

Skilled attendance at delivery; how skilled are institutional birth attendants?

*An explorative study on birth attendants at Bansang Hospital,
The Gambia*

Ina Kreyberg, Lise Mørkved Helsingen



Institute of Public Health, Faculty of Medicine

UNIVERSITY OF OSLO

2010

Table of contents

Abstract	3
Definitions and abbreviations	4
1. Introduction	5
2. Background	7
2.1 Maternal mortality	7
2.2 Skills and abilities	8
2.3 Skilled attendance and differences between urban and rural areas	9
2.4 The Republic of The Gambia	9
2.4.1 General facts	9
2.4.2 Health statistics	10
2.4.3 Health system with focus on reproductive care	10
2.4.4 Bansang Hospital	11
3. Methods	13
4. Results	15
4.1 Work load and responsibilities	15
4.2 Staff coverage	16
4.3 Material resources	16
4.4 Salary and general work conditions	17
4.5 Guidelines and staff meetings	18
4.6 Qualifications and additional training	19
4.7 Skills and abilities	20
5. Discussion	22
5.1 Method discussion	22
5.2 Result discussion	24
5.2.1 Work load and responsibilities	24
5.2.2 Staff coverage	25
5.2.3 Material resources	25
5.2.4 Salary and general work conditions	26
5.2.5 Guidelines and staff meetings	27
5.2.6 Qualifications and additional training	27
5.2.7 Skills and abilities	28
5.3 Correlated results in related literature	30
6. Conclusion	33
References	34
Appendix	36

Abstract

Background: As reflected in the United Nations Millennium Development Goals (UN MDG 5), reducing maternal mortality represents an important area of concern. The common causes of maternal deaths may be preventable and treatable by having access to emergency obstetric care (EmOC), including skilled birth attendance (SBA), when needed. Measuring the presence of a birth attendant has been the main focus until now, not their skills and qualifications, and by this we cannot presuppose that they are skilled in delivery care. We explored the subjective level of confidence in skills and abilities defined by the WHO, among the birth attendants at Bansang Hospital, The Gambia, and how work conditions affected their practice.

Methods: This study is exploratory in nature. We used a structured interview to investigate specific skills, and added a qualitative component.

Results: Our results show that there is a difference between the self reported skills and abilities among the untrained and trained birth attendants. Formal education makes you feel more confident in performing the procedures expected from a SBA. The majority felt the need for additional training, especially in EmOC procedures. Our study also reveals several problems concerning management, material and human resources.

Conclusion: There is a need for further examinations to objectively measure the skills and abilities of the birth attendants in The Gambia. Knowledge is needed on how to increase the quality and capacity of pre- and in-service training among birth attendants in order to reach future goals of every woman having access to skilled birth attendance.

Definitions and abbreviations

CHN: Community Health Nurse. Two years of education after graduating 12th grade

ECHNM: Enrolled Community Health Nurse Midwife, a one year program. Requirements; trained as a CHN and minimum two years of work experience

EmOC; Emergency Obstetric Care

GDP: Gross Domestic Product

HDI: Human Development Index

MMR: Maternal Mortality Ratio. Number of maternal deaths per 100.000 live births

NA: Nurse Attendant. No official training

NGO: Non-governmental

PPH: Post partum haemorrhage

RCA: Reproductive and Child Health Services

SBA: Skilled birth attendant

SCM: State Certified Midwife, an 18 months program. Requirements; trained as a SRN and minimum two years of work experience

SEM: State Enrolled Nurse Midwife, a one year program. Requirements; trained as a SEN and minimum two years of work experience

SEN: State Enrolled Nurse. Two years of education after graduating 12th grade

SRN: State Registered Nurse. Three years of education after graduating 12th grade

TBA: Traditional Birth Attendant

WHO: World Health Organization

1. Introduction

As reflected in the UN MDGs, reducing maternal mortality as well as improving maternal and reproductive health, represent important areas of concern in the world today. Maternal mortality, defined as ‘deaths from pregnancy related complications occurring throughout pregnancy, labour, childbirth and in the postpartum period (up to the 42nd day after the birth)’, is a worldwide health and a developmental challenge. Approximately 529 000 women from developing countries die annually because of direct obstetric complications and/or indirect complications because of pre-existing disease during pregnancy and childbirth (WHO 2005). Reducing maternal deaths by three quarters in the period from 1990 to 2015 is set as an indicator for monitoring the achievements of MDG-5. Two indicators were defined in this context; the maternal mortality ratio and the proportion of births attended by skilled health personnel. In this assignment we will focus on the latter, as it represents a key indicator for the MDG-5 target of reducing maternal mortality.

The most common causes of maternal deaths may be preventable and treatable by access to emergency obstetric care, including skilled birth attendance, when needed. Data from WHO show that maternal and neonatal mortality are lower in high income countries where women receive skilled professional care during childbirth, with the equipment, drugs and other supplies needed for effective and timely management of complications. But what defines a skilled birth attendant? According to the WHO a skilled attendant is ‘an accredited health professional – such as a midwife, doctor or nurse – who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management or referral of complications in women and newborns’ (WHO 2005).

Skilled birth attendance seems to represent a reducing factor in maternal mortality. Delivery at a facility is often seen as one way of ascertaining skilled delivery. However, this is not always the case. In a facility you may encounter a trained midwife, a doctor or an auxiliary midwife, but you may also encounter someone with just a minimum, or no training at all. So the questions are; what qualifies a skilled birth attendant, and are all institutional birth attendants really skilled? We cannot presuppose that all birth attendants are skilled in delivery care (Graham *et al.* 2001). Qualifications on paper alone do not guarantee sufficient skills and competence, and we should not automatically assume that anyone with medical, nursing, or

midwifery training meets the WHO criteria defining a 'skilled attendant' (Harvey *et al.* 2004). There is also a discrepancy between being trained and feeling comfortable about skills, abilities and theoretical knowledge. Even trained personnel have gaps in their competence. This may result in feeling under-qualified and uncomfortable in performing the tasks expected according to the level of education.

Over the course of five weeks in June/July 2009 we have interviewed and observed the birth attendants at the Maternity Ward at Bansang Hospital in The Gambia, in an attempt to determine their subjective level of confidence according to the required skills defined by WHO. Educational and work-related background, work-related satisfaction and other work-related topics and experiences were explored. The intention was to get a broader picture of the institutional birth attendants. What qualifications do they have in terms of official training and work-related experience, and do these make them skilled birth attendants according to the definition by WHO? Furthermore, how do the work conditions influence their skills and abilities as a birth attendant?

2. Background

2.1 Maternal mortality

The five most common direct obstetric causes of maternal deaths are haemorrhage, infection, eclampsia, obstructed labour and post abortion complications. These causes represent 80 % of all maternal deaths, and the final 20 % are due to indirect obstetric causes like HIV/AIDS, anaemia, malaria and cardiovascular disease. Between 11% and 17% of maternal deaths occur during childbirth itself and between 50% and 71% in the postpartum period. About 45% of the postpartum maternal deaths occur during the first 24 hours, and more than two thirds during the first week (WHO 2005).

Less than 1% of deaths occur in high-income countries. The lifetime risk of maternal mortality is 1/16 in low-income countries compared to 1/2600 in rich countries, and the maternal mortality rates range from 830 per 100 000 births in Sub-Saharan Africa to 24 per 100 000 births in Europe. Of the 20 countries with the highest maternal mortality ratios, 19 are in sub-Saharan Africa. In The Gambia, our country of interest, numbers from year 2000 estimate the level of maternal mortality (MMR) to be 540 per 100,000 live births. In comparison, Norway has a MMR estimated to be 10 per 100 000 births (WHO 2005).

