

Factors Influencing Women's Choice of Place of Delivery in Rural Malawi-An explorative study

Line Seljeskog,¹ Johanne Sundby² and Jane Chimango³

ABSTRACT

This explorative study was conducted in the Mangochi area in Malawi with the aim of investigating the individual, community and health facility level factors influencing women's choice of place of delivery. In depth interviews and non-participating observation were the methods used. Three major issues were revealed. First, sub optimal quality of care including communication, attitudes and cooperation within the health care system was identified as a main factor. Secondly, cultural aspects such as influence from decision makers, perceptions of danger signs and traditional views on pregnancy and delivery were important. Finally, an unsatisfactory availability to skilled delivery care in terms of distance, transport and costs was shown. We conclude that the barriers to use of professional obstetric care in Malawi partly can be attributed to the health care system itself, and that a more individualized maternity care is needed. (*Afr J Reprod Health* 2006; 10[3]:66-75)

RÉSUMÉ

Effets du cancer du sein et de la mammectomie sur l'activité fibrinolytique chez les femmes africaines. L'activité fibrinolytique du sang réduite (AF) a été postulée dans le cancer. Il faut bien savoir si c'est le cas chez les Africains atteints du cancer du sein. On reconnaît chez les Africains une fibrinolyse exaltée. Cette étude a été menée pour évaluer l'effet du cancer du sein sur l'activité fibrinolytique et l'effet de la mammectomie sur la fibrinolyse chez les femmes africaines. Soixante femmes atteintes du cancer du sein et qui sont âgées de 25 – 45 ans dont les cas ont été confirmés histopathologiquement ont été comparées à cinquante femmes de mêmes âges qui n'étaient pas atteintes, servant des cas témoin. Le niveau du fibrinogène du plasma et le temps de lyse engloblines (TLE) ont été calculés chez les patientes atteintes du cancer du sein et chez les femmes témoin. Les femmes atteintes du cancer du sein ont eu des niveaux élevés du fibrinogène et du temps de lyse engloblines ($P < 0,001$) par rapport au groupe témoin. Il y a eu une différence moyenne importante entre la pre et la post mammectomie du fibrinogène et des valeurs du temps de lyse ($p < 0,05$). Au cours des semaines étudiées respectivement, nous avons remarqué une baisse significative progressive dans les niveaux du fibrinogène et dans les valeurs du temps de lyse ($p < 0,05$). Les femmes africaines qui sont atteintes du cancer du sein ont une dépuración de la fibrine qui les dispose à la diathèse thrombotique et une mammectomie précoce peut être salutaire. Nous suggérons que les éléments fibrinolytiques peuvent être un indice pronostique pour le cancer du sein. (*Rev Afr Santé Reprod* 2006; 10[3]:66-75)

KEY WORDS: *Maternal health Quality of care Place of delivery*

¹Medical student, University of Oslo, Norway. E-mail: line_seljeskog@hotmail.com. Private address: Trudvangveien 21, 0363 Oslo, Norway. ²MD, PhD, Professor, Section for International Health, University of Oslo. Section for International Health, University of Oslo, Post box 1130 Blindern, 0318 Oslo, Norway. E-mail: johanne.sundby@medisin.uio.no

³Community and Mental Health Nursing Departement, Kamuzu College of Nursing, University of Malawi.

Introduction

Annually, more than 500,000 maternal deaths occur worldwide, the majority equally divided between Africa and Asia.¹ Less than 1% of the pregnancy-related deaths occur in the more developed parts of the world, making maternal mortality the health indicator showing the greatest disparity between developing and developed countries.² Despite the enhanced focus and awareness over the past decades, the situation in the poorest countries has not improved, and maternal mortality reduction is one of the explicit health millennium development goals.³

In Malawi, estimates of the maternal mortality ratio suggests that it has actually increased over the past years, and considerably so, from 620 per 100,000 live births in 1992 to almost 1,120 in 2000.⁴ The lifetime risk of maternal death is 1 in 7, which contrasts to the world average at 1 in 74 and especially to the lifetime risk in industrial countries at 1 in 4,085.1 Even though the accuracy of the numbers is uncertain, the difference is striking.

