"These things are dangerous": Understanding induced abortion trajectories in urban Zambia

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ABSTRACT

Unsafe abortion is a significant but preventable cause of global maternal mortality and morbidity. Zambia has among the most liberal abortion laws in sub-Saharan Africa, however this alone does not guarantee access to safe abortion, and 30% of maternal mortality is attributable to unsafe procedures. Too little is known about the pathways women take to reach abortion services in such resource-poor settings, or what informs care-seeking behaviours, barriers and delays. In-depth qualitative interviews were conducted in 2013 with 112 women who accessed abortion-related care in a Lusaka tertiary government hospital at some point in their pathway. The sample included women seeking safe abortion and also those receiving hospital care following unsafe abortion. We identified a typology of three care-seeking trajectories that ended in the use of hospital services: clinical abortion induced in hospital; clinical abortion initiated elsewhere, with post-abortion care in hospital; and non-clinical abortion initiated elsewhere, with post-abortion care in hospital. Framework analyses of 70 transcripts showed that trajectories to a termination of an unwanted pregnancy can be complex and iterative. Individuals may navigate private and public formal healthcare systems and consult unqualified providers, often trying multiple strategies. We found four major influences on which trajectory a woman followed, as well as the complexity and timing of her trajectory: i) the advice of trusted others ii) perceptions of risk iii) delays in care-seeking and receipt of services and iv) economic cost. Even though abortion is legal in Zambia, girls and women still take significant risks to terminate unwanted pregnancies. Levels of awareness about the legality of abortion and its provision remain low even in urban Zambia, especially among adolescents. Unofficial payments required by some providers can be a major barrier to safe care. Timely access to safe abortion services depends on chance rather than informed exercise of entitlement.

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1. Introduction

Unsafe abortion is a significant but preventable cause of maternal mortality and morbidity. In Africa, an estimated 13% of all pregnancies end in induced abortion, of which 97% are unsafe (Sedgh et al., 2012). Unsafe induced abortion is more likely when procedures are clandestine and legal provision is restrictive (Grimes et al., 2006). Zambia has one of the most liberal abortion laws in sub-Saharan Africa, permitting it on a wide range of grounds (GRZ, 1972). However, legality does not guarantee abortion safety (Sedgh et al., 2012).

The World Health Organization (WHO) defines "unsafe abortion" as a procedure for termination of an unintended pregnancy done either by a person lacking the necessary skills or in an environment that does not conform to minimum medical standards, or both (WHO, 1993). As discussed later, this binary categorisation (safe/unsafe) conceals a complex continuum of risks that change over time reflecting abortion method, provider training, gestational age, legal context, and abortion stigma (for both women and providers) (Ganatra et al., 2014; Sedgh et al., 2012). The availability and use of medical abortion (misoprostol or misoprostol + mifepristone) is increasing and has contributed reduced hospital admissions with severe septicaemia and uterine rupture caused by traditional methods, but clandestine medical abortions incorrectly used can carry risks and complications such as incomplete abortion and prolonged and heavy bleeding (Winikoff and Sheldon, 2012). Such complications require facility

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admission and may be indistinguishable from those of spontaneous miscarriages. Women seeking this type of post-abortion care (PAC) are often able to avoid scrutiny about the legality and/or safety of their medical abortion.

Safety and risk are complex and overlapping concepts that operate in multiple domains, including: emotional, social, clinical, physical and financial. Risk perception, the subjective judgement about the probability and/or severity of a risk varies at the individual level and is influenced by context. How women, and the people involved in their abortion decision-making, make sense of, understand, weigh up and strategise the relative risks (safety) is under-researched. But evidence from settings with highly restricted access to "safe abortion" suggests that while abortion method safety is important it is not the only consideration in women's decision-making (Izugbara et al., 2015). Little is known about how women make decisions about safety and risk of different abortion methods in less restrictive legal settings.

Judgements about abortion risk and safety can be affected by abortion stigma, a societal construct and "a negative attribute ascribed to women who seek to terminate a pregnancy" (Kumar et al., 2009 p.628). Abortion stigma, and its associated shame, guilt, secrecy and fear, can be a critical determinant of care-seeking practices in a wide range of settings (Kinaro et al., 2009; Levandowski et al., 2012; Lithur, 2004; Osur et al., 2015; Shellenberg et al., 2011; Sorhaindo et al., 2014; Tagoe-Darko, 2013), and operates to discredit institutions, communities and individuals (Hessini, 2014). Abortion stigma is both contextualised and dynamic (Norris et al., 2011), and can be internalised, perceived and experienced (Culwell and Hurwitz, 2013). Recognition of its importance has led to efforts to measure stigma at a range of levels, including individual (Shellenberg et al., 2014) and provider (Martin et al., 2014). Managing, reducing or eliminating abortion stigma is challenging because of the episodic and (often) concealed nature of abortion (Cockrill and Nack, 2013).

