UNIVERSITY OF BOTSWANA

MMED FAMILY MEDICINE RESEARCH PROJECT

Reasons for late presentation of pregnant patients with previous caesarean section delivery at Letsholathebe the 2nd Memorial Hospital in Maun, Botswana

An exploratory qualitative study

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DECLARATION

I, Mareko Ramotsababa declare that this dissertation represents my own work

Student signature: _____

Date: 29/03/2016

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1. LIST OF ACRONYMS

LIIMH	Letsholathebe II Memorial Hospital
ANC	Antenatal care
WHO	World Health Organization
UK	United Kingdom
MDG 5	Millenium Development Goal number 5
CARMMA	Campaign for Accelerated Reduction of Maternal Mortality in Africa
EMONC	Emergency Management of Obstetric and Neonatal Cases
C/S	Caesarean section
Prev	Previous
DHMT	District Health Management Team
TB	Tuberculosis
PMTCT	Prevention of Mother To Child Transmission
HIV	Human Immunodeficiency Virus
TaP	Treatment as Prevention
AZT	Zidovudine
IRB	Institutional Review Board

2. ABSTRACT

Introduction

Maternal mortality and morbidity remains high worldwide due to chronic diseases and underutilization of maternal health services. Botswana has made progress in decreasing maternal deaths, but maternal mortality rate still remains high due to factors such as substandard care. Though antenatal care coverage in Botswana is high, late initiation of antenatal care remains a problem. At Letsholathebe II Memorial Hospital (LIIMH), it was observed that there was high mortality and morbidity among women with previous caesarean delivery who initiated antenatal care late. The aim of the study was to explore the reasons for late presentation of pregnant patients with previous caesarean delivery to LIIMH in Maun.

Methods

An explorative qualitative study was performed. Ten purposively selected pregnant women who had previous caesarean section delivery presenting for the first time at LIIMH, Maun, after the 20th week of pregnancy were interviewed. The interviews were audio recorded, transcribed, translated into English and analysed using thematic inductive process initially manually and later with ATLAS-ti ®© software. Data saturation was achieved at the point of 10th interview.

Results

The reasons that were raised by participants for late presentation to LIIMH were lack of information and misconception on the appropriate booking time and the place for ANC; dissatisfaction with the quality of ANC and use of alternative ANC providers; delays at local clinics; experience from previous pregnancies and pregnancy related factors**.**

Conclusion

The study found several factors contributing to late booking among pregnant women with previous caesarean delivery at LIIMH. Consideration of these factors in provision of maternal health services could help improve timely antenatal care attendance.

3. INTRODUCTION

Maternal mortality and morbidity remains a problem with an estimated global maternal mortality rate (MMR) of 216 per 100 000 livebirths in 2015.[1] The highest burden of cases is in developing countries with developed countries having a maternal mortality rate(MMR) of 12 per 100 000 livebirths.[2] The high number of maternal deaths is due to factors such as lack of skilled care, inequitable access to maternal health services, communicable and non-communicable diseases.[3]

Effective antenatal care (ANC) is one of the strategies that are recommended to decrease maternal mortality and morbidity.[4] The World Health Organization(WHO**)** recommends that all pregnant women should have a minimum of 4 focused antenatal visits, with the first visit (booking) made preferably in the first trimester.[5] Globally, antenatal care coverage for at least one visit for the period 2007-2014 was 83% with just under two thirds receiving the recommended number of 4 visits.[2] ANC coverage is much higher for developed countries with estimates showing the rates of 96% for Australia, 100% for both Canada and France during the period 2007 to 2014.[2] Late initiation of ANC has been found to contribute to maternal death. [6]

In exploring reasons for late booking, studies have identified socio-demographic characteristics such as young maternal age, multiparity and low maternal education to be associated with late initiation of ANC.[7, 8, 9] Marital status has also been found to be a factor with those who are not married being more likely to book late.[8] Though low socio-economic status has been found to be a factor in antenatal care attendance,[8] a study in England did not find any association between low socio-economic status and late initiation of ANC.[10]

Issues related to ethnicity have been found to be a factor especially in developed countries. A study in the Netherlands found that non-Dutch speakers were more likely to book late,[7] while in England they found that black women and those born outside the United Kingdom were

more likely to book late.[10] A systematic review of studies on late antenatal care attendance in high income countries also found non-white women were more likely to book late.[8] These studies were concentrating on ethnic minorities and immigrants, thus the findings might be different in their countries of origin.

Another factor identified was the issue of accessibility. In a study in Papua New Guinea, transport and clinic fees were found to be contributory factors.[9] Participants in an Indonesian study had difficulty in accessing health services due to distant facilities and bad roads.[11]

Misconception about the timing and purpose of booking has also been found to be a factor.[9 12] In a study in Papua New Guinea women considered the purpose of booking for ANC to be that one reserves a delivery space, and that one has to delay until the foetus has started moving.[9] Other studies found that there was lack of appreciation of the value for ANC amongst the participants.[11, 12]

Some studies also showed that negative perceptions towards ANC services were associated with late ANC initiation. These include bad attitude from health care workers,[12, 13] being tired from multiple antenatal care visits and long queues at health centres.[9] Other factors such as late awareness and acceptance of pregnancy have also been found to contribute to late initiation of ANC.[7, 12]

In Africa, although there has been a decline in maternal deaths in the last 10 years, it is estimated that maternal mortality rate for Sub-Saharan Africa is still high at 546 per 100 000 live births in 2015[1] down from 900 cases per 100 000 livebirths in 2005.[14]

Antenatal care attendance in Sub-Saharan Africa is generally high with 71% of pregnant women attending at least one ANC visit.[15] WHO estimated ANC attendance of at least one visit in Nigeria to be 61%, Tanzania 88% while Swaziland had 97% for the period 2007 to

2014.[2] However, late initiation of antenatal care remains a problem with about two thirds of participants in an Ethiopian study booking late,[16] while more than three quarters booked late in a Kenyan study.[17]

Several studies have been conducted to explore reasons for late ANC initiation in Africa. Studies done in two rural settings in South Africa identified lack of access to health facilities due to distant facilities and transport costs as factors contributing to late booking.[18, 19] Accessibility issues due to the cost of ANC at the health facilities were found in studies in two Nigerian teaching hospitals.[20, 21] However, Solarin et al.[22] **,** in their study among pregnant women in a South African urban setting did not find money and transport to be factors in booking.

Time has been identified as a factor contributing to late initiation of ANC .In some studies there were concerns with long waiting times at the health facilities.[22, 23, 24] In a study by Sibeko et al.[25], in South Africa, some working women raised issues like being restricted time from work as well as unsuitable clinic operating hours.

Traditional and religious beliefs around pregnancy have also emerged as a factor in antenatal care initiation in Africa.[18, 20, 26] A study by Ngomane et al.[18]**,** focusing on indigenous beliefs in rural South Africa, found that there was a belief that pregnancy should be protected from physical and spiritual harm resulting in concealment of pregnancy and delay in seeking antenatal care. Similarly, Ndidi et al.[20], found that women believed that it was important to hide pregnancy for as long as possible in order to prevent enemies from harming the pregnancy.