Many factors contribute to keep the maternal mortality rates high. According to the WHO unavailable, inaccessible, unaffordable or poor quality care are responsible (WHO 2008). ‘The Three Phases of Delay Model’ was used in classifying important causatives in maternal deaths during a study in The Gambia. These three phases include the delay in the decision making of seeking health care when needed, the delay in reaching health care in time, and the delay in receiving prompt and appropriate care after reaching the hospital. Improving accessibility and quality of emergency obstetrics services in The Gambia, as well as providing timely and adequate treatment and care by skilled birth attendants, seems to be crucial in preventing maternal mortality (Cham *et al* 2005).

Undoubtedly, maternal mortality is related to the absence of a skilled birth attendant (Büttiens *et al.* 2004), and the availability of midwives have a high protective effect on maternal deaths, reducing the case fatality rate by 80%. Case fatality rate is defined as the proportion of maternal deaths in a group of patients with obstetric complications (Mbonye 2007). Even so, having received training in emergency obstetric or in delivery care does not necessarily equal

sufficient skills and qualifications. EmOC professionals scored only 50 % in a test of practical and theoretical knowledge in Benin, Ecuador, Jamaica and Rwanda. The insufficient and unsatisfactory results were explained by inadequate training methods, too little practice of the learned procedures, lack of equipment, bad delegation of tasks and insufficient clinical guidelines (Harvey *et al*).

2.2 Skills and abilities

WHO has defined the required skills and abilities for skilled attendants (WHO 2004), and the following list shows an edited overview over the core skills:

- a) Making a professional and respectful alliance with the patient
- b) Taking a detailed history when the woman arrives at the hospital
- c) Educate in self-care during childbirth and postnatal period
- d) Perform vaginal examination
- e) Identify the onset of labour
- f) Monitor maternal and fetal well-being during labour and provide supportive care
- g) Record maternal and fetal well-being on a partograph and take appropriate action where required
- h) Identify delayed progress in labor and take appropriate action
- i) Manage a normal vaginal delivery
- j) Manage the third stage of labour actively
 - using oxytocic drugs
 - clamping and cutting the cord
 - applying controlled cord traction
- k) Assess the newborn at birth and give immediate care
- l) Identify life threatening conditions in the newborn and take essential life-saving measures, including active resuscitation
- m) Identify hemorrhage and hypertension in labor and provide first-line management
- n) Provide postnatal care to women and their newborn infants and post-abortion care where necessary
- o) Assist women and their newborns in initiating and establishing exclusive breastfeeding
- p) Identify illnesses and conditions detrimental to the health of women and/or their newborns in the postnatal period, apply first-line management (including the performance of life-saving procedures when needed)

- q) Use vacuum extraction or forceps in vaginal deliveries
- r) Perform manual vacuum aspiration for the management of incomplete abortion
- s) Perform episiotomy
- t) Where access to safe surgery is not available, perform symphysiotomy for the management of obstructed labor
- u) Perform caesarean sections
- v) Manage complications during pregnancy and childbirth
- w) Administer blood transfusions
- x) Refer needed patients to main hospital

2.3 Skilled attendance and differences between urban and rural areas

On national level 56.8% of Gambian women between the ages of 15-49, receive assistance by a skilled attendant at delivery. Of these, 83% live in urban areas and 43% live in a rural environment (MICS 2005-2006). However, this study included “auxiliary midwives” which are not considered as skilled birth attendants in the Gambia. Therefore these figures include both skilled and unskilled attendants, and may not represent the real situation in the Gambia. It is also necessary to take notice of that the majority of deliveries (57%) in sub-Saharan Africa occur at home without skilled attendance (Stanton C, et al 2007). The maternal mortality in the Gambia is higher in rural than urban areas. Ronsmans *et al.* (2003) did a study of the association between access to obstetric care and levels of maternal mortality in urban and rural areas in 8 West African countries, including The Gambia. They found higher maternal mortality and lower presence of a skilled attendant during delivery in the rural versus the urban areas. This gave a close link between levels of maternal mortality and the percentage of deliveries conducted by a skilled birth attendant. Their conclusion was that the huge rural-urban differences in maternal mortality were partly due to the differences of access to high quality maternity care.

2.4 The Republic of The Gambia

2.4.1 General facts

The Gambia is a small West African country (11 000 km²), with borders to the North Atlantic Ocean on the West and Senegal on North, South and East. The country is divided into seven administrative regions; Banjul city council, Kanifing municipal council, Lower River, Central River, North Bank, Upper River and Western region. The climate varies from a hot, rainy season from June to November to a cooler, dry season from November to May. The

population is 1,705 000 (UN 2009), 99% being African and consists of several different ethnic groups. The majority of the population is represented by Mandinka, Fula and Wolof tribes. 90% of the population is Muslim and 9% are Christian. The official language is English, but each ethnic group has its own oral language (UN International).

The country is primarily an agricultural nation. Agriculture and fisheries combined account for nearly 60 percent of the GDP. Tourism is also an important sector of the economy. It provides more than 16% of the GDP, and employment for more than 10,000 Gambians (UN International). The Human Development Index provides a composite measure of three dimensions of human development: living a long and healthy life, being educated and having a decent standard of living. The HDI for Gambia is 0.456, which gives the country a rank of 168th out of 182 countries with data. Norway is on top of this list with a HDI on 0.971. In The Gambia the probability of not surviving to age forty is 21.8% (HDR 2009).

2.4.2 Health statistics

Data from 2003 show that the total fertility rate in The Gambia is 4.7, life expectancy at birth for both sexes is 57 years, and the probability of dying under the age of five is 123 per 1000. The MMR was 540 per 100 000 live births in year 2000. The stillbirth rate was 44 per 1000 total births and the neonatal mortality rate (death of live-born during the first four weeks) was 46 per 1000 live births (WHO 2005).

2.4.3 Health system with focus on reproductive care

The Ministry of Health and Social Welfare is head of the different organs, which is organized in:

- Regional Health Teams. These rule the health centers and health posts in the 6 different divisions of the country. There are minor and major health centers, the major health centers are responsible of basic emergency obstetric care.
- Specific programs and units for malaria, AIDS, reproductive and child health, eye care, pharmaceutical services, leprosy and tuberculosis, food hygiene, birth registration, traditional medicine and epidemiology/disease control.
- Five hospitals, which are all responsible of performing comprehensive emergency obstetric care.

The Reproductive Care and Child Health Services (RCH), organized under the Regional Health Teams, are free of charge until the child turns five years old. Free services were first introduced in year 2006. RCH- teams provide monthly on-site counseling to different satellite villages in the regional area. Additionally there are RCH-offices at the major health centers and the hospitals. The RCH-office is responsible of antenatal and postnatal care, family planning, counseling for mothers during pregnancy, preparation of the mother for delivery and advising her where to go, immunization, dietary substitution (folic acid and iron), malaria prophylaxis, HIV-testing and counseling, and treatment/referral when the woman develop complications during pregnancy.

Community health nurses are situated in health posts in key villages, with satellite villages spread around. They are each responsible for 5-10 villages. Their role is mainly supervision of a group of Traditional Birth Attendants (TBAs) and keeping statistical records. They meet once a month at the regional health office, in the nearest hospital or main health center.

TBAs are chosen by the inhabitants of each village. They receive 6-8 weeks of training sponsored by the government. They take care of normal deliveries when the woman prefers to give birth at home rather than at a health center or hospital, and refer patients when needed.

