Maternal care and mortality
– measuring quality and access in Babati

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Abstract

This thesis studies women’s experience of maternal care in Babati, Tanzania and possible reason for Tanzania’s high level of maternal mortality. Globally, every year more than 500,000 women die during pregnancy or deliveries, and 90 percent of these deaths occur in Africa and Asia. The deaths are often of the preventable kind. The purpose is to investigate what makes the maternal care result in high mortality and if under registration of deaths could affect it somehow. The study’s empirical part is conducted through a fieldwork in Babati during the spring semester in 2009 where mothers and health personnel were interviewed. The interviews consisted of semi-structured one on one and group sessions. The interviewed mothers were satisfied with the care received and stated that both accessibility and availability of maternal care was good. One of the possible solutions to the high ratio of maternal mortality is that Tanzanian women visit antenatal services later than recommended and that the access to emergency obstetric care is not always good. Further, it is likely that underregistration of maternal death is present in Tanzania, an issue that must be dealt with in order to receive accurate statistics and by that enable interventions targeted into lowering the maternal mortality.

Keywords: maternal mortality, underregistration, urban, rural, quality
List of abbreviations

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<tr>
<td>WHO</td>
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<td>ANC</td>
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Definitions

Maternal mortality
The International Classification of Diseases (ICD-10) defines maternal death as

“the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes” \(^1\).

Maternal mortality ratio (per 100,000 live births)
According to WHO maternal mortality ratio is the number of maternal deaths during a given period of time per 100,000 live births during the same time period. This expresses the risk of death associated with each pregnancy. \(^2\)

Maternal mortality rate
The maternal mortality rate is the number of maternal deaths in a given period per 100,000 women in fertile age during the same time period. This expresses the frequency of women exposed to risk through fertility. \(^3\)

Lifetime risk of maternal death
Lifetime risk of maternal death takes into account both the probability of becoming pregnant and dying as a result of that pregnancy cumulated across a woman’s reproductive years. \(^4\)

Maternal health
According to WHO:

"Maternal health refers to the health of women during pregnancy, childbirth and the postpartum period" \(^5\).

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\(^2\) Ibid.

\(^3\) Ibid.

\(^4\) World Health Organization., *Reduction of maternal mortality*, 1999

1. Introduction

Every year more than 500,000 women die during pregnancy or delivery, and 90 percent of these deaths occur in Africa and Asia. A majority of these women die from severe bleeding, infections, eclampsia, obstructed labour and from consequences of unsafe abortions and a majority of all these causes are preventable. Maternal mortality is the leading cause of death for 15-19 years and adolescent girls in developing countries. 6

The complicatedness of measuring maternal mortality has for a long time hindered effective interventions. The World Health Organisation, The United Nations Children's Fund(UNICEF) and United Nation Population Fund(UNFPA) has developed a framework for estimating maternal mortality that generates both data for countries with no data and for correcting already available data for underreporting and misclassification. The uncertainty of the available data makes cross-country comparisons complicated when different strategies of data collection are used in different countries. 7

The fifth millennium development goal is to improve maternal health, with the first target to reduce maternal mortality ratio by three-quarters. At a global level maternal mortality has decreased with more than 1 percent between 1990-2005 however the reduction in sub-Saharan Africa was nominal. According to the United Nations, a skilled health worker assisting in delivery, with accurate equipment and a working referral system is of the greatest importance of reducing maternal deaths. 8

UNICEF states that when educating girls for six years or more drastically improves their prenatal care postnatal care and childbirth survival rates. Reducing maternal mortality is not just an issue of development, but an issue of human rights, as preventable maternal mortality often represents a violation of a woman’s right to life.

In this thesis the terms of access, availability and quality of care are often used. Access is defined and operationalized as the approachability to maternal care, availability as how mothers find the care applicable to there own needs, and quality of care as how mothers experience the care received.

1.1 Maternal health in Tanzania

Over the last decade some African nations have seen major progress in reducing child deaths, and Tanzania has shown a great reduction in infant and under five mortality rates. Although the overall positive health trends in Tanzania, there is no indication that of any improvement in maternal mortality since the early 1990’s. The national reproductive health strategy 2005-2010 states that the general objective of maternal health is

"to provide comprehensive, integrated services that are of good quality, equitable, accessible affordable and appropriate to the need of individuals, families and community".

The governments’ national roadmap strategic plan to accelerate reduction of maternal and new-born deaths in Tanzania (2006-2010) provides a focus with emphasis on expanding skills, attendance at birth and increasing availability of emergency obstetric services.