Another factor that has been found is the use of other service providers. These could be private general practitioners or home maternity services.[20, 22, 25] Some make use of alternative care providers like traditional birth attendants.[17, 18, 26]

Misconceptions on the timing and purpose of booking have also been found to be one of the factors contributing to delay in initiation of antenatal care in Africa. In some studies it was found that there was belief that one had to wait for the foetus to start moving before registering pregnancy.[19, 27] Some women have expressed the view that one has to attend antenatal care if she experiences health problems.[16, 20] Others just thought that it was still appropriate to randomly choose the time.[20, 21] In a South African study, there was perception that the purpose of registering was to acquire an antenatal care card in order to have an opportunity to make use of health facilities for delivery.[19]

Late recognition of pregnancy was a factor in several studies in Africa.[19, 22, 24, 27] In an Ethiopian study, pregnancy related factors such as unplanned pregnancy and pregnancy out of wedlock were associated with late initiation of ANC.[16] A study in three Tanzanian districts showed that women with unintended pregnancies were more likely to initiate antenatal care late compared to those with intended pregnancies.[28]

Negative perception of health services has also been found to be a factor in some studies.[18, 29] Issues such as perceived bad attitude of nurses, and not being provided with dignity during examination by nurses contributed to delay in a South African study.[24] In a study in Swaziland, participants were unhappy that nurses were taking too long during consultations.[23]

In Botswana, the estimated maternal mortality rate was 129 per 100 000 livebirths in 2015.[1] Like most countries, ANC coverage in Botswana is high with an estimated 94% of pregnant women receiving ANC at least once.[2] The Ministry of Health recommends a minimum of 6 antenatal visits in Botswana compared to the minimum of 4 visits recommended by WHO.[30] Late initiation of antenatal care has been identified as one of the leading factors contributing to sub-standard care in maternal deaths in Botswana.[30] A study of pregnant women attending

antenatal care in a hospital in South-East district of Botswana found that as many as 4 in 5 women initiated ANC in the 3rd trimester.[31]

In their study, Mwenze et al.[31], found various reasons for late ANC initiation. They found that most of their participants who attended late had no specific reason.[31] Other reasons were no time off work, finances, transport and lack of social support.[31]

Letamo et al.[32], in their study of factors associated with non-use of maternal health services found that factors such as low parity, low education, rural residence, low socio-economic status and young age were associated with a higher risk of not using maternal services.

Mogobe KD et al.[33], in their analysis of data from 14 hospitals in Botswana in 2005, showed that ruptured uterus accounted for a fifth of the direct causes of maternal deaths. The national report on causes of maternal deaths for 2013 identified postpartum bleeding as the leading cause of maternal deaths in Botswana.[30]

It has been observed by the researcher that there is increased mortality and morbidity amongst pregnant patients with previous caesarean section delivery who present to Letsholathebe II Memorial hospital (LIIMH) late in pregnancy. Unpublished data for LIIMH show that in 2015, out of 3147 deliveries 610 were through caesarean section resulting in a 19.3% caesarean section rate which is above the African regional estimate of 4%.[2] The national maternal mortality analysis for the period 2007 to 2011 showed that Ngami district had the 3rd highest maternal deaths in the country.[30] In 2011, the Ministry of Health (Botswana) launched the Campaign for Accelerated Reduction of Maternal Mortality in Africa (CARMMA) in Maun. The Ministry also started a two weeks course for health professionals called EMONC (Emergency Management of Obstetric and Neonatal Cases). Both were aimed at reducing maternal mortality in Botswana, and in LIIMH it was decided that all patients with previous caesarean delivery should not undergo vaginal delivery unless there is adequate staff for

optimum monitoring during labour. For these efforts to be successful, areas of intervention should be identified.

Apart from the few studies mentioned above, the author is not aware of any other studies that have explored reasons for late initiation of ANC in high risk pregnancies in the Northern parts of Botswana. Since health care services are accessible to most patients in Botswana, it is important to explore the reasons why this subset of high risk patients book late for ANC. This may inform targeted interventions in decreasing mortality and morbidity in this group of patients.

The purpose of the study was to explore reasons for late presentation of pregnant patients with previous caesarean section delivery to Letsholathebe II Memorial hospital in Maun.

4. AIM AND OBJECTIVES

Aim

The aim of the study was to explore the reasons for late presentation of pregnant patients with previous caesarean delivery to Letsholathebe II Memorial hospital (LIIMH) in Maun.

Objectives

1. To explore why some pregnant patients with previous caesarean section delivery present after 20 weeks gestation at LIIMH.
2. To compile medical and demographic data (age, residence, education, number of previous caesarean sections, gestational age at booking, place of antenatal care) of pregnant patients with previous caesarean section delivery who present after 20 weeks gestation at LIIMH.

5. METHODS

5.1 Study design

This was an exploratory qualitative study.

5.2 Setting

The study site was Letsholathebe II Memorial hospital (LIIMH), a district hospital situated in Maun, Ngamiland district. Ngamiland district is famous for tourism and the Okavango delta. There are many people employed in the field of tourism, with some workers spending up to 3 months in the delta before getting 2 week breaks.

The hospital is situated in the North-Eastern outskirts of the village. It serves a population of approximately 250000 people[34] in Ngamiland district, Gantsi and part of Boteti districts (please refer to map of Botswana in appendix). As a district hospital, it is the referral health facility for 4 primary hospitals (Gumare, Gweta, Rakops and Gantsi), 16 local clinics and health posts.

During the study period LIIMH was a 300 bed hospital with specialist obstetrician and gynaecologist. The obstetrician ran a high risk obstetric outpatient clinic twice a week. The medical officer on-call attended to all departments at night or weekends, including the accident and emergency department. Most deliveries were attended to by midwives and medical officers. Non-specialist medical officers also performed most of the caesarean sections that were done in the hospital during this period.

5.3 Sampling

Participants were chosen by purposive sampling. Pregnant women with one or more previous caesarean deliveries who were seen for the first time in LIIMH after 20 weeks gestation were selected. There was no limit on the number of previous caesarean section deliveries. Pregnant

patients without previous caesarean delivery and those who presented before 20 weeks gestation were excluded. Most guidelines including Botswana guidelines encourage booking in the first trimester. However, there is variation in definition of late booking. Though Botswana guideline has no clear cut-off gestation for late booking, studies from different countries have used a cut-off definition of 20 weeks,[12, 22, 35] which was adopted for this study.

Recruitment of participants was done by the researcher and trained midwives amongst patients who were seen at the high risk clinic, in antenatal and postnatal wards. This was because some patients were admitted directly to the wards and then reviewed by the obstetrician during hospital stay. To assist with recruitment two 1 hour training sessions were held with midwives to explain the study and the process of obtaining consent.

Prospective participants who met the inclusion criteria for the study were approached and the study explained to them. They were encouraged to ask questions and seek clarity. They were assured of confidentiality, and that their participation was voluntary and they were free to refuse to participate in the study or withdraw from it at any point. They were informed that their non-participation or withdrawal from the study would have no negative impact in the care they received from the health providers. They were also informed that the interviews would be audio-recorded and field-notes taken. Those who were willing to participate were given consent forms and then contact details obtained for follow-up. The researcher made contact with those who had provided contact details, and an appointment for interview was made with those still willing to participate.