Additionally there are non-governmental clinics (NGO) and private clinics, especially gathered around the coast (B. Jammeh).

2.4.4 Bansang Hospital

Bansang is a town in the Central River Division of The Gambia. It is located around 300 km away from the capital Banjul. The inhabitants are mainly farmers and they are generally poor. Bansang Hospital is the only governmental upcountry hospital, situated directly outside the town. It is the second biggest hospital in The Gambia. The hospital is the only facility providing comprehensive EmOC in the Central and Upper River Divisions. The distance from other health facilities in the area to the referral hospital varies from 17 to 115km (Cham 2005). According to numbers from 2002, the total expected number of births in The Gambia is 46 958, out of these 5 826 belongs to the coverage area for Bansang Hospital (Faveau 2007). Based on the numbers registered by the hospital there were a total of 1311 deliveries and 36 maternal deaths in 2008 (Jallow 2008). Since many women still deliver at home in The Gambia, number of births at the Bansang Hospital only represent those who seek care,

because of complications, or because they prefer institutional delivery. There are probably many normal and complicated births that are not captured by statistics and health information, but the evidence suggests that most women with complications do seek care, though with major delays (Cham 2005).

3. Methods

We searched the Cochrane Library, Pubmed and CINAHL using the words 'skilled birth attendant', 'Africa South of the Sahara', 'Gambia', 'nurse midwives/education', 'midwifery', 'professional competence', 'clinical competence', 'qualifications', 'delivery', 'obstetric' and 'maternal mortality' in different combinations.

We wanted to do a study in an African country where access to skilled birth attendants is poor and the maternal mortality ratio is high. This study is exploratory in nature and our working hypothesis was that some of the staff at Bansang Hospital might not have the skills and competencies that one would expect in a tertiary hospital for maternities. We used a framework to investigate specific skills, but also added a qualitative component. The background for doing the study in The Gambia as well as for selecting the participants was accidental. Our supervisor, Professor Johanne Sundby, has many years of experience working and doing research in The Gambia, and has by that made valuable contacts in the country. We chose to do our study in Bansang Hospital mainly because of the size and location. Being one of the biggest hospitals in the country it has a big maternity ward with a large number of deliveries a year. The hospital is situated in a rural area where access to health care is generally poorer than in the urban areas. This is due to a big population spread over a large geographical area. The Chief Executive Director of Bansang Hospital informed the staff at the maternity ward about our study purposes. The selected group of participants were birth attendants who volunteered as interviewees, and they were informed about confidentiality. The informants included nurse attendants, nurses, midwives and one gynecologist (15 in total). We excluded employees who did not attend deliveries independently.

We asked the staff about their working conditions and their subjective level of confidence considering their skills. We chose to do this by using a mix of structured and semi-structured interview. The structured part, with a fixed choice of responses, focused on the skills that are expected from a skilled birth attendant. The semi-structured part, with more open ended questions, discussed their working conditions considering qualifications, responsibilities, work load, management, material resources and salary. The questionnaire was based partly on the skills expected of a skilled birth attendant, defined by WHO (see background), partly on Pettersson's (2007) article about challenges of midwifery in Africa and partly on our own areas of interest. The interview form is enclosed in the appendix.

Participants were informed about the purpose of the study, the fact that their participation was volunteer, and that their name would not be linked to their answers. Originally we planned to let the participants fill out the form themselves. After a couple of days observing and getting to know the staff, we realized that it might be difficult to get the participants to write their own answers individually. The educational level of the participants varied a lot, and it became clear to us that poor writing abilities would have hindered many of the participants in answering the semi-structured questions freely. We therefore decided to read the questions out loud, at the same time as the interviewee had the question form in front of him/her. We encouraged the participant to answer freely. We took notes, and after finishing a question we read the answer out loud to make sure that we had understood what they were trying to communicate. We did the necessary corrections and continued the interview. Each interview took between 1.5 to two hours, and was performed in a private room.

In the analysis of the collected data we used a method for systematic text condensation. After finishing the interviews we gathered all raw data into one full text document. We then used this as a starting point for identifying a thematic framework which represented key issues by which the data could be further examined and referenced. We read the raw data once more, indexing the relevant parts into the different key issue categories. After using the 'cut and paste method', we summarized the data and outlined descriptive quotations.

4. Results

4.1 Work load and responsibilities

Most of the informants felt that the work load was too heavy, especially in the rainy season when the birth rates are at the highest. When patient numbers exceed the staff coverage it results in increased work load for everyone on duty:

You don't have enough time to do all the things you should do if you have one mother needing intensive care. (SEN)

If there is no change, I can't work here. I will move by first chance. You even end up losing your skills working under such conditions. (ECHNM)

When they were asked whether they were comfortable with the responsibilities they were given at the hospital, the answers demonstrated considerable discrepancies. Of the interviewees who felt comfortable, some of the reasons were that they always had someone to ask for professional advice or support, and the fact that they seldom worked without supervision. These were often general nurses or untrained nurse attendants. Others felt comfortable with the responsibilities during day shifts, when there was always a midwife in charge who they could ask for help, and uncomfortable during night shifts when there often were only nurses or untrained staff available. Most of the staff was situated nearby the hospital, or in houses in the hospital area. The untrained staff reported this as an assurance in terms of always having professional help by a midwife in immediate proximity.

The informants reporting to feel uncomfortable with their responsibilities were mainly the ones in charge of the maternity ward during shifts. These were often trained midwives. They pointed out that access to professional support was poor when difficult complications occurred. When their qualifications were insufficient in terms of training and work experience, the doctor was their only person to turn to for support. When he was not available they were left with the full responsibility:

Sometimes the work load is too heavy. I get overwhelmed. There are too many patients, and I tend to crack. I get very tired. There are too many tasks, and I have the responsibility for too many patients. (SRM)

4.2 Staff coverage

According to all of the interviewees there was not a sufficient amount of trained staff in the maternity ward. They were in the greatest need of more midwives and doctors. Having only one gynecologist at the hospital gave an unacceptable high work load for the doctor. One midwife describes it like this:

The doctor works morning, evening and night. No matter how brilliant that person is, a man needs to rest. If not, he will end up doing a bad job. (ECHNM)

Having only the doctor to ask for advice, makes the system even more vulnerable when he occasionally is away travelling.

We only have one doctor to ask for advice/help. When he's away, we don't have anyone to turn to when complications occur. Then I have to call my colleagues (other midwives) so we can put our heads together to find the best solution. (SRM)

4.3 Material resources

The majority of the staff reported that there was a lack of essential equipment, and that this made it difficult for them to do their work satisfactory. However, one of the interviewees explained that they had the equipment they needed according to Gambian standards.