9 United Nations Children’s Fund., MDG’s- Improve maternal health, 2009


12 Ibid

13 Ibid
The Tanzanian healthcare system works at several levels and maternal health services is provided at each level. At the lowest level, dispensaries provide Antenatal Care (ANC) and vaccinations, treat uncomplicated medical problems during pregnancy and assist in normal deliveries. On the second level, health centres provide a wider range of services and have access to technical staff. The care includes deliveries and basic emergency obstetric care but some health centres also provides surgical procedures, such as caesareans. District hospitals are at the highest level, and provide comprehensive services, such as surgical procedures. In addition, some clinics provide some maternal care services.\textsuperscript{14}

Complicated deliveries are primarily managed in hospitals and selected health centres that have skilled staff and equipment. Caesarean sections and blood transfusion services are limited to hospitals that offers delivery services. Among the facilities that offer caesarean sections, 80% have all the basic items needed, and 63% of these facilities have an anaesthetist\textsuperscript{15}.

98% of all women in Tanzania receive antenatal care and it is more likely for younger women to obtain care from more medically qualified personnel than older women. There is no significant variation in receiving antenatal care between urban and rural women. Pregnant women are advised to start attending antenatal clinics before the 20\textsuperscript{th} week of their pregnancy and with monthly check-ups until week 28 when it is recommended to visit antenatal care every two weeks. In 1999 seventy women whose last birth occurred five years before the survey made four or more antenatal visits. There is indication that the low number of antenatal visits is due to pregnant women starting antenatal care late, with the meridian month of the first visit being 5,5 months \textsuperscript{16}.

In Tanzania 44 percents of all births are delivers at a health facility of any kind, while 56 percent delivered at home. The amount of health facility delivered babies has decreased from 53% in 1991-92 to 44% in 1999. \textsuperscript{17} In Manyara region 2004-2005 65.7 per cent of women

\textsuperscript{14} Government of Tanzania., Health, 2003
\textsuperscript{15} National Bureau of Statistics & Macro International Inc., Tanzania Service Provision Assessment Survey, 2006 p: 313, 320
\textsuperscript{16} National Bureau of Statistics & Macro International Inc., Tanzania Reproductive and child health survey, 1999
\textsuperscript{17} National Bureau of Statistics & Macro International Inc., Tanzania Service Provision Assessment Survey, 2006 p: 313, 320
delivered at home. 18 It is more common for educated women to deliver in hospital facilities compared to uneducated women. First births and births by younger women are more often assisted by highly qualified personnel than older women. Deliveries by caesarean section have increased from 2 percent in 1996 to 3 percent in 1999 and in Manyara region 2004-2005 2.4 per cent were delivered by caesareans. 19. Tanzania has a high level of women visiting antenatal services, but far from all visit the ANC as many times as recommended. The above mentioned and the fact that many facilities lack basic items needed for emergency obstetric care are two instrumental factors of why Tanzania is battling with such high maternal mortality. 20 Complications of childbirth and pregnancy are among the leading causes of morbidity and mortality of Tanzanian women. The majority of these deaths are due to obstetric complications, including haemorrhage, sepsis, eclampsia and obstructed labour.

According to the Tanzania Demographic Health Survey (TDHS) there is an association between women’s status and health seeking behaviours that can correlate to empowerment. For example, the more numbers of decisions in which the women has final says, the higher percentage receives antenatal care from a health professional. The more numbers of reasons for women to refuse sex with husband, the more it is likely for her to receive postnatal care within the first two days after delivery. Finally, the women who claim that no reason for wife beating being justified, have a higher percentage of receiving deliveries attended by health professionals than other women. Access to care seems to be an issue in the Tanzanian maternal health. In the 2004-2005 Tanzania health and demographic survey a series of question concerning what problems women face when obtaining care. 40 percent of the women stated that money; 38 percent said distance to the health facility and 37 percent said having to take transport were major problems. They also reported that quality of care was associated with obtaining health, 14 per cent said that unfriendly health providers was an issue and 8% were concerned that there may not be an female provider available. Rural women, older women, divorcees, women with large families, and women that are not working for cash were more concerned with the problems of access to health care. 21

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20 Ibid
There is a lack of equipment in Tanzanian hospitals and other types of clinics. 83 percent of them have access to running water and 93 percent have access to clean gloves. No health facilities have availability of a quality delivery provider on call all day every day\(^\text{22}\).

Babati is a small city in the region of Manyara in the north-eastern part of Tanzania with approximately 30,000 inhabitants. The current maternal mortality ratio is 578 deaths per 100,000 live births and in Babati town 252 per 100,000 live births\(^\text{23}\).