Analysis of the steps from the decision to terminate pregnancy to securing abortion care provides insight into care-seeking behaviour and influencing factors, including barriers and delays to accessing care, stigma and perceptions of risk. Studies of pathways to treatment for other stigmatised health conditions may be helpful to understanding pathways to abortion care-seeking. Evidence from India shows that TB treatment-seeking behaviour can be protracted (with multiple delays) and complex, involving informal, regulated private and public providers (Kapoor et al., 2012). Similar pathways and trajectories have been noted for HIV diagnosis and treatment (Kranzer et al., 2012). HIV stigma is connected to delays and barriers to care-seeking (Jürgensen et al., 2013; Steward et al., 2013), care discontinuation (Geng et al., 2015) and experience of discrimination in care provision (Neuman and Obermeyer, 2013). However, abortion trajectories can be considered a distinct group of healthcare-seeking behaviours because issues of legality and understanding of legal rights overlay an individual's pathway to care. Unlike HIV, which is a chronic condition, abortion is episodic or transient, limiting the comparisons that can be made (Culwell and Hurwitz, 2013).

In India, where abortion is legal, women's trajectories begin with social networks of friends/relatives and progress to qualified or unqualified medical providers (Banerjee and Andersen, 2012), with more than half (53%) of women self-inducing at home. A study in Bangladesh, showed women seeking care from several providers to procure an abortion (Ahmed et al., 1999). Data on abortion in sub-Saharan Africa are rare and difficult to collect (Rossier et al., 2006), but one study from Ghana describing women's pathways to unsafe abortion highlighted the roles played by men (Schwandt et al., 2013). Our study contributes to this literature by analysing care-seeking pathways of women who had either a safe abortion or sought care following an unsafe abortion in urban Zambia. Including both these groups adds further perspectives to the body of work from more legally restrictive settings, which focus on experiences of women who have sought PAC (Izugbara et al., 2015; Kinaro et al., 2009; Levandowski et al., 2012). We analyse the details of pathways to care, barriers and delays, and the role of others in influencing these pathways in order to develop knowledge and theorisation on abortion care-seeking behaviour and its influences.

2. Study context

Induced abortion in Zambia is legally permitted if: continuing a pregnancy involves a risk to the life of the pregnant woman, her physical or mental health or that of any of her existing children, greater than if the pregnancy were terminated; a child born of the pregnancy would suffer from physical or mental abnormalities as to be seriously handicapped (GRZ, 1972); or the woman was raped (GRZ, 2009). A Post Abortion Task Force led to national Standards and Guidelines for reducing morbidity and mortality from unsafe abortion (MoH, 2009). In 2003 Zambia ratified the Maputo Protocol, the international treaty outlining obligations for States to provide comprehensive reproductive health care, including abortion (Migiro, 2013). In 2012, the medical (as opposed to surgical) abortion combination pack Medabon® (mifepristone and misoprostol) was approved for use by the Ministry of Health. Medical abortion drugs are now widely available to purchase in private pharmacies and other venues. There is also a growing private market in unregistered pharmacological abortifacients, including so-called "Chinese drugs".

Despite the legal provision for safe abortion in Zambia, a large proportion of abortions (70%) are estimated to be unsafe (Likwa et al., 2009), reflecting low levels of knowledge of the law by the population and health professionals alike (Macha et al., 2014) and high levels of stigma for those that provide and those that seek abortion (Geary et al., 2012).

Zambia's maternal mortality ratio (adjusted to remove HIV/AIDS related deaths) is estimated at 280 [170–460] deaths per 100,000 live births (WHO et al., 2013). There are no nationally aggregated data on induced abortion incidence, safe or unsafe (Macha et al., 2014). The Zambian government estimates that 30% of maternal mortality is attributable to unsafe abortion (MoH, 2009). Unsafe abortion is also a significant cause of morbidity.

There are few medical practitioners to provide safe abortions legally. For a non-emergency abortion in Zambia, the law stipulates that the abortion must be approved by 3 physicians, one of which must be a specialist. In 2014, less than 1000 registered doctors served Zambia's population of over 15 million, of which fewer than 60 were obstetrician/gynaecologists (ZAGO, 2014). Lusaka offers the optimal setting for access to safe abortion services in Zambia, with a typical urban concentration of gynaecologists and established abortion services in government facilities. Nationally, abortion services are operational in more than 75 government facilities. In addition, safe abortion services are provided by non-governmental organisations in Zambia (MSZ, 2015; PPAZ, 2015), although at the time of our study, MSZ services were temporarily suspended and women seeking abortion were referred to Government of Zambia providers. An unknown number of private medical practices are registered to provide safe abortion services, and some pharmacists have been trained to provide referral information to women seeking an abortion (Fetters et al., 2015; Hendrickson et al., 2015). The largest healthcare provider and employer in Zambia is the government. The private healthcare sector is located in the larger cities and accounts for a small percentage of health-seeking (Hjortsberg, 2003).

There are earlier studies of unsafe abortion and its consequences

in Zambia. Koster-Oyekan's (1998) study investigated why women seek illegal abortions while Castle et al.'s (1990) study describes the barriers faced by women attending a gynaecology emergency ward in Lusaka. Webb's (2000) and Sims' (1996) studies identified socially-embedded reasons for pregnancy termination, and inaccessibility and unacceptability of legal abortion services. However no contemporary studies have focused on the range of experiences of women who use government hospital services at some point in their abortion-seeking trajectories.