Access to professional health care during delivery is considered to be critical for maternal mortality reduction. According to Butti-Åns, Marchal and De Brouwere,⁵ the rationale for this is grounded in three observations. First, early identification and proper management of obstetric complications is fundamental for life saving. The majority of deaths occur during delivery. Moreover, the antenatal screening has such a low predictive value of identifying risk cases, that the presence of a skilled attendant at delivery more likely reduces mortality. Secondly, the common factor among countries managing to reduce pregnancy-related deaths has been the presence of skilled providers attending most of the deliveries. Finally, ineffectiveness of training traditional birth attendants has drawn attention towards training of professional personnel. The proportion of births conducted by a skilled attendant has become an indicator for monitoring progress towards reduction of maternal mortality.⁶

In Malawi, the antenatal care coverage is almost complete (>95%). However, this high attendance does not translate into high institutional delivery rates, with only 41% of the deliveries conducted by trained personnel nationally.⁷ This gap between antenatal care attendance and clinic-based deliveries suggests that there are factors influencing women not to return to the health facilities at the time of delivery, despite information and knowledge about the capacity of skilled personnel to conduct deliveries and identify high-risk pregnancies and referral cases. A need for qualitative explanatory factors for this led to the study question.

The aim for this explorative study was to identify a variety of individual, community and health facility level factors that may be influencing choice of place of delivery in rural Malawi. It was carried out in the Mangochi district in October to December 2004.

Materials and Methods

Study area/setting

Malawi is situated in south eastern Africa and has a total population of 11 million people. This study was conducted in the Mangochi-Lungwena area at the southern shore of Lake Malawi. The Mangochi district has a population of approximately 600,000 and is served by 29 primary health facilities and one district hospital. The district is rural and the people are poor, relying on farming and fishing. Lungwena is one part within the Mangochi district of 26 villages, with approximately 17,000 people. Most of the inhabitants in the southern part of the country are Muslim, and the predominant ethnic group is the Yao tribe.

Mangochi District Hospital is a governmental driven referral hospital, which have a maternity unit with trained midwives and one doctor that supervises the whole hospital. Obstetric emergencies, like caesarean sections, are managed by Medical Officers. In the middle of Lungwena, there is a health centre situated approximately 32

km from the district hospital.⁸ There are also two private mission hospitals in the Lungwena area. Most of the villages are served by trained traditional birth attendants, and also by traditional healers.

Data collection

Data were collected at Mangochi District Hospital, Lungwena Health Centre and in two villages located eight and one kilometre from the health centre, respectively. Qualitative data collection methods were used. Semi-structured in-depth interviews were conducted with six women that had delivered recently, three of them at home and three at hospital or health centre. They were selected either from the postnatal ward or when attending postnatal check-up on a randomly chosen day during the study period. Two health workers and two traditional birth attendants were included as key informants.

Written signature or oral consent witnessed and signed by a third party was obtained. A semi-structured interview guide was employed. The interview focused on a) the women's experiences of and preferences for delivery care and their ideas about barriers to use of professional obstetric care; b) their perceptions and interpretations of danger signs during pregnancy; and c) influencing factors and decision makers in the family and local community.

During the interviews with health workers and traditional birth attendants their ideas of the same issues were probed. An interpreter was used whenever necessary.

In addition to the interviews, non-participating informed observations were conducted, where one of the researchers, with known medical background, observed without taking part in the delivery or antenatal services performed. This took place at the delivery ward, antenatal clinic and postnatal check up at Mangochi District Hospital, and also during antenatal care at Lungwena Health Centre at several randomly chosen points of time. The three authors also participated in focus

group discussions on this theme in a few villages. (Conducted in Yao language)

Analysis

All of the interviews were tape recorded and transcribed in full. The transcriptions were analysed in an open way using content analysis, where the narrative qualitative information and the observations were organized and integrated according to emerging themes and concepts.

Ethical approval

The College of Medicine Research and Ethics Committee (COMREC) in Malawi approved the study.

Limitations

The translation may have introduced biases. An additional independent interpreter controlled parts of the recordings/transcripts to prevent this effect. A small number of study participants may not give a representative picture. Still, the information gathered from the different sources showed convincing consistency. The medical background of interviewer and interpreter may have influenced answers towards a more positive attitude to modern medicine. The observations were done from an outsider's point of view, with preferences for modern western medicine.