### 1.2 Underestimation of maternal mortality

Studies have shown that physicians completing death certificates after a maternal death fail to report history of recent pregnancy or current pregnancy in 50 percent or more of the reported cases.\(^\text{24}\) Underestimation of maternal deaths severely undermines the problem of maternal mortality since mortality rates often are based only on maternal deaths reported on death certificates. Registration at birth also helps keeping accurate statistics over mortality changes and between 2000-2007\(^\text{25}\) a total of 8 percent of children under five in Tanzania were registered at birth according to a UNICEF survey.

A study in Maryland, USA showed that 129 maternal deaths between 1993 and 2000 were identified when multiple data sources were used to identify maternal deaths but only 80 of those (62%) were identified through case of death information obtained from the death records. More than 50 percent of the deaths were unreported.

In a French study, a total of 3045 patients who died during December 1988 to March 1989 were investigated. The study showed that although the doctors reported pregnancy/delivery-related conditions/complications on 41 death certificates, only 24 deaths were classified in the

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\(^{23}\) Data from community staff (see results)


\(^{25}\) United Nations Children's Fund., “*United republic of Tanzania Statistics*” 2004
maternal mortality category according to the International Classification of Diseases (ICD). The other 17 deaths were classified elsewhere under circulatory and respiratory diseases, which according to the medical experts committee 14 of these should have been classified as obstetric. Maternal deaths were underreported for all categories of race, age, education, marital status, parity and plurality.\textsuperscript{26}

1.3 Formulation of problem

Despite the policies and efforts the Tanzanian taken and put in to frameworks the statistics has remained stagnant. Historically, when countries Gross Domestic Product (GDP) per capita has increased, the numbers of maternal deaths has reduced. Even though the GDP per capita in Tanzania has increased since the year 2000, the maternal mortality has remained high and even increased. The quality of maternal care could be determining the outcome, for example when hospitals lack equipment or when women lack access to maternal care. The lack of keeping proper births and death records might obstruct successful governmental policy implementations, when the statistics are misleading.\textsuperscript{27}

1.4 Purpose

This thesis aims to get an understanding for Tanzanians high maternal mortality and how Tanzanian mothers have experienced maternal care. It will also study underregistration of maternal mortality.

1.4.1 Research questions

How do mothers themselves experience the quality of maternal care?
Is it possible that Babati town is underreporting maternal mortality?

\textsuperscript{27} Shiffman., Can poor countries surmount High maternal mortality?, 2000, p:274 – 280
2 Theory

In this chapter theories used to set the study in a wider perspective are presented. In this case the theories of wealth, health, empowerment and education are introduced.

2.1 The health theory

Health perceptive proponents argue that interventions such as antenatal care, family planning services, safe and legal abortion, trained medical attendants at delivery and emergency obstetric care are of highest importance in order to reduce maternal mortality. Antenatal care has the limitation that complications of pregnancy might occur among women without risk factors and can thereby not be predicted although prevented. According to UNICEF the most important intervention for safe motherhood is that skilled medical personnel attend each birth and that quality emergency obstetric care is available.  

A study that took place in Matlab, Bangladesh in 1996 disputed the results from an earlier study which claimed that the decline in maternal mortality was due to increasing presence of skilled midwives. The new study discovered that midwives frequently referred patients to hospitals were expertise and proper equipment were available. The study suggested that deliveries in hospitals with the right equipment and emergency obstetric care were available may be crucial for a decline in maternal mortality. Another study that took place in sub Saharan Africa showed that deliveries with assistance of skilled healthcare personnel and life expectancy at birth strongly correlated with maternal mortality. The study also suggested that

28 United Nations Children’s Fund,  MDG’s - Improve maternal health, 2009


30 Ibid.
GNP per capital and health expenditure per capita strongly correlated with maternal mortality.  

2.2 The wealth theory

McKewon studied mortality transition in Wales and England in the 18th and 19th centuries and suggested that mortality declines were due to improved nutritional standards achieved by improved living standards due to development in agriculture which lead to an increase in the production of food. He later argued that Sweden, France, Hungary and Ireland showed the same type of decline in mortality. The wealth perspective on maternal change presumes that changes only occur in response to socio-economic changes in society and that public health policies by themselves will not accelerate mortality transitions.  

Maternal health can correlate to national wealth for a couple of reasons;
1. Wealthier nations with households with higher income can buy better food hence have better nourished mothers. Better-nourished mothers are less likely than poorer women to suffer delivery complications.
2. The wealthier a nation is, the more resources can be allocated towards the public health system.
3. Wealthier countries have more resources available to spend on education for women, and thereby better health seeking behaviours.
4. Wealthier nations often give women higher status consequently they are offered greater concern during pregnancy and delivery.
5. Wealth is interliked with low fertility. Women in wealthier countries experiences fewer pregnancies and by that their lifetime risk of dying from maternal causes decreases.