3. Research methods and study site

Ethical review was granted by the London School of Economics and the University of Zambia Research Ethics Committees.

Lusaka, home to 17% of the population, is Zambia's rapidly growing capital city. The study used hospital-based recruitment at University Teaching Hospital (UTH) in Lusaka at varying times in the day over a 12 month period (January–December 2013), of adolescents and women aged 15–43 years (N = 112) presenting for care at an emergency ward in the Maternity Department. The ward deals both with medical referrals and women self-referring for abortion and PAC care, and is staffed by nurses, nurse-midwives, doctors and consultants. Potential respondents were identified by study-trained senior nurses and invited to participate once ready for discharge. Women thought to have had a spontaneous miscarriage were excluded. Our sample included women who received treatment as out-patients and those hospitalised for severe complications (29%).

Our recruitment strategy did not capture every woman coming to the hospital for induced abortion-related care. Those seeking care from a hospital doctor privately, for example, might not be entered into the hospital's record keeping system. Our interviewers were employed during the daytime on weekdays, missing women who were admitted and discharged during weekends or at night. To mitigate this two team members started shifts at 6 am to recruit women leaving hospital early, but were not able to capture experiences of women who came and went during the night. Our recruitment strategy focused on women who had disclosed, directly or indirectly that they had sought an induced abortion, excluding women who did not disclose. For women who presented for PAC, and reported having taken abortion medication, our study could not distinguish between registered medical abortion drugs and unregistered abortifacients. Finally, medical staff who were providing abortion through informal private payment arrangements were unlikely to encourage their patients to participate in our study.

Interviews were conducted in a private office by female research assistants (RA) fluent in all major Zambian languages. RAs had been trained in research ethics, informed consent and interviewing techniques. Before being interviewed each participant documented their informed consent to participate using a signature or thumbprint. A novel two-interviewer approach was used: one RA conducted the interview in a conversational style to put the participant at ease and facilitate the narrative flow, whilst a second RA completed a grid that detailed all of the steps, and their influences, taken by a woman to reach the hospital. Towards the end of the interview the second RA asked supplementary questions not covered by the first RA to ensure completeness. Our research instruments are available (CRUAA, 2015). All but two (n = 110) participants gave permission for the interview to be audio-recorded. For the two interviews the second RA took handwritten verbatim notes. Consent was sought to access respondents' medical records and no interviewee refused this. The supplementary clinical data were triangulated with women's stories.

The grids of the steps women took were analysed manually to develop the typology of trajectories described below. Preliminary content analysis of a sub-set of purposively selected transcripts (n = 20) was carried out by the authors with the RAs and discussed in a team analysis workshop. The set was maximized for heterogeneity, including: age, marital status, ethnicity, education, employment, residence, wealth, clinical intervention and outcomes. Findings informed the design of the subsequent framework analysis reported here. Framework Analysis (Ritchie and Lewis, 2003), is a method for systematically categorising, organising and synthesising case-oriented qualitative data. Key recurring themes and related sub-themes were identified and mapped to ensure there was conceptual clarity within them, with no obvious omissions or overlaps. In our analyses the themes were shaped by the analytical ideas that emerged from the preliminary team content analyses, meaning that a combination of deductive and inductive themes were included (Gale et al., 2013).

We developed each theme in a separate matrix, and exemplar matrices are available [Supplementary material sample framework matrices]. We included analytic comments to create a log of all our interpretive observations and reflections that were separate from the data. The matrices contained participants' recorded words and phrases and retain information about the context in which they were expressed, as well as a reference to the raw data, creating an audit trail of the analytical process (Ward et al., 2013). A randomly selected sample of cases was analysed until saturation (no new evidence or themes emerged) was achieved at 70 cases. Pseudonyms are used in our results.

4. Sample description

The recruitment strategy yielded a heterogeneous sample, from a 15 year old schoolgirl who had never used contraception, to a 23 year old unmarried university student who did not want pregnancy to interrupt her studies, to a 42 year old married mother of 6 children reporting contraceptive failure and an inability to support another child (Table 1).

4.1. Findings

4.1.1. A typology of abortion trajectories

Our initial study intention had been to compare women who had 'safe' or 'unsafe' abortions and who had accessed hospital care at some point in their trajectory. However, analysis of the steps taken by the 112 women revealed no simple safe/unsafe dichotomy. Over a third of our respondents had initiated an induced abortion prior to arriving at the hospital. Some of these had resorted to dangerous or ineffective methods. However, in this group, a significant proportion had used abortifacient medication obtained from another source. This finding corroborates recent discussions on the usefulness of WHO's definition of unsafe abortion and Ganatra et al.'s suggestion that with the changing availability of MA methods, safety needs to be understood as a continuum, with a spectrum of risk (Ganatra et al., 2014). We developed a typology of three abortion trajectories:

Trajectory 1: Clinical abortion induced at public sector hospital (63.4%)
Trajectory 2: Clinical abortion initiated elsewhere, followed by abortion-related care at public sector hospital (16.1%)
Trajectory 3: Non-clinical abortion initiated elsewhere, followed by abortion-related care at public sector hospital (20.5%)

In this typology a clinical abortion includes medical abortion (MA) or MA plus Manual Vacuum Aspiration (MVA) or MVA. A non-clinical abortion involves neither MA nor MVA, and includes

Table 1
Percentage distribution of sample socio-demographic characteristics, full sample.