Five potential participants declined to participate, either at the time when they were in hospital, or agreeing to further consult for appointments over the phone and then declining at a later time. Some of those who declined stated that they wanted to reserve their views, while others

advanced no reasons. When that happened, further sampling was done to get more participants. Recruitment was also made difficult by that most of the midwives declined to help with recruitment because of lack of monetary incentive. As a result only a few of them helped the researcher to do the recruitment.

5.4 Data collection

Data collection was done by the researcher. In preparation for this research, the researcher attended a course on research methods, had follow-up lectures and access to reading materials on qualitative research, and attended a workshop on conducting qualitative research interviews which was organized by the University of Botswana's Office of Research and Development. Further guidance came from the supervisor who has done qualitative research projects**.**

At the start two pilot interviews were conducted but were not part of the analysis. From the pilot interviews no changes were made to the interview guide. However, it was noticed that the first audio recording was not clear because of the position of the audio recorder during the interview. This was modified with the second pilot interview and there was improvement. The duration of the pilot interviews also gave the researcher a reasonable estimate of 45 minutes which was the time proposed with prospective participants.

The interviews were done in participants' homes except for the two participants who preferred to be interviewed in the hospital. All interviews were conducted during the day. The day before each scheduled interview participants were contacted to confirm whether they are still willing and available for the interview. On the day of the interview, the researcher went to the participant's place. The participant chose the appropriate spot for the interview. The researcher and the participant went over the consent again, and where the participant was still willing to

participate in the study the consent form was signed. The audio recorder was switched on and the interview started. The interview was conducted guided by a paper interview guide (appendix 2), with further questions asked for clarity based on emerging issues. The interview process employed a free-attitude technique. Field-notes were taken alongside audio recordings during the interview. The interviews were done mainly in Setswana but participants were also free to express themselves in English when they preferred to do so.

5.5 Data analysis

After each interview, the researcher listened to each audio-recording and read through the field notes, and then the interview was transcribed verbatim. The correctness of the transcript was checked against the audio recording. The transcript was translated to English and back-translated by the researcher. Emerging themes from the interview were noted. The process was repeated with each interview until saturation point was reached. Afterwards, the transcripts were read through and more codes created. Once the ATLAS.ti 7®© software became available, the transcripts and the codes were loaded into it. Transcripts were again read through several times and more codes created, some refined as necessary to come up with the final code list. To help in visualization, network views were then created from the final code list. Codes addressing a similar concept were grouped together and relationship connections between them established. The network views were then used to come up with major themes which are presented as a summary of themes (Table 2).

5.6 Establishing scientific rigor

In order to improve the rigor of this study, a qualitative study method as described in detail above was chosen. For triangulation, interviews were audio-recorded, field-notes taken,

member-checking done, and a colleague used for co-coding. Member-checking was done by summarizing and reflecting during the interview as well as at the conclusion of the interview, and confirmation of transcripts against audio-recordings. Another doctor with previous experience of taking part in one qualitative research project was used to co-code the data. The purpose of triangulation was to ensure credibility, dependability and objectivity of the study. There is a step by step thorough description of the methods to help ensure that the study could be repeated by someone else with ease, in order to improve dependability. A thorough description of study setting, sampling process and findings has been provided in order to improve transferability.

The researcher is a medical doctor working in the study area and is studying towards a master's degree in Family medicine, and was therefore aware of the possible influence this might have on the data collection and analysis. The researcher constantly reflected on the questions that had been asked during the interviews to ensure that there was minimal personal influence on the responses obtained in order to minimise bias. Transcription was done verbatim to minimise bias. After translation of transcripts to English, back-translation was done to minimise bias. During the data analysis stage, co-coding by colleague was used to minimise bias in interpretation.

5.7 Ethical considerations

Ethical approval was obtained from the University of Botswana IRB, Ministry of Health Review Board under licence number PPME 13/18/1 VIII (467) and permission to conduct the study on site was granted by Ngami DHMT IRB.

6. RESULTS

Baseline characteristics

The study participants were ten females. The age range was between 22 and 35 years, with a mean age of 28.8 years (SD +/- 4). The highest level of education for 5 participants was secondary school, 3 had tertiary education while 2 had primary school education. The range for gestational age on presentation for antenatal care at the hospital was 28 to 40 weeks. Most participants (7/10) had history of one previous caesarean section delivery. (Table 1)

Table 1: Participants' baseline characteristics

Participant	Sex	Age	Number of previous C/sections	Gestational Age(weeks) when first seen at LIIMH	Education
P1	F	31	1	38	Tertiary
P2	F	30	1	38	Tertiary
P3	F	35	1	37	Secondary
P4	F	30	1	35	Tertiary
P5	F	27	2	40	Secondary
P6	F	22	1	28	Primary
P7	F	27	2	28	Secondary
P8	F	24	1	37	Secondary
P9	F	34	2	38	Primary
P10	F	28	1	32	Secondary

T**hemes**

The major themes that emerged from the study are listed below with illustrative quotes. A summary is presented on table 2.

1. **Lack of information**

Participants expressed that if they had the knowledge about the risks of previous caesarean delivery they would have attended ANC at the hospital earlier. This is illustrated by the following quotes: "*The main reason is that we don't know…..people don't know. If I had known that having delivered previously by operation, and that I will need another operation, then I would have long gone to LIIMH knowing that I am in danger so I shouldn't just be seen at the clinic*."(P1)

"*They didn't tell me anything. I only heard from people that if you delivered by operation, your next delivery is also going to be operation, and that after 3 operations they sterilize you. I didn't hear anything from the hospital*."(P7) This comment was made by a participant who had 2 previous caesarean deliveries.

In addition to health workers not delivering information, participants also expressed that at times the medium used to deliver such information was not effective: "*The information is there, there are posters but other people don't read; they just see a pregnant woman not knowing what she is doing there. I feel there should be teachings*." (P1)

2. **Misconceptions about timing for booking**

Some participants expressed that registering for ANC was tied to the timing for various services during pregnancy such as timing for supplements, PMTCT and massage as illustrated by the following quote: "*The thing is if you register after 1 or 2 months, it is still only blood and the baby is not yet formed. I feel that when it's a properly formed baby, they can massage*

you and give you pregnancy treatments. The thing is when you are still 1 month; they don't know what it is inside. It's just blood."(P5)

"*…you could even register at 6 or 7 months…because PMTCT program starts when one is at least 6 months…*" (P9)

3. Dissatisfaction with the quality of ANC

Participants expressed the view that the quality of antenatal care provided at health facilities was not good. The unhappiness was a result of various reasons as illustrated below: "*All she did was take your weight, check the baby's heartbeat, ask you how you feel and if fine then the check-up is complete. She did not even check the urine. The consultation was complete within 2 minutes*."(P2)

"*In my view they were not massaging. The midwife comes and puts something that looks like a microphone, saying they are listening to the baby's heartbeat, they measure the tummy, check the urine and then collect blood…that's all they do.*"(P10)

4. Alternative ANC

Some participants expressed preference for alternative antenatal care in the form of traditional birth attendants and churches. The following quotes are illustrative: *"As for me I use one old woman. She always helps me. I started going to her when I felt my body wasn't right...*" (P6)