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33 Ibid.
2.3 The empowerment theory

Proponents of the empowering perspective argue that the key to lower maternal mortality is to improve women’s status in society. It does not, like the wealth perspective presume a link between GNP and women’s status and in contrast to the health perspective it believes that maternal mortality is not just an issue of the health care system alone. This perspective argues that when the status of women improve:

1. Resources may be allocated by nation leaders as women health is more likely to be a concern for them.
2. It is more likely that their lives will be more valued by other members of the community who will be more likely to encourage women to seek care when needed.
3. The chances to get higher education increases.

With education a number of benefits follow, for example educated women practices healthier behaviours through their pregnancy and choose nutrition dense foods. They also respond to warning signs better than uneducated women do. But most importantly, they bear fewer children; which reduces their lifetime risk of dying maternal related causes. 34

2.4 The education theory

The Adult Morbidity and Mortality Project35 has since 1992 been collected data from several areas in Tanzania. The data shows that higher educational status at the community level relates strongly to lower total and maternal mortality. Differences in adult education attainment account for 51% of the observed difference in all cause mortality and 40% of the difference of the maternal mortality. Tanzania has obligatory primary school and the gross enrolment rate for primary school has increased drastically since the elimination of school fees. In 2000 57% of all children aged 7-15 were attending school and in 2006 the gross enrolment rate was 110% and the net enrolment rate 98%. 36 However educational level may

34 Shiffman., *Can poor countries surmount High maternal mortality?*, 2000, p:274 – 280
35 United States Department of Labour, *The worst forms of child labour*, 2004
p: 455
36 United States Department of Labour, *The worst forms of child labour*, 2004
reflect earning capacity and economical status as well health related behaviours and attitudes. It is possible that poorer villages have different access to maternal care and different patterns of using health facilities.
3 Method

The empirical data for this thesis was collected during a field trip to Babati, Tanzania during spring 2003. With the help of an field assistant mothers and health care workers were interviewed in Babati town, Dareda village and Bonga village.

3.1 Possible methods and choice of methods

Qualitative research is based on several different methods for collecting information, were surveys are the most important types of methods. Most survey reviews are based on correlation studies in which information of a segment of the population at a certain time is collected in order to discover to what extent different variables are correlating. Qualitative methods provided a comprehensive picture that increases the understanding of the researched subject. Qualitative methods are known for their flexibility and quantitative for their structure.

3.2 Motivation of method

A qualitative study can contribute to an increased understanding of social processes and coherence. The close-up perspective in this type of studies forms in the relationship with the informants and opens up for ideas about the social context of the informant. Due to the nature of research, the study is built on an inductive method, which means that theory is chosen after studying the results.

37 Bryman, Alan, Kvantitet och kvalitet i samhällsvetenskaplig forskning, 1997


39 Ibid.
The aim of the study and data collecting method determines what kind of interview should be used. In this study single and group interviews are used rather than in surveys because of the relatively small sample size, the different languages the women spoke, illiteracy and because of the delicate nature of the questions.\footnote{Holme, Idar Magne & Solvang Bernt Krohn., Forsknings metodik, 1997 p: 72, 76, 79, 83, 101, 105, 107}

3.3 Previous research on the subject

Previous studies have been carried out on the subjects of unmet needs for emergency obstetric care in Tanga and of maternal mortality through a community based case-study of Ilala district\footnote{Prytherch H, Massawe S, Kuelker R, Hunger C, Mtaifikolo F, Jahn A. The unmet need for emergency obstetric care in Tanga Region, 2007}.

The study “Quality Aspects of Maternal Health Care in Tanzania” used indicators of quality for maternal care in Tanzania using antenatal services in cases of anemia, emergency obstetric care and hypothermia as focus. The results showed that hospitals were unequipped, unmotivated and used wrong measurements for investigating anemia and hypothermia. The conclusion was that there is a need to deal with structural weaknesses and improve training on quality improvement.\footnote{Urassa, David Paradiso., Quality Aspects of Maternal Health Care in Tanzania, 2004 p: 2}

3.4 Sources of data

The interviews in the study are based on semi-structured interviews conducted in the villages of Babati, Dareda and Bonga. Doctors, Midwifes and other healthcare personnel were interviewed to achieve an understanding for the situation and for statistics. The healthcare personnel consisted of a midwife from Dareda Mission Hospital and one from Bonga Dispensary and one Co-ordinating Nursing Officer responsible for Reproductive and Child Health at the Bible School/Church of God in Babati. They were interviewed about resources, maternal mortality transitions and death causes.
The mothers interviewed were asked about age, education, occupation, number of children, and later about their health seeking behaviour during their pregnancies. They also described their experience of the maternal care given. All interviews with the mothers except one were held in someone’s home, were discrete discussions could be held. All respondent were granted anonymity, no recording of the interviews took place, although notes were taken.