Findings and Discussion

The analysis identified that the most important factors influencing women in the study area's choice of place of delivery fall into the following categories: (1) Quality of care, (2) Cultural factors and (3) Availability.

1. Quality of care

Perhaps surprisingly, many of the findings in this study could in some way or another be associated with different aspects of sub optimal care, and therefore to a large extent be attributed to the health care system itself.

(a) Communication and attitudes

Health education and information given

In this study, the focus was on the women themselves, to reveal their (expressed) reasons for their choices. However, the role of antenatal care (ANC) in educating and advising women is evident. Therefore, some questions about antenatal care were included.

All of the women involved had attended antenatal care during all their pregnancies, like the great majority of pregnant women in Malawi do. The reasons given for attending antenatal care were that they wanted to know the growth and progress of the pregnancy, to obtain drugs and immunisations, to know if everything was normal, and to have any problems diagnosed and treated. (One woman also mentioned that attending ANC would give her a good delivery, and would prevent her from delivering before term.)

Unexpectedly, attending antenatal clinics two or more different places was not unusual, presumably driven by fear of refusal if they did not have "the right" ANC-card/ "ticket". (Different types of care providers (privates, NGO, government) issue different cards.) Some of the women seemed to believe that they for instance needed one "ticket" from the health centre, if that was where they intended to deliver, one from the traditional birth attendant (TBA), and one from the referral hospital, just in case.

The examinations done during ANC were also observed, and the general impression was that very little time was used on each patient. One nurse on duty often performed the head-to-toe examination on all the pregnant women, and there might be more than 70 patients a day, with little time left for individual health education or counselling.

Important issues raised by other researchers are the function, value and quality of antenatal care (ANC).⁹ Is its contribution in educating pregnant women worth the costs, and most importantly, is it capable of recognising those

women at risk, and through that strategy reduce the maternal mortality and morbidity?

In general, pregnant women in Malawi tend to come too late for the first visit, with only 9% attending during the first trimester. Furthermore, on average the women only attend antenatal clinics three times,⁷ while the recommended number for uncomplicated pregnancies is a minimum of four.

Central in this context is the health workers role in advising the women on where to deliver. Were they encouraged to deliver at the hospital? Some of the women held that nobody had talked to them about plans for delivery. One of the health workers narrated:

"We encourage them to come to the hospital, but if they want to go to the TBA (traditional birth attendant) it's up to them, (...) all of them cannot deliver at hospital"

The reason for this being lack of space, and in that case a problem joining the long line of equipment and facility scarcities in this poor country.

It is important to question how the rumours of the possibility of refusal for not having the right "ticket" have been generated. Is it just gossip built on misunderstandings, uncertainty and fear of unfamiliar environment, or is there some truth in them, after all? At some level, at least there is a communication problem. Another interesting point here is whether the ANC attendance might be overestimated, if this is a widespread phenomenon.

Client-provider interaction

Approximately 4000 deliveries are conducted at Mangochi District Hospital every year, an average of ten deliveries a day. There were a total number of 80 beds for maternity admissions. The labour ward consisted of one room with seven beds. Nine nurses/midwives and two Clinical Officers were employed at this ward, with three nurses working the day shift and two during the night.

Privacy was difficult to achieve in the delivery room. Some of the beds did not have curtains,

and many people had access to the ward. The women in labour waiting for a bed sat on the floor. With only one fan working, the heat was a constant issue.

Sterile delivery packs were present, but they lacked pairs of scissors, so the women had to bring razorblades from home for cutting of the cord. They also had to bring towels and blankets for the newborn and black plastic sheets for themselves. Some infection prevention measures were taken, like the use of gloves, decontamination of beds etc, and plastic bins for different kinds of waste stood by the beds. The hand washing, however, was not always a routine. Some of the health workers wore casual clothing, which might be a matter of confusion, the ward being so busy.

Generally, the staff at the ward talked very little to the patients. Some of the women in labour had to wait very long for examination. They were often left more or less to themselves. Some even delivered without any assistance, supervision or attention at all.