"We prefer the old women and the churches…at the clinic it's not that you get massaged, it's just that they have machines which can tell whether the baby is fine and things like scan…"(P10)

5. **Experience from previous pregnancies**

Some participants stated that with repeat pregnancies one gains experience that could enable them to detect problems themselves at home. The following are illustrative quotes: "*Usually I register at 4 months, but this time around I decided to delay because everything was fine. I also felt that I had experience*."(P2)

"Some people end up going to the health facility for the first time when they are in labour because they know the tricks already."(P6)

Some participants also expressed the view that multiple antenatal visits were tiring as illustrated: *"…. From there after registering you need to go for check-ups…"* (P10)

"Some people say they don't want to go to the health facility monthly because it's tiring. They just want to go when their tummies are big."(P7)

6. **Delay at local clinic**

Some participants stated that they were returned from health facilities due to shortages of equipment and personnel. This is illustrated by the following quotes: *"I kept going to the clinic but they were saying they didn't have kits for testing HIV. The thing is before you register they have to check HIV then register and give you the pregnancy book. .*."(P7)

"In ……. there is shortage of midwives. Some people even end-up going to ……. But some people get turned away from ……..."(P6)

7. **Pregnancy-related factors**

Factors related to the pregnancy such as unexpected or unwanted pregnancy, denial and late recognition of pregnancy were reported by some participants to have led to late ANC

registration. The following are supporting quotes: *"I didn't want to believe that I was pregnant. Since the last child was still young, I didn't want to believe I was pregnant…"* (P3)

"The thing is that I didn't expect the pregnancy. By the time I discovered it was already late."(P6)

"... Sometimes at home they don't agree with the pregnancy."(P4)

Table 2: Summary of themes

Number	Theme	Illustrative quotes
1	Lack of information	"*The main reason is that we don't know…..people don't know. If I had known that having delivered previously by operation, and that I will need another operation, then I would have long gone to LIIMH knowing that I am in danger so I shouldn't just be seen at the clinic*."(P1) *"They didn't tell me anything…I didn't hear anything from the hospital."(P7)*
2	Misconceptions about timing for booking	"*The thing is if you register after 1 or 2 months, it is still only blood and the baby is not yet formed. I feel that when it's a properly formed baby, they can massage you and give you pregnancy treatments. The thing is when you are still 1 month; they don't know what it is inside. It's just blood."*(P5) "*you could even register at 6 or 7 months…because PMTCT program starts when one is at least 6 months…*"*(P9)*
3	Dissatisfaction with the quality of ANC	*"All she did was take your weight, check the baby's heartbeat, ask you how you feel and if fine then the check-up is complete…within 2 minutes"(P2)* *"In my view they were not massaging. The midwife comes and put something that looks like a microphone, saying they are listening to the baby's heart…that's all they do."(P10)*
4	Alternative ANC	*"As for me I use one old woman. She always helps me…*."*(P6)* *"we prefer the old women and the churches…at the clinic it's not that you get massaged …*"*(P10)*

Number	Theme	Illustrative quotes
5	Experience from previous pregnancies	"*Usually I register at 4 months, but this time around I decided to delay because everything was fine. I also felt that I had experience*."*(P2)* *"…. From there after registering you need to go for check-ups…" (P10)*
6	Delay at local clinic	*"I kept going to the clinic but they were saying they didn't have kits for testing HIV. The thing is before you register they have to check HIV then register and give you the pregnancy book. .."(P7)* *"In ……. there is shortage of midwives. Some people even end-up going to ……. But some people get turned away from ……..*"*(P6)*
7	Pregnancy related factors	*"I didn't want to believe that I was pregnant. Since the last child was still young, I didn't want to believe I was pregnant…"* (P3) *"... Sometimes at home they don't agree with the pregnancy."*(P4)

7. DISCUSSION

This study identified lack of information as a factor contributing to late initiation of ANC. Some participants stated they were not given information that could enable them to make informed decisions. Some of them pointed out that if they had the information about the risks posed by previous operation and the need to attend the high risk clinic they would have done so timeously. This is similar to findings by Gudayu T W et al.[16] , who found that women who had information on when to initiate antenatal care were more likely to book early compared to those who did not have information. Haddrill R et al.[12], found a similar finding in their study among women attending initial antenatal care late in England. Similarly, Ganga-Limando M et al.[23], in their study on pregnant HIV positive women, lack of information was identified as a factor contributing to non-use of antenatal care services by participants. Our study finding is in

contrast to that by Ndidi E P et al.[20], who found that in their study amongst late bookers in a Nigerian teaching hospital as many as three quarters had knowledge of the right time to book. Gross K et al.[27], also found that there was no difference in the timing of booking between women who had knowledge about antenatal care services and those who did not have knowledge among women in a Tanzanian study. This difference could come from that there are complex factors around information and knowledge, in that there could be other overpowering factors like other people being influential in the decision making process.

It also emerged that in some instances information was actually available but not in the form that was accessible or interesting to patients. For example, participants noted that there were posters about pregnancy and antenatal care but most of them had never read them, instead they preferred teachings by health care workers. Fagbamigbe A F et al.[29], noted that participants who got information about ANC services from health workers had better knowledge than those who got it from other sources like friends, relatives and news media. Ineffective communication could be the reason why in my study with majority of participants having at least secondary education, lack of information was found to be a factor.

This study found several misconceptions on the timing for booking. Amongst the misconceptions was that booking should be delayed until the baby was well formed and moving. The reason given was that it was an appropriate time for "massage" to be commenced which is considered an important component of ANC by some participants. Similarly Myer L et al.[19] , found that in their study, participants expressed that they had to wait until the baby was moving. However, for their participants the reason was that they wanted to be able to answer with confidence at the clinic that they were feeling the movements, whereas participants in my study wanted to be ready to commence 'massage' immediately. There appears to be a strong cultural and religious influence on this issue since participants in my study who were seen by traditional birth attendants and at church mentioned that services were

given once the baby had started moving. In a study in Papua New Guinea, some health care workers shared the same view with patients that they should wait until pregnancy was physically visible which influenced the perception on timing of booking.[9] A study among women attending antenatal care in a Nigerian teaching hospital identified wrong perception of appropriate ANC booking time as one of the reasons for late booking.[20] Sibeko et al.[25], found that participants were delayed because they believed that it was too early to book.

In Ngami district, all pregnant women receive malaria prophylaxis, iron, folate and calcium supplements from first ANC attendance until delivery. They also get provided with HIV prevention of mother to child transmission (PMTCT) services, with either immediate triple anti-retroviral therapy for those meeting the criteria for life-long treatment or prophylactic treatment commencing at 14 weeks for those who only qualify for treatment as prevention (TaP). Notably, some participants still thought that anti-retroviral treatments in pregnancy were given from 6 or 7 months. This is probably because of previous practice where PMTCT prophylaxis with Zidovudine (AZT) was started at 28 weeks. As a result those who associated initiation of ANC with wrongly timed initiation of treatments in pregnancy were more likely to delay ANC attendance.

