." Research investigators are expected to comply with these policies and procedures, and to be familiar with the University's Federalwide Assurance, the Belmont Report, 45CFR46, and other applicable regulations prior to conducting the research. This document and other important information is available on the HRPO website http://hrpohome.wustl.edu/.

Appendix F: Full Text of Historical Documents from Chapter 3

A)
314/127
Memo Ref. No. 161/55

<u>Rural Midwifery</u>

These notes are written following the suggestions of Lady Twining that the training of rural midwives should be instituted at Bukoba.

2.   There does not exist in the Lake Province a big demand for midwifery services in the rural areas. There is a tendency for the people to demand institutional rather than domiciliary facilities for midwifery. This must be resisted, as it should be the aim of the midwifery service to use the fact of giving assistance in delivery to gain entrance to the home, to influence the woman of the house in improved hygienic measures and to follow the child through the crucial early years of life.

3.   The "village midwife" should therefore combine the functions of assisting in delivery with those of the "health visitor." If she is to do her two jobs properly her sphere of activity must be strictly limited. She must be acceptable to the local population, which implies that she should be a local resident of mature age. She will therefore probably be married or a widow and have a family of her own to look after. Such a person is unlikely to be able/supply the needs of more than 100 families.

4.   It is unlikely that educated women of this age already resident in rural areas will be found in anything like adequate numbers to supply the eventual need. The possibility of taking senior hospital "ayahs" and training them in this particular work is not promising. Such women are usually established in an urban environment and would not welcome moving to a rural area and to a new type of work. Some might be found, but I think very few.

5.   I think the most promising approach to finding staff suitable for training in this work will be firstly to select an area in which the institution and supervision of such service is practicable, and to then endeavor to find a suitable person resident in that area for training. If this method of selection is adopted, then it is necessary that the training school should be reasonably close to the homes of the trainees. It is necessary that the trainees should be able to read and write in Kiswahili.

6.   In my opinion it will be necessary to create the service envisaged in two stages, bearing in mind the present state of women's education in Tanganyika generally.

        (a) Initially it will be necessary to use women of very low educational qualification. Such people will be unable to absorb anything in the way of "academic" training. Their training will have to be entirely practical, and they will have to work to "rule". That implies that they will have to be given a very close degree of supervision.

        (b) It will become gradually possible to replace these women with more educated women, capable of absorbing a wider training, and therefore capable of being given more responsibility.

7.   The training must be adapted to the material available and also to the period of training which candidates are prepared to undertake. Older women from rural areas are not likely to agree to leave their homes for a period training much in excess of 6 months.

8.   The training will require to be entirely practical, and it will be necessary to draw p a simple but comprehensive code of rules for these women designed to cover all the common

conditions which they may expect to meet and to deal with. This will require a good deal of experience on the part of the teacher in this particular type of work. I think it most unlikely that any African midwife trained in institutional methods will be capable of producing or imparting such a syllabus of training.

9.　　The concept of the "village midwife" as outlined in para. 2 and 3 above is, as far as I am aware, something new. I am not clear as to the scope of the rural midwifery service established in the Western Province, but think that this was largely institutional rather than domiciliary. If I am correct in this assumption then it appears to me that the first need is for a European Health Visitor to get first-hand practical experience as to what is likely to be needed of the village midwife--- that is she must gain experience of domiciliary midwifery and of health visiting in rural areas. It is highly probable that a good deal of experience on these lines could be obtained from Mission workers, though here again I have the impression that most of the work is institutional rather than domiciliary.

10.　　The immediate problem is whether we can do something on these lines at Bukoba NOW. After careful consideration of the position, I do not think we can. I have given my reasons above as to why I think it necessary that the training and supervision of village midwives must be carried out by a European, at least in the initial stages. Whilst training these midwives it is possible that a more highly trained African midwife could at the same time be trained as an instructor in this particular subject. The present establishment of 2 Nursing Sisters at Bukoba is fully occupied in maintaining the nursing and running of this large hospital as a desirable standard.

　　　Training and supervising village midwives will be a whole time occupation for one sister; this will leave the hospital short-staffed again just after it has at last been possible to improve its standards. This would be regrettable. I can see no possibility of any effective training being conducted in the hospital alone. I can foresee a short preliminary period of training in the hospital, to be followed by a longer period of practical training in the rural area, and, once these women are established in their villages, they will require close supervision.

11.　　With the present staff we can either reduce the degree of nursing supervision at Bukoba Hospital and make an honest attempt to train and supervise village midwives, or we can retain our present degree of nursing at Bukoba Hospital and either do no trainings of village midwives or else we can carry out a form of training which I am convinced will be of no practical value in the field.

12.　　The solution lies in the posting of a Health Visitor to Bukoba specifically for this purpose of training and supervising village midwives, and not for duties within the Township of Bukoba. If the staff position allows of such a posting and if housing is available at Bukoba then an immediate start on the lines indicated could be made.

　　　Such a start should be regarded as largely exploratory and experimental, and for the first two years should not expand until experience gained has shown the lines on which expansion can best proceed. With growing experience there is no reason why the aid of voluntary agencies should not be enlisted to introduce similar training and supervision, nor is there any objection to a voluntary agency starting some similar scheme independently of the Government scheme.

　　　Certainly as far as this Province is concerned this is something quite new, and I think we should be well advised to progress experimentally, modifying our methods of training and supervision by experience gained.

13.　　To sum up these rather discursive arguments—
　　　(a) Material available and suitable for training as village midwives will be capable only

of absorbing practical, "rule of thumb" training.

(b) The "village midwife" is something entirely different in concept from the "institutional" midwife.

(c) The training of village midwives will have to be done in the village environment and not in the hospital.

(d) The only type of woman available for training for some years to come will require a very close degree of supervision in the field and will have to work to a dogmatic set of rules.

(e) It will require the full time services of a European Sister or Health Visitor to train and supervise village midwives even on a small scale. Training by Africans in the earlier stages is not feasible.

(f) Such training could be instituted at Bukoba with the present staff but only at the expense of the efficiency of the hospital. Alternatively if an extra Health Visitor or experienced sister could be posted to and housed at Bukoba, training could be begun on an experimental scale. Such a Health Visitor would not be able to undertake urban duties.

14.   I shall be glad to receive comments on this memorandum.

Provincial Medical Officer, Lake Province.

B)

314/131

No. 78/384   Health Office, Tanga. 12th April, 1950

The Asst: Director of Medical Services,

Arusha

Domiciliary Midwifery Training Scheme at Tanga

1.   The scheme will apply to African expectant mothers resident within the township boundaries.

2.   Ante-natal care to continue being given at the Clinic. During this period each prospective domiciliary case is to be allotted her own midwife, who will perform ante-natal examinations and give advice to the expectant mothers under the supervision of the Health Visitors. Assessment to be made about 30-32nd week of suitability for home delivery. Main factors to be considered in such assessment should be obstetrical considerations parity, willingness of patient to be delivered in her house and suitability of house. In considering this last factor, gross overcrowding or the presence of chronic illness in the house such as pulmonary tuberculosis or the chronic septic ulcer should preclude home delivery. In the absence of these defects, advice should be given to the expectant mother, preferably in the presence of the father, on her own requirements and those of her child when born. This advice should be given in the house by the midwife in the presence of the Health Visitor.

3.   Only two of the four Clinic midwives can be used for this domiciliary Service. The other two midwives will be required to alternate on Clinic night duty.

4. Equipment   Delivery Basket.

1 Basket with detachable cloth lining

3 kidney dishes

1 Handwashing bowl

1 Lotion bowl

1 small bowl (babies [sic] eyes)

Soap & nail brush

Dettol zii
Ol. Ric zii
Pulv: Ergot
Cotton wool q.s.
Pulv: Boracic, zinc & Amylum
1 Thermometer
1 Pulse glass
Enema syringes & soap
2 Operating towels
Ligatures for cord
1 Haemostat
1 Scissors dressing

5.   Records of labour and delivery to be kept. All patients to be seen by Health Visitor with midwife on the morning after delivery and subsequently as necessary but at least once again before the end of the first week of the post-natal period. The midwife must attend her delivered cases daily for five days after delivery and then on the seventh and ninth days. After that the patient should be advised to attend the post-natal Clinic.

6.   Monthly returns of district deliveries to be sent to the Medical officer of Health with any comments that may be necessary of how the scheme is or is not progressing.

7.   <u>Post-natal Basket</u>

1 Basket with detachable cloth lining
Cord dressings, powder, etc.
1 Hand washing basin
Ol. Ric zii
Pulv: Ergot
Tabs. Totaquine
1 Thermometer
1 Pulse glass
2 dressing towels

8.   Provision of transport for these midwives and the Health Visitor is, in my view, essential and such provision is the crux of this scheme. It is most undesirable for these midwives to walk from their homes to patients' houses at night with their equipment over a considerable distance for foot traffic. Can a full time utility car and driver be provided for the Clinic? If so, the scheme outlines above can go into operation in the immediate future.

A.F. Fowler
Medical Officer of Health

C)
314/133 and 133A
133   5th May 1950
 I send herewith a few comments on the Provincial Medical Officer, Lake's No. 161/56 of
28.3.50 a copy of which was sent to you.
                    Regional Asst. Director of Medical Service (Tabora)

133A

<div align="center">Rural Midwifery</div>

         Notes written on receipt of Provincial Medical Officer, Lake's 161/56 which comments
on the "Rural Midwifery, Health and Child Welfare" memorandum, and on the specific
suggestion that the training of rural midwives be instituted at Bukoba.

