Factors and perceptions that influence women to use a Maternal Waiting Home (MWH) in Ifakara, Tanzania

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by:

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Factors and perceptions that influence women to use a Maternal Waiting Home (MWH) in Ifakara, Tanzania, is my own work.

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Abstract

Objectives: to identify factors that influence women to decide to use a maternity waiting home (MWH) in Tanzania and to identify the perceived quality of care of users and providers in order to make recommendations aimed to increase the use of the MWH by women.
Design: Exploratory study using mixed methodologies including literature review, interviews and retrospective data analysis.
Setting: maternity waiting home of the St. Francis referral Hospital in Ifakara, rural Tanzania.
Participants: interviews were conducted with 18 users and non-users of the maternity waiting home and 7 interviews with health care providers.
Findings: women who use the MWH home live mostly outside Ifakara and have often a risk factor for obstetric complications and subsequently have a greater chance of a complicated birth as determined by the birth ending in a caesarean section. Women and health workers describe risk factors and reasons for admission to a MWH differently.
Conclusion: This study supports the assumption that MWHs are an approach to reduce the barrier of distance to the health facility for women who live far from maternal health services and have risk for obstetric complications.
Women respondents (both users and non-users of the MWH) base their decision making on their perceptions of the severity of the problem in combination with the quality of care of the service.
Implications: the findings about the concerns and priorities for women to make use of a MWH should be incorporated in future research to determine the potential for bring the model to scale.

Keywords: maternal mortality, maternity waiting home, birth preparedness, accessibility to obstetric care

Word count: 249 words

List of Abbreviations and definitions

ANC	Antenatal care
CS	Caesarean section
EmOC	Emergency obstetric care
GDP	Gross national product
Gravidity	The number of pregnancies (complete or incomplete) experienced by a woman
MMR	Maternal mortality ratio
MWH	Maternity waiting home
Parity	The number of times that a women has given birth to a fetus with a gestational age of 24 weeks or more, regardless of whether the child was born alive or was stillborn
PNM	Peri-natal mortality
PP	Post partum (after the delivery)
TBA	Traditional birth attendant
TFR	Total fertility rate
SVD	Spontaneous vaginal delivery
WHO	World Health Organization

1. Introduction

Maternal (and neonatal) deaths are still a major concern worldwide. Each year globally around 287.000 women die due to complications of pregnancy and childbirth[1]. 99% of these cases occur in developing countries and sub-Saharan Africa accounts for more than half of that percentage.
The risk of dying during pregnancy for women from sub-Saharan Africa is 1 out of 39, whereas this same risk is 1 out of 3800 among mothers from developed countries[1].

Since the launch of the Millennium Development Goals (MDGs) including MDG 5, the improvement of maternal health, a general decline of global maternal deaths of 2,5% is seen except for sub-Saharan Africa[2].

The complexity of many factors related to maternal mortality makes it hard to achieve the MDG's. Over the last years a more holistic approach towards maternal and newborn health is established by strengthening health systems and to reduce poverty and economic inequality[3].

1.1 Background

The United Republic Tanzania is a low-income country with a population of almost 47 million people. The republic consists of the mainland of Tanzania and the isle Zanzibar who has a semi-autonomous status. The literacy rate in the country is 70%. The ethnic composition: 99% are African in the mainland of Tanzania whom is almost all Bantu and consisting of more than 130 tribes. Religions of the mainland are: Muslim 35%, Christian 30% and 35% indigenous beliefs. 74% of the total population lives in rural areas[4]. The gross domestic product (GDP) per capita is 1,700 dollar. About 25% of the Tanzanians were living under the poverty line in 2007. Despite the grown rate of the GDP of 6,5% is has not reduced poverty in an equitable manner, poverty remains still high among farmers what is a large group of the population[4].
Life expectancy at birth is 53 years. The total fertility rate (TFR) in Tanzania is 5.0 children per woman. The MMR dropped from 578 in 2004 to 454 per 100,000 live births in 2010[5].
Most women in Tanzania did not receive the minimum of 4 antenatal care visits as recommended by the WHO. Only 15% had their first visit before the fourth month of the pregnancy. Nearly one third did not seek care before the 6th month of the pregnancy[5].
Even though many women say that they plan to deliver at a health facility, less than half of all births in Tanzania (47%) actually take place in a facility[5].

Figure 1: Map of Tanzania[1]

Barriers for women's access to health care in Tanzania

The demographic and health survey report of Tanzania 2010 showed information regarding the problems women face in obtaining health care services. Women between 15 and 49 years old were asked what factors would be or not be a barrier in obtaining reproductive health services: money, distance to the health facility or not wanting to go alone. 36% of the women reported at least one problem. The biggest perceived barrier for women was money (24%). In addition, 19% cited distance to the health facility and 11% did not want to go alone.

About the decision making process of women in Tanzania:

Only 15% of women decided by themselves about the decision to seek health care, the majority was made by the husbands 38% and 45% jointly[5].

Morogoro district

Ifakara is located in southern Tanzania and is part of two districts Kilombero and Ulanga in the Morogoro region. It covers a rural population of about 99,000 people[6].The neonatal mortality rate (NMR) is 29.3 per 1000 live births[6]. No data about maternal mortality ratio or perinatal mortality (PNM) are available.

The demographic and health survey report from 2010 reported that in the Morogoro region 1 out of 4 women face a problem accessing health care. The number of deliveries at home and in health facilities is 38,% versus 58% [5]. The percentage of institutional deliveries in the Morogoro region is higher than the national figure (47%). It is not clear why more women deliver in facilities in this region. No differences in population composition region are found for factors possible associated with facility delivery as education of the mother or economic status[5]. One of the hypothesis could be the positive impact of the MWH on institutional deliveries in this region.

*maps around the world. [Online]. Available from: www.vidiani.com [Accessed 15 August 2013]

The Maternity Waiting Home in Ifakara
Tumaini, the MWH in Ifakara is part of the St. Francis referral Hospital which is one of the nine referral hospitals in Tanzania.
It has a capacity of 36 beds where pregnant women can await their delivery. The costs to stay at the MWH including all medical services (delivery, medical check up, consult of doctor, an ultrasound if needed) are 34.000 Tanzanian shilling (nearly 21 US dollar), no matter the duration of the stay.
The service includes a daily portion of porridge in the morning, a daily antenatal check up for all women and twice a day a check up of the foetal condition, conducted by the nurses. Doctors are consulted in case of an abnormal finding. Health education is provided daily.
Twenty meters outside the hospital is a waiting/cooking area provided by the hospital where caregivers (most of them are relatives) can stay overnight and cook for themselves and the women who are admitted. Women with obstetric risk factors (and who mostly don't living near the hospital) are advised by antenatal check up to await their delivery at the MWH.
Obstetric risk factors are defined as: *primigravidity, parity more than 6*, *previous caesarean section (CS) or complicated delivery, history of stillbirth or past perinatal death*, *hypertension*, *pre-eclampsia (now or in the past)*, *anaemia* ,*post partum haemorrhage*, *non- cephalic presentation or multiple pregnancy.*

1.2 Problem statement

In Tanzania there has been a slight decline of maternal mortality compared to 2004, but at this rate MDG 5 will not be reached.
Related to the MMR is the high number of newborns who are dying due to the same complications of pregnancy and childbirth which influences achieving MDG 4.

To improve maternal mortality there are currently multiple strategies and activities to combat the problem. The complexity is because of many variables and contextual factors that influence the interventions on maternal mortality that operate at many different levels states the plausible explanation. There is evidence that facility based deliveries leads to an increase in the number of deliveries attended by a skilled health provider that subsequently has an positive impact on maternal and neonatal health outcomes[1;6-8]. Several barriers to accessing health facilities have been identified. MHW's are one approach to reduce barriers of timely access to a health facility for labour by:

a) Having women with a 'proven' risk factor for obstetric complications (either prior to or during the pregnancy) waiting close to the facility and having frequent and timely access to ANC in order to identify' complications timely and /or being admitted to the facility early in the delivery phase.

b) Having women who live far from the facility staying closer to the facility to ensure that they have general access to the service, and timely in case of complications.

Even though the Morogoro region has a relatively high facility birth rate compared to the national birth rate, the remaining non- facility users in the Morogoro region includes women who are more vulnerable for maternal health

risks; i.e. women with low educational status, higher fertility, young and first-time mothers etc)[5].
The thesis will try to identify (contextual) factors that influence women to decide to make use of a MWH. This information may be used to scale up this service in Morogoro and in turn contribute to the improvement of health of women and newborns.

1.3 Justification

Maternity Waiting Homes
The purpose of a MWH is to reduce barriers for accessing facility birth (skilled birth attendance) so that there is timely presentation to the hospital during labour/delivery or in pregnancy if complications occur. How MWHs can achieve this is by accommodating mothers with obstetric risk or those living far away. MWH's will help to increase the number of women who give birth at a facility but will also improve maternal and neonatal health outcomes and beside this, being close to a health facility will make it easier for women to access antenatal care at the facility at the end of the pregnancy.
MWH's can help to support more general maternal and neonatal health by educative counselling of nutrition, family planning, neonatal care and overall maternal health promotion[7;9].
There are also differences how women are accompanied, by traditional birth attendants, relatives or alone[9-12]. Costs of a MWH are covered in different ways: community involvement, by fund raising projects, donors, or governmental contributions[9-12].
MWH's do not require high technologies. They rely on existing (hospital) services and human resources (family, TBA's) who are often present in the community. In general they are part of a lager more comprehensive aspect of maternal health.

While there is (anecdotal) evidence about the success of MWH's in reducing maternal mortality, factors influencing the decision making process on utilization and user satisfaction are insufficiently documented.
A better understanding of these factors, and using this knowledge may help to improve maternal health services, resulting in more use of the services and better maternal and newborn health outcomes.

The MWH in Ifakara is a well-established and used facility that is part of a good functioning referral hospital serving a rural population that may be considered more vulnerable for maternal ill health. This setting provides the opportunity to identify and better understand the factors why women make or do not make use of a MWH.