Of the equipment lacking were additional delivery kits, oxygen bottles, suction machine, vacuum extractor and ultra scanner mentioned. Lack of beds was pointed out as a problem in the peak season for deliveries, as well as bed sheets and baby wrappers. Other issues were limited access to electricity (only a few hours a day and not during night shifts), and varying access to essential medications like antibiotics and hypertensive drugs. Several of the midwives described cases where they had to send patients to the operation theatre because of lack of essential equipment in the delivery room, such as vacuum extractor or suture equipment:

We need more delivery trays especially in the rainy season. Sometimes we only have three trays for ten patients. It's not good enough. (NA)

When electricity lack it is difficult to resuscitate babies because we can't use oxygen cylinders when there's no electricity. Instead we have to do it by hand. (NA)

Lack of blood was mentioned as a significant problem:

Blood is very difficult. A lot of women die because of lack of blood. It is difficult to motivate family members to give blood. (NA)

Most of the deaths we have here is due to bleeding/anemia. It's a big problem when there's no blood in the lab. (SCM)

4.4 Salary and general work conditions

The majority of the interviewees reported that they were dissatisfied with the salary. The main reason for this was that the salary was not adequate for covering more than primary needs such as food, gas, electricity and clothes. Many pointed out difficulties in saving money so that they in the future could invest in a house or other material goods. In order to support their family, several had to take additional jobs to increase their income. They also pointed out that they were not paid for extra hours; there were no night shift supplements or risk allowance:

Extra hours aren't paid and the work load is very heavy; I'm often alone being the only midwife on duty. The amounts of work I do don't give the right amount of money. Whatever I earn goes to food, gas, electricity. It is not possible to save up money to buy a house etc. (SCM)

We get less than 2000 Dalasi (approximately 70 USD) a month, and because of that I have to do other things to earn money, like gardening, to support my family. (SNA)

Many of the informants emphasized the unattractiveness of working in a rural area. Because Bansang Hospital is situated upcountry with a hot climate, little industry and few working possibilities for other family members, it is less attractive. Low salary represents an additional factor in this. According to the majority of our informants, giving the staff higher salary would contribute to motivate people from moving to urban districts where there are better opportunities for the family as a whole. There is a big problem that staff tends to stay for shorter periods, always on the look for more favorable work places, for instance in the private health sector or abroad.

Higher salary could motivate the staff so that they stay here. Because of long distances and low salary, there is a big problem that the staff only works here for a short period of time before they leave for better work places. (SRN)

In contrary, two of the interviewees reported that they were satisfied with the salary. The reason for this represented a different perspective and was explained as follows:

We don't live in an advanced country and even though the salary is not enough, I have to settle with it. God will pay me if I do something good in life. I have to accept that the work load is too much – we need to support our people. I don't expect you (Western Europeans) to come and work for our people. (SNA)

4.5 Guidelines and staff meetings

On question about standardized guidelines and routines in the maternity ward the informants had different understandings. Some of the staff reported that they had sufficient guidelines in lists on the wall in the delivery room, while others did not know they existed.

There were also informants who felt that the existing guidelines were insufficient, and that there was a need to change and update these. What they all agreed on was the fact that they needed more guidelines in general, for instance on how to handle complications before, during and after delivery. (For instance intrapartum and postpartum hemorrhage, anemia, eclampsia, abruptio placenta, resuscitation of the newborn, obstructed labour, malaria and HIV positive mothers.)

The ones who were aware of the existing guidelines stated that they followed them, but they would not report whether their colleagues followed them or not. Some mentioned that some of the untrained staff perhaps did not know about them. One of the informants suggested that in order to solve this, the staff should have their own copy of all the guidelines. In this way everybody at the maternity ward would use the same standards.

One of the midwives questioned the staff's ability to comply with guidelines and protocols in general:

We have a few guidelines on the wall that we use as working aids, but we need new and more guidelines. You can have protocols placed somewhere, but the problem with Gambians is reading. You can put a protocol on the table, but they will just place something on top. (SCM)

Some expressed a need for establishing regular staff meetings to discuss both inter-collegial and professional issues.

We've never had a staff meeting since I started here. We should meet at least twice a month for discussing issues like professional and staff problems. We would be able to refresh peoples mind. Meeting is the best form for discussing different issues. (ECHNM)

4.6 Qualifications and additional training

The majority of the interviewees reported that they felt under-qualified in many occasions in their daily work. Many of these explained that the reason for this was lack of official training. Half of the informants did not have other educational background than high school. Their skills and abilities were strictly based on work experiences, and they tended to rely on help from trained colleagues. Almost everyone in this group expressed that they wanted to get an official education, both in order to be more confident in their responsibilities at work, and to receive more respect from trained colleagues. However they said that this was difficult to accomplish because of economical limitations and poor school performances.

This group of untrained staff reported that in absence of trained staff they often performed tasks they were not officially qualified to do:

I know it's not really my job to do deliveries, and I'm not qualified for doing it. I give medications, and they have taught me how to do it, but I know I'm not really qualified. (NA)

Both trained and untrained staff pointed out the need for additional training in several different obstetric topics. Some of the topics frequently mentioned were different complications in delivery like hemorrhage, eclampsia, anemia, placenta abruption, breech delivery and resuscitation of the newborn/neonatal care.

4.7 Skills and abilities

Half of the nurse attendants felt they were not confident in taking a detailed history. The ones who implied this had the least work experience measured in years of working. The doctor, being foreign, also felt that he had problems with this, mainly because of the language barrier.

The majority of the NAs felt unconfident in performing a vaginal examination, while the SNAs, nurses and midwives all declared that they were confident or very confident in doing it. When it came to identifying the onset of labour, the results were the same. The majority of the NAs did not feel confident in monitoring the labour, recording the maternal and foetal well-being in a partograph, or identifying a delayed progress in labour. The nurses and midwives however reported that they were confident or very confident in all the mentioned skills. The doctor stated to be unconfident in monitoring the labour in an appropriate way because of lack of monitoring equipment like for instance a cardiotocography. All felt confident or very confident in performing a normal vaginal delivery.

In questions concerning the third stage of delivery, around half of the NAs and one SNA did not feel confident in managing oxytocic drugs, cutting the cord and performing cord traction. The NAs informed that they did not feel confident in giving immediate care, identifying life threatening conditions and take essential life-saving measures including active resuscitation in the newborn. One of the informants also uttered concern about the difficulties in giving immediate care to the newborn because of lack of equipment; for instance, the ward did not have a laryngoscope for newborns.

We found similar results in identification and management of complications like hemorrhage and hypertension in labour, as well as for identifying conditions and illnesses in women and their newborns, and applying appropriate first-line management in the postnatal period. Some of the NAs also reported that when complications occurred, they would call the midwives or the doctor for action. It is important to point out that approximately all of the nurses and midwives did feel confident in performing all the previous mentioned tasks.

Four NAs and one SNA, as well as one nurse and two ECHNMs reported that they did not feel confident in using a vacuum extractor or forceps in vaginal deliveries. The majority of these also reported that they would refer the patient to the doctor. In the use of manual vacuum extractor for the management of incomplete abortion, only the doctor, two SCMs and

one nurse felt confident. One of the informants reported that this procedure was in fact never performed because they did not have the necessary equipment for doing it, instead they used a curette.

Of all the informants only three NAs felt unconfident in performing episiotomy when needed. One of the interviewees explained that the reason for this was that it was a standard procedure because they did it on all the primigravida. To the question about performing a symphysiotomy for the management of obstructed labour only two SCMs reported that they felt confident, while the doctor informed that he had never performed it at all. For caesarean sections everyone reported that they referred the patient to the doctor who felt very confident in doing it.

Approximately half of the interviewees represented by four NAs, one SNA, two SENs and one SRN did not feel confident in managing complications during pregnancy and childbirth. As for managing critically ill patients, the majority claimed that the doctor would refer them to the main hospital when needed, but the doctor reported that he never referred any patients. Nonetheless, three of the midwives felt confident in referring patients when needed.

5. Discussion

5.1 Method discussion

The selected group of participants was the staff working in the maternity ward at Bansang Hospital. Participation was intended to be on a voluntar basis, but we might question the level of this taking in consideration that the the highest authority at the hospital presented us and our project. By this, the employees may have gotten the impression that it was mandatory to participate as interviewees. The level of confidentiality may also been compromised because of the limited number of interviewees (15 in total) and since information was closely linked to educational background. Therefore, a possibly unsatisfactory level of volunteer participation and confidentiality naturally raise ethical issues in regards to publication as well as informed consent.