         2. There is no doubt that the Native Authorities would welcome a "Midwifery Service".
The local members of Barazas always know what to ask for in order to be regarded as
"progressive"; it is not at all so certain that the rural African women are at present making much
demand for domiciliary midwifery. That the need exists there is no doubt at all. That it is a tough
fight to get the women to accept what we think is good for them is also without doubt.

         3. There is no doubt that the African women tend to prefer institutional to domiciliary
midwifery. There has been for many years been a domiciliary midwifery service in Tabora, and
until five years ago institutional midwifery was restricted almost entirely to abnormal cases.
With the provision of an obstetric block, however, there has been a gradual change, depending
partly on the frequent changes of Nursing Staff and lack of transport for the Supervising Sister,
so that how institutional deliveries equal and may possibly exceed domiciliary. This is a
tendency which I agree should be strongly resisted.

         4. An efficient Rural Midwifery Scheme depends on
                    (a) tutorial staff
                    (b) supervisory staff
                    (c) good communications
                    (d) adequate funds
         These are the only limiting factors, and their provision is not within the control of
the Medical Department.

         5. I feel most strongly that it is wrong to train any sort of midwife and then to post her as
a Government or Native Authority servant fifty, a hundred, or hundred-fifty miles from the
nearest Inspecting Officer and from any place or institution to which she may quickly send any
of the abnormal conditions she has been taught to recognize but with which she is not competent
to deal.

         6. It may not be widely realized that there is already in existence a rural midwifery
service. Each small area is served by African women who are recognized as the local midwives
and who receive remuneration either in cash or in kind for their services. They are mostly
illiterate but they have some accumulated local wisdom (not to be dismissed too
contemptuously) and they are accepted. It seems to me that these are the women who should be
taught, not midwifery but the elements of cleanliness, e.g. the importance of hot water and soap
and the use a of nail-brush, even possibly the use of some harmless antiseptic such as Dettol to
add to the hot water and to cleanse, if not to sterilize, the old safety razor blade or the traditional
piece of "mtama" stalk with which the cord is cut. Such women would not look to Government
or Native Authority for remuneration; they would simply have been helped to do better a job on
which they are already employed. They could be supplied by Government against payment with

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the barest necessities such as soap, nail-brush, cotton-wash and possibly Dettol and an enamel bowl or two. The teaching of these women will be no mean task mainly because of the difficulty of getting to them; they should not be brought to a hospital for any instruction, but be taught under village conditions.

7. Meanwhile Government should concentrate on getting as many well educated girls as possible trained in Uganda as Certified midwives. If only three per year had been sent over the last ten years we would already have had a nucleus of training and supervisory staff. Because of the constantly changing European Nursing staff I feel Government should rely on an increasing number of Uganda-trained midwives both for teaching and for supervising the so-called "practical midwives". The European Nursing staff is so transitory that it would be best employed on advanced or "post-graduate" instruction of the certificated midwives, probably in English, since so few of the Nursing Sisters ever get beyond a most elementary standard of Kiswahili. The provision of a well equipped, well-staffed "School of Midwifery" in this Territory would in time obviate the necessity of sending candidates to Uganda but it appears that it will be several years before such an institution is well established.

8. With regard to the specific proposal to divert one of the two Sisters at Bukoba to the training and supervision of village midwives, I consider this would be an undesirable dissipation of effort. Some Nursing Staff emergency will arise elsewhere in the Territory considered to have priority over midwife training, a transfer effected by telegram, and another scheme foundered: and nothing causes so much ridicule of Government among African [sic] as foundering of well-intentioned but poorly carried out "schemes".

Signed Keevill
Regional Asst. Director of Medical Services (Tabora)

D)
Ref. no. 34300/74 16th July 1953
To all Provincial Commissioners
"I am directed to inform you that the question of maternity services throughout the territory has recently been considered by the Medical Department which reports that increasing appreciation of the benefits of these services is resulting in a demand that they should be rapidly expanded. It is realized that the success of these "institutions" is a tribute to the work of the administration in the districts concerned and it may not be easy to encourage women whose confinements will in all probability be normal to stay at home and be "visited" rather than go to the clinics.
2. Nevertheless a growing difficulty is that the accommodation in existing maternity units is now being used largely for uncomplicated confinements, and it is pointed out that uncontrolled development of this tendency will result in overcrowding and an inability to meet the demands of those who are being educated to take advantage of these services. To this end the Director of Medical Services has recommended that the following criteria be accepted as policy for the future:
(a) The primary emphasis in the development of all maternity services, should be on the establishment of ante-natal and post-natal services, with the provision of in-patient facilities primarily for complicated cases.

(b) The tendency towards uncontrolled expansion of institutional midwifery services should be resisted.

(c) For normal cases, domiciliary midwifery, rather than institutional midwifery, should be encouraged in urban and peri-urban areas.

(d) In rural areas, the possibility of development of domiciliary services should be considered in the light of local conditions such as topography, density of population, transport facilities and financial considerations. Where these are unfavorable, there may be a good case for the controlled development of institutional services.

(e) The rate of development of midwifery services, both institutional and domiciliary, should be dependent upon the availability of supervisory staff; uncontrolled development of unsupervised services staffed by unqualified persons should be resisted. It was appreciated that for many years to come domiciliary work in rural areas would be mainly in the hands of certificated tribal midwives, and training courses of the type held in the Lake Province were to be encouraged.

3. I am to request your comments on these proposals.

P.H.W. Haile for member for local government."

E)

Undated speech by the Minister for Health, Hon. D.N.M. Bryceson, M.P. (from 1964, most likely)

Excerpts only included here because it's many pages long. Other parts summarized, direct excerpts in quotes.

Starts out by saying that the theme of the speech will be on preventative medicine and not hospitals, and the need to bring about healthy societies.

"As we plan how we are to fulfill this in the future, we are fortunate to have the report and recommendations of the Titmuss Committee to guide us. This small expert committee came at the end of 1961 as a result of a request which I had made to the African Research Foundation. The Chairman was Professor Titmuss of the London School of Economics.

This group recommended that we should do a certain reorganization of the health services in order to do two things:

1. to make the maximum possible use of all our available resources-of central government, local government and the voluntary agencies;

2. to ensure that a particular emphasis would be placed on health education and the preventive aspects of medicine."

He then goes on in the next paragraph to say why he thinks this advice has not been followed over the course of the last 25 years despite it having been recommended. He says it is often because there are more pressing budget needs or emergencies and the "medical men" decide to take money from preventive medicine budget, because it's easier to cut preventative side than curative.

"For if you close down a hospital, shut down a ward, withdraw a doctor, cut down on nursing staff, then immediately these things are seen and felt by the public. The Government comes in for severe criticism. But if you cut down on health inspections, vaccination campaigns, teaching of hygiene and sanitation, then little or no direct effect is felt at all. When a sick man goes to the hospital and finds it overcrowded, he blames the Ministry of Health for not providing enough beds or doctors. But when a healthy man falls sick he does not blame the Ministry of

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Health for having failed to institute a vaccination campaign to prevent that particular sickness, or for having failed to inform him of preventive measures he should have been taking.

And so the hospitals have expanded slowly and on a piecemeal basis, and the exponents of health education and preventive medicine have been starved and disheartened. All this has led to a situation today when you can go into almost any of our hospitals and you will find the hospital overcrowded and the medical staff overworked. If you analyze the major causes of sickness there, however, you will find that most of the people in our hospitals today are there suffering from something which could have been avoided. Today they, our people themselves, do not have the knowledge to avoid many of the prevalent diseases, although medically this is now known.

I believe that if we plan today to put all the medical resources we have and can hope to have available to use over the next five years into curative medicine, then our already inadequate hospital service will become more and more overworked and less and less able to fulfill the basic aim of the Health Ministry.

If, however, we expand hospitals on a planned basis, emphasize preventive medicine, educate our people in hygiene and environmental sanitation, have vaccination and inoculation campaigns and withstand any temptation or effort to divert our resources from those plans, then I believe that slowly but surely we will get on top of the health situation, regain the initiative and reduce the pressure on our hospitals and medical staff, because the number of sick people will be reduced- not by curing them but by preventing sickness.

There is too, apart from humanitarian reasons, another very good reason for wanting a healthy population. This is because we need every bit of energy we have to put to the task of building the nation. Building a nation is not a job to entrust to chronically sick people. And yet this is precisely what we are proposing to do if we disregard these aspects of health which are not so obvious as the straightforward curing of illness. We are a long way behind with out medical and vital statistics, but certain surveys that have been done and knowledge than [sic] we have tell us already a great deal that we can work on.

A recent survey covering 3,000 people between the coast and Lake Victoria, showed that on average the blood count of the people is 52% of what is considered medically normal.

The reasons for this are chronic malaria, bilharzia, hookworm and malnutrition, to mention a few of the most common. The result is that these people cannot be expected to do a full day's work. For years we have known that our infant and child mortality rate is one of the highest in the world. We know the reasons for this-the familiar malaria, enteric infections, malnutrition.

All these things are preventable-malaria, bilharzia, hookwork, enteric infection, malnutrition. Even when we come to other diseases such as tuberculosis, smallpox, leprosy, we can either eradicate or cut down the incidence very considerably with the resources we have today, as long as those resources are planned and used properly.

The proper use of our resources then is the basis of the plan. In this planning whatever the origin of the resources, government, private company or voluntary agency, they must take their place in a rationalization within one co-ordinated health service. I am happy to report that I have already discussed this with a number of voluntary agency medical workers both collectively and individually and have found their response to be clear and most encouraging.