Aim of the study
The aim of the study is to better understand the factors that influence women to decide to make use of a MWH in Tanzania and to identify which factors influence satisfaction with the MWH's in Ifaraka, in order to make recommendations aimed to increase the use of the MWH by women.
Women's expectations and perceptions of the care they have received will be studied for women who stayed in a MHW and those who did not make use it.

2. Objectives

The overall goal of this study is to identify factors that influence women to decide to use a MWH in Tanzania and to identify factors that make the stay pleasantly.

Specific objectives of the research:

1. To review literature about the evidence of MWH's and factors that influence health seeking behaviour.
2. To identify and describe the social cultural and other factors that contribute to the decision making process of women for using and not using the MWH in Ifakara.
3. To describe levels of satisfaction and elements women liked or didn't like with their stay at a MWH.
4. To make recommendations aimed to improve the MWH service in Ifakara and improve the use of this service in the region.

3. Methodology

3.1 Study design

This is an exploratory observational study with a mixed methodology, both qualitative and quantitative.
The retrospective quantitative data shows actual use of the MWH for a defined period. The majority of the that is qualitative, focusing on individual experiences, describing real-life situations. This is suitable for this research topic since this study explores the perception of women and their individual experiences.

The following methods are used for the study design:
1. Literature review, to answer objective 1.
2. Semi-structured interviews with women and health workers, to answer objectives 2,3,4.
3. Analysis of retrospective data of admission records to answer objectives 2 and 4.

1. Literature review:
While some evidence is found in literature about the success of MWH's in the reduction of maternal mortality, there are various studies and different models of MWH's described in the literature throughout the world.
All relevant literature with a focus specifically on MWH's in Tanzania are used as background information to develop the topic guide for the questionnaires and are considered in the analysis of the study findings.
A literature search was performed in Pubmed the search terms: "maternity waiting home", "quality of care" AND "maternity waiting home", "maternal health interventions in low resource countries" and, "the organization of obstetric services" AND "developing countries". Languages restrictions were not applied. Additional research was conducted using the VU library database. A search in Google Scholar was performed to look for national statistics of Tanzania and for additional information of maternity waiting homes of the World Health Organization (WHO).

2. Semi-structured interviews

Eighteen semi-structured interviews were carried out with women who used and did not use the MWH in the Morogoro region of Tanzania. This number was based on the feasibility of the timeframe to conduct interviews and the assumption that the expectation was that no new information would emerge after this number of interviews.

The interviews collected information on:

the characteristics of the participants, factors that influenced health seeking behaviour, how women did perceive the care received who used the MWH and what contributed to users' satisfaction.

See annex 1.2 for the full topic guides.

Seven interviews were held with health workers (nurses-midwives, doctors and other health workers) who were care providers for women using the MWH service. See annex 4 for the full topic guide.

The questions were adapted after pre- testing, as new themes emerged.

The interviews were developed in English and together with the local research assistants, translated into the local language. Interviews were conducted in local language and transcribed into English. They were being recorded digitally and notes of the interviewer were taken too.

4. Analysis of retrospective data of admission records

Retrospective demographic and clinical data was collected from 106 women who made use of the MWH in the months August and September 2008 (more recent data was not available).The data was collected using admission books of the MWH and delivery books of the St. Francis referral Hospital. The data was complementary to the qualitative data because it provided actual information for a period of time about what kind of women make use of a MWH (how far do they live from the MWH, what are the characteristics of these women, what was the indication to come and what was the mode of delivery).

3.2 Sampling and selection

Purposeful sampling was used to recruit respondents into the study.

Women

Adult women (above 18 years of age) who were no more than 6 weeks postpartum (PP) and living in the catchment area of the MWH were considered for recruitment, as it was assumed that a more recent birth experience would contribute better recall about what they thought and how they felt prior to giving birth. By interviewing women in the catchment area of the MWH, there would be a better chance that all women would know about the MWH (including those who did not use it).

Women were considered who used and did not use the MWH services in order to better understand the reasons for this decision.

Women who did not use the MWH and who experienced severe health problems (themselves or their newborns) during or direct after birth were not included into the study.

These women were excluded because of the reason that any women with complications would have felt guilty if she had not used the MWH. There was tried to avoid situations where women who had been advised to use the MWH and did not, might feel guilt and shame if they talked about the experience. For

these cases no sufficient counselling could be provided. So out of ethical considerations, these women were excluded.

Health workers
Health workers were recruited who were care providers for women using the MWH service. They were doctors, midwives and nurses. They were a variety in working experiences.

3.3 Recruitment
Women visiting the health clinic for postnatal care and/or newborn vaccinations services were informed by health workers about the study. Upon leaving the clinic, they were approached by the research team. This was carried out by the following steps:

- The research team asked whether the woman used the MWH
- For non-MWH users, women were asked about any severe health complications resulting from the delivery (exclusion criteria).
- All women, fulfilling the inclusion criteria and not excluded were informed about the study and were asked to participate.
- If women wanted to participate, the research team asked them for a written informed consent.
- Interviews were conducted only after obtaining consent and in the setting of choice by the woman.

3.4 Data collection process
The research team consisted of two female Tanzanian medicine students and myself. The data collection took place in a 2½ week period in January 2013 in Ifakara.

3.5 Data analysis
Analysis of the transcripts was carried out manually. Data analysis was partially based on themes determined by the literature review. Emerging themes found were also included in the analysis. Common issues and outliers were identified. Response frequency is generally not reported. However, to give an idea how common or rare answers were given they are indicated in terms of "a few", "many", "the majority", "less than a half", "almost all".

To contextualize the qualitative data, two case- studies from individual interviews are used to illustrate personal experiences as related by women in their own words. The case studies use pseudonyms in order to assure confidentiality of the participated women. The analysis of the quantitative data was conducted using MS Excel, looking at different variables such as gravidity, age, days of admission, reason for admission, distance from home to the MWH. The data was complementary to the qualitative date because it gave an overview about the characteristics for women who use of a MWH.

3.6 Quality assurance
For the qualitative data collection, two student researchers were selected based on their ability to speak local languages as well English. They received a one day training prior to the field work that addressed: the context and background of the study, interviewing techniques and issues relating to quality control. The

student researchers transcribed the tapes of the interviews themselves to prevent misunderstandings of some of the responses caused by transcribing from one language to another.
A separate quality control took place to verify if the interviews were correctly transcribed from Swahili to English and to check if the content of the interviews corresponded with the translation of the research assistants. This involved two interviews transcribed into English by an extern translator from Dar es Salam and compared with the students' versions. No meaningful differences were found indicating that the students were transcribing correctly.

The signed informed consent forms were kept separate from the data. All digital recordings were be filed in anonymously by an unique coding name and kept by the lead researcher. They have been deleted after the data analysis. After data collection and preliminary data analysis, a meeting took place with local knowledgeable persons (from Ifakara health Institute and management staff of the hospital) in order to validate the data and discuss the meaning of the analysis themes.

The quantitative data was collected by myself using admission books of the MWH and birth records of the labour ward.

3.7 Ethical considerations

Ethical approval was obtained from the KIT Research Ethics Committee on the 7th of February 2013. See annex 5. The procedure for approval of the National Institute for Medical Approval started at January 2013 and is still under revision. Local permission to conduct the study in time was given out by Dr Nyamtema, Medical Director of the St. Francis referral Hospital.

Informed consent was obtained from all respondents prior to the start of the interviews. All interviews were recorded assuring the anonymity of the interviewees (by using unique codes instead of names) and no way to link information to a particular person.

3.8 Study limitations

According to the chosen methodology the results of the study tell about the different perceptions/opinions of women living in the catchment area of Ifakara these results are not necessarily valid for women from other settings in Tanzania.

The sampling method was different for users and non- users of the MWH. Most users were not living in Ifakara and did not come back for postnatal clinics but went to the health centre where they lived close by. Therefore it was impossible to recruit women who made use of the MWH during postnatal consultations or at vaccination days in the clinic of St. Francis referral Hospital. Instead users were recruited in the maternity ward of the hospital, with an average of two days post partum just before they went home. A limitation of the study could be that the answers given in the interviews were biased by the experience and outcome of the delivery because the interviews were conducted so shortly after the delivery.

As previously mentioned in section 3.2 women who did not use the MWH service and who experience severe health problems of their newborn during or direct after birth were not interviewed. A limitation of the study is that the stories of those women are missing on how the experience could influence their use of the MWH in the future.

For MWH non-users the recruitment took place at the postnatal clinic/vaccinations days of the St. Francis referral Hospital a limitation could be that most probably women were recruited who lived close by the hospital that might have other considerations not to use a MWH than women who live far from the hospital.

The idea was to collect the same retrospective kind of records from January and February 2013 to compare if there was a difference between the variables in the data from August and September 2008.
However the retrospective data of August and September 2013 was limited to the records that were completely filled in. Most variables were incompletely documented. 55% of the total records were missing what means that there was insufficient data to compare the data with the records of 2008.

It was not possible to find specific quantitative data about the characteristics of women who delivered in the Morogoro region but outside the St. Francis referral Hospital. This made a comparison of women in the study with women in the same area impossible.

3.9 Conceptual framework

The conceptual framework developed for this study (figure 2) is based on the comprehensive model of Thaddeus and Maine (1994) where the main components around maternal mortality related to three phases of delay:

1) Delay in health seeking behaviour
2) Delay in accessing a health facilities in time
3) Delay in receiving adequate care at a health facility

The 3 delays model is applicable to this research into maternal waiting homes as many of the factors influencing the delays are similar to the factors influencing use of a maternal waiting home. The major difference is that the concept of 'time' is not relevant. Another difference is that this framework addresses the perceptions of users and providers about factors that influence the utilization of a MWH.

The conceptual framework combines the first two delays (from the Thadddeus and Maine model) because they both relate to factors that influence women in the decision making process related to making use of a MWH. The concept of birth preparedness is included as this includes knowledge of complications and how these are perceived as risks as two important factors in the decision making process to use the services of a MWH.
The 3rd delay in the Thaddeus and Maine model looked at delays to receiving adequate care solely in terms of technical quality. In the framework presented here, this has been adapted to reflect the quality of care as perceived by users and providers of MWH services. Alignment between the expectations and provision of care increase satisfaction and can result in an increase of utilization of maternal waiting home services.