Characteristics	Percent distribution (n = 112)	Treatment sought at UTH	
		SA	PAC
Age group (range 15–43 years)			
15–19	24.3	15.9	37.8
20–24	28.7	26.1	33.3
25–29	13.9	17.4	8.9
30–34	15.7	18.8	11.1
35+	17.4	21.7	8.9
Highest school level completed			
Nursery/kindergarten	13.1	12.8	15.5
Primary	36.0	24.3	53.3
Secondary	35.1	40.0	26.7
Higher	15.8	22.9	4.4
Religion			
Catholic	27.9	24.3	31.1
Protestant	9.6	8.6	8.9
Muslim	1.0	1.4	2.2
Seventh Day Adventist	14.5	17.1	17.8
Other	45.3	48.5	40.0
Main occupation/activity			
Work for pay (f-t/p-t)	24.6	30.0	15.5
Housewife	11.4	7.1	17.8
Student (school/college/university)	29.8	27.1	33.3
Runs own business	17.5	20.0	13.3
Unemployed and seeking work	5.3	4.3	6.7
Unpaid family worker	2.6	2.9	2.2
Other	8.8	8.6	11.2
Using contraception at the time of most recent pregnancy	47.8	48.6	46.7
Wealth quintile			
Poorest	19.6	15.9	25.6
2nd	20.5	17.4	25.6
Middle	19.6	15.9	25.6
4th	20.5	27.5	9.3
Wealthiest	19.6	23.2	14.0

Note: % do not add up to 100% due to variable item non-response. Wealth quintile based on reported assets ownership using principal components analysis with assets weighted according to the overall population distribution (Filmer and Pritchett, 2001).

insertion of a foreign object, herbal medicine, and all other abortifacients used by respondents to try to terminate a pregnancy.

The abortion-related care at the hospital depended on the state in which the woman arrived and the gestational age of the pregnancy. It could include administration of medical abortion, manual vacuum aspiration of the products of conception, antibiotic therapy, contraceptive counselling, and in some cases the treatment of complications with blood transfusion or other procedures. These trajectories reflect not only our recruitment strategy, but also the current realities of abortion services in Zambia. Outside of government hospitals, abortions can in theory be provided by public sector hospitals and clinics or third sector providers (PPAZ, 2015). However, levels of actual abortion provision at government clinics are very low. The reasons include a lack of trained staff able or willing to provide medical abortion or manual vacuum extraction, poor drug availability, and insufficient doctors to meet the three opinion requirement for certification of non-emergency legal abortion in Zambia.

Trajectories to securing a termination can be complex and iterative (Fig. 1). Individuals may navigate private and public health systems as well as consulting unqualified providers in order to achieve an abortion. Respondents frequently tried multiple strategies in order to achieve termination of an unwanted pregnancy and many attempted to self-induce abortion using MA, other drugs or more harmful methods.

Our framework analysis indicated four major influences on the direction a woman's trajectory took, its complexity and or timing of actions. These were advice from trusted others; perceptions and calculations of risk; delays in care-seeking and receipt of services; and economic cost. Data, presented below in anonymised vignettes and illustrative quotes, are drawn from a range of interviews to maximize for heterogeneity in socio-demographic characteristics and in clinical intervention and outcomes.

4.1.2. The influence of advice from trusted others

The advice respondents sought and received, or did not seek, played a significant role in shaping their trajectories. Respondents' relationships with significant others — mothers, fathers, boyfriends, husbands, friends — and the quality of those relationships, the expectations of those relationships and the expectations held within those relationships were all important. They influenced who was told about their pregnancy, the decision to terminate it, how and where it was terminated and for some women, whether PAC at hospital was sought, and when.

Most of our interviewees did not know about the legality of abortion or about what government services might be available. Typically, it was the degree of knowledge of different service providers possessed by trusted others that shaped how women navigated care-seeking. Women who we classified in the Typology 1 group and had gone straight to the government hospital were a broad social mix from the poor and middle-class, but they often possessed social networks that included someone with insider knowledge of the health system (clinician, medical student, auxiliary staff). For example, Anne was a 33 year old with two children aged under 3 living in a poor neighbourhood with her husband. Both ran small businesses. Her pregnancy was unplanned and unexpected — they had been using condoms:

I called a friend, I explained my situation … she gave me a [hospital] doctor's number, who I called.
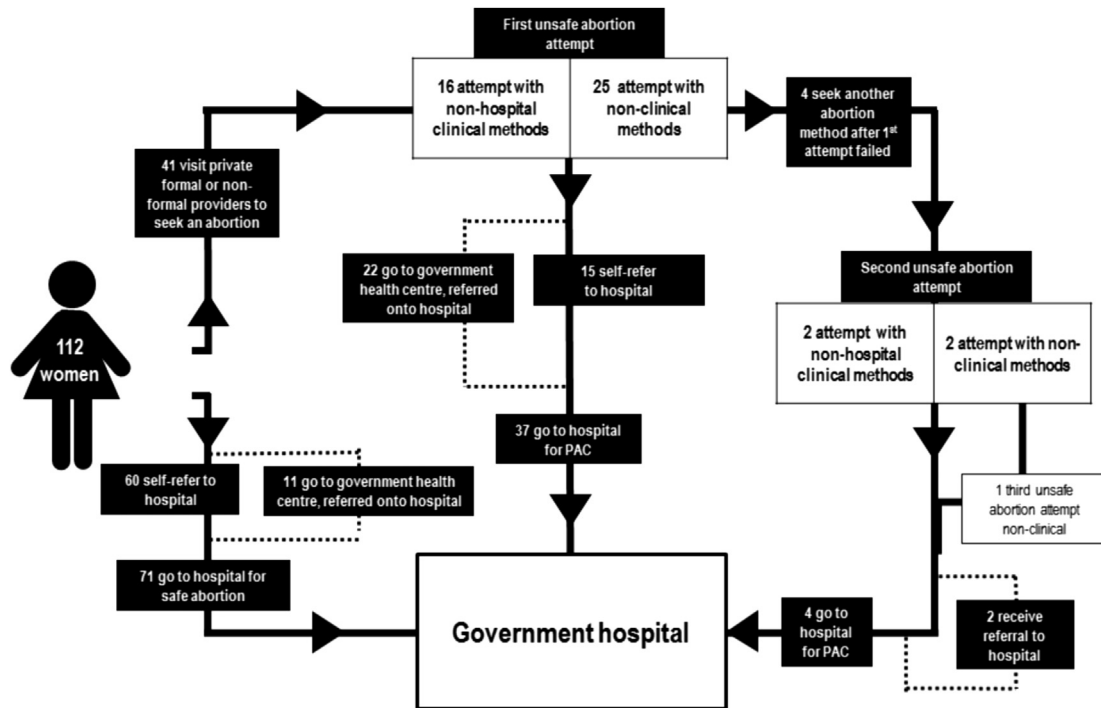
Fig. 1. Study participants' abortion trajectories.

Fear of parental disapproval meant that adolescents often sought advice from within their own age group initially, and whichever trajectory they followed could be highly dependent on their peer group's knowledge. Some had privileged information. Carol was a university graduate who had just been offered a Master's degree scholarship. She discussed her options with her boyfriend and they mutually agreed on an abortion so she could take up the scholarship. Her boyfriend's brother was a medical student. The brother was instrumental in providing (correct) advice, procuring the abortion via his medical insurance scheme, and accompanying the couple to hospital:

R: He [boyfriend's brother] said "No, there is actually a right way if you explain yourself and have a valid reason it can actually be done at [hospital]" … what made me decide, because I wanted to do it right, I want to be able to have more kids … and I don't want to have funny infections and unnecessary incurring of cost

Edith was 17 years and worked as a housemaid. Her pregnancy was unplanned but not unwanted initially. She went for a confirmatory pregnancy test at a government clinic with her sister. Her partner wanted her to continue with the pregnancy but she reported getting mixed messages from "other people". Ultimately she did not feel ready to have a child and she attempted to abort with tablets obtained from a friend:

She is my friend and I have known her for a long time now. I told her and I asked her if she knows medicine for aborting … She said there is someone I know but these things are dangerous you may die together with the child and I told her to just get for me …

Where abuse lay behind the pregnancy, it coloured the actions of young women and their advisors. Hilda was 20 years old and finishing school. Following her parents' deaths she lived with her step-mother, her 'uncle' (step-mother's cousin) and her siblings and cousins. But the 'uncle' coerced her into having sex with him and she became pregnant. Her step-mother guessed she was pregnant and gave her an herbal abortifacient drink:

She made some herbal mix in a container … I didn't know but when I came back from school, she just gave me and told me to drink then I drunk and only my stomach pained a lot … Then she made the mix again and forced me to drink. She said if I don't drink, she will beat me. Then I drunk and my stomach hurt again. Then after two days, I told my friend at school about it and she told me to go to [study hospital] and that I should explain then I can get help.

Hilda's school friend also found her the money for transport to the hospital. There was sympathy in the actions of service providers too. In the light of her situation registration fees were waived by the hospital and a nurse paid for her transport home afterwards.

Our analyses suggest that women who initially resorted to non-clinical attempts to terminate their pregnancy were less like to have confided in a trusted other than women who followed other routes. Women without friends or relatives they could confide in, and who did not know that a safe abortion was a legal option, were more likely to try multiple, and often escalating, methods. This was not just in the case of adolescents trying to hide pregnancies from the opprobrium of parents or guardians. For married women who felt unable to either disclose the pregnancy or their decision to terminate, the need to keep the pregnancy and subsequent actions a secret from their husband limited their options to seek informed advice.