It is obviously necessary that we have some machinery to advise on and effect this rationalization. The first decision to be made was at what level to establish this machinery-district, region, or some other unit. After careful thought on this point, I have given a direction

that every region shall have its own health committee comprising basically the senior government Ministry of Health representative, the Regional Medical Officer, the various voluntary agencies which may be concerned, and local government and the R.C.D.O.

The Titmuss Report, which I have already mentioned, not only gave a very clear exposition of our present situation, but also the history leading up to this position and specific recommendations about actions to take and principles to follow.

Actually a number of those principles were already being followed by the Ministry and a number of new ones we have accepted and shall plan to implement.

These regional health committees will have as their first task to examine the health situation and make their development plans on the basis of these principles. The most important of these is that the immediate aim should be to establish a number of health areas-each area to have as a basic curative unit a 200-bedded hospital. This hospital would serve as a reference hospital for a number of health centers, both urban and rural.

Emphasis is placed on the importance of having a small number of large reference hospitals rather than a large number of small all-purpose hospitals. The smaller hospitals should convert to rural health centers and expansion concentrate on the hospital chosen to act as reference for the health centers in its district.

It is necessary to do this in order to allow our doctors to concentrate upon that work which they are qualified to do, to practice their chosen specialty. This they can do only if the hospital is large enough to allow for a larger number of doctors on the staff. It will be far more satisfactory for the doctor.

Part of the plan for the development of the health service is that the hospitals themselves should be isolated from the public- that is, a patient will not go there direct, but rather by reference from a health center. In other words, hospital out-patient departments will be situated far away from the hospital itself, and will come under the supervision of the medical officer in charge of the health center. From the health center there will be a group of subsidiary clinics. These will be part of the health center organization and will be supervised by the medical officer in charge of the health center. This will assist us to cut out much of the uneconomic duplication that can be found in many part of the country today in our dispensary system. The chain will be, then, health clinic, or dispensary, to the health center, and, where hospitalization is necessary, reference to the hospital. There will also be a small number of large specialty hospitals for the more severe or more complicated cases from the local hospitals. At present these are planned for Dar es Salaam, Tanga, Mwanza, and Moshi. It will be obvious to members that at least two more will be necessary to cover the country at all adequately.

All this reorganization does not mean that areas now being served by small hospitals will be worse off. Far from it. In fact they will be better off, for the health center will, apart from concentration on preventive medicine and health education, have a number of beds for maternity cases, emergency cases and holding beds for cases to be referred to the hospital. Plans will be made to suit the different circumstances of each district and region.

And, as I have already mentioned, all patients will enter the hospital system through the health centers, either urban or rural. Today we have 31 rural health centers only- a much slower rate of progress than we had hoped. The five year plan plans for 83 in rural areas and nine in urban centers.

Perhaps one of the reasons for the disappointing rate of health center development in the past was that the entire cost of them was borne by the local authorities. It is my firm belief that the success of the five year development plan depends on rapid effective increase in the number

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of health centers and the work done by them. The Ministry is now proposing, therefore, that Government should contribute towards the capital cost. As a start this should be to an extend of 50%, but of course the actual cost of establishment of a health center will vary according to the facilities that are already available and the additions or alterations that may be necessary. After all, the principle of the central Government contribution to the capital costs of a health center is not so different from that of the contribution to the establishment of a water supply. In the latter case, central Government already pays 75% of the cost and there is a proposal in the plan to raise this to 90%. We can expect, furthermore, that the past contributions of equipment by UNICEF will continue, also supplies of dried milk and cod liver oil and other important food items for the all-important mother and child health clinics.

One exception to the hospital-type treatment of disease which I think could and should be done in special wards at health centers is the treatment of tuberculosis. Tuberculosis control schemes already exist in most regions, and a major effort will now be made on control in the regions around Lake Victoria. This scheme has been planned with the close cooperation of the Episcopal Conference and the Misereor Foundation, who will bear much of both the capital and recurrent costs.

I make this exception specially because tuberculosis is a disease which can be controlled very largely by teaching health education and taking preventive measures. Also the follow-up out-patient treatment, in which home visitors are employed, is an essential phase in the cure. So it can be seen that health center type of activity has an important part to play not only in the prevention, but also in the treatment of the disease.

The same comments might also apply to leprosy, and certainly there will have to be some arrangements for certain classes of leprosy patients in some health centers.

I hope that what I have said will convince all Honourable members of the vital role of the health center in our fight against disease and that I can therefore rely on their whole-hearted support in a campaign for the establishment of large numbers of centers.

It will be quite obvious by now that all these plans call for a considerable effort in training staff not only for the new services, but also to augment the already overworked staff in the present service.

We already have in training a number of medical students at Makerere. This course combines academic and clinical teaching of the highest standard and fits the successful graduate for further study leading to specialist qualifications. The results have so far been very gratifying and show two things-firstly that the Makerere training is of a very high order, and secondly that our own doctors have worked hard and proved themselves as good as any other doctors trained anywhere in the world.

We propose to continue to encourage our Makerere graduates to follow up the specialty of their choosing. They will form the backbone of expert medical attention that will be available in our hospital system.

The Makerere training is a University one and has an academic bias, and necessarily so. But we also need another medical practitioner whose training is of a high order, but of a more practical nature and, in particular, has a very distinct and deliberate emphasis on public health. This need is filled in our own school of medicine in Dar es Salaam. The men trained there will be ideally fitted for taking charge of the health centers- which duties will include the supervision of health clinics in the area each serves. Others will work in hospitals for the need is there for their services, and will remain probably for generations.

The training of medical assistants continues, and so do their up-grading courses to

assistant medical officer. I hope that it will be possible to expand this training of medical assistants to voluntary agencies as the present cadre, and especially the new assistant medical officer, have amply proved that they are very capable, hard-working people.

Included in the medical assistants' course are a number of selected rural medical aids.

The next rung down the ladder is the rural medical aid, and these are being trained in greater numbers at Mwanza, Bukoba, and Mnero, with possible development at Ifakara. Their course has been increased to three years instead of the past two, but they will continue to be recruited from Std. VIII leavers, until a higher standard is available. I am particularly concerned that we should train increased numbers of rural medical aids. The demands for their services are going to be many, both from the organized health centers and clinics and from the new villages as they become established. I am not satisfied that the present plans will give us numbers that will be sufficient, and the Ministry will work out plans for training a greater number with the minimum delay.

On the all important health side, we are training Health Inspectors, and have a number of them and assistant health inspectors in the field. This new emphasis on health education will need greater numbers of trained personnel at the village level, as it is now proposed to establish a school for health assistants to fill this need. We hope that the new school will open before the end of this year, and are being assisted in this by the Basle Foundation for Aid in developing countries. The expansion of the rural health services, and in particular the establishment of the new village settlements call for rural medical aids, these health assistants, and for a greater number of village midwives. Accordingly, more training facilities will be set up at 13 regional hospitals for village midwives.

An increase in our nurse training facilities will provide for the training of 30 more nurses per year.

During the year 1964/65 it is proposed to design and undertake the planning of a new 200-bed hospital at Shinyanga, to erect an urban health center with an out-patient department, probably at Ujiji, a regional psychiatric ward at Lindi, tuberculosis wards at Kilwa and Tabora, and to extend ward accommodation at Handeni, Lushoto, Same, Dodoma, Mpwapwa, Kondoa, Singida and Maswa. These extensions will include new service buildings as required. I should like, however, to emphasize both the flexibility of the plans- as distinct from the principles- and that I hope to be able to get around the country and meet with all the regional planning committees as soon as possible.

Up to now our facilities for psychiatric treatment have been most unsatisfactory. There are 746 beds for patients suffering from disorders at Mirembe Hospital and 246 beds for criminals suffering likewise at Isanga Institution, both of which are at Dodoma. The civil mental hospital is invariably over-crowded and usually there are over 1,000 patients for the 746 beds and the acute cases with reasonable prospects of recovery intermingle under these crowded conditions with the chronic incurable cases. Such conditions are not ideal for effective treatment or for the training of psychiatric nurses. It is for this reason that until now all our nurses wishing to specialize in psychiatric nursing have been trained abroad.

Some chronic cases have been transferred from Dodoma to Lutindi Hospital (140 beds) and also to the newly established Irente Psychiatric Farm in the Usambaras which has 60 beds and which will, in the five year Development Plan, be extended to accommodate 200 patients. These extra units, however, cannot themselves solve the problem of over-crowding at Mirembe Hospital. It is now proposed to solve this problem by establishing a number of psychiatric treatment centers to which acute cases can be admitted under conditions suitable for specialized

psychiatric nursing and treatment, leaving Mirembe Hospital and the other existing units to cater for the more chronic cases.

The new Treatment Centers will consist of the main unit in Dar es Salaam, which will be completed later this year, and the staff of which will be headed by the Consultant Psychiatrist in charge of the psychiatric services in the country, plus five new units to be built under the five year Development Plan at the general hospitals at Bukoba, Iringa, Lindi, Tabora, and Tanga, each with 30 beds. I hope this will only be a start in this new approach to the problem and that treatment units for the other district hospitals will be included in future plans.