Health seeking behaviour and perceived quality of care are inter-related and influence the decision making process to use MWH services.

This conceptual framework was used to develop the research instruments and for the analysis of the data collected during this study

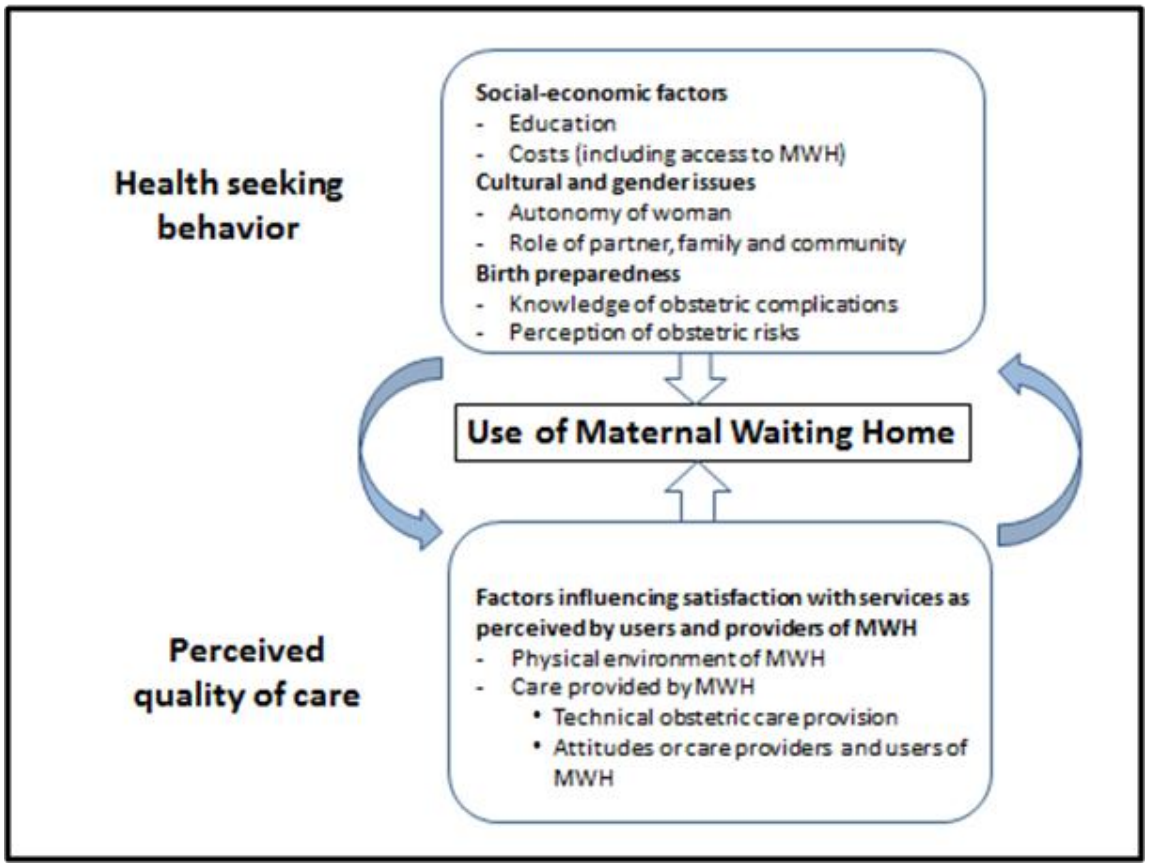

Figure 2: Conceptual framework

4. Findings

Literature review

Understanding the causes of Maternal Mortality and the concept of Maternity Waiting Homes

As mentioned above, Thaddeus and Maine (1994) stressed that delay is one of the reasons for negative outcomes in obstetric care.
With that model in mind, different safe-motherhood initiatives were launched to improve pregnant women's access to health facilities and to avoid delay by timely detecting obstetric complications. Decentralization of health services was discussed in order to reduce the distance to a health facility by bringing services closer to communities.
As decentralization of health care was not an practical alternative for most countries, MWH's were developed as an alternative solution[7].
In the literature they are described as promising in preventing maternal deaths, but further investigation into health outcomes for women should be promoted[13;14].

Evidence on the effect of Maternity Waiting Homes

There is no clear consensus from what women benefit most to stay in a MWH, as giving birth is a risk event itself, but some pregnancies face more risks than others. The literature show that most complications in pregnancies occur in a low-risk pregnancies[7;15], however it is impossible for all pregnant women to stay in a MWH as most health systems in developing countries would be overloaded. Identification of women most likely to benefit from a MWH must be based on risk factors and the ability of the health system to provide adequate care.

The WHO repeatedly called since 1990 for more studies assessing the impact of MWH's[7].
Unfortunately, to date there is a lack of good quality evidence from randomized controlled trials to evaluate the outcome for women using a maternity waiting home as most studies conduct were retrospective cohort studies (with potential bias) and were limited in evaluating the effect of using a MWH[16].

However what is known is that, 75% of maternal deaths are due to direct obstetric cases[15] and it is known that they can mostly be treated with emergency obstetric care (EmOC) if women timely present to the service. The following risks are associated with more obstetric complications: Primigravidity or parity more than 6, previous caesarean section or complicated delivery, history of stillbirth or past perinatal death, hypertension, pre-eclampsia (now or in the past), anaemia, history of post partum haemorrhage, non- cephalic presentation or multiple pregnancy[17]. For the women with those risk factors, it might be beneficial to guarantee access to a hospital through a MWH[7;9].

Other current evidence on MWH's show a decrease of maternal deaths and stillbirths[16;18;19] and an increase of institutional deliveries[20].
Tuwine at al.(1995) described a positive effect of MWH's in the reduction of low birth weight of newborns[10].

No literature is found on implementation strategies looking at users perspectives in order to create effective and good accessible MWH's. Although Ensor et al.(2004) described the demand side barriers what influence the decision making in health seeking behaviour [21] and what is related to health seeking behaviour of MWH's too.

Factors influencing women's decision to health care utilization and dimensions related to user's satisfaction

If the service provider knows the dimensions that can tackle demand barriers in health services access and utilisation for pregnant women, then levels of satisfaction can increase. Below are the factors listed that affecting utilisation and outcome for delay 1 and delay 2.

Socioeconomic/cultural factors:

- General education: Being educated gives one the ability to use information in a correct way, and helps to have a better perception of illness. When women can identify that they are ill and they know that they require treatment, it will influence health seeking behaviour. Often they distinguish whether they require treatment and evaluate what the best place is to seek care[13;21].
- Household barriers: Household barriers can be a result of intra-household equity. Gender issues as hierarchy play a major role. Utilization of health services has to be agreed with the permission of the husband. The acceptance to leave home for a longer period without generating income is often a decision made by the husband[21;22].
- Community and cultural preferences: Cultural believes can influence health seeking behaviour. Perceptions about giving birth, the role of traditional birth attendants and the influences from mothers in low can have an effect on the perception about health service utilization. For example ideas about using modern medical care at the time of a delivery[13;21;22].

Accessibility of facilities

- Costs: Costs can be divided in direct- and indirect costs and distance related costs.
  Indirect costs are the costs that are mentioned before: the missing income generated by women if they are away from home. Seeking health is a time consuming event and for example in harvest time the prize to pay is high being away from home. Direct costs are costs to pay facilities, medication and other supplies.[13;21]

- Distance/transport: Distance to facility and travelling costs has often both a negative impact on health service utilization[7;13;14;18;21].
  Distance is even a more complicated factor to manage during labour because of the possibility to deliver on the way to the health facility or being too late to organize transport when a complication is already fatal. However it seems that costs and transport are less important in the decision making process than quality of care[13;21;22].

Perceived quality of care

Women's decisions where to give birth is often based on the perceived quality of care as literature states. Sorensen et al. (2011) found that perceived quality of care is the most important factor for women in making the decision were to give birth in rural Tanzania[21].

Kruk et al. found evidence in rural Tanzania that a chosen health facility of women was based on the perceived and objectively observed care at the facility, even if women had to bypass another health facility[23]. Martey et al. concluded that by improving the quality of care, the use of maternity waiting homes would have been increased in Ejisu district in Ghana .The findings of the study showed that 90% of interviewed women between 15-49 year in the community, were willing to stay in a good functioning MWH if needed[24].

Study findings

A total of 18 women participated in the in-depth interviews, (10 users and 8 non–users of the MWH), 7 key informant interviews were performed with health providers of the MWH. Retrospective information from 106 women were gathered using birth records and socio-demographic data from admission books of the MWH and delivery books of the labour ward of St. Francis Hospital between August and September 2008.
Furthermore, two case studies are used from two different experiences of women who made use of the MWH. They are developed with the data collected in the interviews and used to illustrate the context of the data.
When in the findings the term "users" and "non-users" are used it will refer to the women who did or did not use the MWH.

4.1 Characteristics of the women interviewed

The following table shows the obstetric characteristics of the non-users and users of the MWH interviewed. The age, number of pregnancies and number of deliveries are reported. Lost children (children who have died, not only related to childbirth) are indicated between brackets after the number of deliveries (parity). The column with risk factors describes what the respondents reported as being mentioned by health providers during the antenatal visits or during labour. Furthermore the number of admission days are mentioned and the mode of delivery this is either a spontaneous vaginal delivery (SVD) or a caesarean section.
The outcome of the baby (alive or death) applies for the perinatal period (from the 22^{scd} week of the gestational age till the 7th day after the delivery).