Scientific articles were received from pubmed and google scholar with combined search words; “maternal mortality”, “Tanzania” “maternal death” “poverty”, and “mortality”. Official documents such as the “Tanzania Service Provision Assessment survey 2006” and the “Poverty and Human Development report 2007” were retrieved from the Nordic African institute library in Uppsala, but are available online as well.

3.5 Critical approach, reliability and validity

An interpreter was used during some interview situation when the subject to the informer did not speak English. In some cases when an informant spoke Iraqw, a fellow informant translated her answers into Swahili, and then the interpreter translated the answer to English. This might have had a negative effect on the interviews as the interpreter might have reinterpreted the answers. To help establish confidence for the author the respondents were all given a short summary of the purpose of the essay and of the author, and all respondents agreed on letting their names be used in the study. The sampling of the informants was made from a couple for the field assistant stated criteria and the informants that worked in hospitals and community could be assumed to have knowledge of the subject and thereby increase the informational content. The field assistant did pick the informants so they are not randomly selected but the informants are mothers of different ages, have various educational background, come from areas and different occupations, indicates that the study is reliable. Unaware subjectivity and reinterpretations could affect the validity of the study by the author.

A close relationship established between informant and author can give fuel to predefined expectations and there is a possibility that informants answer questions based on what they believe the author envisage. In qualitative studies the informants must be seen as subjects, and the subjects themselves can contribute to control the dependability of the information, that the author has as a task to reproduce. The role of the author is mainly to be objective and a good listener. The interviews were made with question manuals, which is not that common in qualitative research, not to control the interview but rather to collect comparable information. The process of qualitative research is always based on values and educational background together with and preconceived ideas and prejudices. If the author acknowledges this he or she is one step closer to objectivity.\footnote{Holme, Idar Magne & Solvang Bernt Krohn., Forsknings metodik, 1997 p: 72, 76, 79, 83, 101, 105, 107}

Group interviews differs from regular respondent and informant interviews in the aspect of the social dimension with all the mechanisms and factors it implies. In this type of discussion interviews perspectives and opinions can be formulated in the social interaction by peer pressure and mutual influence. This could have influenced the informants in the way of not feeling confident with sharing their personal patient history or suite their answers to the other informants.\footnote{Ibid} Qualitative methods aims to capture specific factors among the specific subject and the subjects life situation therefore, the focal point of the research is limited to the source of the information. Limitations of time and monetary resources force this study to focus on a small number of informants and thereby a small amount of information.\footnote{Ibid} The study can therefore be argued to be unvalid from a scientific point of view, when generalisation cannot be made for all mothers in Tanzania or even Babati.

The literature consists of medical journals, reports from WHO & UNICEF, and reports provided by the government of Tanzania. The latter could be argued to not exclude data in order to make a more presentable impression, however many of these reports are co-written with USAID, and by that they could be argued to be accurate and valid.

\footnote{Ibid}
\footnote{Ibid}
4 Results

In this chapter the empirics will be presented through a short summary followed by a summary of the results. The empirics are divided into two parts, first the women will be presented and then the health care staff.

4.1 Mothers in Babati and Dareda

The Mrare hospital is located in Babati town; dispensaries and clinics are providing services in the areas nearby. Dareda has one dispensary placed in centre of town and the Anglo-catholic Dareda Misson hospital, located approximately 7 km from Dareda. The informants, both rural and urban experienced the care received as either “ok” or “good”. It seems quite common to visit ANC during pregnancy. All informants did it, however the result of the interviews do not show if they visited ANC for every pregnancy or in within which week they did their first visit. All informants delivered at least one child at a health centre, and stated that it is common to deliver the firstborn at a hospital and the following children at home with or without help from skilled medical personnel. No difference in health seeking behaviour was to be seen between the respondents with primary or secondary education. Some of the urban informants had closer to the dispensary but chose to visit the district hospital because it was perceived as providing higher quality of care. However these informants were the only ones that experienced the quality of care as “ok” instead of “good”.  

Only one informant had to pay for consumer products, in her case examine gloves, other informants stated that the only thing they had to pay for was accommodation if admitted and not covered by the governmental insurance.  