Honourable members will see that I am asking for a net total of £2,457,266 or approximately £136,500 more than last year, plus £35,000 of Capital Development expenditure. I should like to be able to explain to the House that this increase is going to mean more services to the public. Unfortunately, when I explain the reasons for this increase, honourable members will see that this is not so. Of the £136,500, nearly £100,000 goes to an increase in grants in aid to voluntary agencies. This is a direct result of the decision taken last year to pay grants for local staff at local rates of pay. Of the remaining £37,500, £23,000 is for normal increments and vacancies filled during the past year. This leaves some £14,500. Honourable members will see that there is now a sub-head entitled "Five Year Development Plan" and the amount asked for is £10,000. This, however, is only a small part of the total sum which we had calculated would be required to give practical effect to the development plans that I have outlines. The additional expenditure forecast by the Ministry of Health amounted to £81,000 of which the major amounts were due to an increase in hospital services and the additional medical training schemes. The other major item of expenditure is extra emphasis on tuberculosis control projects. I must warn honourable members that the Ministry of Health can only give services to the extent that financial resources are provided. If finance cannot be found to implement all our plans, if emergencies arise which make unexpected calls on our resources, then cuts will have to be made. Whatever we do these cuts must not be made on the old pattern- that is, out of our preventive medicine program of training, teaching, and control. Whatever else may have to suffer, it must not be this.

Our people as a whole now recognize the importance of a hospital service as a means of curing sickness. They accept and indeed demand modern medical attention. This is good- but it is only a first step. The next step is to be aware of the causes of illness and from there knowledge of how to prevent illness follows naturally. This is our job- ours in the Ministry of Health- ours as the elected government- ours as chosen representatives- ours as responsible citizens- to teach how to prevent sickness.

But it is not only sickness that we can prevent through greater care, by vaccination, by hygiene in the home, by insisting on cleanliness in all things. We must also prevent accidents and burns by using more care. I do not for a moment suggest that we can eliminate accidents, but at least we can ensure that when they happen it is not due to our carelessness. How many children do you find in our hospitals, or outside, suffering from burns that could and should have been avoided? How many grown people do you find suffering, and in many cases harmed for life, by engaging in drunken brawls?

We must teach our people not only to value good medicine, but also to value good health. When we are well and fit we seldom think of being sick- we take our good health for granted. We should be careful of it though, guard against attack, for there are many enemies who would harm it. Fit and well, we can do a good job of work, we can make a contribution to building the

nation; sick, we at once become a liability, needing the care of others and using up scarce resources. We must see that we all take every reasonable precaution not to lose our good health-this is our duty to ourselves, our families, and our country."

F)
HE 1172/67 (translation of 1172/68)

Ministry of Health, Dar es Salaam
18th May 1964

To: All Health Workers
Dear Colleague (Wenzangu Wapendwa),

On July 1st we set out on the new five-year Development Plan. As Mwalimu outlines in his introduction of the plan to the National Assembly, there are three broad objective:-

1. To raise the Gross Domestic Product so as to give a per capita income of £45 as compared with under £20 today.

2. So to lay the foundation and build up our education system that by 1980 we may expect to be self sufficient in skilled manpower.

3. To raise life expectancy from 35-40 years at present to 50 years.

After explaining a number of policy matters, Mwalimu ended with his call to the Nation- It can be done. Play your part. [Fanya wajibu wako]

Now what does this plan mean to the Health services and what is our part. But before turning to that I should like to make it clear that in the context of this Development Plan, each of us has two roles to play.

On is a personal individual one- for this is a plan of the people, conceived by the people assisted by our planning experts and dependent on the all-out individual effort of each person. So it is the duty of each of us as a member of society to take part in nation building projects which have an important place in the plan. All over the country there are development committees. It is incumbent on each of us to assist in the work of development through discussion on those committees where that is appropriate, through energetic and enthusiastic participation in community development projects as they are started and whatever form they take, and through personal effort and contribution of particular skills or knowledge. Being a laboratory assistant does not relieve you of the duty of cultivating a communal shamba, being a doctor does not mean that you should not help make a new road, being a nurse does not stop you from teaching young or old people to read and write and count. Whatever the development we, as citizens of a progressive society, have our personal parts to play and it is our duty to play our part and, playing, encourage and assist others to do theirs too.

Our second role is that specific one allotted to each of us as members of a national health service. When I talk of our national health service, I include that part which is run by the Voluntary Agencies as well as the work of the Ministry of Health, for these are complementary and the two together make a whole. As Minister for Health I took upon the service as one and my remarks apply to all health workers- Voluntary Agency workers just as much as workers in this Ministry.

As health workers then, we have the specific duty within the five-year plan, of raising the

life expectancy of the people from 35-40 years to 50 years- AT LEAST.

Now this is not going to be easy. We do not plan to build many new hospitals all over the country or to expand greatly the facilities of existing hospitals. Our aim of one bed to 1000 head of population on a district basis remains and our plan moves towards the attainment of this target. But curing the sick <u>alone</u> is not the right way to raise life expectancy. We must, in our work, by example <u>again</u> and <u>again</u> and <u>again</u>, the importance of prevention of disease and an adoption in our normal way of life of standards of hygiene attainable by everyone. These standards are desperately important, and very often simple, but too often they are forgotten or neglected.

In October 1960 in the then Legislative Council, as Minister for Health & Labour, I quoted an estimate of child mortality of 40%-50% before the age of six. Today, nearly four years later, that same figure is being quoted. To me, this is a great shame. We must do better than this. If we do not we shall fail our country and our people. We know now many things. We know facts about malnutrition and ways of overcoming this enemy. We have considerable knowledge about that major killer malaria, and if we cannot eradicate it because of expense, we can teach our people how to prevent it. We know that the scourges of hook-worm are preventable and that enteric infections are spread because of insufficient attention being paid to simple preventive methods involving hygiene and environmental sanitation.

We are responsible for the health of the nation. The attainment of the broad aim of an increase in life expectancy is dependent upon our efforts. The very target of an improved standard of living is dependent to a large extend on the success of our teaching. I know that our medical workers, of all grades both in the Ministry and in the Voluntary Agencies are already hard worked. Nevertheless, I am asking for more time, more effort- particularly and specifically in the field of preventive medicine. If each one of us plays his part, in his work and outside his work, in every contact that we have, then we shall succeed- It can be done- Play your part.

Yours sincerely,
D.N. Bryceson
Minister for Health

Appendix G: Medical Terms

Active labor- the part of the first stage of labor when the woman's cervix begins to dilate more quickly and contractions become longer, stronger, and closer together, resulting in transition to the second stage of labor when the woman starts pushing.

Active management of the third stage of labor- used to remove the placenta instead of letting in separate from the uterus and be expelled with a contraction. The provider exerts sustained force on the umbilical cord while applying counter pressure to the woman's uterus to pull the placenta free.

Anemia- a deficiency of red blood cells, or hemoglobin, in the blood, results in pallor, weakness, fatigue.

Antenatal- the period prior to giving birth

Antepartum hemorrhage- severe bleeding occurring anytime in the pregnancy before giving birth; common causes could be threatened miscarriage or abnormalities of the placenta, e.g. placenta previa, placental abruption.

APGAR score- a point system used to measure a newborn's reflexes and assess their condition and determine if they need any further medical intervention after birth.

Cannula- the needle inserted into the vein to deliver fluids.

Cardiomyopathy- a chronic disease or abnormality of the heart muscle tissue.

Catheter- inserted into the urethra to drain urine so the recipient does not have to urinate, particularly used during operations and for post-operative recovery.

Cephalopelvic disproportion- a condition in which the baby's head is too large to enter or pass through the mother's birth canal, often due to the shape of the bony processes of the pelvis and/or the shape of the pelvic outlet. Normal, spontaneous vaginal delivery is often impossible and, in low resource settings, this cases prolonged labor, which, if unaddressed, can result in death of the baby and tissue damage to the mother, causing an obstetric fistula.

Cesarean section (alt. C-section)- a surgical procedure to remove the baby from the mother's uterus.

Congestive cardiac failure- a chronic, progressive condition that affects the heart muscle's ability to pump effectively; the term usually refers to the stage in which fluid builds up around the heart and causes it to pump inefficiently.

Cross-matching- a simple laboratory test done with blood samples to determine the Rhesus (Rh) factor, i.e. positive or negative.

Disseminated intravascular coagulopathy- a blood clotting disorder, which initially leads to overproduction of blood clotting factors and platelets. After this period, the platelets and clotting factors are exhausted and the patient experiences severe, uncontrolled bleeding as the blood is no longer able to clot.

Eclampsia- the onset of seizures during pregnancy (or the postpartum period) caused by the high blood pressure of pre-eclampsia and confirmed by testing for protein in the urine combined with the presence of seizures.

Embolism- when a material causes a blockage inside a blood vessel, preventing blood flow in whole or in part. In pregnancy, amniotic fluid embolism is a threat and can cause sudden and unexpected death of the woman.

Fresh stillbirth- indicates a baby that has died shortly before being delivered, as opposed to a macerated stillbirth.

Giving set- also known as an infusion set, it includes tubing, a burette, drip chamber, and roller clamp. The tubing is connected to the cannula and the IV fluid to be administered. The roller clamp helps to regulate the flow of the fluid.

Hemorrhage- generally, the term means bleeding, but often used throughout the dissertation to convey extreme blood loss.

Kangaroo care- a technique of caring for premature infants in which the baby is placed skin-to-skin with a caregiver in order to help the baby regulate its body temperature and respiration.

Macerated stillbirth- a stillbirth in which the baby has died prior to the delivery, even as long as days or weeks before, leading sometimes to tissue necrosis as the body starts to reabsorb the fetal tissue.

Manual removal of the placenta- a procedure in which a healthcare provider must remove the placenta that the body has not expelled, includes using the hand to follow the umbilical cord into the woman's uterus and removing the placenta, or pieces of the placenta, which have not separated from the uterine wall.

Misoprostol- a medication used to start labor, induce an abortion, or treat postpartum bleeding caused by poor uterine tone/contraction.