Table 1. Obstetric characteristics of respondents
[1] Spontaneous Vaginal Delivery
[2] Number of children who died
[3] Caesarean Section

Use of MWH	Age	Gravida /Para	Risk factor(s)	Days in MWH	Delivery Mode	Outcome newborn
Non-users	29	3/3	Post term pregnancy	-	SVD[1]	Alive
	47	4/4,(-1)[2]	Ante partum haemorrhage	-	SVD	Alive
	17	1/1	Anemia	-	SVD	Alive
	24	1/1	Transverse position	-	CS	Alive
	21	1/1	Anemia	-	CS[3]	Alive and admitted for 3 days
	29	3/3	-	-	SVD	Alive
	22	2/2	-	-	SVD	Alive
	28	2/2	-	-	SVD	Alive
Users	38	8/6	Advanced age	<1 (2 hours)	SVD	Alive
	32	5/4 ,(-1)	Grand multipara	12	SVD	Alive
	18	1/1	Primigravida	1	SVD	Alive
	38	4/5	Previous twins delivery	10	SVD	Alive
	29	3/3, (-2)	Previous CS Placenta preavia	24	CS	Died
	40	7/6	Grande multipara	57	CS	Alive
	19	2/1	-	14	SVD	Alive
	17	1/1	Anemia	28	SVD	Alive
	20	2/2, (-1)	Post term pregnancy	12	SVD	Alive
	18	1/1	Primigravida	7	SVD	Alive

Characteristics of the respondents
Characteristics of the respondents
Half of the women interviewed were Christian and the other half was Islamic. Out of the eighteen respondents fourteen women generated income by farming with their husband and families. 2 respondents described their profession as having their own business, 1 was a housewife and 1 respondent was a student. 16 respondents were married. 14 women received education up to primary school, and 4 women did not have any educational level.
All women interviewed could speak Swahili and none of them spoke English.
All users interviewed had received antenatal care (between 1 and 4 visits).

Characteristics of health workers
Eight key informant interviews were performed with health workers (nurses, nurse-midwives and doctors) who worked in various departments of St. Francis referral Hospital, providing different aspects of MNH services and with varying in years of work experience (see table 2). One nurse performed antenatal care (including risk selection) and vaccinations the other health workers were all

involved in the care for women who made use of the MWH they performed the daily check-ups, provided health education and consulted a doctor in case there was a need.
All nurse respondents were female and all doctor respondents were male.

Table 2 Characteristics of health workers

Medical training	*Workplace*	*Working experience*
Nurse/Midwife	Head obstetric department	20 years
Nurse/midwife	Head nurse MWH	33 years
Nurse	Antenatal care & vaccinations	10 years
Student nurse	MWH	-
Medical doctor	Obstetric ward & MWH	2 years
Medical doctor	Obstetric ward & MWH	2 years
Interim doctor	Obstetric ward & MWH	6 months

4.2 Decision making process to use a MWH, users' perspectives

Data regarding the decision making process for women to use a MWH were obtained in the interviews. Below are the findings described of the interviewed users

4.2.1 Awareness of a MWH

The question posed for users was: *Can you tell me what a maternity waiting home is and if yes can you explain what women can use it?*
Users answered the question in two different ways. Some of the users who were advised during antenatal care to use a MWH had no idea what a MWH was before they arrived at reached the St. Francis Hospital. The following quote illustrate the responses given.

> *"To be honest I don't know anything about the MWH, I just reached here and they received me, I really had no idea of where I was going to stay when I got to the place I saw women there but I didn't know what was that house called" (U4)*

Some of the users interviewed knew what a MWH was because they had heard about it from other women who had used the MWH. Most women heard about the good care given both at the MWH and in the labour ward of the hospital close by. Other women had heard about the service of the MWH before their pregnancy but they could not recall from whom they had heard about it because they had no interest in it at that time.
Most women indicated that the service related is for those women who live far away from a health facility. Other advantages mentioned were: not worrying about transport at time when the delivery starts and being in a "big" health facility.
Some women linked the advantage of a MWH to be close at a health facility in relation to (early) solutions for problems when they occur at the end of the

pregnancy or when labour starts. The quote bellow illustrates how one woman described what a MWH is.

"According to me the way I understand what a maternity waiting home is, it is a place where pregnant women living far from the health facility come and stay so that they can get the services when one starts to feel the contractions and wants to deliver during the night so that they do not worry where to get transport." (U2)

Birth preparedness
Birth preparedness is de planning and actions undertaken by women in collaboration with partners, family and community around giving birth. The elements described below are related to the decision making process.

4.2.2 Antenatal Risk selection

Most of the respondents using the MWH were advised by health personnel during antenatal visits. Nearly all of the women interviewed related the reasons for the advice to use the MHW and these included age, post-date pregnancy, and formal delivery of twins, formal caesarean section, primigravity, grand multigravidity, anaemia and irregular contractions. See further table 3. Although not advised during the antenatal visits to use a MWH, one woman decided herself to come when she noticed that the expected date of the delivery had passed. Another woman told that when she arrived with contractions in the labour ward she was advised her to stay at the MWH as she had no dilatation of the cervix yet. She had also passed the expected date of delivery.

Some women answered (from different villages) that they felt not welcome anymore at their local health facility/dispensary after they had been referred to the MWH by their local care provider during their antenatal visits. Some of them expressed the feeling that the health workers did not want to help them anymore. The following quotes are used for illustration.

" .....whenever I went the first time and the second time (for antenatal check up) when I went there (again) they threw my card away and told me to prepare myself and go to Ifakara there is a big hospital where I will stay and wait for my delivery." (U7)

"Where I come from, there are not such a places and even the health workers there are not well skilled. In fact the nurses after they have told you to go somewhere and if you don't go they will not care about you even if you go there while you are in labour pains they will just be looking at you watching you deliver but they will not help you" (U4)

4.2.3. Risk perception/ perceived illness

In general almost all the users of the MWH told that they decided to follow the recommendations made to them because of the risk(s) they faced. Beside the risks summed up by the health providers the respondents could mention other or additional risks that were justifications for them to opt for a MWH.

The general risks or danger signs mentioned by women respondents were often different from the ones given by the health providers. In most cases, the reasons for using the MWH service as reported by women did not correspond with the reasons mentioned by health providers. Table 3 below shows the risks why health providers referred a woman to the MWH and the (additional) reason(s) for women to make use of a MWH.

Table 3.
Risks mentioned by health providers and (additional) reasons for women to make use of a maternity waiting home

Risk selection made by health providers use	Reason(s) for women to make of a MWH
Age & post date pregnancy	Post date pregnancy Feeling not welcome in the health centre No skilled persons in health centre available
Not recommended	Post date pregnancy
Latent stage of labour, post date pregnancy	Advised by grandmother to go to the MWH
Grande multipara	Post date pregnancy Formal intra uterine death Feeling not welcome and safe to deliver in health centre
Previous caesarean section	The health centre could not provide adequate care
Primigravida	Feeling dizzy and fainting
Grande multi para & irregular contractions afraid for bad	No progress of the delivery, health outcome
Anaemia	Decision made by parents because of anaemia
Previous delivery of twins	Safety of being close to a health facility
Primigravida	Safety of being close to a health facility

Some of the risks mentioned by women what made them decide to use a MWH were: formal bad obstetric outcome, perception that a post date pregnancy was "not normal", worried about the duration of labour pains that are on and off, or cultural believes as illustrated in the following quotes:

"I came for my own problem as I was worried why did I pass my expected delivery dated (EDD) while it has never happened, my EDD was 22 December and after it passed I anticipate may be early January but yet I had no signs so I decided to come to a bigger facility to get help, as till then I was already so worried.... (U5)

..... being far from big facility was never a good practice as if at all I could be at home alone I could have delivered in the toilet which was dangerous to the baby... (U5)

I think the post date pregnancy has some risks to me and the baby as the pregnancy is death by itself" (U5)

"... it depends with (on) the problem one is having and that is why there is a maternity waiting home. I had problems of fainting and it starts with kizunguzungu (dizziness) then later I will fall down. I was told that someone at school had thrown to me a demon. I discussed this with my cousin and she called me and told me (not to worry)…and that I should proceed to the maternity waiting home at Ifakara and there I would deliver my baby" (U7)

4.2.4 Role of the family in decision making

In most cases women reported that they discussed with their husband the option to stay at a MWH and that the decision was made by them together. The following two quotes are used as an illustration for the role of the husband.

"Yes I discussed about coming to stay at the MWH with my husband, he at first wanted me to go to Dar-es-Salam and wait for my delivery time there but I did not agree because I asked him will I be going to Dar-es-Salam every time I get problems while there is a good hospital in Ifakara where I can get all the necessary services that I may require? So we (me and my husband) came to the conclusion that I should come here and stay at the MWH till I deliver my child" (U2)

"I discussed about coming here with my husband, I couldn't come without (him) agreeing where could I have got the money to enable me come here?" (U1)

One married woman told that she decided herself to come to the MWH and just informed her husband:

"There is no one (I discussed with) I made the decision myself ".... ..."It was my own choice to move to here MWH) following my issue with my date (post term pregnancy)" (U5).

Besides discussing with husbands, some women also discussed this issue with their relatives. One young married woman explained that the decision was taken by her mother.

"..my mother made the decision (to come to the MWH), she told me that we should come together to the hospital at Ifakara" (U9)

4.2.5 Distance transport and costs

In this section distance, transport and costs are described in relation to the decision making process to use a MWH.

Distance and Transport

The distance for users from home to the MWH is registered in table 4.
Almost all users mentioned the reduction of distance to the health facility as the main component why women should use a MWH. However the obstacle of transport was mentioned by users.

" To be honest I didn't face so many problems but transport was the problem in particular since we are coming from interior and also we had to rush before rain season or otherwise the journey to this place could have been so tough ,but also we had to wait for the train at the local station for two days." (U3)

Means of transport from home to the MWH of the users were either by bus, by train, by taxi or a combination. None of the user came by foot.

Costs
The costs are described as all expenditures for women during their stay at the MWH. This costs includes costs of transport, admission fee of the MWH but also living costs during the stay at the MWH (food) and "lost income" when a woman is away from home.