Deaths of newborns occurred, which could have been avoided. For instance, one infant died because the cord was not clamped well, and nobody looked after him for a very long time, until the blood loss was too significant and it was too late. Results that had not been measured were put in the records, without caring for the accuracy of information.

The health workers themselves on the other hand, felt that the patients did not understand the pressure on them, and that they were expecting too much:

“Sometimes they're saying that they are not well cared at the labour ward (...). What happens there is that one nurse is looking after five women in labour. (...) She has to run up and down to look after others. But these women, they need someone to be there, just to sit there by them, (...) and that can't happen.”

Although some complaints were put forward, not many of the women interviewed complained about the treatment they had received, at least

not in direct words. But some of them made expressions like preferring to be assisted by a male nurse,

- “Because he is better and kinder than a female nurse”

indicating that their experiences at least with female nurses, were not entirely positive.

The reasons for this lack of criticism may be several. The easiest assumption is that they actually were satisfied. However, the fact that so many decide to deliver at home and the observations made added to this, speaks against that theory. Other possible explanations for not complaining are fear of reprimands, loyalty towards the authorities or simply that they never have known any other reality; their expectations were low.

Most of the people living in this area are very poor, and the socio-economic gap between the well-educated health workers and the patients was naturally prominent. That is complicating the communication, because of different perceptions and interpretations of important matters. This challenge becomes a problem when differences turn into distance and disregard. The poor conditions observed at the labour ward turned out to be among the most important findings in this study, illustrating a main challenge for the health care system in Malawi.

A woman's general impression of pregnancy and labour is to a large extent influenced by her experiences in the delivery situation.¹⁰ A woman in labour is vulnerable and in pain, sometimes also at considerable risk. Still, her needs are for a number of reasons not always met the way they optimally could have been, even in the institutions intended to do so. The reasons for the increase in maternal mortality in Malawi over the past decade can be attributed not only to the impact of the AIDS epidemic but also to substandard obstetric care in hospitals, the latter being associated with half of the maternal deaths in the Southern region of the country.¹¹

Women's delay in medical care seeking or non-compliance with referral care instructions is

presumably partly a result of previous negative experience with the health care system.¹² Along with distance and lack of money, rudeness of health workers was in Malawi Obstetric Quality of Care Assessment¹³ found to be one of the major constraints to accessing maternal health services.

Nevertheless, the reality is, that the health workers are well educated and have resources that are way beyond what the poor pregnant women can ever expect to achieve. But they may have other aspirations for their life than what is currently available, and may use their relative indifference as a coping mechanism for fatigue and helplessness in the real situation in which they work with little supervision, poor feedback, and few prospects for any improvement in the near future. The Malawi Obstetric Quality of Care Assessment found that 60% of the health workers in the country were unsatisfied with their salaries, accommodation or other aspects of their working conditions.

Cooperation within the health care system

The TBAs are conducting a considerable part of the deliveries in the district (33%).⁷ However, the professional health workers did not seem to have a lot of trust in them: "She (the TBA) is maybe trained, but she does things as if she doesn't have any knowledge about the deliveries."

In the villages, on the other hand, the TBAs gave the impression of being prominent and trusted ("People know me as a TBA, and they know I can assist them"). They also seemed to have quite a lot of power, for instance through involving the husbands of their clients in their work.

The TBAs interviewed were trained, and knew well that they were supposed to refer clients when facing problems. According to the health workers though, this was not always the practice. The TBAs, in contrast, told stories about not being met at the health centre when searching advice.

Whoever is right and wrong, the role of the TBAs and the value of training them is disputed,¹⁴ especially because there are some things they

simply cannot do, like handling postpartum hemorrhage or instrumental delivery.

Not only the communication between the TBAs in the villages and the health facilities, but also between district and referral hospital, was sometimes substandard. This was due to unreliable wireless messages, lack of transport, bad road conditions and so on. Seeking care at a facility that cannot provide the required care thus delays the medical intervention rather than being able to assist the women in getting optimal treatment quickly.¹⁵

(b) Facilities, staff and equipment

As one woman explained; "I went to (...) health centre, and the health worker was not there..." lack of staff is a significant problem. At the district hospital in Mangochi there was only one medical doctor, who additionally was the District Health Officer and had a lot of administrative duties. Medical Assistants and Clinical Officers were doing most of the work traditionally done by medical doctors, trying to meet the overwhelming needs. Although more nurses than doctors, also these were too few and overloaded with work.