The hospital is situated in a rural area, and has great problems concerning staff recruitment. This may result in a larger portion of the staff having lower educational background, less work experience and motivation, compared to birth attendants working in urban parts of The Gambia where recruitment is high. We can therefore not assume that the results found for this group can be generalized to birth attendants in The Gambia as a whole. On the other hand, The Gambia is a small country, with a small population and a low number of educational institutes, and we can assume that the staff working here has partly the same educational background as birth attendants working in different areas of the country. According to the hospital's problem with recruitment, mainly because of hot climate and position, it is possible that this hospital use a greater proportion of untrained staff than other health facilities that is situated in more popular areas. This will naturally affect our results. We have no numbers that can confirm or weaken this hypothesis.

The collection of the data met a whole set of problems, language being one of these. Neither the informants nor the interviewers had English as their first language, which may have caused misunderstandings, both in the understanding of questions, and in interpretation of the answers. Generally, the lower educational level the informant had, the lower were his or hers English skills, which may have resulted in more misunderstandings during the interviewing of this group. The fact that we wrote the answers by hand implicates that there are a lot of possible miscalculations from the informant's spoken answer, via the interviewer's interpretation, to the written answer. If we had recorded the interviews we could probably

have shut out a lot of these miscalculations. Initially we planned to allow the respondents to fill the data collection individually, but after a few days of observation we decided to read out the questions to them. We realise that this approach may be subjected to many sources of error or bias; eg the unconscious motivation of the respondents to tell the interviewer what they think the interviewer wants to hear, or in some cases what the interviewer does not want to hear. This may compromise the quality of the study. We could also have done a continuous validation of the dialogue in a greater degree than we did. In addition there were some problems with the standardization of the interview situation. The majority of the interviews were done in a private office, but for some this was impossible due to the working pressure. In these cases we had to perform the interview in the ward, and this may of course have affected these answers considerably. Although we made an effort to make an alliance with the informant before starting the interview we cannot be sure that they told us their sincere opinion during the whole interview. During our stay at Bansang Hospital we spent a lot of the time with the hospital management in terms of being their guests. We have to assume that observing this affected the staff's answers.

The fact that we are medical students and not specialists in gynaecology/obstetrics may have caused misunderstandings in the professional sense. We could have misunderstood terminology during the interviews. On the other hand it might have been an advantage in the sense of being 'only a student'. The participants might have felt that they did not have to impress us with their knowledge in the same way they might have felt if it was a specialist interviewing them. This may have given us more honest answers. We had read a lot of literature on the subject before we started the data collection. This has probably colored our minds and affected our way of interpreting the answers. We also experienced a lot of difficult and unaccustomed situations during our stay. We witnessed a great portion of human suffering that you would never see in such degree in our home country. This has undoubtedly affected our way of interpreting both the spoken answers during the interviews, as well as our presentation of the final results.

Our intention with this study was to obtain a comprehensive picture of the birth attendants. We wanted to find what qualifications they have in terms of official training and work-related experience, and whether or not this make them skilled birth attendants according to the definition by WHO. We also wanted to investigate the influence of working conditions on

their skills and abilities. Our study design was a mix of a semi-structured and a structured interview. The informants gave us their subjective answers, and we did not objectively measure their skills. This means that our results represent the birth attendants' personal thoughts about their working conditions and skills. We can only say that they 'feel confident or not confident' in performing the different procedures. We cannot conclude anything about their objective skills. This means that our study design was not optimal to answer if the birth attendants were skilled according to the definition by the WHO. An alternative approach, which was beyond the scope of this study, would have been to do a skills/knowledge and competency test (theory and practical) of the respondents. However, our results may provide an idea of where skills are lacking. Thus, objective measurement of skills cannot be done with semi-structured interviews.

There is of course great differences in a person's way of expressing himself, some have a tendency to underestimate own skills, while others overestimate them. This occurs both consciously and unconsciously in any conversation, and it has probably caused incorrectness in our result presentation. It could have been avoided if we had measured the skills objectively in addition to interviewing.

Regarding to what degree the skills were affected by working conditions, we can only conclude on how the participants think and feel about this issue. We have not measured either the work load or the material resources, and cannot exclude that lack of equipment or too heavy work load was used as an excuse of not performing tasks satisfactory or to cover up for lack of skills.

When measuring the skills we used the WHO's definition of skills and abilities a skilled birth attendant should possess. The criteria have been developed by the International Confederation of Midwives, and we have assumed that this represents a worldwide consensus of necessary skills. We cannot, however, exclude the fact that there may be disagreements about this, and country based differences will always be a problem when it comes to creating international criteria.

5.2 Result discussion

5.2.1 Work load and responsibilities

Almost all working at the Maternity Ward, regardless of educational background, felt that the work load was too heavy. This was a big problem during the peak of births in the rainy season. The amount of staff on duty was the same all year around, and even though it was adequate in some periods, the staff felt a need for additional resources during peak season. There were shifting periods of lower work load and inappropriately high work load.

Looking at what the staff felt about their work responsibilities, we found however, a dividing line between the staff. NAs and general nurses, representing a group with none or few years of official training, actually felt comfortable with their duties and responsibilities at work. The midwives, however, did not. The reason for this might have been that the untrained staff and the staff with lower educational background nearly always had someone with better qualifications to ask for professional advice or support. For the midwives on the other hand, who seldom had higher qualified colleagues with them on duty, advice and support was not as easily accessible. The ones with a high level of skills and abilities, reflected in educational background and work experience, were also the ones in charge during shifts. Being the only one without relatively easy access to professional backup when needed may result in lower satisfaction considering work load and responsibilities at work.

5.2.2 Staff coverage

Generally the interviewees wanted more staff at the Maternity Ward. But as pointed out, especially by the trained staff, the ward was in the greatest need of additional trained birth attendants such as midwives and doctors to help share the heavy responsibilities and work load.

5.2.3 Material resources

The majority of the staff felt that they did not have the appropriate amount of equipment to perform satisfactory work. Access to sufficient equipment was particularly difficult in the peak season, with lack of beds and delivery sets as illustrative examples. They had to share equipment among the patients, and limited access to sterilization and maintenance lowers the quality of help during delivery. Without adequate material resources, the possibility to perform the procedures satisfactory is restricted.

This represents two different perspectives. In situations where the skilled birth attendant lacks the equipment of first choice, alternative equipment may be accessible. For instance in

incomplete abortions, the staff had to use a curette because of lack of a vacuum extractor. This does not necessarily make the execution of the performance unsatisfactory, only that it may not have been ideal. But when tools required for lifesaving treatment or monitoring is not accessible, the skilled birth attendant cannot perform their tasks at all. This may result in inappropriate treatment, delay, unnecessary referral or life threatening situations.

Basic material resources such as electricity, resuscitation equipment and blood for transfusion are all essential in a maternity ward. Without these a skilled birth attendant, regardless of being a NA, nurse, midwife or a doctor, will have difficulties to perform his/her tasks.

5.2.4 Salary and general work conditions

The big majority of the staff was not satisfied with their current salary. Many reported that their monthly salary only covered primary costs, and very few of them had the possibility to get ahead economically and secure themselves with some personal savings. The low salary also made many of the staff depend on a second job to support their family. For those who already felt that the work load was too heavy, having to work double shifts did not make this easier. Hard work load may take away the opportunity to get proper rest and motivation.