Multiparous- a woman who has had more than one child.

Neonatal- relating to a newborn child; the neonatal period constitutes the first month after birth.

Nuchal cord- occurs when the umbilical cord wraps all the way around the baby's neck. The condition can resolve on its own before birth but, if it has not, can causes delays in the baby's descent into the birth canal or other complications during the delivery.

Obstructed labor- a condition in which, though the uterus is contracting, the baby does not exit the pelvis. This can have a number of underlying causes and can result in fetal, newborn, or maternal disability or death.

Oxytocin- a medication (also a naturally produced hormone) used to cause uterine contractions.

Placenta previa- a condition in which the placenta wholly or in part blocks the neck of the uterus, preventing normal delivery of the baby.

Partograph- a composite graphical representation of maternal and fetal data during labor, graphed in relation to time.

Placental abruption- complication of pregnancy wherein the placenta separates from the uterus, a common cause of bleeding late in pregnancy.

Postnatal- the period after giving birth

Postpartum hemorrhage- bleeding that occurs after giving birth, can be caused, most commonly, by tears, poor uterine contraction (atony), retained pieces of the placenta, or blood clotting disorders.

Pre-eclampsia- a condition during pregnancy that is characterized by high blood pressure, fluid retention, and protein in the urine. If untreated, can lead to eclampsia and is life-threatening.

Pregnancy-induced hypertension- the development of new hypertension (high blood pressure) in a pregnant woman after 20 weeks gestation but without the presence of protein in the urine or other signs of pre-eclampsia.

Primigravida- a first time mother, someone in their first pregnancy

Resuscitation- processes of correcting physiological problems in a patient who is acutely unwell. Can include, for example, cardiopulmonary resuscitation, which is meant to restore blood flow and breathing.

Retained placenta- a condition in which the placenta fails to separate from the wall of the uterus within approximately 30 minutes after giving birth to the baby.

Sepsis- a complication that arises in response to severe infection. The body's overwhelming response to the infection can lead to tissue damage, organ failure, and death.

Stillbirth- when a baby has died while still in utero, from known or unknown causes.

Uterine atony- when the uterus fails to contract after the woman gives birth, a major cause of postpartum hemorrhage. The blood vessels fail to close and the woman continues to bleed.

Uterotonic- a drug used to cause the uterus to contract.

Summary
The Maternity Ward as Mirror: Maternal Death, Biobureaucracy, and Institutional Care in the Tanzanian Healthcare Sector

Public health research on the causes of maternal mortality in sub-Saharan Africa, the site of half of all such deaths globally, points to the combined effects of poverty, lack of education, gaps in infrastructure, poor communication, and inadequate healthcare staff training. Current global recommendations for reducing maternal deaths focus on ensuring women give birth with biomedical supervision. Despite these recommendations, women in Tanzania still have a 1 in 45 lifetime risk of dying due to pregnancy related causes. As policies have shifted over the last 30 years, anthropological research has problematized global health recommendations for reducing maternal deaths, emphasizing the perspectives of women, local healers, and their interactions with biomedicine. As a distinct but complementary approach, to explore another component of the complex contributors to maternal death, my research turns the lens onto biomedical healthcare institutions, their providers and social environments. This research rebuts the global assumption that if only a woman could overcome community barriers to care, in order to reach a health facility, she would be able to receive the life-saving help she needs in times of obstetric emergency. This public health and policy assumption elides the vital contributions, strategies and subjectivities of another group- the healthcare providers and administrators responsible for this care, often "functionally invisible" in health systems research in sub-Saharan Africa (Wendland 2010:22), a trend which has only recently begun to change. My research found, instead, that institutional and social dynamics of the maternity ward, the hospital generally, and the overall health care system still too frequently cause additional delays and complications once a woman has arrived. These institutional attributes often exacerbate the effects of well-known barriers to the use of biomedical care (e.g. lack of education or poor infrastructure) and contribute to the

deterioration of a woman's condition and her subsequent death within biomedical health facilities in ways that transcend clinical practice.

Located at the nexus of history, policy, social relations, and biomedicine, this research uses the death of pregnant women as a lens for examining structures and continuities within the health bureaucracies of Tanzania. In doing so, the project sheds light on concepts of governance, risk, uncertainty, gendered work in the nursing profession, and the ways in which healthcare providers, administrators, patients, and communities cope with, and make meaning within, bureaucratically constrained and low-resource settings when pregnant women die. Key themes include accountability, responsibility, routinization of care and structures preventing change, narratives of death, and what it means to be a "good" nurse or healthcare institution, as well as coping with risk, uncertainty, and death. The analysis demonstrates the ways in which the very structures and policies meant to help women receive high quality care often acted to pervert those very goals, leading to health crises and deaths.

This dissertation is based on a total of 23 months of mixed-method, ethnographic research in the Rukwa region of Tanzania, which has one of the highest maternal mortality rates in the country. Healthcare providers, administrators, and women in health facilities and communities form the core of the project. I spent over 1600 hours on the regional hospital maternity ward and conducted in-depth interviews, surveys, and group discussions with nearly 500 participants in eleven communities. I also conducted primary source archival research in the Tanzania National Archives and elicited oral histories. The historical data emphasize the *longue durée* of debates related to maternal health stretching back at least 100 years in Tanzania-i.e. women in the medical professions and concepts of the ideal midwife; the ideal location of birth

for optimum control and surveillance, either institutions or the home; and the role of biomedicine and its institutions in state goals and society.

The dissertation presents a new perspective on an old problem, moving forward the ways in which we study maternal death. I use critical medical anthropological and feminist perspectives to analyze the events which I witnessed and the broader structures affecting maternal health in Tanzania. I draw on concepts about the nature of care and extend them to an analysis of the ways in which healthcare administrators and the healthcare system writ large fail to care not only for pregnant women, but for the nurses and physicians meant to provide the clinical care to these women. In this analysis, care appears on various scales—failure of the state to care for citizens in communities, clinical aspects of biomedical care, institutional care for employees, and community care for pregnant women.

The dissertation begins with an ethnographic anecdote in which the reader is drawn into the chaotic feeling of the maternity ward with its attendant uncertainty, violence, improvisation, and institutional norms. Part I includes an introduction to the topic and bodies of literature on which this work is built (chapter 1), as well as a description of the methods I used (chapter 2). Part II examines the global construction of the problem of maternal mortality with brief background on the complexity of maternal death as a clinical and social problem. It also reviews the specific efforts of Tanzania to address maternal mortality, covering the construction of the pregnant body as in need of oversight and the historical development of discourse around pregnancy and maternity care in Tanzania from the colonial period to the present day (chapter 3). I demonstrate how historical trends are later echoed in national policy shifts away from training traditional birth attendants to strongly, even coercively, encouraging women to give birth in biomedical facilities. Drawing on community-level data, I discuss the structures women faced in

their daily lives that may have predisposed them to life-threatening obstetric emergencies, such as access to education and decision making in the family. I analyze the ways in which local, gendered logics influence reproduction and healthcare-seeking in ways that sometimes conflict with global, WHO-driven logics of risk and rational choice (chapter 4).

Part III of the dissertation is based on data collected at the regional hospital and is centered on the difficult work environment in which maternity care providers find themselves (chapter 5). They face a uniquely complex ward characterized by the unpredictability of labor and birth, as well as staffing deficits, low pay, and insufficient supplies and physical infrastructure (chapter 6). Motivation in the workplace became a central theme for the research participants. Their different positionalities within the hospital afforded different actors varied access to information on the ways in which the health system operated, thereby informing how they interpreted what it means to be a motivated worker in an under-resourced environment. In addition to examining issues of motivation and what it means to "be called" to midwifery, I deconstruct a protracted conflict over nursing uniforms to analyze gendered norms within biomedicine, what it means to be a "good" nurse, and the ways in which maternity nurses often failed to perform this role due to the very nature of maternity care (chapter 7). This conflict epitomized the hospital's resolute refusal to acknowledge the singular nonconformity of maternity care in their setting and more broadly.

Using cases of stillbirth, I analyze systems of accountability and ethics within the hospital setting when care went wrong (chapter 8). I highlight the role of bureaucratic health sector procedures in limiting administrators' ability to discipline staff members, which they told me reduced accountability but increased administrators' and providers' ethical struggles when seeking to protect their patients and come to terms with their roles in the deaths of women and

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babies. I then end Part III with an examination of maternal death audit meetings, which are meant to prevent future deaths by examining gaps in care (chapter 9). Instead, I argue these meetings became more of a performance of process, giving the appearance of efficacy while not including viable interventions or follow-up actions. Providers often constructed a narrative in which the women who died came from remote areas "already dead," shifting blame to forces outside the facility.

The dissertation demonstrates the ways in which biomedical institutions characterized by a level of scarcity that permeates all aspects of the healthcare system are frequently unable to break routines or implement new initiatives to improve maternal healthcare. Situated in a global and national health complex that emphasizes data collection, healthcare providers find themselves constrained by an "accounting culture," as opposed to working in a "caring culture," like the vision presented to them during their education and training. Nurses, in particular, also desired to be part of a "caring culture" on the institutional level in which administrators demonstrated their care for and appreciation of nurses, particularly when nurses were putting their own bodily and professional integrity on the line in the course of caring for pregnant women during emergencies. Nurses provided the vast majority of the care to pregnant women but had access to the least amount of power within the hospital hierarchy— their efforts often were undervalued and overlooked. This institutional lack of care contributed to the continued production of nursing care that gave the appearance of lacking motivation and compassion.