The vast majority of interviewed users had set aside money during the pregnancy for transportation to and for the fees associated with the MWH. According to women, the health providers at their local facilities advised the women as general birth preparedness during antenatal care to save money in advance for the delivery and costs of the MWH.
Money collected to pay the costs was mostly done from generated income of harvest products, as most interviewed users and their families were famers. One woman told that they had to sell a piece of land to finance all costs. One woman perceived her life more important than the costs:

"Money was not a priority to me as my life came first so I had to go ask for a loan from a friend." (U5)

"We normally cultivate pad (a type of rice crop) and store what we harvest in stores in Dar-as-Salam, because storing at our farms is dangerous as they can be burnt. So when one gets a problem he or she would go to Dar-es-Salam and sell one of the sacs stored and get money. This practice is the culture for the people in Mang'ula." (U2)

Another woman indicated another way or ensuring that there were sufficient funds to cover the costs associated with delivery.

"I did not do like the others, I always saved money in my mobile phone" (U7)

One way to minimize the effect of lost income when a woman is away from home was by cultivating the land before coming to the MWH. This was mentioned by some of the women. The following quote is an illustration of this.

"I prepared the lands for cultivation, I also saved money and also my husband had to sell the crops which helped us with the transport costs and hospital expenses." (U3)

4.3 Care given at the Maternity Waiting Home
In this section experiences of users during their stay with the MWH are described.

4.3.1 Medical services given
The MWH was located +/- 40 metres from the labour ward and was part of the hospital. I observed a beautiful garden full of flowers to be crossed before entering the building. The place looked clean and cosy with women chatting and playing games together. Most women shared a room with 5 other women.

By asking the users what medical services were given during their stay at the MWH it surfaced that the general daily check up for all women given were perceived in different ways;

The daily check up was mentioned by some women as medical service given while some other women perceived only the exceptional care or check up from a doctor as medical service. It is likely that the question was interpreted in different ways. The following two quotes illustrate the various interpretations given by the women when asked about the medical services given during their stay.

"There was a routine that the care providers had, the nurse who was watching us that night will do the required check-up for all of us in the morning, another check-up will be at noon and the other one in the evening, but this does not mean that they will not do check-up on a person who feels that there are some changes that one is feeling at that particular time because may be check-up was already done at a particular time". (U2)

"There was no other care except when I got fever; I was given some medications after consulting the doctor. I was admitted in the wards" (U1)

4.3.2 User's experiences of their stay at the MWH

The perceived quality of care during a stay at the MWH could play a key role in influencing subsequent health seeking behaviour or that of others . The respondents described what they liked about their stay at the MWH using various examples.

Company of other pregnant women in the maternity waiting home:

Most off the women interviewed liked the company of other pregnant women during their stay. Informal chats and stories with their "fellows" were mentioned as pleasant and informative. The following quote is used as an illustration.

" We used to cook and eat together and do some exercise like going to the market plus physical exercise and for sure I have enjoyed that a lot." (U1)

More than half of the women appreciated the habit to accompany each other when a woman was referred to the labour ward after beginning contractions. The following quote is an illustration:

"Good services…..suppose our fellow is in labour pain we would escort her to the labour ward and then we would go to call her relatives and then once she had delivered her baby we would return to Matumaini House (MWH)" (U6)

Attitude of the nurses:

Another aspect very much appreciated and mentioned by all users, was the attitude of the nurses. For one woman the contact with the nurses was "open and informal". Women related that the nurses were "like parents for us". Most women mentioned that they felt free to consult a nurse in case of a perceived problem as demonstrated by the following quotes:

"my communications with the nurses was so good in the way they insisted that in case we had faced any problem we report them as immediately as possible..... (U6)
.....I want to thank God and the care givers at Tumaini house (MWH) as they have been so good to us; they made us feel at home" (U3)

"the care which I was given was so good to be honest, as the nurses are living with us like our own parents and when we get fever they would be close and suppose the labour is not due they always tell us to be patient and report in case of any problem." (U5)

Antenatal care:

Generally the daily antenatal check-up was perceived as a highlight of the day as illustrated by the following quotes.

"I was happy by the attitude of nurses to come and check our well being and our babies for sure that made me so happy always." (U6)

"that thing of measuring my pressure and checking my baby's heart rate made me so happy" (U5)

"For me my stay here was comforting because every time a nurse would come and take some measurements on me, check my blood pressure and baby's heartbeat." (U2)

Health education given:

The health education given by the nurses was seen by users as an extra advantage of the MWH and was perceived as very positive by almost all of them.

"I think the maternity waiting home has the number of advantages including that of being taught how to take care of the baby after delivery" (U1)

"Yes the care was good. I was really impressed because beside the investigations that they performed to us yet they educated us on different things like the walking time, they taught us on the suitable time to walk that it should be in the evenings because in the noon times the baby's frequency of playing in the womb is increased and so the mother should rest during that time. So that really impressed me and it was a service that was really comforting to me".....(U4)

.. "They would also educate us on how the labour process normally is and how to take care of the baby and asked if there was any one with a problem who needed help. So these services were very comforting to me." (U2)

Table 4.
Main elements of satisfaction from users of the Maternity Waiting Home:

> Attitude and contact with the nurses of the MWH
> Accompany of other women (to the labour ward at time of the delivery)
> Daily antenatal check -ups
> Health education given

Treatment and expertise of the health care providers:

Not all women were satisfied about the provision of drugs during their stay and this influenced how they perceived the quality of the care provided at the MWH. The following quotes are used as an illustration:

"I had to buy anti pain, antiseptics syringe.....I'm not impressed as I had to buy pain killers for myself and the syringes" (U6)

"I have never received any extra care……they have not even given me the tablets (for malaria) to swallow? " (U6)

One woman (who lost her baby during labour) highlighted the importance of adequate actions by the nurses before she was taken to the labour ward:

"They should increase love to the patients, because one has a problem and when the nurse is told she doesn't act immediately she just acts when she feels like doing so this is not good because some of the problems that the patients report need an immediate action" (U8)

Costs associated with the stay at the MWH:
In the morning every women who stays in the MWH receives porridge. This was the only meal provided at the MWH. Other meals were prepared by the women themselves. A few women mentioned that meals constituted one of the problems they faced during their stay. Some women explicitly mentioned the aspect of extra expenditures for meals and especially when women stayed for a longer period in the MWH they were afraid to run out of money for food, see the following quote:

"If one does not have money she is most likely to be stressed because she will always think of where to get money so that she can buy what she needs may be food, this is different when you are at home that even if you do not have money at that particular time you can ask the shopkeeper to give you a particular thing then tell him that you will pay him when you get money. But you cannot ask a shopkeeper here to lend him you flour or salt or sugar and say that you will pay him later" (U2).

One woman mentioned that she found it stressful to ask her husband more than once for money to pay food. She described it as a sensitive topic to share issues concerning food expenditures with others as you live with other women with different incomes together.

Visitors:
Almost all users received visitors during their stay with the MWH.
All of the visitors where relatives of the women, some visitors stayed for a longer (or whole) period in the compound next to the hospital and used to cook for the women daily, others came for a short visit to bring money, cloths, food etc, for example:

" my sister came to pay me a visit and she brought food for me and there are other days when she would just come to greet me and go." (U1)

Some women answered that their husband was not able to come because they had to take care of the farm. In some cases relatives who lived close by took over the care for the women.
In general women mentioned that the support of visitors was important for them besides the care they received at the MWH. Especially help with cooking and accompany to go to the market to buy food was highly valued.

Duration of stay:
The duration of stay by the users interviewed varied from a few hours until 57 days with an average of 17 days. None of the women left the MWH before they

gave birth. After birth, women stayed in the maternity ward 1 till 7 days depending on the care the mother or newborn needed and depending on the payment of all costs. The women could not leave the hospital before the payment was done.

4.4 Perspective from non-users about the maternity waiting home

Findings regarding the view on the MWH by women who did not stay there helped to explore what women know about a MWH, if women have been advised to make use of a MWH, how the decision took shape and other considerations.

4.4.1 Awareness of a MWH

All non–users of the MWH could tell what a MWH is. Most women mentioned that pregnant women who live far away could await the delivery at the MWH. Some women mentioned distance as well as "problems" a reason for women to stay at the MWH, for example:

> *"The maternity waiting home is that house where the pregnant women they stay so that they are close to the health centre and in case they are in labour pains they won't get problems to get assistance, or women who their pregnancies are problematic so they are kept there.....*
> *Those women who have problems are the ones like us, may be their home is too far so they come to the hospital to wait for their days to deliver." (NU3)*

Most women knew about the service through other women who used the MWH or heard about the service from relatives, friends, neighbours etc. It was mentioned by a few women that they heard that the service was good at the MWH:

> *"I know some women at Mikumi and my neighbours, there is another mission hospital which is big but it doesn't have the maternity waiting home. I heard those women saying with regards to problems concerning pregnancy they would choose to come to the maternity waiting home (here)."* (U10)

> *"I knew about the maternity waiting home through other two women who had previously used the MWH. What they told is that when I get to Ifakara there is a house where women do stay while waiting to have their delivery. They liked the staying in the house. In general they said that the service provided here is nice and the health providers have a good follow up on them." (U2)*

4.4.2 Antenatal risk selection

None of the women were advised during antenatal care to make use of the MWH because they lived close by the hospital.
Some women were told by health providers that the pregnancy faced a risk. The risk selection was done both during antenatal care as well in the labour ward for those women who arrived with beginning contractions and the delivery had not started yet. All women were asked if they lived or stayed nearby the hospital and that was the reason for not being advised to stay at the MWH, as the following quote illustrates:

"I did not start my clinic here I started it in Morogoro I just came here to wait for my delivery "
I was admitted (at the labour ward) because of the labour pain they asked me if I was staying near the hospital or should they refer me to MWH. I told them I stayed near the hospital so they did not refer me to the home"
A week after I had left the doctors room I came back at night I was feeling the labour pain, I stayed in the labour ward till morning then the labour pain was gone and I was admitted in the B7 ward (women's ward). The doctors told me that I had no blood so they added 3 bottles of blood after 2 days I was allowed to go home after I had told them that I was staying near the hospital." (NU4)

4.4.3 Choice for place of the delivery

All non-users delivered at the St. Francis Hospital except one woman who delivered at home (planned).
Some women answered that they choose to deliver in the hospital instead of a health centre because in case they needed a caesarean section they were in the hospital where they could receive the care needed. Other women mentioned that they delivered at the St Francis Hospital because it was the nearest place to give birth.
One woman mentioned that she decided to deliver in the hospital because she did not want to be referred during labour in case of a problem so she decided to stay with her relatives close to the hospital the last weeks of the pregnancy. The following quote reveals her reasons for doing this.