Doctors at district level working as administrators instead of doing clinical work, is a well-known problem all over the country, causing a negative effect on the delivery of obstetric and other services.¹³

The facilities were not satisfactory and the lack of different kinds of equipment prominent. Shortage of drugs was common. Even the most basic, like iron-supplements, were often out of stock, which naturally is a problem in a country where 50% of the pregnant women suffer from anaemia.⁹

This situation with overwhelming workload and equipment scarcities leads to frustration, fatigue, sub optimal quality of care and unsatisfied patients.

2. Cultural factors

Cultural factors are essential for health care-seeking behaviour in all communities. In this study,

especially the influence from decision-makers, perception of danger signs and traditional views on pregnancy and motherhood were found to be influential on the choice of place of delivery.

(a) Influence from decision-makers

Most of the women narrated that if they could choose, they would prefer to deliver in a health institution assisted by a professionally skilled person. Reasons given for choosing to deliver at health facilities, were almost the same as for attending antenatal care, namely solving of problems, or as a safety measure to ensure a positive outcome.

Nevertheless, this decision was not simply their own, and the influence from other members of the household seemed strong. Especially older women in the family like mothers, grandmothers and mothers-in-law, but also the husband, were mentioned as decision-makers. When it came to those influenced by family to deliver at home, reasons revealed were that the family needed to observe the labour and to be in charge. If someone from the family did not witness the delivery, they might reject the child: *"If a woman delivers at hospital, the husband says: -that's not my baby."*

(b) Perceptions of danger signs

The most often mentioned predictors for adverse pregnancy outcome in this study, were bleeding, fever/malaria (the same word in the local language), oedema ("swollen feet and body") and vomiting.

The women's perceptions of some medically defined risk factors were also probed for. For instance, older multigravidas were perceived as weak; they might bleed and even die. The problem with many, and not very well cared for, children at home was also brought up. The very young and primigravida was also seen as at risk of dying, and so was the baby. Becoming ill in other ways might be the onsequence of such deliveries. The association between fever and mosquito bites was well known, so was the

importance of sleeping under mosquito nets for pregnant women. They were also familiar with the connection between anaemia ("lack of blood") and diet. Many of the other symptoms such as swollen feet, general pains, dizziness and headache were seen as a consequence of "lack of blood". However, controversy existed around the preferable treatment.

Expert-defined risk factors are in other studies found to have little influence on a woman's decision to seek hospital care, due to different perceptions and interpretations of danger signs.¹⁶ The importance of this for pregnant women's health care seeking behaviour in Malawi is a vital issue that needs further investigation. Certainly, it is essential to keep in mind in future evaluation and implementation of maternity care.

(c) Traditional views on delivery and motherhood

In pregnancy, delivery and motherhood matters it was the older women in the community; like mothers, grandmothers and mothers-in-law, who were trusted and perceived knowledgeable, and their advices were listened to. One of the nurses narrated: *"The grandmother, she just tells the granddaughter: - don't worry, deliver here so that I can take care of you. So the girl listens more to the grandmother than she remembers what was said at the clinic."*

Fear of having an operation was mentioned as reason for not going for a hospital delivery. Caesarean sections were in general considered as negative because *"a women is born to deliver vaginally."* It was also mentioned that it was dangerous and that the reason for having an operation was being lazy. In addition, *"those who have an operation, they get fluids and blood which is a threat to our culture."* The longer hospital stay was a problem because of time costs.

The attendance for postnatal check up in Malawi is even lower than the hospital deliveries. (24%)⁷ Instead the women preferred to *"take herbs at home,"* according to one of the interviewees. If

nothing was wrong with neither mother nor child, they did not see the point of coming to the clinic. Pregnancy and motherhood is in many cultures perceived to be a natural phenomenon, not requiring intervention unless something is clearly wrong.¹⁷

3. Availability

With half of the people in this area living more than 5 km from the nearest hospital, access to health care is sub-optimal. In addition to distance, financial and time costs were reducing the availability of maternity health services.