The scarcity with which nurses and doctors struggled everyday produced an expectation that ideal care is nearly impossible to provide. This environment led to reduced expectations that providers and hospital administrators can solve clinical or systemic problems, constrained as they are by a system that-currently and historically-makes it so difficult to do so. Acting within a

complex of demands for data collection and metrics-and in a system so characterized by scarcity-

improvisation and the justification of deviation from guidelines became facts of everyday life.

Providers shifted their efforts from providing care to accounting for deviations from ideal care.

Good outcomes often happened by chance and could not be replicated. The dissertation

contributes to the anthropology of maternal death from a novel perspective, but also has

significant potential to inform policy making and maternal health advocacy efforts.

Samenvatting

De Kraamafdeling als Spiegel: Moedersterfte, Biobureaucratie en Institutionele Zorg in de Tanzaniaanse Gezondheidszorg

Public health onderzoek naar de oorzaken van moedersterfte in Afrika ten zuiden van de Sahara, de plek waar de helft van dit soort sterfgevallen wereldwijd plaatsvindt, wijst uit dat er gecombineerde effecten zijn van armoede, gebrek aan opleiding, hiaten in de infrastructuur, gebrekkige communicatie en ontoereikende scholing van zorgpersoneel. Huidige wereldwijde aanbevelingen om moedersterfte terug te dringen focussen op het zorg dragen voor biomedisch toezicht tijdens de bevalling. Ondanks deze aanbevelingen hebben vrouwen in Tanzania nog steeds een kans van 1 op 45 om tijdens hun leven te sterven aan zwangerschapsgerelateerde oorzaken. Terwijl in de afgelopen 30 jaar vele beleidsveranderingen hebben plaatsgevonden, heeft antropologisch onderzoek de aanbevelingen door de wereldgezondheidszorg om moedersterfte terug te dringen geproblematiseerd door de perspectieven van vrouwen, lokale genezers en hun interacties met de westerse geneeskunde *(biomedicine)* te benadrukken. Mijn onderzoek heeft een andere maar complementaire benadering door een andere component van de complexe veroorzakers van moedersterfte te verkennen, en richt zich op de biomedische zorginstituten, aanbieders hiervan en de sociale omgeving. Dit onderzoek weerlegt de wereldwijde aanname dat alleen als een vrouw in staat is om belemmeringen in haar lokale gemeenschap en de samenleving die het bereiken van een zorginstelling verhinderen, te overwinnen, zij in staat is om de levensreddende hulp te ontvangen die zij nodig heeft bij een verloskundig noodgeval. Deze aannames in public health en beleid negeren de essentiële bijdragen, benaderingen en subjectiviteiten van een andere groep – de zorgaanbieders en -bestuurders verantwoordelijk voor deze zorg, vaak "functioneel onzichtbaar" in onderzoek naar zorgsystemen in Afrika ten zuiden van de Sahara (Wendland 2010:22), een trend die pas recent

is begonnen te veranderen. Mijn onderzoek liet juist zien dat institutionele en sociale

dynamieken van de kraamafdeling, het ziekenhuis en zorgsysteem in het algemeen nog steeds te

vaak verdere vertragingen en complicaties veroorzaken op het moment dat een vrouw arriveert in

de zorginstelling. Deze institutionele aspecten verergeren vaak de effecten van de bekende

belemmeringen tot het gebruik van biomedische zorg (bijvoorbeeld gebrek aan opleiding of

gebrekkige infrastructuur) en dragen bij aan de verslechtering van de toestand van een vrouw en

haar daaropvolgende dood in biomedische zorginstellingen, op manieren die de klinische praktijk

overstijgen.

Dit onderzoek bevindt zich op het snijvlak van geschiedenis, beleid, sociale relaties en

westerse geneeskunde (*biomedicine*) en gebruikt de sterfte van zwangere vrouwen als een lens

voor het bestuderen van structuren en patronen binnen de zorgbureaucratieën in Tanzania.

Hiermee biedt het project inzicht in concepten van bestuur, risico, onzekerheid, *gendered* werk in

het zorgberoep, en de manieren waarop zorgaanbieders, bestuurders, patiënten, en

gemeenschappen omgaan met, en betekenis vinden in een omgeving beheerst door bureaucratie

en beperkte middelen wanneer vrouwen sterven. Kernthema's zijn verantwoording,

verantwoordelijkheid, routinematigheid van zorg en structuren die verandering verhinderen,

narratieven van overlijden, en wat het betekent om een "goede" verpleegkundige of

zorginstelling te zijn, en daarnaast het omgaan met risico, onzekerheid en de dood. De analyse

toont de manieren waarop de structuren en beleidsvormen die bedoeld zijn om ervoor te zorgen

dat vrouwen een hoge kwaliteit van zorg ontvangen, het bereiken van deze doelen vaak juist

bleken te verhinderen, hetgeen leidde tot gezondheidscrises en sterfgevallen.

Deze dissertatie is gebaseerd op in totaal 23 maanden *mixed-method*, etnografisch

onderzoek in de Rukwa regio van Tanzania, die één van de hoogste moedersterftecijfers van het

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land heeft. Zorgaanbieders, bestuurders, en vrouwen in zorginstellingen en gemeenschappen vormen de kern van het project. Ik bracht meer dan 1600 uren door op de kraamafdeling van het regioziekenhuis en hield diepte-interviews, nam vragenlijsten af, en organiseerde groepsdiscussies met bijna 500 deelnemers in elf gemeenschappen. Ook deed ik archiefonderzoek naar primaire bronnen in het nationaal archief van Tanzania (Tanzania National Archives) en hield *oral history* interviews. De historische data onderstreept de *longue durée* van debatten gerelateerd aan moedersterfte, die al minstens 100 jaar in Tanzania gaande zijn – bijvoorbeeld over vrouwen in medische beroepen en ideeën over de ideale vroedvrouw; de ideale locatie voor een bevalling voor optimale controle en toezicht, ofwel instellingen of thuis; en de rol van de westerse geneeskunde (*biomedicine*) en zijn instituten in overheids- en maatschappelijke doelen.

De dissertatie biedt een nieuw perspectief op een oud probleem, en brengt de manieren waarop we moedersterfte bestuderen een stap verder. Ik gebruik kritische medisch antropologische en feministische perspectieven om de gebeurtenissen te analyseren die ik aanschouwde en de bredere structuren die moedersterfte in Tanzania beïnvloeden. Ik gebruik concepten over de aard van de zorg en breidt deze uit naar een analyse van de manieren waarop zorgbestuurders en het zorgsysteem zichtbaar falen om te zorgen, niet alleen voor zwangere vrouwen, maar ook voor het verzorgend personeel en dokters die de klinische zorg voor deze vrouwen moeten bieden. In deze analyse verschijnt zorg op verschillende schaalgroottes – het falen van de overheid om voor burgers in gemeenschappen te zorgen, klinische aspecten van biomedische zorg, institutionele zorg voor werknemers, en gemeenschapszorg voor zwangere vrouwen.

De dissertatie begint met een etnografische anekdote, waarmee de lezer in de chaotische sfeer van de kraamafdeling wordt getrokken met zijn onzekerheid, geweld, improvisatie, en institutionele normen. Deel I bevat een introductie van het onderwerp en een overzicht van de literatuur waarop dit werk voortbouwt (hoofdstuk 1) en een beschrijving van de methoden die ik gebruikt heb (hoofdstuk 2). Deel II onderzoekt de wereldwijde constructie van het moedersterfteprobleem en schetst kort de achtergrond van de complexiteit van moedersterfte als een klinisch en sociaal probleem. Eveneens wordt een overzicht gegeven van de specifieke pogingen van Tanzania om met het moedersterfteprobleem om te gaan, waaronder de constructie van het zwangere lichaam als iets dat toezicht nodig heeft en de historische ontwikkeling van het discours rondom zwangerschap en kraamzorg in Tanzania vanaf de koloniale periode tot en met het heden (hoofdstuk 3). Ik laat zien hoe historische trends later geëchood worden in nationaal beleid dat wegbeweegt van het opleiden van traditionele kraamhulpen naar het dringend, of zelfs dwingend, stimuleren van vrouwen om te bevallen in biomedische instellingen. Gebruikmakend van data op gemeenschapsniveau bespreek ik de structuren waarop vrouwen in hun dagelijks leven stuitten en die hen mogelijk in levensbedreigende verloskundige noodsituaties gebracht hebben, zoals toegang tot onderwijs en de manier waarop beslissingen worden gemaakt in familieverband. Ik analyseer de wijzen waarop lokale, *gendered* logica reproductieve gezondheid en het ondernemen van actie gericht op het verkrijgen van behandeling beïnvloeden op manieren die vaak conflicteren met wereldwijde, WHO-gedreven logica van risico en rationele keuzes (hoofdstuk 4).

Deel III van de dissertatie is gebaseerd op data verzameld in het regionale ziekenhuis en concentreert zich op de ingewikkelde werkomgeving waarin aanbieders van kraamzorg zichzelf bevinden (hoofdstuk 5). Zij hebben te maken met een unieke, complexe afdeling die gekenmerkt

wordt door zowel de onvoorspelbaarheid van bevalling en geboorte als personeelstekort, lage

lonen en een gebrek aan middelen en fysieke infrastructuur (hoofdstuk 6). Motivatie op het werk

werd een centraal thema voor de onderzoeksdeelnemers. Hun verschillende positionaliteiten

binnen het ziekenhuis gaven verschillende actoren op verschillende wijzen toegang tot

informatie over de manieren waarop het zorgsysteem werkte, wat hun interpretatie beïnvloedde

van wat het betekent om een gemotiveerde werknemer te zijn in een omgeving met beperkte

middelen. Naast het onderzoeken van motivatiegerelateerde onderwerpen en wat het betekent om

een "roeping" te hebben tot vroedvrouw, deconstrueer ik een langdurig conflict over

verpleegkundige uniformen om te analyseren welke *gendered* normen er binnen de

biogeneeskunde zijn, wat het betekent om een "goede" verpleegkundige te zijn, en de manieren

waarop het verloskundigen vaak niet lukte om deze rol aan te nemen, juist door de aard van de

verloskunde zelf (hoofdstuk 7). Dit conflict typeerde de resolute weigering van het ziekenhuis

om de opmerkelijke non-conformiteit van de verloskunde in deze setting en daarbuiten te

erkennen.