Mary was 28 years old and had a young baby. She divulged neither the new pregnancy nor her subsequent actions to her husband. She was unaware that it could be possible to obtain a safe termination. She continued to take her contraceptive pills, presumably in the hope this might precipitate a miscarriage. When the pregnancy continued, she escalated her attempts and went to an

herbalist:

> I was given something to insert … I was given medicine, a stick … They inserted it themselves

Finally her husband brought her to the hospital during night as an emergency admission, ostensibly believing her story that she was sick due to very high blood pressure. Mary received emergency PAC, including MVA.

4.1.3. Perceptions and calculations of risk

In accounts of decision-making about how to terminate a pregnancy the issue of weighing up and mitigating risks appeared frequently, reflecting either the woman's own concerns or concerns raised by those in whom she had confided. The social mores around sex, pregnancy, and abortion meant that harm could occur along a number of dimensions. For some respondents the risks of physical harm from the abortion methods were outweighed by desperation to remove the pregnancy, but they would make the best selection they could within the options that they were aware of.

For example, Hope was a schoolgirl living with her mother. Having decided to terminate her unanticipated pregnancy, she listened to friends discussing various non-clinical methods and selected the one she thought was safest:

> R: They [friends] were busy chatting about methods that should be used for aborting the pregnancy … then I went home and decided to try whatever they were saying. That Cafemol [pain-killer] really drugged me, felt like I was dying … I took twenty Cafemol tablets … They said a lot of things that people take to terminate the pregnancy … I heard that you can drink Coca-Cola with some tablets, some were saying you drink Jerico [hair gel], some said you should drink Cafemol. A lot was said even for using sticks.

> I: So of all the stuff said, you chose to use Cafemol?

> R: Yes, I felt that it was safer.

Hope was eventually admitted to the hospital with sepsis several weeks later, but survived.

Ruth was a young woman living with her family, and concealed her pregnancy from them to avoid disapproval. She asked her friends for advice on how to abort, and persisted until she found an option she felt she could pursue:

> They told me to try herbs from people. I told them I can't because I don't trust them, you can die.

On the advice of a different friend she sought out abortion medication:

> So I had gone to a drug store near where I stay but they said that they don't do that. So my friend told me a friend of hers had done it with a certain medicine in a white box they are 5 in it, that's how she wrote for me on a paper and I went to buy in town.

Alone, she took the medication. She finally told her mother what had happened once she was in considerable pain and distress. Her mother then brought her to a local government clinic from which she was referred to the hospital.

Confidence in government healthcare facilities and providers seemed to be generally high in the communities from which these women came. In particular the teaching hospital was well thought of, and considered to be the place to go if things were not straightforward. Gloria explained this clearly. She had been admitted after severe complications from a self-administered medical abortion, and injections to counteract bleeding administered at a private clinic:

> We decided to go to a government clinic because government hospitals we thought are much safer than the private clinics … I think it is a big hospital and they pay attention to patients. They do not want us to come back complaining so they really work hard.

4.1.4. Delays in care-seeking and in timely receipt of care

Timeliness is important in abortion services where methods are effective or permitted only during a certain timeframe, and where complications of unsafe abortion pose threats to life and to future fertility. Despite the implications for women's health, delays to care-seeking were common. The causes were many and sometimes inter-related.

Delays linked to non-disclosure, particularly for women whose trajectories fall under Typologies 2 and 3, were common. For example, when the Cafemol taken by Hope began to cause her heavy bleeding, vaginal discharge and abdominal pain, she started a convoluted process of care-seeking that was complicated by fear:

> R: I was just feeling okay until after two weeks when I started wondering if I was rotting … That started worrying me a lot … [I] went to [local clinic]. I explained to them something else because I was scared to tell them that I did something. They gave me prescriptions there but I did not buy the medicine because I knew that it was the wrong medicine … I tried to hide from my mother for few days but I decided to tell her what was happening …

> I: So from the clinic, you went home and what happened next?

> R: I got sick that I could not move out of bed because of the pains … I then decided to tell my mother about what happened … She was very annoyed with me … I stayed for three days, very sick … On the third day, she called me from work and told me to meet her at some station so that she can take me to [local clinic]

For younger adolescents, delays were often linked to ignorance about their bodies but also to denial, a desire to ignore the problem because the consequences seem too difficult to deal with. Emily was a schoolgirl living with her grandmother. She appears to have been unaware, or in denial, of the symptoms of pregnancy, leading to substantial delays in her care-seeking. When she asked people about her lack of menstruation:

> I told the sister to my boyfriend and my sister, who told me that at times it's okay to have such kind of periods … But then I was still worried because that has never happened to me, I have never missed my periods. Then I asked my neighbour who is a nurse, she told me that I was pregnant and that I should tell my mother. I told her I couldn't do that because my mother wouldn't spare me [a beating].