Receiving risk allowance and additional pay for extra hours and/or night shift, would probably decrease the tendency for staff having extra jobs. Higher salary would also contribute to increase staff motivation and make the Maternity Ward a more attractive place to work. This might keep them from moving to more urban settings or drain to the private health sector/abroad. It is important to point out that taking jobs in private sector as well as moving to more urban areas was mainly an option for the trained birth attendants. The majority of them were not locals from the Bansang area, but represented a group of people originally from other parts of the country, coming from families with higher educational backgrounds and better economic situations. Most of the untrained staff however, came from families living in the area, and did not necessarily have the wish or opportunity to move to more urban parts of the country. This may result in a continuous risk of 'loosing' trained birth attendants, while the untrained staff usually stays put for longer periods. The negative effects of this are clear; when the risk of losing trained staff is constantly present, the ward is in a very vulnerable position. The advantage of having staff familiar with routines and responsibilities at the ward is difficult to obtain, and the need for replacements is crucial.

5.2.5 Guidelines and staff meetings

As for questions about the guidelines, answers varied. Some felt the need for new guidelines, and some felt the need for changing or reviewing the old ones. Some of the informants did not see the need for guidelines at all, and were not aware of the ones already there. Considering the unawareness to this it might question whether the addition of new guidelines will make a difference at all. Perhaps a briefing or an educative orientation regarding the importance of guidelines is sufficient to implement them in the daily work at the maternity ward.

We did find a correlation between the topics in which the staff wanted more guidelines and in the ones where they wanted additional training. These were almost exactly the same for the two groups, confirming that the staff wanted more knowledge and guidance in these distinct obstetric areas. The topics mentioned were how to handle different complications in delivery such as intra- and postpartum hemorrhage, eclampsia, anemia, placenta abruption, and resuscitation of the newborn. All of these represent some of the most common obstetric complications and causes of maternal death during delivery. It is essential for a skilled birth attendant to know how to identify and handle complications like these. It is also important that all staff follow the same standard routines and guidelines. This was most likely not achieved in this ward, considering differences within the staff in regards to awareness of the guidelines available.

5.2.6 Qualifications and additional training

Almost everyone working at the Maternity Ward felt under-qualified in their work in some situations, but the staff without any official training felt by far the most insecure. We were concerned by looking at the statements from this group, which represent approximately 50 % of the working stock. Their skills and abilities are strictly based on work experiences, and in several situations they depend on help and guidance from trained colleagues. Nevertheless, trained birth attendants are not always present, due to periods of heavy work load and staff shortage. This shifting inaccessibility of superiors may result in incidents where untrained staff members are forced to perform procedures or initiating treatment without approval or guidance. The biggest concern is related to critical emergency obstetric situations in which most of the interviewees expressed the need for additional training. As mentioned above, these include the most common complications in delivery, and the most common causes of maternal death.

The majority of Gambian women choose to deliver at home with the help from family members or TBAs. When they do seek medical help at the hospital, it is often because of complications that they are not able to handle at home or in the community health care center. In situations like these, both patients and their family expect, and are in need of a higher level of medical expertise. With the substantial risk of meeting staff that is not satisfactory qualified, critical situations may arise. It is clear that the solution to this is partly to give more pre- or in-service training. Increased knowledge in EmOC topics will strengthen the staff's confidence in handling these frequent conditions.

5.2.7 Skills and abilities

As for confidence rating on the different skills and abilities, most ratings correlated with what we found under questions about guidelines, in-service training and qualifications. The untrained staff at the maternity ward rated themselves the least confident. As expected, they felt less confident or unconfident in skills and abilities required in handling emergency obstetric topics. But the majority also feels unconfident in even important routine examinations like taking a detailed history, performing a vaginal examination, monitoring labour using a partograph, and identifying onset of and delayed progress in labour. The nurses and midwives, however, with the midwives feeling the most secure, reported that they felt confident or very confident in performing most of the latter. This creates a division within the staff according to level of confidence; one untrained group and one trained group. The untrained group includes staff with differences in background mainly reflected in varying length of work experience. The trained group include nurses and midwives with both different educational backgrounds varying from two (SEN) to four (SCM) years, as well as years of work experience. Still the findings clearly indicate that confidence in skills and abilities correlate more with having an official training rather than having many years of work experience. Number of years in training does not seem to make the greatest difference in confidence level, which may be surprising when one considers the amount of training a midwife has compared to a nurse.

The nurse attendants, representing half of the employees at the Maternity Ward, over represents the number of nurses and midwives on duty, and play an important role in the meeting and management of patients. It was common that officially qualified birth attendants like nurses, midwives or doctor were not always available. This raises some questions yet to be answered; do educational differences represent different tasks at work, or do all birth

attendants, trained or not, perform the same procedures? What we do know is that staff performs tasks they are not officially qualified to do. However, they do report that they also refer patients to more qualified personnel like the midwife or the doctor in difficult situations. Even though this is not always possible, trained personnel do, when available, take responsibility and perform procedures that untrained staff cannot. This indicates that not all birth attendants have the same tasks.

Is it easier for an untrained birth attendant to admit his or hers lack of skills and abilities compared to a trained birth attendant where a certain level is already expected? The answer to this is likely to be yes in certain cases. But we still choose to believe that the answers we got from the staff do represent what they honestly consider themselves confident in doing. Not all of the listed procedures are expected to be performed by a NA or a nurse, and in almost all cases the informants reported that in situations where it was necessary, they would refer the patient to a midwife or the doctor. Looking at the answers given from the midwives and the doctor, this was confirmed when they rated themselves as confident in handling these patients.

All of our interviewees considered themselves as birth attendants. Whether they are skilled or not is difficult to answer based on our study, since we have not measured their actual skills and abilities through theoretical and practical testing. Our results have merely given us the impression that the trained birth attendants had higher confidence in the required skills and abilities compared to the untrained staff.

Can official training as a nurse, midwife or doctor guarantee that you are a skilled birth attendant? It is natural to presume that an official education at the very least makes a birth attendant more qualified than one with no training. Our results confirm this. Still, one can not presume that a birth attendant with no formal education is not skilled at all just because of lack of official training. Work experience and ‘learning by doing’ may very well be an adequate way of acquiring needed skills. We may question whether this is true for workers at Bansang Hospital. Nevertheless, as mentioned previously, most of the untrained staff expressed that they wished for an official training.

Even though most of the nurses and midwives felt confident or very confident in many of the skills and abilities needed as a SBA, many of these still asked for additional guidelines and in-service training in topics concerning emergency obstetrics. What we can learn from this, is

that regardless of being a trained or an untrained birth attendant, or feeling confident or not in performing basic or complicated procedures, you can always improve yourself and you may always feel the need to brush up on your skills. Standardized guidelines, coordination among the staff, making common routines, and a general increase of knowledge and practical skills will improve the staff's confidence as well as the quality of birth attendance.

5.3 Correlated results in related literature

There are not many studies that focus on the subjective level of skills among birth attendants, but generally there are a lot of studies that can confirm our results on the field of interest. We found that the percentage of untrained staff working in the maternity ward was big (almost 50%), due to lack of trained birth attendants. These untrained staff were also the ones who reported that they were 'not confident' in a large part of the skills expected from them. This was especially explicit in emergency obstetric skills. One study concluded that an option is to invest in upgrading and certifying the skills of auxiliary staff. Because they already represent an important proportion of the health workers they could play a considerable role in the reduction of maternal mortality if their competencies are upgraded to manage major obstetric complications in an appropriate way (Büttiens *et al.* 2004).