Gebruikmakend van gevallen van doodgeboorte analyseer ik systemen van

verantwoording en ethiek binnen de ziekenhuisomgeving wanneer de zorg faalde (hoofdstuk 8).

Ik laat zien welke rol bureaucratische procedures in de zorgsector spelen bij het beperken van het

vermogen van bestuurders om medewerkers te disciplineren, iets wat, zoals zij mij vertelden, ín

minder verantwoording resulteerde maar de ethische worstelingen van bestuurders en aanbieders

vergrootte bij hun pogingen hun patiënten te beschermen en hun rol in het sterven van vrouwen

en baby's te accepteren. Ik eindig Deel III met een studie van audit vergaderingen over

moedersterfte, die bedoeld zijn om toekomstige sterfgevallen te voorkomen door lacunes in de

zorg te onderzoeken (hoofdstuk 9). In plaats daarvan beargumenteer ik dat deze vergaderingen

eerder een schijnvertoning waren die de indruk van effectiviteit gaven, maar geen haalbare interventies of vervolgacties bevatten. Aanbieders construeerden vaak een narratief waarin vrouwen die stierven "al dood" van verafgelegen gebieden kwamen, waarmee zij de schuld verplaatsten naar factoren buiten de instelling.

Deze dissertatie laat zien op welke manieren biomedische instituten, gekenmerkt door schaarste die doordringt in alle aspecten van het zorgsysteem, vaak niet in staat zijn om routines te doorbreken of nieuwe initiatieven te implementeren om de kraamzorg te verbeteren. Zorgaanbieders, die zich bevinden in een wereldwijd en nationaal zorgcomplex dat gegevensverzameling benadrukt, worden beheerst door een "verantwoordingscultuur", in plaats van dat zij werken in een "zorgcultuur", zoals de visie die hen gepresenteerd wordt tijdens hun opleiding. Vooral verpleegkundigen wensen ook deel uit te maken van een "zorgcultuur" op het institutionele niveau waarin bestuurders hun zorg en waardering voor verpleegkundigen tonen, in het bijzonder wanneer verpleegkundigen hun eigen lichamelijke en professionele integriteit op het spel zetten bij het zorgen voor zwangere vrouwen in noodsituaties. Verpleegkundigen boden het grootste deel van de zorg aan zwangere vrouwen maar hadden het minst toegang tot macht binnen de hiërarchie van het ziekenhuis – hun inspanningen bleven vaak ondergewaardeerd en onopgemerkt. Dit institutionele gebrek aan zorg droeg bij aan de voortdurende productie van verpleegzorg waarbij motivatie en compassie leken te ontbreken. De beperkte middelen waarmee verpleegkundigen en dokters dag in dag uit mee te maken hadden, zorgde voor de verwachting dat ideale zorg vrijwel onmogelijk te geven is. Deze omgeving leidde ertoe dat de verwachtingen dat aanbieders en ziekenhuisbestuurders klinische en systemische problemen kunnen oplossen, laag waren, beperkt als zij zijn door een systeem dat – op dit moment en historisch gezien – het hen moeilijk maakt om dit te doen. Handelen binnen een complex van eisen voor

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gegevensverzameling en indicatoren – en in een systeem dat zo sterk gekenmerkt wordt door

schaarste – werden improvisatie en het rechtvaardigen van het afwijken van de richtlijnen

onontkoombaar. Aanbieders verschoven hun inspanningen van het bieden van zorg naar het

verantwoorden van afwijken van ideale zorg. Goede uitkomsten kwamen vaak per toeval tot

stand en konden niet worden gerepliceerd. De dissertatie draagt bij aan de antropologie van

moedersterfte vanuit een nieuw perspectief, maar ook kan het een belangrijke bijdrage leveren

aan het werk van beleidsmakers en voorvechters van de gezondheid van moeders.

Adrienne E. Strong

Curriculum Vitae
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St. Louis, MO 63130 USA
adrienne.strong@wustl.edu

RESEARCH INTERESTS

Medical anthropologist with over 3.5 years of fieldwork experience in Tanzania (2007-2016) conducting qualitative and mixed methods ethnographic research in health facilities in remote areas. My research interests coalesce around maternal death in healthcare facilities. This has come to include scholarly interests in respectful maternity care, gendered dynamics in the nursing profession and care provision in biomedical settings, health system financing in ethnographic perspective, stillbirth and accountability, as well as the contemporary role of bridewealth, and men's sexual and reproductive health in rural East Africa. Theoretical orientations include critical medical anthropological and feminist approaches to the study of bureaucracy, institutions, hospital ethnography, and concepts of risk, uncertainty, and care. My research interests sit at the nexus of anthropology, gender studies, science and technology studies, and history.

HIGHLIGHTS

- Over $250,000 in extramural funding for research and graduate school support since 2010, including Fulbright IIE, Fulbright-Hays, National Science Foundation Graduate Research Fellowship, National Science Foundation Doctoral Dissertation Improvement Grant, and P.E.O. Scholar Award
- Fieldwork experience and National Science Foundation sponsored training in designing and conducting systematic mixed methods and qualitative research projects in cultural anthropology
- History of interdisciplinary collaboration in publishing, fieldwork, and consulting

EDUCATION

2017   Ph.D. Anthropology, Washington University in St. Louis (May 2017) (Joint degree)
       Ph.D. Anthropology, Universiteit van Amsterdam (May 2017) (Joint degree)
       Dissertation: The Maternity Ward as Mirror: Maternal Death, Biobureaucracy, and Institutional Care in the Tanzanian Health Sector, advised by John Bowen and Anita Hardon
2016   Certificate in Women, Gender, and Sexuality Studies, Washington University in St. Louis (May 2016)
2013   M.A. Anthropology, Washington University in St. Louis (May 2013)
2010   B.S. with Research Distinction in Biomedical Science, Minor French Literature, *magna cum laude*, The Ohio State University (June 2010)

PUBLICATIONS

2016   Strong, A. Working in Scarcity: Effects on social interactions on the maternity ward of a Tanzanian hospital (accepted, *Social Science & Medicine*)

2016   Strong, A. and D.A. Schwartz. Anthropological aspects of risk to pregnant women during the 2013-2015 multinational Ebola virus outbreak in West Africa. *Health Care for Women International* (in press)

2015   Strong, A. "The convergence of social and institutional dynamics resulting in maternal death in Rukwa, Tanzania" in *Maternal Mortality: Risk Factors, Anthropological Perspectives, Prevalence in Developing Countries and Preventative Strategies for Pregnancy- Related Death*. Ed. David Schwartz. Nova Science Publishers

2015   Marwa, S and A. Strong. "Three case studies and experiences of maternal death at a regional referral hospital in Rukwa, Tanzania" in *Maternal Mortality: Risk Factors, Anthropological Perspectives, Prevalence in Developing Countries and Preventative Strategies for Pregnancy-Related Death.* Ed. David Schwartz. Nova Science Publishers

Works in Progress

2016   Strong, A. The partograph as *mutable mobile*: How one piece of paper is clinical tool, bureaucratic document, and social facilitator on a Tanzanian maternity ward (in preparation)

2016   Strong, A. "We Swim in Blood:" Maternity care providers and perceptions of risk in the work place at a Tanzanian hospital (in preparation)

2016   Strong, A. "Jumping the Red Tape:" Administrative workarounds, improvisation, and the social world of rumors in a Tanzanian hospital (in preparation)

2017   Strong, A. Brideweath, Gender Relations, and Maternity Care: Insights on a Shifting Institution from Rukwa, Tanzania

Public Anthropology and Other Publications

2016   Maternal Health: A Dangerous Birth, photoessay on SAPIENS.org (forthcoming)

2016   Washington People: Adrienne Strong https://source.wustl.edu/2016/08/washington-people-adrienne-strong/

2014   Hospitals and Maternal Death in Tanzania, GlobalHealthHub.org http://www.globalhealthhub.org/2014/06/21/hospitals-maternal-death-tanzania-adrienne-strong/

2014   Personal fieldwork blog mentioned in Around the Web Digest, SavageMinds.org, weeks of July 14th and August 10th http://savageminds.org/2014/07/14/around-the-web-digest-week-of-july-6/

SELECTED AWARDS AND GRANTS

2017   Society for Applied Anthropology Peter K. New Award for Student Research, 3rd Place

2016-17	Dissertation Completion Fellowship, Washington University in St. Louis, $22,000
2015	Society for Medical Anthropology Travel Award for travel to American Anthropological Association Annual Meeting, $500
2015-16	P.E.O. Scholar Award from International Chapter of the P.E.O. Sisterhood, $15,000
2015-16	National Science Foundation Doctoral Dissertation Improvement Grant, $15,125
2014-15	Fulbright-Hays Doctoral Dissertation Research Abroad Grant, $23,718
2011-16	National Science Foundation Graduate Research Fellowship, $185,000
2010-11	Fulbright Institute for International Education, Student Research Grant to Tanzania, $25,000
2006-10	Presidential Scholarship, The Ohio State University, $100,000