Like Hope, Emily took painkillers to self-induce an abortion. After an unclear amount of time, possibly weeks, she told her grandmother that she had back and stomach pains, so her grandmother took her to another tertiary hospital in Lusaka from where she was referred to the study hospital. However, her grandmother was ill, so they did not follow up the referral and went back home.

At home, her uncle realised that she must be pregnant and he gave her money to come back to the hospital to request an abortion.

The unpredictability of daily life, and for women with family responsibilities the need to keep earning a precarious living, also meant delays to seeking care, even when symptoms were severe. For example, Theresa had three children, the youngest of whom was still breastfeeding. When she found out she was pregnant, she continued to take her oral contraceptives, hoping this would cause a miscarriage. When this did not work, she took other unspecified tablets, and started bleeding heavily. However, she could not afford to close her market stall. On the day that custom was slow because of heavy rains transport was also difficult. Eventually she made it to the hospital, but further delays occurred because of difficulties in navigating hospital systems, official and unofficial:

> I was told to come on the [date]. But then I forgot to book for that day … when I came I was given another booking and went to do a scan just to find out if anything went wrong in that I was bleeding earlier … So I was told to come on [date 2 weeks later] and so I was here yesterday

When she arrived, she was sent away by the doctor to return the next day.

4.1.5. Economic costs

Financial costs of seeking an abortion played a role in the timing and complexity of trajectories, as well as the choice of abortion method and provider. The hospital served a large area and finding money for transport was a hurdle.

Those women and girls without independent income sources were faced with particular dilemmas, as they were often dependent on those from whom they wish to conceal the pregnancy. Alice was a nineteen year old living with her parents. When she suspected she might be pregnant she approached a doctor living in the neighbourhood who gave her a pregnancy test. She drank lots of Coca-Cola and then told her father that she had bad stomach pains. He took her to see the same doctor. Knowing that she was pregnant and wanting a termination, the doctor, she said, gave her "injections in her stomach". Substantial bleeding followed, but Alice still did not disclose to her father, who then took her to another clinic, where they were given a referral letter for the hospital:

> I So when you reached here at [hospital] he [father] knew by then that you are pregnant?
>
> R No he didn't
>
> I What was he telling you or asking you?
>
> R He was asking
>
> I What did you tell him?
>
> R I just told him that it's my stomach

At the hospital, the MVA that she eventually received was further delayed because of her father's refusal or inability to pay the K10 hospital registration fee when they arrived.

To decrease unnecessary hospital use and encourage use of government primary care facilities in Lusaka, a referral from a satellite health centre reduces registration fee at the hospital from K80 (£11.60) to K10 (£1.20). For poorer women knowing how to navigate the public sector health system in this way made care more affordable but it also added an additional step in their trajectory to the hospital.

Theresa subsequently revealed to the interviewer that the 'doctor' (who may have been a doctor or a clinical officer) had asked her for K200 (£24.00) to go through with her treatment the following day. This was a demand for an under-the-counter payment, not a hospital registration fee. She was very reluctant to reveal to us how much she had had to pay: "Won't I be taken to the police?" she asked.

For women such as Theresa above, the unofficial costs of procuring an abortion could sometimes be significant, and introduce further delays as they gathered the money. Illegal, unofficial provider payments are quite frequently expected and paid in the formal health sector in Zambia, and are an open secret. Abortion stigma gives providers leverage to extort such fees, knowing that women are desperate for the service and unlikely to expose these financial demands for fear of revealing an abortion. Women can find it difficult to find out how much abortion care will cost; even legal service providers do not advertise their abortion service charges openly, unlike other sexual health services. When unofficial payments are paid, secrecy means that there can be substantial gaps between expected and actual costs.

Kasamba was a 20 year old from a poor family who was a live-in maid for her mother's friend ('aunty'). She had confided in her aunty who spoke to a hospital doctor, and they went to the hospital. However the charge was more than anticipated and they left to find the outstanding balance. Several weeks later she obtained a medical abortion.

> " We thought that maybe we would be charged 100, so that is the money we come with. So we gave him a 100 and had a balance of 200 [still to pay]. So that is how we went back … .We paid 200, but it is not enough yet, we still have a balance."

Some medical personnel − doctors or clinical officers − who were employed in the public sector's gynaecology services were also providing abortion-related care services at those facilities under private arrangements. Women coming for abortion at the hospital often had the phone number of a specific doctor with whom they made arrangements. The hospital had a private ward and differential fee scales, but there was also a difficult-to-quantify undercurrent of unofficial private practice that exploited the stigma surrounding abortion and women's lack of clarity on their entitlement to services. We heard of some providers charging high fees to women (up to 400 Kwacha or £48), far beyond the amounts set by the hospital (around 10−100 kwacha or £1.20 to £12 for standard procedures).

Herbalists will extend a line of credit for clients, often with deferred payment until treatment has been successful. Sometimes this situation makes the non-clinical route preferable. Nsabata, for example, 32 years old, married with 4 children, was surprised to find herself pregnant again because she had used injectable contraception. She went first to a government clinic:

> R: I went to the clinic and the doctor told me that I need to pay K150 and I failed to find the money … after I went to the clinic and they told me the price, the money was too much for me so I went to a certain lady [herbalist] and she told me that I have to pay K70 and she gave me some herbal medicine which I took and then she also inserted a stick in my cervix … I haven't yet given her [the money]. … She said I should give her when the pregnancy is out.