(a) Distance and transport

As expected, distance and transport were considered as major constraints by the interviewees. One of the health workers explained:

"Most of the women, they stay very far from the hospital. Some places there are no labour transport, matolas (pick-ups), no buses... they use bicycles, so it's a problem when the mother starts the labour there (...) That's why most of the women just deliver at the TBAs. They can't reach the hospital."

Not only the lack of infrastructure and means of transportation, but also the considerable travelling time was given as reason for not reaching hospital. ("*Some have a quick labour, so that they cannot walk to a hospital.*") In the rainy season, the road conditions are even worse, and at any time of year it is difficult and dangerous to travel by night.

One of the interviewees had been moving around a bit, and whenever living near the hospital she chose to deliver there. While living far from the hospital, she delivered at the TBA's. Having tried both these alternatives more than once (5 deliveries), she preferred delivering at home assisted by a TBA, because in addition to being near, she found her skilled and to conduct the delivery better. But proximity was the most important matter.

In rural Malawi, assistance at delivery by a trained health worker is found to be less likely as

the distance to the health facility increases.¹⁸ Distance is also by other researchers found to be one of the most important determinants, in the decision of not seeking modern health care even when needed.⁹

(b) Financial costs

Lack of money was given as reason for not using the health facilities in an area served by a private, mission based health organization. No money may also be a problem in reaching free maternity care, for example due to transportation costs. And even the governmental driven hospitals expected the women to bring certain equipment as mentioned earlier (razor blades, plastic sheet, blankets). In addition, unofficial costs may perhaps be an issue. Many of the TBAs charge a little fee too, so although contributing, financial costs are probably seldom the only factor that influence place of delivery.

Kowalewski et al¹⁹ found that even though cash payment for the services may be an acute barrier to use of maternity care, in cases where the family considers hospital treatment necessary, efforts are made to cover the costs, and the majority finds the means to afford the admission.

(c) Time costs

With time costs are meant opportunity costs of foregone wages, time spent on travel, waiting and treatment and time spent by caretaker! accompanying person.

For some of the women, being away from home for several days was a major concern. Who was going to take care of their duties at home? Who was going to look after their other children?

Other researchers¹⁹ have concluded that time costs are constantly higher than financial costs.

Conclusions

As Kowalewski et al,² we conclude that the barriers to reaching professional delivery care go far beyond distance and costs. Moreover, they can at least partly, be attributed to the health care

system itself. Furthermore, the sub optimal quality of care observed, is not only caused by lack of staff, equipment and drugs. In addition to the long-term needs for general poverty reduction, infrastructure improvements, more educated personnel and better facilities and equipment, this study shows that other kinds of obstacles are equally important and need to be emphasised: An enhanced awareness of the rural pregnant women's psychological vulnerability and insecurity is necessary, and better education and training of health workers in interpersonal skills and attitudes is required.

Different perceptions and interpretations of danger signs during pregnancy amongst health personnel and the local community and traditional views on pregnancy and motherhood, are important cultural factors influencing health care-seeking behaviour that must be kept in mind and made a subject of further research. Allowing a family member or a friend of the woman to accompany her during labour might be a possible intervention, to overcome the cultural need of the family to observe the delivery, as well as reducing the barrier of unfamiliar environment that may cause timidity and anxiety.

It would probably be valuable for increasing not only knowledge but also trust, to spend a few more minutes than is currently done on each patient during ANC. The time was often too scarce for appropriate counselling, health education and discussion of plans for delivery.

Influence from decision-makers was also found to be an important obstacle for institutional deliveries. If one wants other decisions to be made, maybe involving the decision-makers like the TBAs do is an option? When possible, letting the husband or a family member participate in parts of the antenatal health education and counselling, might perhaps be an intervention worth exploring.

Even though this explorative study has revealed areas that need further investigation, it is plausible to draw some conclusion from the

findings. In rural Malawi, a more individualised professional maternity care is needed, that takes into account the particular woman's needs, preferences and insecurity, and that meets her as the service-minded institution it is meant to be.

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