INVITED TALKS

2016 P.E.O. Sisterhood Chapter Meeting- St. Louis, MO (March 5)

2015 Fulbright Reflection Series- U.S. Embassy, Dar es Salaam, Tanzania (August 4): Bureaucracy, Life, and Death on the Maternity Ward of a Tanzanian Hospital

2014 Islamic Medical Association and the Federation of Islamic Medical Associations Annual Conference- Arusha, Tanzania (August 9-10): Improving a comprehensive understanding of maternal death

2011 Fulbright Reflection Series- U.S. Embassy, Dar es Salaam, Tanzania (July 21): Through the Voices of the Women: Birth culture and maternal healthcare in Singida, Tanzania

CONFERENCE PRESENTATIONS

2016 American Anthropological Association Annual Meeting- Minneapolis, Minnesota (November 15-20) Vital Conjunctures and Breached Initiations: Constructing Adulthood Under Conditions of Precarity (Panel Co-Organizer and Co-Chair)

2016 American Anthropological Association Annual Meeting- Minneapolis, Minnesota (November 15-20): We Swim in Blood: Risk, Healthcare Providers, and Social Interactions on a Tanzanian Maternity Ward

2015 American Anthropological Association Annual Meeting- Denver, Colorado (November 18-22): Partograph as Mutable Mobile: The Social Life of a Document on a Tanzanian Maternity Ward (Co-Chair and Panel Co-Organizer- Health Systems in the Global South: New Ethnographic Approaches)

2015 European Association of Social Anthropologists Medical Anthropology Section MAGic 2015 Conference- Brighton, England (September 9-11): Ethnography as Mediator Between Community and Maternal Healthcare Providers in Rukwa, Tanzania

2013 American Anthropological Association Annual Meeting- Chicago, Illinois (November 20-24): Home birth in St. Louis, MO: Tenuous Legalization

2013 The Fantastic and the Banal: Rethinking Bureaucratic Authority- University of Colorado, Boulder (September 27-29): Bureaucracy and Birth: Life and Death on the Maternity Ward of the Rukwa Regional Hospital

2013 Society for Medical Anthropology/European Association of Social Anthropologists Medical Anthropology Section Joint Meeting- Tarragona, Spain (June 12-14): Fierce

Nurses and Bad Welcomes: Theorizing women's perceptions of patient-provider interactions and encounters in the biomedical care setting in Singida, Tanzania

2012   Society for Applied Anthropology Annual Meeting- Baltimore, Maryland (March 27-31): Shut Up and Push!: Factors Influencing Health Care Seeking Behaviors During Pregnancy and Childbirth in Rural Tanzania (Session Chair)

RESEARCH AND FIELD EXPERIENCE

Washington University in St. Louis Department of Anthropology

2014-15   The Maternity Ward as Mirror: Maternal Death, Biobureaucracy, and Institutional Care in the Tanzanian Health Sector, advised by Dr. Carolyn Sargent (January 2014-August 2015)
Doctoral dissertation research on the institutional, historical, and social contributors to maternal death within the biomedical healthcare setting in the Rukwa region of Tanzania, using systematic and mixed research methods

Committee members: Dr. John Bowen, Anthropology; Dr. Brad Stoner, Anthropology; Dr. Shanti Parikh, Anthropology; Dr. Priscilla Song, Anthropology; Dr. Anita Hardon, University of Amsterdam, Anthropology.

2012-13   Breast Cancer in French Immigrants from the Senegal River Basin living in Paris, France, advised by Dr. Carolyn Sargent, (June 2012-March 2013)
Interdisciplinary and international collaborative research with researchers from French institutions and Washington University in St. Louis Department of Anthropology and Brown School of Social Work and Public Health
Conducted preliminary data collection from patient records at a Parisian hospital
Contributed to planning meetings and recommended potential use of GIS to delimit geographic boundaries for data collection in neighborhoods in certain Parisian districts

2011-12   The Voice of the Mother: Homebirth in St. Louis, Missouri, advised by Dr. Priscilla Song, (September 2011-December 2012)
Conducted participant observation and interviews with women in the homebirth community in St. Louis on legal challenges to accessing homebirth options, as well as individual motivations for pursuing midwifery care and out of hospital births

Fulbright Student Research Grant, affiliated with Outreach International, Singida Region, Tanzania

2010-11   Birth culture of the Singida Region of Tanzania and barriers to the use of healthcare services during pregnancy and childbirth (September 2010- July 2011)
Conducted independent research for eleven months in Singida, Tanzania including semi-structured interviews, surveys, and participant observation in villages, village dispensaries, and the Singida Regional Hospital

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The Ohio State University Department of Anthropology and Singida Region Government Hospital
2008-10   Barriers to the uptake of healthcare services during pregnancy in rural Tanzania, advised by Dr. Barbara Piperata, (October 2008-June 2010)
         1st place in Social and Behavioral Science category at Ohio State's Denman Undergraduate Research Forum, 2010

TEACHING EXPERIENCE

Washington University in St. Louis, St. Louis, MO
2017   Instructor of Record: Global Gender Issues, Spring 2017, University College
2016   Instructor of Record: Introduction to Women, Gender and Sexuality Studies, Spring 2016
2012   Teaching Assistant: Gender, Culture and Madness in Fall 2012, taught by Dr. Rebecca Lester
2016   Invited Respondent for Mellon Mays Undergraduate Fellowship 2nd Annual Research Forum, Spring 2016- commented on student research theses
2016   Guest Lecture on maternal mortality for Transnational Reproductive Health, Spring 2016
2016   Guest Lecture on birth and maternal mortality for Introduction to Medical Anthropology, Spring 2016
2015   Guest Lecture on methods for systematic qualitative text analysis for Research Methods in Anthropology Seminar, Fall 2015
2015   Guest Lecture on research methods in anthropology for Introduction to Cultural Anthropology, Fall 2015
2015   Guest Lecture on maternal and reproductive health for Introduction to Medical Anthropology, Fall 2015

CONSULTING

2015   Plan International, Jhpiego, and Africare Tanzania, (June-July 2015)
         Advised program officers as they were writing a proposal for a new 5-year, multi-million-dollar project to operate in the Rukwa and Geita regions of Tanzania, funded by the partner organizations and the Canadian International Development Agency (CIDA)
         Contributed primary, ethnographic research data during planning meetings to determine goals and design of new project in order to fulfill the objectives of lowering maternal and infant mortality in Tanzania
         Produced briefing documents based on primary ethnographic research on topics related to the regional hospital's Health Management Team, community concerns and self-identified needs, and suggestions for improving the maternal death audit procedures being followed in the Rukwa region

PROFESSIONAL MEMBERSHIPS

2014-present   White Ribbon Alliance for Safe Motherhood, Tanzania
2012-present   Council on Anthropology of Reproduction
2009-present   Society for Medical Anthropology

2009-present   American Anthropological Association
2010-present   Sigma Xi Scientific Research Society, Associate Member
2011-present   Fulbright Alumni Association

EXCHANGE PROGRAMS
2016-17   Washington University in St. Louis and the University of Amsterdam – Health,
               Care, and the Body, Amsterdam Institute for Social Science Research (AISSR)
               (August 2016- January 2017)
2012-13   Washington University in St. Louis, University of Amsterdam, and L'Ecole des
               Hautes Etudes en Sciences Sociales, Paris France: Three-part exchange program
               focused on the anthropology of institutions (September 2012- June 2013)

LANGUAGE PROFICIENCY

English- native
Swahili- fluent
French- highly proficient
Spanish- proficient reading comprehension
German- university instruction, limited proficiency

OTHER TRAINING

2013   National Science Foundation Summer Institute for Research Design, Duke Marine Lab,
       North Carolina, USA (July 14-August 3, 2013): Three weeks of intensive instruction on
       anthropological research design and methods, including training in qualitative and mixed
       methods data analysis software packages including SYSTAT, UCINET, ANTHROPAC,
       and MAXQDA.
2013   Doula (birth attendant) training through DONA International (September 2013):
       Participated in three days of intensive training on the duties of a doula as a labor support
       person.

PROFESSIONAL SERVICE

Council for Anthropology on Reproduction (CAR), a Special Interest Group of the Society for
         Medical Anthropology- International Newsletter Co-editor (2016-18)

Committee of 3 Cultural Anthropology Graduate Student Representative, Washington University
         in St. Louis Department of Anthropology (2015-16)
                 Liaised with faculty counterparts to voice graduate students' concerns and
         advocate for their needs with the Department's faculty, Graduate Coordinator, and
         Department Chair
                 Designed and disseminated student satisfaction survey in Fall 2015 to
         elicit needs for improvement within the department

COMMUNITY ENGAGEMENT

2012-14   University United Methodist Church- Rukwa Partnership for Health fundraising project, St. Louis, MO and Sumbawanga, Tanzania (October 2012-December 2013)

        Planned and led fundraising campaign to purchase boat to serve as emergency transport to healthcare services for five villages on Lake Rukwa, Tanzania

        Coordinated fundraising projects to raise a total of more than $11,000 for the purchase of a boat, motor, and life jackets, as well as coordinating transportation of the boat to its location of use

        Worked with Rukwa Regional Medical Office and Sumbawanga Urban District Offices to coordinate sustained support for the boat

        In March 2014 presented the boat to the local community and Tanzania's Minister of Health and Social Welfare as part of the White Ribbon Day celebrations to commemorate maternal deaths and advocate for improved maternal health care services