48 Interviewed on February 27. All further abstractions from this interview refer to this date.

49 Interviewed on February 24. All further abstractions from this interview refer to this date.
The rural women had 7 km to Dareda Mission hospital, but had access to their local dispensary when it was open. The most common forms of transportation are by bus, taxi or by walking. They weren’t too familiar with house calls; they said it could happen up to once a year. Mrare hospital has one ambulance available; however it remains unclear to which extent this is used, none of the mothers had ever heard of anyone being transported in it.50

One urban informant51 lost one of her firstborn twins during delivery. She lives in Babati with her husband and two children. Her accommodation at Mrare hospital in Babati town was paid by the government. She visited ANC services four times during the first pregnancy and several more times during her second pregnancy due to complications with the first delivery. She had problems lactating her first born, but did not receive any advice or medications, however she experienced the services as good and feel that her basic needs were met.

4.1.1 Summary

- Health seeking behaviour did not differ between respondents with primary or secondary education.
- Common ways of transportation to the hospitals were by walking, bus or taxi.
- All informants experienced the received care as good or ok.
- No one of the mothers had heard of anyone using the ambulance.
- All mothers received ANC.
- In one case, due to complications of the first delivery, the respondent visited the ANC more than four times during the second pregnancy.
- All mothers delivered at least one child at a hospital.
- The maximum distance to maternal care was 7 kilometres.
- Only one mother had to pay for consumer products.

50 Interviewed on February 28. All further abstractions from this interview refer to this date.

51 Interviewed on February 24. All further abstractions from this interview refer to this date.
4.2 Health care staff in Babati, Dareda and Bonga

The midwife interviewed at Mrare hospital in Babati Town who had worked there for over 10 years sensed that syndromes related to maternity are decreasing due to governmental policies and initiatives for example mosquito nets. Her impression was that the hospital budget has increased over ten years of time. She claims that out of 2800 deliveries at the hospital 5 deaths occurred in 2007. These deaths were due to

- Abortion
- Excessive bleeding
- Malaria
- Anaemia
- Postpartum Haemorrhage

According to the midwife in Babati, the Babati town strategy for lowering maternal mortality included first time births to be delivered at Mrare Hospital and the second, third and fourth child are deliver either at home or at the dispensary. For the fifth child they recommend the mother to deliver at Mrare. If the women are in complicated labour at home they can call for an ambulance to escort them to the hospital. 52

At Dareda mission hospital a midwife that had been working at the hospital for nearly 20 years and now working in the postnatal ward was interviewed. The interview took place in the postnatal ward; a crowded room where women shared beds and where the floor consisted of compressed red soil. She said that the maternal death causes were mainly delayed second stage of labour and immunodeficiency syndromes as a result from infections due to malaria. Hypothermia was a common syndrome among pregnant women and according to her the doctor on call has the possibility to visit women if needed in the villages. 53

At the dispensary in Bonga the midwife claims that no death due to maternity has occurred since 2006 when she started working there. Complications during pregnancy that the

52 Interview on March 3, 2009. All further abstractions from this interview refer to this date

53 Interview on February 28, 2009. Interview on March 3, 2009. All further abstractions from this interview refer to this date
dispensary cannot treat are remitted to the hospital. Patogram is used at every delivery. If defects are showing during ANC the patient is remitted to Mrare hospital. 54

The Babati town health planner was able to provide the 2008 statistics. According to Babati Town office the maternal mortality rate were 578/100,000 live births in villages and 252/100,000 live births in Babati town. The relatively low number for Babati is due to lack of data collection of the surrounding villages of Babati. According to hospital records the death causes of the 8 women who suffered complications in 2008 were due to

- Severe malaria and severe anaemia
- Severe post-partum haemorrhage
- Fat embolism
- Ruptured uterus
- Meningitis and HIV

The Babati town strategies for reducing maternal mortality included encouraging women to visit ANC within the first 16 weeks and expand the 7 mobile clinics in the region to 10. 55

4.2.1 Summary

- The mobile clinics are frequently used in rural areas but mainly focused on antenatal care and family planning.

- The Babati town strategy encourages early ANC visits and first time deliveries at hospital.

- Many of the death causes were preventable.

54 Interview on March 7, 2009. Interview on March 3, 2009. All further abstractions from this interview refer to this date

55 Interview on March 4, 2009. All further abstractions from this interview refer to this date
5 Analysis

**Quality of care, access and availability:** The interviewed mothers experience the care as rather good. The distance to the health clinics is less than 10 kilometers, indicating that help is not too far away in case of emergency. The use of ambulance for emergency obstetric care is diffuse, according to the Mrare hospital it is used frequently, but none of the mothers have heard of anyone using it. This could be a sign that the ambulance is simply used in other means or it could also be that there is a lack of skilled ambulance staff that makes the ambulance unserviceable.