Kinfu *et al.* (2009) studied 12 countries in Sub-Saharan Africa. In ten of these countries current pre-service training was insufficient to maintain the existing density of health workers. With current workforce training patterns it would take 36 years for physicians and 29 years for nurses and midwives to reach the WHO's recent target of 2.3 professionals per 1000 population for the countries taken as a whole. It is obvious that we cannot wait for this. As long as it is not possible to get enough specialized and formally trained staff, it is clear that the emergency obstetric skills of the auxiliary staff need to be upgraded to achieve a reduction in the MMR.

There was a great amount of our informants who reported that they were not confident in managing obstetric complications like post partum haemorrhage (PPH). A study from South Africa concludes that PPH is one of the major causes of maternal deaths, and that avoidable factors are a main contributor to morbidity and mortality. Not preventing PPH and lack of skills were the most common avoidable factors in this study (Lombaard *et al.* 2009). Our results give reason to believe that this is an important factor also in The Gambia. It also illuminates the need for better skills in EmOC services.

Walraven *et al.* (2000) looked at maternal deaths and causes for these in the North Bank district of The Gambia. They found that there was a clear need for improving the blood transfusion services for cases of severe blood loss and/or severe anaemia. Unavailability of blood transfusion services at the referral level was regarded as a probable contributing factor to several maternal deaths. Furthermore, there was a shortage of blood for transfusion, partly because of a lack of donors in the population. Our informants reported the same problem. They found it difficult to motivate the population to donate, and lack of blood was a major issue in their daily work. This has probably contributed to maternal deaths also in Bansang Hospital (specific data on this are not available), and it is extremely important that the management of and the motivation for the blood donations are improved.

Our informants reported that they did not have staff meetings. They wanted these both to discuss collegial and professional topics. Forsetlund *et al.* (2009) found that educational meetings alone or combined with other interventions can improve professional practice. This suggests that a staff meeting which also concerns professional topics could actually improve quality of care. The informants uttered a lack of joint guidelines that were known to everybody, they also complained that there were often insufficient amounts of drugs during night shifts, due to the fact that the pharmacology was closed. It was also considered a problem that there was often only one midwife on duty, sometimes none. According to Dogba and Fournier (2009), strengthening of managerial abilities would help to better coordinate patient care. Another study from Yemen, found that equipment, drugs and consumable supplies were often in short supplies, and facilities had few management systems to support quality health care. They concluded that poor management was the reason behind many of these shortcomings, for example, misdistribution of scarce staff and lack of job descriptions (Al Serouri 2009). Just as well, poor management may play a considerable role in some of the problems described at Bansang Hospital.

Our informants complained of lack of equipment, and many gave examples on how this affected their work negatively. Many also expressed that they could not do their job in a satisfactory way because of this. The majority had never been offered any in-service training, but mostly had a great wish for this, especially in EmOC skills. The interviewees also focused on the problem in getting enough staff, especially the trained ones. All but one stated that they would have gone abroad or to a private clinic if possible. The majority reported that they

were dissatisfied with the work load in the sense that it was too much. This was especially evident for midwives and the doctor. Among the NAs it was a common problem that they had to do things in their daily work that they were not really trained for. Our results are supported by Fauveau (2007), who visited The Gambia to determine whether there were sufficient facilities of adequate quality to manage the expected number of obstetric emergencies. The results showed that a big proportion of the facilities could not provide all of the signal functions for basic EmOC. This was due to lack of appropriate equipment, such as vacuum extractor or manual vacuum aspirator, or the provider's lack of skills in using the equipment. They also concluded that The Gambia has inadequate equipment and logistical problems, and also lack human resources. In-service training and supervision of the staff was non-existent. Another study from Sub-Saharan countries showed that 'shortages of health professionals reduce the number of facilities equipped to offer emergency obstetric care 24 h a day, and are significantly related to quality of care and maternal mortality rates. Existing workforce may experience increased workloads and job dissatisfaction, and may have to undertake tasks for which they are not trained.' They also illuminated the problem that many Sub-Saharan countries are experiencing depletion of their workforces due to emigration, movement from public to private health facilities, and HIV-aids related illness (Gerein 2006).

6. Conclusion

We cannot say for sure whether the birth attendants at Bansang Hospital meet the criteria for skilled birth attendance or not, because we have not objectively measured their skills and abilities. But our results indicate, based on self reported level of confidence, that there is a lack of basic knowledge and skills among many of the birth attendants. This is partly due to their varying educational backgrounds. The majority of the untrained staff, as well as a few of the trained staff report that they feel insecure in their tasks and responsibilities at work. Difficult work conditions also seem to decrease the staff's performance and efficiency.

According to the WHO skilled birth attendance is an important factor for reducing maternal mortality. By definition a skilled birth attendant needs to possess certain skills and abilities, as well as working in an enabling environment. Our study reveals several problems concerning management, skills among birth attendants, and material and human resources that need to be solved. It is impossible for us to predict what the actual consequences of these problems are. However, it is likely that they have an impact on the maternal mortality rate at Bansang Hospital. There is a clear need for further research to objectively measure the skills and abilities of the birth attendants in The Gambia. One approaching method introduced by Harvey *et al* (2004) included a multiple-choice test for theoretical knowledge and anatomical models for evaluating skills. There is also a need for studying how to deal with management issues and lack of material resources.

The birth attendants at Bansang Hospital need and wish for more training especially in EmOC topics. There is also a considerable need for more educated staff at the maternity ward. What we do not know is how to increase the quality and capacity of pre- and in-service training among birth attendants. According to WHO (2005) there is little evidence on what the best models of pre-service training to prepare birth attendants for their future roles are. There is also little evidence whether the millions of dollars spent on in-service training till now have improved the outcomes or not. As pointed out by Harvey *et al.* (2004) increase in percentage of women delivered by skilled birth attendants, may not be such a robust indicator of progress toward reducing maternal mortality as long as we do not know for sure that birth attendants are 'skilled' according to WHO's definition of the word. It is clear that we need more knowledge in this field in order to reach future goals of every woman having access to skilled attendance at delivery.

References

- Al Serouri AW, *et al.* Reducing maternal mortality in Yemen: Challenges and lessons learned from baseline assessment, *Int J Gynecol Obstet* (2009), doi:10.1016/j.ijgo.2008.12.020
- Büttiens H, Marchal B, Brouwere V. Skilled attendance at childbirth: let us go beyond the rhetorics. *Tropical medicine and International health*. 2004; 9(6):653-654
- Cham M, Sundby J, Vangen S. Maternal mortality in the rural Gambia, a qualitative study on access to emergency obstetric care. *Reproductive Health*. 2005;2:3.
- Dogba M, Fournier P. Human resources and the quality of emergency obstetric care in developing countries: a systematic review of the literature. *Human resources for Health*. 2009; 7:7
- Fauveau V, UNFPA-AMDD Working Group on Indicators. Program Note: Using UN process indicators to assess needs in emergency obstetric services: Gabon, Guinea-Bissau, and The Gambia. *International Journal of Gynecology and Obstetrics*. 2007;96:233-240
- Forsetlund L, Bjørndal A, Rashidian A, Jamtvedt G, O'Brien M A, Wolf F *et al.* Continuing education meetings and workshops: effects on professional practice and health care outcomes (Review). *The Cochrane Library*. 2009;3
- Gerein N, Green A, Pearson S. The Implications of Shortages of Health Professionals for Maternal Health in Sub-Saharan Africa. *Reproductive Health Matters*. 2006; 14(27):40-50
- Graham WJ, Bell JS, Bullough CHW. Can skilled attendance at delivery reduce maternal mortality in developing countries? *Studies in Health Services Organisation and Policy* 2001; 17:97-130
- Harvey A S, Ayabaca P, Bucagu M, Djibrina S, Edson N W, Gbangbade S *et al.* Skilled birth attendant competence: an initial assessment in four countries, and implications for the Safe Motherhood movement. *International Journal of Gynecology and Obstetrics*. 2004;87:203-210.
- HDR. Human Development Reports 2009. Available from: http://hdrstats.undp.org/en/countries/country_fact_sheets/cty_fs_GMB.html#
- Jallow, Abdou Karim. Statistics at the Bansang Hospital. Maternity Unit Bansang Hospital.
- Jammeh, Baboucarr. Chief Executive Director, Bansang Hospital, The Gambia.
- Jeng B, Cham M, Sundby J. What is skilled attendance at delivery? Normal births in an African Teaching Hospital.