"First this was the hospital that was near from the place I stay, also it is a big hospital so I decide to come here because I knew that I will get all the necessary services instead of going to minor dispensaries when they fail to do a certain procedure they will put you in an ambulance and bring you here" (NU8)

4.4.4 Other considerations for using a MWH

Severity of problem
Considerations to use a MWH by non-users were mostly related to the severity of the problem, for example:

"It will depend with the condition that one is having because one may be staying around the hospital but because of the seriousness that she is having then even the place where she is staying may seem far so she may be required to stay at the hospital." (NU1)

Distance/costs/leaving family at home
Besides the severity of the problem, delays in reaching the health facility in time (including emergency costs of transport) were considered as reasons to use a MWH. For some women who lived close by, the MWH was not deemed necessary because they did not foresee any delay in reaching the hospital and extra costs could be prevented by staying at home.
One woman mentioned leaving her family at home for a longer period as the most important consideration for her when she would be advised to use a MWH.

Quality of care
Also Quality of care of the health service was a response given as a point of consideration.
The following quotes give an illustration.

"it will depend on the service because a person stays where there is good service I'll come if I see the services provided is good if I am not pleased with them I will not stay if I am pleased then I will stay , you know we pregnant women do not need disturbance" (NU8)

4.5 Health providers perspectives

4.5.1 Vision of MWH

Most health providers described the MWH as the place where problems for pregnant women (who are not living close by the hospital) can be detected and solved at an early stage so that the mother will deliver in good condition with a healthy baby.

" A MWH is very important because it helps those (women) who are coming from far away from peripheral. So if they came early we detect the problems and we solve it early and she gets a healthy baby. We don't want to lose any one among the mother and the baby." (HP2)

By asking what mothers are recommended to use the MWH. Health providers mostly mentioned: Primigravity, women with a previous caesarean section and grand multiparity. Other risks were hardly mentioned. This could be due to the fact that most of the interviewed health providers only conducted antenatal consultations at the MWH and are not generally involved in risk selection. However, most of the interviewed health providers admitted the women to the MWH and knew the reasons why women said they were advised to stay at the MWH.

4.5.2 Improve accessibility and quality of health care delivery

According to the interviewed health workers, challenges in improving accessibility and quality of care were mainly related to the costs women have to make for their stay. All health workers mentioned costs as the main problem why certain women do not make use of a MWH.
Beside costs: ignorance about health problems, living close by the hospital, deciding too late to come and leaving family at home where mentioned as the main barriers to using the MWH. The following quote is illustrative:

"Why women are not coming.... it depends on their financial situation. They get the health education with their talks during the antenatal visit but she thinks of many things. First she thinks of financial money she has to get when she comes here. She needs somebody to leave at home to stay with the other family. Therefore there are some obstacles. Maybe the husband does not like. If she is not able to solve these issues they stay at home. But most of them now are days they understand." (HP2)

To improve the quality of care the following points were mentioned by health providers:

1. Some women left the MWH to go to the market to buy food, cook and/or stayed with their family outside the compound. Health providers perceived it as dangerous that they lost track of the women (with potentials risks) during the day. The provision of more meals and a television so that they could watch television instead of walks in the village or watching television at other places (like the out-patients department, or in the village) was mentioned as a possible solution.
2. More doctor visits in the MWH. All women should be seen regularly seen by a doctor to identify risks at an early stage. This was mentioned by a few doctors because of the huge variety in expertises of the nurses. Early identification of risks was seen as a general problem.
3. Routine ultrasound for all women at arrival was recommended by a few doctors.
4. Testing of HIV at the MWH rather than taking -once in a while- the women to the HIV clinic to test them, so that all women will be checked for their status and receive counselling.
5. Users should not have to buy their own drugs (this is the case when drugs are out of stock). The view of the health providers was that some women can't afford to have extra expenditures and thus don't receive the care needed.
6. More capacity of beds as the MWH is mostly occupied and women have to lay with extra mattresses on the ground, was mentioned by almost all health providers

At macro level:

7. The government should take more responsibilities, like: providing more health education, better training in risk selection during antenatal care, and more budget for healthcare delivery for pregnant women.

The following quotes illustrate some of these points.

"During the evening you should make sure that by an interval of two hours to visit the MWH because they are two doctors on shift. The doctor should go there and ask if there are any problems because sometimes you don't find the nurses there and the patients are still there. So you go there and if there is any problem you have to cross check and look if there are any interventions needed for the conditions of the patients..... Because at one point it was like a nurse should refer the patients. And we discovered that some patients they ended up with a ruptured uterus. So they were referred too late." (HP5)

"The regulations are there that we have to check them all the time, but that is sometimes ignored. They only check the ones who are sick or who are complain. Sometimes the nurses ignore the complains. It also comes to the doctors regulations are not present. We should take things seriously and also in the community. Education should be given to women. Even if it is possible the government should be in charge to take care of the women. They should also take their responsibility. They should inform people through public health and also the ones who are coming to antenatal clinic should be informed. They are doing it, but people should check it if it is (properly) done". (HP4)

4.6 Characteristics of women who used the MWH between August and September 2008

Retrospective data was collected for 106 women who were admitted at the MWH and delivered on the labour ward of the St. Francis referral Hospital in Ifakara between August and September 2008.
The socio-demographic characteristics of these women are shown in table 5.

Table 5 Socio- demographic characteristics of users of the MWH No. 107			
	Mean	Range	
Age	26	14-43	years
Gravidity	3	1-9	pregnancies
Days admitted at the MWH	18	1-57	days
Distance from home to the MWH	74	2-207	km

Additional information for table 5: the mode for age of women who made use of the MWH was 20 years (with a range of 14-43 years) and the mode for the gravidity was 1 (with a range of 1-9 pregnancies).

Table 6 below gives a summary for the main reasons of admission for women who stayed at the MWH. The most common indications were primigravity, multiparity, self-referral and previous caesarean section.
In the case of 3 women, two reasons for admission were recorded.

Table 6 Reason for admission	No.
Primigravity	30
Multiparity	24
Self referral	20
Previous caesarean section	12
Grand multiparity	5
Antepartum haemorrhage	3
Not known	2
False labour	2
Malpresentation	2
Expected big baby	1
History of post partum haemorrhage	1
post term pregnancy	1
Double reason for admission	
Antepartum haemorrhage/ Previous caesarean section	1
Post partum haemorrhage/ Previous caesarean section	1
Expected big baby/ Multi gravidity	1
Total number of admissions	106

Table 7 shows the distribution of spontaneous vaginal deliveries compared to caesarean sections for the reasons for admission to the MWH.
Because of the short timeframe of the study it was not possible to look at different health outcomes related to obstetric risks other than caesarean sections. There is chosen to look at caesarean sections because it is an indication of a complicated delivery.

As some women had more than one reason for admission, there is chosen for the 3 cases with double admission criteria to choose out of the two risks the reason what was seen as the most valid risk, this was based on technical knowledge and experience of the researcher. In 2 cases the previous caesarean section was seen as the most valid risk in the other case there was decided that the expected big baby was the most valid risk (see table 6).
Of the 106 deliveries, 37% ended in a caesarean section. A previous caesarean section is associated with a repeat caesarean section this indication gives the highest chance for another caesarean section (87%) and to a less amount but still high with 40% are the primigravidity'. See table 7.

Table 7
Distribution between spontaneous vaginal delivery (SVD) versus caesarean section (CS) related to the reason for admission between August and September 2008

	Mode of delivery			
Reason for admission	CS	SVD	Not known	Total
Primigravidity	40%	40%	20%	30
Multiparity	29%	63%	8%	24
Self referral	20%	70%	10%	20
Previous caesarean section	86%	14%		14
Grand multipara	20%	80%		5
Antepartum haemorrhage		100%		3
Expected big baby		50%	50%	2
False labour		100%		2
Malpresentation		100%		2
History of post partum haemorrhage	100%			1
Overdue		100%		
Not known	50%	50%		2
Total	37%	53%	10%	106

Table 8 shows the distribution of caesarean sections and spontaneous vaginal deliveries in the study population versus the percentages of CS and SVD for the Morogoro region and at national level. The CS rate is 37% in the study population compared to 5-6% for the region and national level.

Table 8
Percentage of caesarean sections for women admitted via the maternity waiting home (between August and September 2008), compared with the percentage of caesarean sections for the Morogoro region and the overall population of Tanzania (DHS 2010)

	% CS	% SVD	% unknown
Study population MWH users	37%	53%	10%
Morogoro region	5,8%	91,2%	3%
Total population of Tanzania	4,5%	94,2%	1,3%

4.7 Two Case studies of Josephina and Mary

To contextualize different aspects described in the findings and as an illustration of the data, two case studies are used of two different experiences from women who made use of the MWH in Ifakara. The names Josephina and Mary are pseudonyms in order to guarantee the confidentiality of the participants.

Josephina's story

Josephina is a 40 year's old married woman and a farmer and is a gravida 7 para 6. I met her in the maternity ward of the St. Francis Hospital two days after she gave birth and had stayed for 57 days in the MWH.

She told me that the doctors of the hospital where she went for antenatal clinic told her to come to the MWH to await the delivery.

"The doctor of Idete Hospital recommended me to come and stay here because I got pregnant several times and had several deliveries so with this one I could get problems, they told me that if I do not come here I will face many difficulties during my delivery"

We asked her what she thought herself about the risks for this pregnancy and delivery.

"It was threatening my life because if I would not come here I would die during or after the delivery. Also my first pregnancy the baby died in the womb so I am afraid (that) even this baby could die in the womb"

She told us when they advised her to go to the MWH she had to discuss this with her husband.