Our study also found that lack of satisfaction with the quality of antenatal care provided was a factor that contributed to late initiation of antenatal care. The reasons given were that nurses were seen to be just doing brief examinations, while some were not happy that they were not 'massaged'**.** Similarly, a study in Kenya found that women who were unhappy with ANC services were more likely to book later than those who were happy with the services**.**[17] Ngomane S et al.[18], found that participants delayed going to the clinics because of the perceived bad attitude of nurses towards patients. Unlike in our study, in Swaziland they found that participants were unhappy with that nurses took a long time during consultation.[23] Though

there are differences in reasons, these findings seem to suggest that patients' views of the health services influence their use of the services.

Another finding from this study is the role of alternative antenatal care providers such as traditional birth attendants and churches. These were either in the place of health facility-based ANC or as a complementary service, hence contributing to delay attending antenatal care. Similarly, Aryeetey et al.[26], in their study amongst Ghanaian women, found that 14% of the women who sought alternative ANC did not go to the health facility as the first source of antenatal care, but rather used traditional, spiritual or self-medication as their first point of care. In contrast to our study, Titaley CR et al.[11], in their study among Indonesian women found that participants stated that they preferred health professionals because of perception that they had better equipment to do thorough assessments of pregnant patients. This could be due to involvement of traditional birth attendants in educating women about importance of antenatal health services as was demonstrated by an interview with a traditional birth attendant, whereas in Ngami district the interaction between traditional birth attendants and health services is minimal. Unlike in our study, Ngomane S et al.[18], found that traditional birth attendants were used because of their skills in preventing miscarriages and early labour as compared to 'massaging' in our study. Some also used traditional birth attendants because of inability to access health facilities due to problems with money. Accessibility of health facilities was not an issue in our study due to that our study site was an urban village with good transport network, while Ngomane S et al.[18], studied women in a rural place in South Africa.

Some participants stated that they delayed attending antenatal care because they said that having gained experience from previous pregnancies; they could detect or anticipate problems. Similarly, Haddrill et al.[12], in their study, noted that based on previous experience, multiparous women were less likely to attend antenatal care early; as they held the view that antenatal care was more important for primigravidae because they lack pregnancy experience. In a study

done in Kenya, Malawi and Ghana, it was found that older multiparous women were more interested in getting an antenatal card than checking the condition of pregnancy, resulting in them booking late.[36] A study in Papua New Guinea found that though multiparous women were more likely to book late, those who had experienced complications in previous pregnancies were more likely to book earlier.[9] This suggests that pregnancies and their outcomes are important in influencing future decision making about antenatal care attendance.

Our study found that delays at local clinics were a factor in delaying initiation of antenatal care. Delays before booking were mainly because patients were turned away from health facilities due to shortages of pregnancy and HIV testing kits. Similarly, Abrahams N et al.[24], found in a Cape Town study that some pregnant women were turned away from booking if they had not yet done confirmatory pregnancy tests or if the daily allocated spaces had been filled. In our study, it could be that some health professionals possibly misinterpret the commitment of the health system to ensuring a well-run Prevention of Mother-To-Child Transmission(PMTCT) program by disadvantaging other important components of maternal and child health care.

Issues around the occurrence, discovery and acceptance of pregnancy also emerged as factors on the timing of booking in our study. Some of the participants had unplanned pregnancies that were followed by denial on recognition of pregnancy. These findings are similar to those in a study by Haddrill R et al.[12], where some women booked late because they either could not realise they were pregnant or they initially considered terminating pregnancy. In an Ethiopian study, unplanned pregnancy and pregnancy out of wedlock were associated with late initiation of antenatal care. Similarly, Solarin I et al.[22], found that the highest proportion of late bookers in their study had been unaware that they were pregnant.

8. LIMITATIONS OF THE STUDY

The design of the study was qualitative therefore the findings cannot be generalised to the general population of pregnant patients with previous caesarean section who are first seen at LIIMH after 20weeks of pregnancy. The study focused on the views of the patients, excluding other stakeholders in antenatal services like midwives which could result in some important factors being missed. The researcher is a health provider at LMIIH and this could have resulted in some participants being less willing to divulge negative information. The interviews were conducted in Setswana and then translated to English, which could have resulted in some loss of meaning. Back translation was used to minimize this.

9. CONCLUSION

This study found several factors that contribute to late antenatal care attendance at LIIMH by pregnant women with previous caesarean delivery. These include lack of information and misconceptions about appropriate time for booking. These findings could be used to improve antenatal care services provided at LIIMH and Ngami district. The study findings add to the knowledge of factors contributing to late attendance of antenatal care in a Botswana setting. The reasons found in this study could be used in a questionnaire to perform a quantitative study in a larger sample which would have better generalisability.

10. RECOMMENDATIONS

1. Post-delivery all women should be adequately advised about future pregnancies prior to being discharged.

2. Regular health talks on maternal health should be conducted at all health facilities in the district.
3. The District Health Management Team should facilitate regular interaction and collaboration between health facilities and alternative health providers in the district.