However, these respondents all lived relatively close to the hospital or dispensary and can get advice or ANC within an hour distance by car, in opposite of rural women with longer distance to the hospital who have to wait for the mobile clinics to come around. There was no difference to be seen in access/availability or experienced quality of care between rural and urban women in this case, probably because both groups had a hospital, and dispensaries nearby. Even if the hospitals are available, the availability in an emergency situation is limited due to only one ambulance and other factors such as distance or monetary resources. Dispensaries do not have the equipment or personnel to work as an emergency unit, and remittance takes time, especially in settlements with poor infrastructure and limited access to hospitals. Health care is certainly available for those who live closely a hospital, dispensary or health centre. But for all mothers who live in rural settlements the availability is limited. Mobile clinics and ambulances are necessary to keep mothers healthy and alive.

**From the health perspective:** Free health care is undoubtedly a good way of reducing maternal mortality. Especially ANC and emergency obstetric care is important to ensure a safe pregnancy and delivery. This however seems to be were the system fails to reach. When almost every woman in Tanzania (98%) receives ANC, very few of them visit the hospital within recommended time.\(^{56}\) According to the interviews all mothers were involved in ANC

but none of the mothers knew exactly in what week of their pregnancy they were in at the
time for the visit. The women in Dareda only visited the ANC once per pregnancy and the
women in Babati once or twice. The women in Babati lives closer to both dispensaries and
hospitals and this could explain why they visit ANC more often. Another explanation could
be that the Babati town strategy, with increased amount of mobile clinics is awaiting
implementation. The Babati strategy to make women visit the ANC within the first 16 weeks
of pregnancy does by that not seem to successful. The follow up care is limited in Babati,
especially if mothers live far away from hospitals or dispensaries and do not posses easy
access to health care. The overall increased risks associated with caesarean increases even
more if mother and their families cannot afford the cost of 2-3 days hospitalization. Although
the care is free, the accommodation, meals and some types of consumer products are not. This
might lead to mothers rejecting care due to unexpected costs or poverty. Since emergency
obstetric care is only provided in the district hospitals, as in most countries when
complications arise at home it is crucial to immediately visit a hospital. In Dareda the
informants all said that a doctor from Dareda mission makes house calls, but that this only
occurs once a year. No information is available on whether this is due to limited availability
of resources, staff equipment, and transportation or to limited request due to traditional births.
Since no one really knows how or which purpose the ambulance really has, women must rely
on their husbands, extended family or neighbors to help escort them to the hospital. Since
Babati is a town where very few people possess a car of their own; taxi, bicycle or buss is the
most common ways of reaching the hospital. Mobile clinics are one way of increasing the
amount of women attending ANC, and The Babati health planner has taking a good initiative
of taking for grants to increase the mobile clinic pool from 7 to.

**From an empowerment perspective:** The TDHS 57 establish that there is a correlation
between women’s status and health seeking behaviour. Three informants did during their
pregnancies wish to seek care more than one time but could not. The reasons for this were that
the husband wasn’t around or that no one could take care of the children that would be left
home.

57 National Bureau of Statistics & Macro International Inc., Tanzania Demographic and Health Survey, 2004-05
From a wealth perspective: Although the GDP of Tanzania has increased over the last decade, maternal mortality has remained stagnant. Although the midwife at Mrare hospital thought that the hospital budget had increased during the last decade, and some of the respondents believed that the maternal care had improved, maternal mortality does not decrease. In relationship to the death causes, which were mostly preventable, this could have something to do with the quality of care. The hospitals might lack in skilled staff, equipment or simply not have availability to emergency units. One possibility is also that the hospital performs caesarian section without having the necessary equipment or staff for it. The midwife explained the relatively low mortality ratio in Babati was due to the access to the hospital.

From an education perspective: It did not seem to be any significant difference in educational background or urban or rural areas, and health seeking behaviour among the respondents. This contradicts the educational theory but could be a result of a successful information campaign from the government or city. Since many of the women had jobs, this could also be a result of workplace related group pressure, were women influence each others health seeking behaviours positively.

Underreporting maternal mortality: There are indications that underreporting of maternal death is common, partly because a majority of women are not assisted by a health professional in delivery, and thereby no registration of the child or eventual death of the mother is made. Since there is a very low level of registration of births and the large scale of women delivering at home, with no professional medical assistant, and a lack of flexible emergency care such as ambulances; there is a large possibility that deaths are not always registered. Since Tanzania uses the International Statistical Classification of Diseases and Related Health Problems if the death is even registered by medical personnel, there is a possibility of miscoding since the underlying cause is not always the selected in accordance with the ICD rules. For example if the mother dies because of complications from a caesarean section as the underlying reason, but is registered as death caused by severe haemorrhage, the system fails to acknowledge the true cause of death.