"We discussed like how we (I) are going to survive at Tumani house, how we (I) get money while I am in Tumani house (MWH). We sold a piece of land so that we got money for me to come here and we discussed that I should stop giving birth"

She told me that she also discussed with her husband that in case they needed more money, her husband would sell the farm.

To prepare herself for the MWH she bought a razor blade, thread, clothes and dishes and she took a bus to the MWH.

She stayed for 57 days in the MWH and her husband visited her several times. About the MWH she told us *"Always nurses where coming to check our progress".* We asked her if she could tell about the delivery and she responded that she could not because she did not have contractions. She told us:

"I did not have any labour pain. After I had seen that my date of delivery had passed, I was supposed to have delivered early December, but January had almost passed so I decided to come here and wait to have my delivery, but still I did not experience any labour pain till yesterday. I decided to follow the doctor and explain my problem when he checked with the sono (ultrasound) the doctor told me that the baby had grown so much so I had to have an operation (caesarean section), but up to that time I did not have any contractions.

The baby was born fine"

The other case study is a story told by a woman who experienced sub optimal care at the MWH with a poor outcome. Aspects described in the findings about quality of care are contextualised in the case study of Mary.

Mary's story
Mary is a 29 years old woman who is a gravida 3 para 3.
She delivered her first born with a spontaneous vaginal delivery. Her second child was born with a caesarean section (reason unknown) that died at 4 years of age due to severe malaria.
She told that during this pregnancy she was once admitted due to pneumonia.
She arrived at the MWH around her expected date of delivery. She was advised to stay at the MWH as her previous caesarean section was a risk for this delivery.
The 29th of January 2013 her contractions started after having stayed 24 days at the MW. She told the nurse in the morning and in the evening the nurse referred her to the labour ward with 7 centimetres dilatation of the cervix;
"When I got there they checked me and told me to wait soon I will deliver, after a while when they came to check me they found that (placenta preavia) and called the doctor and when he came he checked me then took me to the operating room, he then told me that the placenta was coming out and the baby had torn the delivery bag so he found the baby out of the bag, and I think that is what caused the death of the baby".

At midnight a caesarean section took place with the indication of a placenta preavia during the operation they found out that the uterus was ruptured. Her child a boy had an Apgar score of 0.
The uterus was repaired. 1 ½ day after the caesarean section she was told that she had lost her child during labour.

4.8 Analysis of Mary's story – challenges to improve the quality of care of the MWH in Ifakara

The story of Mary illustrates the challenges to improve the service of the MWH in Ifakara and describes how important it is that early diagnosis and recognizing of problems (with adequate management) are guaranteed upon time.

One eye–catching event in Mary's story is that Mary was in labour for 12 hours with a potential risk because of her previous caesarean section and that even after she told the nurse her contractions started she was not checked anymore till she was referred to the labour ward with 7 cm dilatation of the cervix. Moreover, for 24 days Mary did not receive any ultrasound since she was admitted at the MWH. It was at midnight, 16 hours after the start of her labour when the diagnosis of placenta preavia was established, the uterus was already ruptured and the baby had died yet.

5. Discussion and conclusions

This section looks at the main results from this small study and how these compare to what is already known about the use of maternal waiting homes in Tanzania and in other settings.
The subjects described in the discussion and conclusions are ranked according to the headings and the priority in the analysed findings.

5.1 Health seeking behaviour

Distance and obstetric risk perception

Distance to health facilities is mentioned in the literature as an important obstacle to accessing timely care. Two studies, one in Zambia and one in Zimbabwe have shown that women who make use of a MWH live farther away from the health facility compared to women who went directly to the facility[17;25]. The results from this study indicate the same. Reducing distance to the health facility was the main reason mentioned by providers and users of the MWH as an advantage of MWH services. As within the limited timeframe and scope for this study, it was not possible to interview non-users who lived far away from the health facility, this cannot be said for that group. The group of interviewed non-users (who generally lived closer to the facility) did not mention distance as a barrier which correlates with the information obtained from health workers who indicated that distance in combination with obstetric risk factors should be considered when advising women to use the services of the MWH. It is assumed that women with obstetric risk who live closer to the facility will timely access the facility.

Thaddeus and Maine (1994) pointed out that the (perceived) severity of obstetric risk influences how far people are willing to travel for maternal health care. The more they perceive the risk as a serious problem the further they are willing to travel. This aligns with the results of the study that showed that the interviewed users of the MWH lived outside town where the MWH was situated and all perceived a particular risk during pregnancy or during labour, making them decide to travel to the MWH prior to delivery.

Based on the available information, this study supports the evidence that MWHs are an approach to reduce the barrier of distance to the health facility for women who live far from maternal health services and have risk for obstetric complications.

This study shows that there are differences in how providers of maternal health services and users of maternal waiting homes perceive and/or describe obstetric risk. Women respondents (both users and non-users of the MWH) base their decision making on their perceptions of the severity of the problem in combination with the quality of care of the service. Providers of care base their advice on their technical knowledge of obstetric risk combined with distance needed to travel to the facility.
Thaddeus and Maine (1994, P.1096) discussed the perceptions of obstetric risk stating that "the perceived severity and the perceived aetiology of the disorder shapes the decision to seek care" .
That means that the severity will influence the decision to seek care if the risk is perceived by the women as a serious problem, than justification to seek care is most of the time accepted. Even though the MWH users in this study generally articulated different risks as reasons for using the MWH services compared to those stated by health workers, it seems that they accepted the advice of the health care providers and acted upon that advice.

Antenatal risk assessment
Antenatal risk assessment is an important factor for MWH utilization.

In the literature there is a discussion going as to what extent antenatal risk selection plays a role in the prevention of maternal mortality. Despite this, antenatal risk assessment is still recommended especially for those women who could benefit from a MWH without overloading the existing health facility[7]. The WHO states 3 different components on how risk selection could take place: 1)Medical risk, 2) Socio- economic risk, and 3) Geographic distance to a health facility[7].

Three of the 4 main reasons for MWH admission retrospectively studied could be considered medical; primigravity, multigravidity and caesarean section in obstetric history. Looking at examples of indicators that define high-risk pregnancies , the most common mentioned are: mal-presentation, multiple pregnancy, high pregnancy order, previous operative or complicated delivery, hypertension/pre- eclampsia, anaemia[7;27]. Multigravidity and previous caesarean section are covered in this definition of high risk. Primigravity as an obstetric risk has been mentioned by the WHO and the admission data review in this study confirms that this reason is also accepted as criteria for admission to the MWH. If primigravity and multiparity are both indicators for using the MWH, this would imply that all women would be eligible. In reality, the obstetric risk is generally made up of a combination of factors. The qualitative information indicates that geographical distance is an important factor in decision making to use a MWH even though this was not sufficiently documented in the available data.

Another reason often documented for MWH admission is self-referral which indicates that women use the services at their own discretion and not because they have been advised to do so. One explanation could be that the admission criteria were not clear for the health providers who were responsible for the documentation in the admission books. Another explanation could be that women perceived risk themselves and acted upon it or that they decided to travel to the MWH because of the quality of care of the services offered.

The total percentage of caesarean sections performed (29%) for users of the MWH are far above the national percentage (5-6%). Although a higher number of caesarean sections are expected in a group of pregnant women with a higher risk for obstetric complications a more in-depth review or audit would be needed investigating the indications for all caesarean sections performed in order to better understand the implications of this. A limitation to this study is that the data obtained only provided information relating risk selection to the chance of caesarean section. The impact of MWHs is better related to maternal mortality and morbidity.
It is not clear if the relative high percentage of caesarean sections performed in the group of self-referrals (20%) indicates that these women might be more at risk for obstetric complications that require an operative delivery. Future research could address whether women who self-refer to MWHs have more obstetric risk despite the fact that there is no risk manifestation at the time of the self-referral.

The proportion of deliveries that ended in a caesarean section was higher in the group of women who had previously undergone a caesarean section. This made

sense as a previous caesarean section gives a higher chance of a repeat section in general. As previously reported, all interpretation of the results from this study are indicative and do not reflect reality as the data reflects only a short period of time and is of poor quality.

Although there is not enough information about the process of referral to the MWH, especially when this should take place, there is some information about problems arising from the referral when women do not immediately report to the MWH. Some women mention that after they were referred by the health provider they were told that they are not welcome anymore to deliver in that specific health facility or they were told that they were not able to assist the delivery or that they would be neglected if they would turn up in labour and this was not appreciated. Unfortunately there was no opportunity to obtain information from the health workers in the periphery who refer to the MWH and it is not clear if and why they respond to women the way described. It could be that they did not want to be confronted with problems they cannot handle or that they are afraid of repercussions if they assist a woman who had been advised to go to the MWH and the delivery ends with obstetric mortality and morbidity.
In any event, this kind of response from the health workers as perceived by women, could have a negative effect that women stop seeking care at their local facility and do not follow the advice to travel to the MWH and deliver at home without skilled care increasing the chance of poor health outcomes.
Beside risk selection, antenatal care could be an opportunity for the provision of information on birth preparedness. It could raise awareness for potential risks and complications so that women can participate and anticipate about actions needed in case of having a risk or an emergency, with the theory that it reduces delay in obtaining health care. This theory is suggested too in the study of Hailu et al.(2011)[28].

Role of the family and points of discussion
The husband plays an active role in the decision making process relating to the use of the MWH and is in most cases the primary person involved in the decision making process. Most women depended on the permission of the husband in order to pay the costs of the MWH, transport and food.
In general, women having received advice and understanding the risk implications, present the case to the husband in order to obtain their permission. The findings of the study correspond with data from Tanzania showing that the husband is involved in the decision making process, respectively 38% is done by the husband only and 45% jointly[5].
Two studies conducted in rural Tanzania indicate that male involvement in antenatal care is important and is proven to be effective. These studies describe the positive impact of male involvement in antenatal care on the acceptance of perinatal interventions. Women whose partners were involved followed significantly more the advice of health providers[29;30].
There is a role for health workers to encourage partner participation in ANC in order to ensure that advice is better followed, including advice for MWH referral. Being away from home for a longer period and thus lost income are obstacles to the decision to seek care in general[11;13;21].
These issues are more of an issue when related to a stay at a MWH that could be for a few days to a few weeks. In this study being away from home for a longer period and lost income were mentioned once by a non user as point of consideration to use a MWH. This could be a reflection of the study size (more

women might have answered the same in a larger study sample), or it might have been less explicitly mentioned as other more direct factors relating to these issues as access to money and distance were more often mentioned.