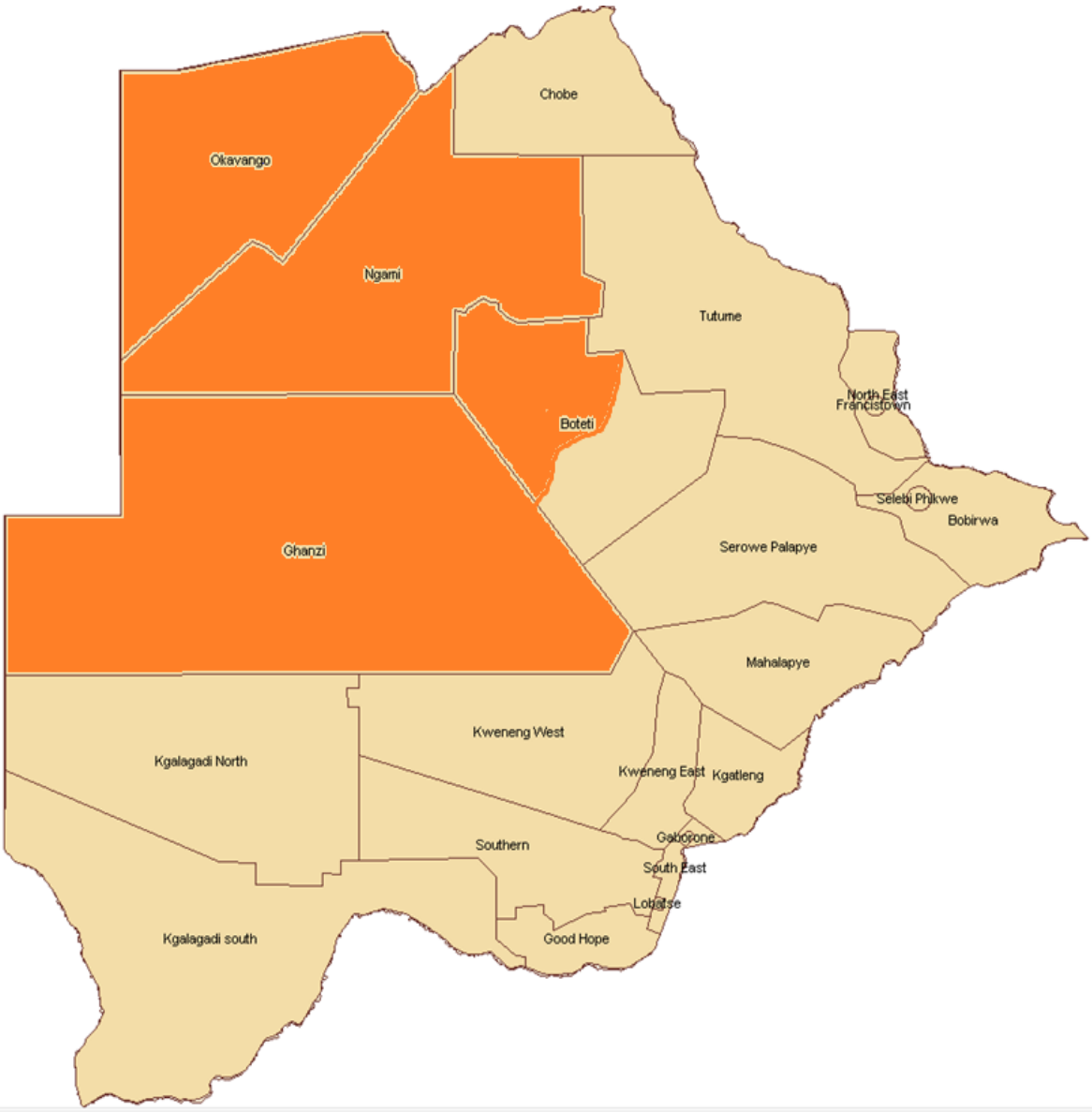
11. REFERENCES

1. Trends in Maternal Mortality: 1990 – 2015: estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division. Geneva: World Health Organization, 2015. 12 March 2016. www.who.int/reproductivehealth/publications/monitoring/maternal-mortality-2015/en/
2. World Health Statistics 2015. . Geneva: World Health Organization, 2015. 8 March 2016 www.who.int/gho/publications/world_health_statistics/2015/en/
3. Health in 2015: From MDGs, Millenium Development Goals to SDGs, Sustainable Development Goals. Geneva: World Health Organization, 2015. 8 March 2016. www.who.int/gho/publications/mdgs-sdgs/en/
4. Banta D. What is the efficacy/ effectiveness of antenatal care and the financial and organizational implications? Copenhagen: WHO Regional Office for Europe, 2003. 14 March 2016 http://www.euro.who.int/Document/E82996.pdf
5. Standards for Maternal and Neonatal Care: Provision of effective antenatal care. Geneva: World health Organization, 2006. 13 March 2016. www.who.int/reproductivehealth/publications/maternal_perinatal_health/effective_antenatal_care.pdf
6. Centre for Maternal and Child Enquiries (CMACE). Saving Mothers' Lives: reviewing maternal deaths to make motherhood safer: 2006–08. The Eighth Report on Confidential Enquiries into Maternal Deaths in the United Kingdom. BJOG [Internet]. 2011; 118(Suppl. 1). Available from: http://www.cdph.ca.gov/data/statistics/Documents/MO-CAPAMR-CMACE-2006-08-BJOG-2011.pdf.
7. Alderliesten ME, Vrijkotte TGM, Van Der Wal MF, Bonsel GJ. Late start of antenatal care among ethnic minorities in a large cohort of pregnant women. BJOG. 2007;114(10):1232-9.http://dx.doi.org/10.1111/j.1471-0528.2007.01438.x
8. Feijen-de Jong EI, Jansen DEMC, Baarveld F, van der Schans CP, Schellevis FG, Reijneveld SA. Determinants of late and/or inadequate use of prenatal healthcare in high-income countries: a systematic review. Eur J Public Health. 2011:ckr164.http://dx.doi.org/10.1093/eurpub/ckr164
9. Andrew EVW, Pell C, Angwin A, Auwun A, Daniels J, Mueller I, et al. Factors affecting attendance at and timing of formal antenatal care: results from a qualitative study in Madang, Papua New Guinea. PloS one. 2014;9(5):e93025.http://dx.doi.org/10.1371/journal.pone.0093025
10. Rowe RE, Magee H, Quigley MA, Heron P, Askham J, Brocklehurst P. Social and ethnic differences in attendance for antenatal care in England. Public Health. 2008;122(12):1363-72.http://dx.doi.org/10.1016/j.puhe.2008.05.011
11. Titaley CR, Hunter CL, Heywood P, Dibley MJ. Why don't some women attend antenatal and postnatal care services?: a qualitative study of community members' perspectives in Garut, Sukabumi and Ciamis districts of West Java Province, Indonesia. BMC Pregnancy Childbirth. 2010;10(1):61.http://dx.doi.org/10.1186/1471-2393-10-61
12. Haddrill R, Jones GL, Mitchell CA, Anumba DOC. Understanding delayed access to antenatal care: a qualitative interview study. BMC Pregnancy Childbirth. 2014;14(1):1.http://dx.doi.org/10.1186/1471-2393-14-207
13. Ayala LSH, Blumenthal PD, Sarnquist CC. Factors Influencing Women's Decision to Seek Antenatal Care in the ANDES of Peru. Maternal and child health journal. 2013;17(6):1112-8.http://dx.doi.org/10.1007/s10995-012-1113-9
14. Maternal Mortality in 2005: Estimates developed by WHO, UNICEF, UNFPA and The World Bank. Geneva: World Health Organization, 2007. 2016 March 7. www.who.int/whosis/mme_2005.pdf