6 Discussion

Being that only 8 percent of children under five were registered according to a UNICEF survey\(^60\) this implies that Tanzanian births and death statistics is not accurate. The WHO sisterhood method for measuring maternal mortality\(^61\) could be a way of gathering data of maternal mortality in a reliable way. The sisterhood method for measuring maternal mortality was developed in the eighties to reduce large sample sizes and costs by asking respondents the survival of all their sisters. In addition to the lack of birth registration the many studies proving that miss registration according to the ICD’s \(^6\) is common in western countries indicates that Tanzanians maternal mortality is probable higher than what the current ratio is. Consequently correct ratios and numbers of maternal mortality are not at hand to help policies and frameworks align their interventions towards changing the mortality trends.

Interventions and aid could be directed towards an increased family planning to help avoiding unwanted pregnancies, ensuring that skilled birth attendants, i.e. doctors and midwifes assist every delivery and every other step of the way, from the first ANC visit to the post natal check-ups. However immediate access to emergency obstetric care is necessary for the effectiveness of the birth attendants\(^62\).

There clearly is good availability of hospital based maternal care in both Babati and Dareda, however the access to them in emergency situation could be argued to be better. The issue seems rather to be a lack of more flexible emergency obstetric care and that so many women choose to deliver at home. Since the care is free there is no economical aspect except the transportation and eventual meals hindering women to deliver every child at the hospital. This

\(^60\) United Nations Children's Fund, “United republic of Tanzania Statistics” 2004


\(^62\) World Health Organization, Reduction of maternal mortality, 1999
would be an expense for the government which would repay itself through lowered maternal mortality. With every delivery taking place in a hospital, the registration of both birth and deaths should increase and a holistic picture over the maternal mortality situation might develop.

It does not seem like the wealth, health, empowerment or education perspective can explain Tanzanians high maternal mortality seldom. High maternal mortality must be seen in context of all perspectives, and especially in the context of traditional births. That the Babati town strategy and midwives encourages women to deliver the firstborn at the hospital and second, third and forth child at home seriously endanger both the life of the mother but also of the child. Since the amount of hospital delivered babies has decreased with 12 percentage points from 1991-92 to 1999\textsuperscript{63} gives an indication that at home deliveries is correlated to maternal mortality.

This study has only been given a hint of how women in Babati experience maternal care. The sensible subject of some of the questions could have made some women embellished the truth. Additional questions about the information of ANC could have given a deeper understanding of the actions of these women. These recommendations can be given for further research on the subject:

- A larger sample size of women in the whole region could be interviewed for a graspler overview of how mothers with different access to maternal care experience the situation.
- The sisterhood method could be applied on a village to set in contrast to existing statistics.

\textsuperscript{63} National Bureau of Statistics & Macro International Inc., \textit{Tanzania Service Provision Assessment Survey}, 2006 p: 313, 320
The aim of this study was to investigate how mothers experienced maternal care and if underregistration of maternal mortality did occur. No significant difference in the experience of care was to be seen between urban and rural, educated or uneducated women. The empirics show that mothers experienced the receive care as good and that underreporting of maternal mortality probably do occur. The empirics have been examined through the theoretical perspectives of wealth, health and empowerment. The theoretical perspectives can probably not by them self explain why Tanzania still battles with this issue, but should rather been seen in context of them all influencing each other. The context should also include underreporting of maternal deaths that severely undermines the problem of maternal mortality.

Tanzanian women visit ANC much later then recommended this and the fact that the access to emergency obstetric care could be reasons why women die such preventable deaths. The access to emergency obstetric care is even more important when not delivering at a hospital, which many Tanzanian women do.

Throughout the process of this thesis is context of literature reviews and interviews some recommendations can be given:

- Health planners should work for every delivery to take place in a hospital.
- The importance of ANC in the beginning of a pregnancy should be promoted harder.
- Further education in coding according to ICD should be offered hospital staff.
- With improved and extended mobile clinics, women with poor access to hospitals can get family planning and ANC and reduce the risk of unwanted pregnancies and unsafe abortions.
8 References


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9 Appendix

H.W= Housewife
H.C= Health centre/hospital
Rural: transportation, taxi, motorbike, busses
Doctor makes visits once a year

Question 13 rural: for accommodation if admitted
Question 14 rural: not common, to late to visit doctor, missed service, malaria

Questions:

Footnotes:
1. Lost firstborn at delivery/ no lactation at last born
2. Caesarean
3. vacuum/ caesarean
4. no recommendation was given
5. no recommendation was given
6. no recommendation was given
7. no recommendation was given
8. no recommendation was given
9. no recommendation was given
10. no recommendation was given
11. no recommendation was given
12. no recommendation was given
13. gloves