- Kinfu Y, Poz MRD, Mercer H, Evans DB. The health worker shortage in Africa: are enough physicians and nurses being trained? *Bull world Health Organ.* 2009;87:225-230
- Mbonye AK, Mutabazi MG, Asimwe JB, Sentumbwe O, Kabarangira J, Nanda G et al. Declining maternal mortality ratio in Uganda: Priority interventions to achieve the Millennium Development Goal. *International Journal of Gynecology and Obstetrics.* 2007;98:285-290
- MICS. The Gambia – Multiple Indicator Cluster Survey Report 2005/2006. The Government of The Gambia in collaboration with UNICEF.
- Petterson K O. Major challenges of midwifery in Africa. *British Journal of Midwifery.* Aug 2007;15 (Pt 8).
- Ronsmans C, Etard J F, Walraven G, Høj L, Dumont A, de Bernis L, Kodio B. Maternal mortality and access to obstetric services in West Africa. *Tropical Medicine and International Health.* 2003;8;10;940-948.
- Stanton C, Blanc AK, Croft T, Choi Y. Skilled care at birth in the developing world: progress to date and strategies for expanding coverage. *J Biosoc Sci.* 2007 Jan;39(1):109-20.
- UN. Department of Economic and Social Affairs Population Division (2009) (PDF). Available from: [World Population Prospects, Table A.1,
http://www.un.org/esa/population/publications/wpp2008/wpp2008_text_tables.pdf](http://www.un.org/esa/population/publications/wpp2008/wpp2008_text_tables.pdf).
- Walraven G, Telfer M, Rowley J, Ronsmans C. Maternal mortality in rural Gambia: levels, causes and contributing factors. *Bulletin of the World Health Organization.* 2000;78(5).
- WHO. Making pregnancy safer: the critical role of the skilled attendant. Department of Reproductive Health and Research, Geneva 2004.
- WHO. Making every mother and child count. The world Health Report 2005.
- WHO. Why do so many women still die in pregnancy or childbirth? 2008. Available from: <http://www.who.int/features/qa/12/en/index.html>

Appendix

Questionnaire: Skilled Birth Attendance

Bansang Hospital, The Gambia

We are 4th grade Medical students from Norway, studying at the University of Oslo. Currently we are working on our mandatory assignment. We have chosen the subject: ‘Skilled attendance at delivery as a reducing factor in maternal mortality.’

To gather material for our project we are interviewing birth attendants about their experiences in the labour ward.

We will be very grateful if you could answer the following questions.

Any information gathered will be kept confidential.

Yours sincerely,

Ina Kreyberg

Lise Mørkved Helsingen

Date:

Gender:

Age:

Title/position:

Average work hours a week (exclude house work):

1. Educational background

a) What kind of educational background do you have?

(Fill in yes/ no and explain)

- Basic education
- Enrolled Nurse
- State Registered Nurse
- Nurse with midwifery training
- State Certified Midwife
- General Physician
- Specialist training
- Other
- None

b) If you have a specialist training and/or another educational background, please specify

c) Where were you trained?

2. Work experience

a) For how many years have you been working in this Health Care Facility?

b) For how long have you been working in all?

3. Work-related satisfaction

a) How satisfied are you with your:

(Rate from 1 to 4. 1: very satisfied, 2: satisfied, 3: dissatisfied, 4: very dissatisfied)

- Current position
- Current salary
- Current workstation
- Current work hours
- Current work load

b) If you are dissatisfied, explain why:

4. Resources

a) Are you satisfied with the access to material equipment in the:

(Fill in yes/no)

Prenatal care

Delivery Room

Postnatal care

b) If you are dissatisfied, please explain why.

What kind of equipment do you miss in the different wards?

c) Do you feel that you have the necessary material resources to perform your tasks satisfactory?

d) Are you satisfied with the amount of staff working in the:

(Fill in yes/no)

Prenatal care

Delivery Room

Postnatal care

e) If you are dissatisfied, please explain why.

Which ward do you consider is in greatest need for additional staff, and what kind of staff?

f) Do you consider the hospital's financial resources are being spent appropriately?

If not, how could it be spent differently?

5. In-service training

a) Did you receive appropriate training before you entered your current position?

b) Have you been offered in-service training supported by your employer?
If so, did you or did you not attend? Explain.

c) If you have been to training workshops, what kind of topics did they cover?

d) In what kind of topic(s) do you might feel the need for additional training?

6. Guidelines

a) Are there established guidelines at your division?
What kind of guidelines?

b) Do you follow the guidelines? If not, please explain why:

c) Do you think your colleagues follow the guidelines? If not, what do you think is the reason?

d) Do you see a need for changing existing guidelines or making new ones? Explain.

e) Do you have a duty schedule?

7. Collegial interaction

a) Do you have supervisors or more experienced colleagues to ask for professional advice when problems or complications occur? Who?

b) Do you have supervisors or colleagues to turn to for support in emotionally difficult situations?

Who?

8. Appropriate role to your level of experience

a) Do you feel over-qualified in your day-to-day work? Please state the reason.

b) Do you feel under-qualified in your day-to-day work? Please state the reason.

c) Do you feel comfortable with your duties and responsibilities at the hospital?

9. Skills and abilities

(Use a scale with “level of confidence”: Level 1: not confident. Level 2: less confident. Level 3: confident. Level 4: very confident)

- a) Making a professional and respectful alliance with the patient
- b) Taking a detailed history when the woman arrives at the hospital
- c) Educate in self-care during childbirth and postnatal period
- d) Perform vaginal examination
- e) Identify the onset of labour
- f) Monitor maternal and fetal well-being during labour and provide supportive care
- g) Record maternal and fetal well-being on a partograph and take appropriate action where required
- h) Identify delayed progress in labour and take appropriate action
- i) Manage a normal vaginal delivery
- j) Manage the third stage of labour actively
 - using oxytocic drugs
 - clamping and cutting the cord
 - applying controlled chord traction
- k) Assess the newborn at birth and give immediate care
- l) Identify life threatening conditions in the newborn and take essential life-saving measures, including active resuscitation
- m) Identify hemorrhage and hypertension in labour and provide first-line management
- n) Provide postnatal care to women and their newborn infants and post-abortion care where necessary
- o) Assist women and their newborns in initiating and establishing exclusive breastfeeding
- p) Identify illnesses and conditions detrimental to the health of women and/or their newborns in the postnatal period, apply first-line management (including the performance of life-saving procedures when needed)
- q) Use vacuum extraction or forceps in vaginal deliveries
- r) Perform manual vacuum aspiration for the management of incomplete abortion
- s) Where access to safe surgery is not available, perform symphysiotomy for the management of obstructed labour
- t) Perform Caesareans sections
- u) Manage complications during pregnancy and childbirth
- v) Administer blood transfusions
- w) Refer needed patients to main hospital