15. Kinney MV, Kerber KJ, Black RE, Cohen B, Nkrumah F, Coovadia H, et al. Sub-Saharan Africa's mothers, newborns, and children: where and why do they die? PLoS Med. 2010;7(6):e1000294.http://dx.doi.org/10.1371/journal.pmed.1000294
16. Gudayu TW, Woldeyohannes SM, Abdo AA. Timing and factors associated with first antenatal care booking among pregnant mothers in Gondar Town; North West Ethiopia. BMC Pregnancy Childbirth. 2014;14(1):1.http://dx.doi.org/10.1186/1471-2393-14-287
17. Van Eijk AM, Bles HM, Odhiambo F, Ayisi JG, Blokland IE, Rosen DH, et al. Use of antenatal services and delivery care among women in rural western Kenya: a community based survey. Reproductive health. 2006;3(1):2.http://dx.doi.org/10.1186/1742-4755-3-2
18. Ngomane S, Mulaudzi FM. Indigenous beliefs and practices that influence the delayed attendance of antenatal clinics by women in the Bohlabelo district in Limpopo, South Africa. Midwifery. 2012;28(1):30-8.http://dx.doi.org/10.1016/j.nidw.2010.11.002
19. Myer L, Harrison A. Why do women seek antenatal care late? Perspectives from rural South Africa. Journal of Midwifery & Women's health. 2003;48(4):268-72.http://dx.doi.org/10.1016/s1526-9523(02)00421-x
20. Ndidi EP, Oseremen IG. Reasons given by pregnant women for late initiation of antenatal care in the niger delta, Nigeria. Ghana Medical Journal [Internet]. 2010 PMC 2994152]; 44(2). Available from: www.ncbi.nlm.nih.gov/pmc/articles/PMC2994152.
21. Gharoro EP, Igbafe AA. Antenatal care: some characteristics of the booking visit in a major teaching hospital in the developing world. Medical Science Monitor [Internet]. 2000 PMID 11208364]; 6(3):[519-22 pp.]. Available from: www.medscimonit.com/download/index/idArt/421315.
22. Solarin I, Black V. "They told me to come back": women's antenatal care booking experience in inner-city Johannesburg. Maternal and child health journal. 2013;17(2):359-67.http://dx.doi.org/10.1007/s10995-012-1019-6
23. Ganga-Limando M, Gule WP. Potential barriers to focused antenatal care utilisation by HIV-positive pregnant women in Swaziland. SAFPJ. 2015;57(6):360-2.http://dx.doi.org/10.1080/20786190.2015.1085223
24. Abrahams N, Jewkes R, Mvo Z. Health care–seeking practices of pregnant women and the role of the midwife in Cape Town, South Africa. Journal of Midwifery & Women's health. 2001;46(4):240-7.http://dx.doi.org/10.1016/s1526-9523(01)00138-6
25. Sibeko S, Moodley J. Healthcare attendance patterns by pregnant women in Durban, South Africa. SAFPJ. 2006;48(10):17-e.http://dx.doi.org/10.1080/20786204.2006.10873478
26. Aryeetey RNO, Aikins M, Dako-Gyeke P, Adongo PB. Pathways Utilized for Antenatal Health Seeking Among Women in the Ga East District, Ghana. Ghana Medical Journal. 2015;49(1):44-9.http://dx.doi.org/10.4314/gmj.v49i1.8
27. Gross K, Alba S, Glass TR, Schellenberg JA, Obrist B. Timing of antenatal care for adolescent and adult pregnant women in south-eastern Tanzania. BMC Pregnancy Childbirth. 2012;12(1):1.http://dx.doi.org/10.1186/1471-2393-12-16
28. Exavery A, Kanté AM, Hingora A, Mbaruku G, Pemba S, Phillips JF. How mistimed and unwanted pregnancies affect timing of antenatal care initiation in three districts in Tanzania. BMC Pregnancy Childbirth. 2013;13(1):1.http://dx.doi.org/10.1186/1471-2393-13-35
29. Fagbamigbe A F, Akanbiemu F A, Adebowale A S, Olumide A M, G K. Practice, Knowledge and Perceptions of Antenatal Care Services among Pregnant Women and Nursing Mothers in Southwest Nigeria. IJMCH. 2013;1(1):7-16.http://dx.doi.org/10.12966/ijmch.05.02.2013
30. 5 year Maternal Mortality report(2007 - 2011): "Exploring Causes of Maternal Mortality" Ministry of Health, Botswana, 2014.
31. Mwenze MC, Pengpid S. Factors related to antenatal-care initiation among rural women in the Sout-East district of Botswana. AJPHERD [Internet]. 2008; 13(4):[491-504 pp.]. Available from: http://hdl.handle.net/10520/EJC19504.
32. Letamo G, Rakgoasi SD. Factors associated with non-use of maternal health services in Botswana. JHPN [Internet]. 2003:[40-7 pp.]. Available from: http://www.jstor.org/stable/23498833.

33. Mogobe KD, Tshiamo W, Bowelo M. Monitoring maternity mortality in Botswana. Reprod Health Matters. 2007;15(30):163-71.http://dx.doi.org/10.1016/s0968-8080(07)30330-3
34. Population and Housing Census 2011: Analytical report. Gaborone: Statistics Botswana, 2014. 2 March 2016. www.cso.gov.bw/images/analytical_report.pdf
35. Kisuule I, Kaye DK, Najjuka F, Ssematimba SK, Arinda A, Nakitende G, et al. Timing and reasons for coming late for the first antenatal care visit by pregnant women at Mulago hospital, Kampala Uganda. BMC Pregnancy Childbirth. 2013;13(1):121.http://dx.doi.org/10.1186/1471-2393-13-121
36. Pell C, Meñaca A, Were F, Afrah NA, Chatio S, Manda-Taylor L, et al. Factors affecting antenatal care attendance: results from qualitative studies in Ghana, Kenya and Malawi. PloS one. 2013;8(1):e53747.http://dx.doi.org/10.1371/journal.pone.0053747

Map of Botswana health districts



Courtesy of Ms Motlaleng. 2013. Ministry of health, Botswana

Key

LIIMH drainage area

INTERVIEW GUIDE

DEMOGRAPHIC DATA

Age:	<20 ☐	20 -24 ☐	25-29 ☐	30+ ☐
Marital status:	Single ☐	Married ☐	Widowed ☐	Divorced ☐
Education level:	None ☐	Primary ☐	Secondary ☐	Tertiary ☐

Residence…….

PREVIOUS OBSTETRIC HX

Parity:	1-2 ☐	3-4 ☐	5+ ☐
Number of previous C/Sections:	1 ☐	2 ☐	3+ ☐
Date of last pregnancy (years):	1 ☐	2 ☐	2+ ☐

CURRENT PREGNANCY

- At which health facility did you book? _____

- Is the pregnancy planned? YES ☐ NO ☐

- How many weeks pregnant were you when you booked? (Corroborate with information in the card)

  ≤12weeks ☐ 13 – 20 weeks ☐ >20weeks ☐

- In your view when is the best time to book?

  ≤12weeks ☐ 13 – 20 weeks ☐ >20weeks ☐

  Any reasons?.....

- Why did you register the pregnancy after 20 weeks gestation at L2MH?

  Answer:

- In your view what are the reasons for late registration of pregnancy in this area?

  What would make a person register late?

  Some women register late. What do you think is the reason?

  What are the things that make pregnant women register late?

  What do people say are the reasons that make women register late?

- What do you think can be done to facilitate early registration of pregnancy?

  What do people say should be done?

  Is there anything nurses, doctors, government, clinics, hospitals politicians can do to make people register early?

  What can the community do to help women register early?

INFORMED CONSENT FORM (SETSWANA VERSION)

SETLHOGO: Patlisiso ya mabaka a a dirang bomme ba ba kileng ba belega ka loaro gore ba kwadisetse boimana thari kwa sepateleng sa Letsholathebe II Memorial mo Maun, Botswana

Mmatlisisi-mogolo: Dr Mareko Ramotsababa

SE O TSHWANETSENG GO SE ITSE KA PATLISISO E

- Ga o patelediwe go tsaya karolo mo patlisisong e.
- O gololesegile go gana go tsaya karolo kana go ikgogela morago mo patlisisong e nako nngwe le nngwe.
- Pele ga o tsaya tshwetso, o tshwanetse go tlhalosediwa ka botlalo mabapi le patlisiso e le ditshwanelo tsa gago.

MOSOLA WA PATLISISO

Patlisiso e e dirwa ke moithuti yo mogolwane go tswa Yunibesithi ya Botswana (Mmadikolo). E tla a bo e direlwa kwa sepateleng sa Letsholathebe II Memorial (LIIMH), Maun, mo kgaolong ya Ngami go tloga ka Mopitlo go tsena Phukwi ngwaga wa 2014. E itebagantse le baimana ba ba kileng ba belega ka loaro ba ba yang ko sepateleng ba setse ba digetse dibeke tse di masome a mabedi tsa boimana. Maikaelelo ke go batlisisa mabaka a a dirang gore bomme ba ba tle morago ga nako, le go tswa ka megopolo e e ka thusang gore ba tle ka nako. Lengwe la mabaka a go dira se ke go thusa go fokotsa dikgobalo le dintsho tsa bomme tse di amanang le boimana le pelegi.