Subsequent bleeding and pain led to her being brought by ambulance and admitted as an emergency to the hospital.

5. Conclusions

This study is the first in Zambia to explore the detail of trajectories to abortion care. Our findings suggest that even though there is legal provision for abortion in Zambia, and has been for over 40 years, some girls and women take significant risks to abort. This echoes the situations in some other settings, for example, the 1971 MTP Act of India is still not fully implemented in practice (Banerjee and Andersen, 2012; Banerjee et al., 2012). Ethiopia significantly expanded the potential for safe and legal abortion in 2006 but a study conducted in 2008 shows that only 27% of induced abortions were safe and conducted in health facilities (Singh et al., 2010). Evidence from South Africa where there is substantial legal abortion service provision shows that women still seek unsafe abortions outside designated services for reasons related to barriers to legal service use including: lack of knowledge of legality and/or service provision; perceptions about service provider reactions; and, assumptions about lack of confidentiality (Jewkes et al., 2005).

Analysis of the pathways that individuals take to abortion-related care helps focus policy and programmatic attention on what is needed to increase accessibility to and quality of safe abortion services. Our findings in Lusaka, where services and knowledge are likely to be the most advanced, suggest that levels of awareness about abortion legality and its provision remain low, especially among adolescents. Adolescents, particularly unmarried adolescents, face multiple barriers to accessing sexual and reproductive health (SRH) services in Zambia: healthcare providers have negative attitudes towards the provision of adolescent SRH services (Warenius et al., 2006) and adolescents have low levels of knowledge of abortion legality in Zambia (BBC, 2014). If morbidity and mortality associated with unsafe abortion are to be reduced, and women are to be able to make choices about their wellbeing, then not only does access to effective contraception need to be improved, but so does awareness of safe abortion services (UN & CEDAW, 2011; WHO, 2012).

Our analysis yields three distinct trajectories of care-seeking, and adds new evidence for theorising about how women assess and act upon abortion stigma and safety, set against individual contexts of access to information and financial resources. Sometimes this ability was clearly and unambiguously enacted, particularly for women with access to information and resources. For these women, the decision to seek a safe abortion, with an emphasis on the safety of the procedure, was a choice that they were able make. For those women that did not seek a safe abortion, however, concerns about method safety were sometimes outweighed by the need to conceal the abortion. For these women, both older married women and unmarried adolescents, the imperative of concealment meant that greater risks were taken.

By analysing the experiences, pathways and trajectories of those who have sought and received abortion-related care, our research sheds light on the complexities involved in navigating a pluralistic health system (public, private, informal) in this area. Nearly two thirds of our sample had short and relatively straightforward trajectories (Typology 1), seeking a safe abortion at the study hospital (with or without a referral via a clinic). However, it is important to observe that for many of these cases the straightforward nature of their route to safe care was more by chance than design, and for some it was dependent upon belonging to a social or kinship network that included someone who knew their way around the healthcare system, or who had the phone number of a doctor.

Although the official healthcare charges are low and within reach of most families - and were waived in some cases - young women without any source of independent income struggled to know how to get to care. Health practitioners that extorted unofficial payments from women seeking abortion care exploit low levels of knowledge about the law and the high abortion stigma in Zambia that leads women to want discrete attention. Stigma and the false perception that abortion is illegal contribute to steering women towards clandestine methods, and reinforce women's silence and isolation (Cockrill and Nack, 2013).

Lusaka's emergency gynaecology wards no longer have the high volume of severely complicated abortion case, perforated uteruses and maternal deaths that had been described in earlier studies (Macha et al., 2014). In part this is due to the specialised clinical and services that the obstetrics and gynaecology department of the hospital now offers, and to the work of other NGO providers. Increasing availability of medication over-the-counter for medical abortion has likely also contributed and means that there is likely to be a reduction in the number of women seeking either abortion in hospital or PAC following an unsafe abortion. We observed such 'kits' to be readily available at private pharmacies in Lusaka. Provided the instructions are followed, self-administered MA bought from a pharmacist, assuming the correct pharmacology and dosage, can be expected to be safer and more effective than inserting objects or consuming herbal abortifacients.

Why some Zambian women continue to risk their health to abort using less safe methods is an important question for public health. The Zambian government has expressed concern about the continuing high incidence of unsafe abortion, but efforts to reduce these have had little effect (Likwa et al., 2009). Our research was conducted in an urban setting with the highest levels of specialist providers and services, in a country with longstanding legal provision for safe abortion. Yet many women either do not know about these services, or have to overcome substantial barriers to access them. Legal frameworks and service provision are essential first steps in reducing morbidity and mortality from unsafe abortion, but without generalised knowledge of services and rights, women will continue to seek unsafe abortions.

Appendix A. Supplementary data

Supplementary data related to this article can be found at http://dx.doi.org/10.1016/j.socscimed.2016.02.025.

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