KA FA PATLISISO E TLA A DIRWANG KA TENG LE NAKO E E TLA A TSEWANG

Fa o ka tsaya tshwetso ya go tsenelela patlisiso, o tla a solofelwa go nna le puisano le mmatlisisi, e tsaya nako e e sa feteng oura kwa lefelong le le dumelanweng. Puisano e, e tla a bo e gatisiwa ka sekapamantswe le mo pampiring.

BODIPHATSA

Mo puisanong e, o ka nna wa botswa dipotso tse di kgonang go sa go tseye sentle mabapi le setswalo kana tlhakanelo dikobo. O tla a bodiwa dipotso mabapi le gore boimana jo bo fetileng bo tsamaile jang, mme se se kgona go go kgobera maikutlo.

DIPOELO KANA PHIMOLO DIKELEDI

Ga go duelelwe go tsenelela patlisiso e. Le fa go ntse jalo, maduo a patlisiso e a kgona go thusa mo kitsong ya phokotso ya dikgobalo le dintsho tsa bomme tsa boimana le pelegi.

SEPHIRI

Sengwe le sengwe se se tla a buiwang ke motsaya-karolo, go akaretsa le dintlha ka ga gagwe, di tla a bewa e le sephiri. Ga go na go dirisiwa maina. Babatlisisi ke bone fela ba ba ka dirisang dintlha tse di tswang mo batsaya-karolong.

GO ITHAOPA GO TSENELELA PATLISISO

Ga o patelediwe go tsaya karolo mo patlisisong e. O gololesegile go gana go tsenelela patlisiso. Thuso e o e fiwang mo ditirelong tsa botsogo ga e na go amiwa ke go gana go tsenelela patlisiso e. Fa o itlhophela go tsaya karolo, o gololesegile go ka ikgogela morago mo patlisisong nako nngwe le nngwe.

DIPOTSO KANA BOIKUELO

Fa o na le dipotso dingwe mabapi le patlisiso, ikgolaganye le Dr Mareko Ramotsababa, Letsholathebe Hospital 6879000

Fa o na le dingongorego, o tlhoka go ikuela kana go itse ka ditshwanelo tsa gago, ikgolaganye le ba ofisi ya dipatlisiso ko Yunibesithi ya Botswana, Mogala 355 2900, Email: Research@mopipi.ub.bw

TETLA

Nna _____ ke tlhomamisa fa ke amogetse tlhaloso e e tletseng ka patlisiso le ditshwanelo tsame. Ke ithaopela go tsenelela patlisiso e.

_____	_____
Motsaya-karolo kana moemedi	Letsatsi
_____	_____
Kamano le motsaya-karolo	Letsatsi
_____	_____
Mmatlisisi	Letsatsi

INFORMED CONSENT FORM

PROJECT TITTLE: **Reasons for late presentation of pregnant patients with previous caesarean section delivery at Letsholathebe the 2nd Memorial Hospital in Maun, Botswana.**

Principal Investigator: Dr Mareko Ramotsababa

What you should know about this research study:

- Your participation in the study is voluntary.
- You are entitled to either refuse to participate or withdraw at any time from the study.
- Prior to making a decision, you should get adequate explanation about the study and your rights.

PURPOSE

The study is conducted by postgraduate student from the University of Botswana. It will be conducted at letsholathebe II Memorial hospital (LIIMH), Maun, Ngami land district from March to July 2014. It focuses on pregnant women who have had a previous caesarean section delivery and present to LIIMH high risk ANC after 20 weeks gestation. The purpose is to explore reasons why they present late and make recommendations to facilitate early presentation in order to minimize maternal morbidity and mortality.

PROCEDURES AND DURATION

If you decide to participate, you will be expected to have an interview with the researcher for a duration not exceeding 1 hour at an agreed location. The interview will be done verbally using an interview guide and recorded both on paper and on voice recorder.

RISKS AND DISCOMFORTS

During the interview, you may be asked sensitive questions on menstrual cycle and sexual activity which may make you uncomfortable. You will also be asked questions on previous pregnancies and their outcomes which may bring some unpleasant memories.

BENEFITS AND/OR COMPENSATION

There are no payments that will be made to the participants. However, the outcome of the study is likely to benefit women by contributing knowledge that will help towards reducing maternal morbidity and mortality.

CONFIDENTIALITY

Any information provided by the participant, including personal information and ideas, will be kept confidential. Your names will not be used. Only the research team will have access to handling data obtained from the participants.

VOLUNTARY PARTICIPATION

Your participation in this study is voluntary. You are free to refuse to participate in the study. The care you receive at the health facilities will not be in any way affected if you decide not to participate in the study. If you chose to participate, you are free to withdraw at any stage of the study.

HANDLING RESEARCH RELATED INJURIES/ ENQUIRIES

If you have any questions about the study contact:

Dr Mareko Ramotsababa, Letsholathebe II Memorial hospital, Phone number 6879000.

If you have any other questions about the study, your rights or feel harmed by the study, contact:

Office of Research and Development, University of Botswana, Phone 355 2900. Email: Research@mopipi.ub.bw

AUTHORIZATION

I……..acknowledge receiving adequate explanation about the study and my rights. I voluntarily chose to participate in the study.

_____	_____
Participant or Representative	Date
_____	_____
Relationship to the Participant	Date
_____	_____
Researcher	Date

Telephone: (267) 363200
FAX (267) 353100
TELEGRAMS: RABONGAKA
TELEX: 2818 CARE BD

MINISTRY OF HEALTH
PRIVATE BAG 0038
GABORONE

REPUBLIC OF BOTSWANA

REFERENCE NO: PPME 13/18/1 VIII (467) 14 May 2014

Health Research and Development Division
Notification of IRB Review: New Application

Mr Mareko Ramotsababa
P.O. Box 12
Maun

Dear Mr Ramotsababa

PERMIT: REASONS FOR LATE PRESENTATION OF PREGNANT PATIENTS WITH PREVIOUS CAESAREAN SECTION DELIVERY AT LETSHOLATHEBE II MEMORIAL HOSPITAL IN MAUN

Your application for a research permit for the above stated research protocol refers. We note that your proposal has been reviewed and approved by University of Botswana Research Ethics Committee.

Permission is therefore granted to conduct the above mentioned study. This approval is valid for a period of 1 year effective 14 May 2014

This permit does not however give you authority to collect data from the selected sites without prior approval from the management. Consent from the identified individuals should be obtained at all times.

The research should be conducted as outlined in the approved proposal. Any changes to the approved proposal must be submitted to the Health Research and Development Division in the Ministry of Health for consideration and approval.

Furthermore, you are requested to submit at least one hardcopy and an electronic copy of the report to the Health Research, Ministry of Health within 3 months of completion of the study. Approval is for academic fulfillment only. Copies should also be submitted to all other relevant authorities.

Yours sincerely

P. Khulumani
For Permanent Secretary

MINISTRY OF HEALTH RESEARCH DIVISION
2014 -05- 14
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