Transport
Transportation to the MWH was is the only obstacle mentioned during the interviews of the users. For some women it was due to costs for some women due to the infrastructure. The conditions of the road around Ifakara are poor and the period were the interviews took place was the beginning of the rainy season. These were both obstacles.

Costs
Well Thaddeus and Maine (1994) state that costs will affect utilisation of health care services in developing countries but only to some extent (other factors as quality of care or perceived illness are more important factors to consider).

Ensor et al (2004), states that costs is one of the most important factors for negative impact on health service utilisation. However there is evidence that distance to facilities increases costs (long travels are more expensive), in this study the findings shows that mainly those women make use of the MWH who come from far and thus will have additional costs.

Most women were early informed by health providers in the pregnancy to save money during their antenatal visits in case of an unforeseen problem (a reflection on how birth preparedness might have a positive impact on access).

For non users the reduction of extra costs is one of the main considerations not to use a MWH, this was weighted by the perceived risk.
Careful in conclusion can be said: perhaps the perceived risk women face (who don't live close by the St. Francis Hospital) and the quality of care of the service is at the end more important than costs, what Thaddeus and Maine stated it too, or only those women access the MWH in this study who could afford the costs.

More research is needed to explore in what circumstances costs play a role in access of a MWH.

Cultural acceptance
Cultural acceptance in the community will contribute to better access of a health facility. Wild et al. (2012) found that women from remote areas did not make more use of a MWH service because the service was not integrated in other (rural) health care services and in the community.
Wilson et al. (1997) state that the strategy of a MWH would more successful if individual social and political, acceptance would be reached.

The information obtained during this study indicates that the MWH in the Morogoro region is culturally accepted and the concept is integrated in the community as demonstrated by the number of women who either utilize the service after being advised or by their own choice (self-referral).

5.2 Perceived quality of care by users

Below are the factors described that influence satisfaction with services as perceived by users.

Knowledge of the MWH

Knowledge of a health service by women themselves/or others influence the utilisation of a service and the perceived quality of care[13]. Reputation and previous experiences are part of the knowledge what goes along with expectations of the services provided.

The same could be assumed for the use of maternal waiting homes. In this study, the knowledge about the function of a MWH is in general in both groups (users and non users) the same. Most women knew what the function of a MWH is with a few exceptional cases in the user group (perhaps because all non users lived close by they are more familiar about what services are offered in the region). In both groups women told that they had heard from others about the MWH service and that the care was perceived by others as good quality.

This indicates that the quality of care provided by the MWH in Ifakara is generally perceived as good. This perception could possibly contribute to the high utilization rates and success of the Ifakara MWH but because of the small group of women interviewed, no conclusion can be made about how and if this perception influences the decision making process to use a MWH.

Care provided by the MWH

The quality of care is related to the expectations that users have about the service. Running out of drugs is a common problem in developing countries and described in literature by Thaddeus and Maine (1994) as a negative impact on the quality of care. Even it is often behind the scope of the hospital management there is often a small adjustment possible to reduce the impact what result in better perceived quality of care.

Extra costs were made for some of the users when medication was out of stock and they had to buy their own drugs. This was perceived as less optimal quality of care.

Satisfaction factors in the study are the close collaboration between nurses and doctors. There is a big variety in the competence nurses have.

When women have complains they are being seen by a nurse and in most cases referred to a doctor for a consult. Caution must be that women are first seen by the nurse she is the one who makes the risk selection to consult a doctor, this can lead in some cases to insufficient quality of care by too late detection of problems that occur.

The daily antenatal check- up, accompany of other women to the labour ward at time when the contractions started, and health education given by the nurses contributed to high satisfaction of the service.

The results of this study are in line with the results of the study of Wilson et al (1997). In this study women missed exactly the elements mentioned above and Wilson mentioned this as reason for poor utilisation of the MWH service in Ghana. Beside, the MWH was not connected to a hospital and not integrated in the community why access to the MWH was difficult

6. Recommendations

From the discussion it becomes clear that to improve the MWH service in Ifakara and to make the service more accessible for the region the following recommendations can be made:

6.1 Improving access by:

- It seems that users do have a different scale of priorities while deciding if they need to use the MWH or not. If health providers do not understand and address these concerns and priorities it is quite likely that many women will decide not to stay in the MWH even if they should. Therefore more attention should be to talk to women (during antenatal care visits or even during health promotion activities in communities) to explore these concerns and be aware that they can be different than the risks raised by health providers.
  Male involvement in antenatal care should be encouraged by health providers given the positive impact on birth preparedness and acceptance of perinatal interventions. Health promotion activities in communities could help to raise awareness for both male involvement and providing information about the MWH service to improve cultural acceptance. The effect of provision of information early in the pregnancy could be that there is sufficient time women can prepare themselves to save money, or to overcome obstacles in seeking timely and adequate care. The focus later during antenatal care could be on how women perceive obstetric risks, what actions can be planned and to verify if all information is understood well.
- Exploratory research could be carried out to understand the circumstances in which costs play a role in the decision to make use of a MWH and how these can be overcome at the individual or community level.

6.2 Improving the quality of the services offered at the MWH

Early detection of complications and adequate risk management by:

- Routine ultrasound for all women admitted, to exclude or diagnose possible risk factors (not previously seen) for the delivery as: mal-presentation, placenta preavia, multiple pregnancies etc.
- Closer collaboration between nurses and doctors. All women in labour should be presented to a doctor at in an early stage (who can provide ultrasound when needed with adequate interpretation and management of the results) to agree on a birth plan for each woman coming from the MWH based on her specific risk profile.
- Improvement of data documentation and quality by improving reliability and internal validity in order to better understand:
  the motives and outcomes of the group of women who self-refer to the MWH the appropriateness and effectiveness of the care provided to women coming from the MWH and including audits and reviews for cases with bad health outcomes.

6.3 Other recommendations

Health centres should have mechanisms in place to protect themselves if they are confronted with a complication that they had tried to avoid by referring the case to a MWH. Possible mechanisms could be ambulances in place, good communication with the hospital about possibilities to refer or provide the

optimal care what could be given at a health centre. Prevention of women who feel "rejected" in a health centre after being referred to the MWH could be improved by open communication between the pregnant women and the health provider to make clear that in case she can't make it to Ifakara a facility birth (local facility) is still preferred upon a non-skilled birth at home.

Finally, it is recommended to profit from the innovative mixed-method approach to research in– both qualitative and quantitative analyses, gathering information from both women as well as medical professionals – practiced in this study, as well as from the preliminary insights based on the findings in this study. It is useful to duplicate this study in other institutional and cultural settings (countries or regions).

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Annex 1

Topic guide for semi structured interviews (users).

Considerations for women to use or not to use the MWH in Ifakara

Knowledge, perception of risk, decision making moments in antenatal care

1. Can you tell me what a maternity waiting home is?
2. Can you explain which women can use a MWH?
3. How do you know about the MWH? (PROBE: other women/ nurse/ midwife/ doctor)
4. Do you know other women who used the MWH? If yes what did they tell you about the MWH? (did they like it, did they not like it and WHY)
5. Did anyone recommend you to use the MWH during one of your antenatal visits?

   If yes: ask question 6. Till 12. and continue with question 14.

   If no ask question 13. and continue with question 13.
6. Why they advised you to stay with the MWH? (danger signs/risk)
7. Do you think this/(these signs/ distance) are dangerous for you and/or the baby?
8. If yes/no why?
9. Why could (or could not) the MWH be helpful for you? (PROBE other experiences deliveries, dangerous signs this pregnancy)
10. Was there someone you discussed about the decision to use or not to use the MWH?
    (husband, mother (in law), TBA, others)

    What did you discuss?(being away from home, no income to generate, costs)
11. Why did you decide to go /not go to the MWH?
12. Could you imagine to use the MWH if a health worker advised you? Why yes/no

Cultural acceptance/ obstacles to use the MWH

Now we want to ask some questions about the actual use of the MWH

13. By whom was the decision made to come to the MWH? (husband, woman, mother TBA)

14. Where there some obstacles for you to come? If yes why?

15. Did you have to make arrangements at home or with family before you went there? What arrangements and how did you do that?

16. How did you travel to the MWH?

17. How did you organize the money (for the transport, MWH,)

Perception/satisfaction of the MWH after the delivery (for users)

Sub Topics:
Experience of the MWH (waiting time)

18. Can you explain how it was for you to wait in the MWH?

19. How long did you stay?

20. Did you receive visitors while there? Who and how often

21. Did you receive help or assistance (food/money) during your stay? Who, what and why?

22. Were there other women staying there? How was that? What did you do together

23. Did you stay till the baby was born (if not, why)

24. Beside the care given during the delivery, was there other kind of care given by medical persons?

25. If yes can you describe how it was organized?

26. Was the care good for you? If yes or No why?

27. Did you miss something in the care you received?

28. How was the contact for you with the health providers?

29. What did you like most during your visit with the MWH?

30. What did you like less during your visit with the MWH?

31. What would you see improved?

32. Is there something missing in the MWH? If yes what?

33. What is the advantage/disadvantage of a MWH?

34. Is there anything else you want to say?

Modus and outcome of the last delivery

35. How many times you were pregnant?

36. How many children do you have (PROBE, children born alive/ death, died after the delivery, abortion)

37. Can you tell me about your last delivery ?

(- How did it start, what happened, why it happened like this you think?)

- did you have transport (ask if women do not respond by themselves to this questions)

Where there any problems/complications before/ during or after the delivery?

(ask all questions INFORMAL the women has to tell her own story of the delivery)

38. Was the baby born alive ? if no: what happened? When did it happen? How long the baby was was in the facility?

THANK YOU FOR YOUR PARTICIPATION!!!

Annex 2

Topic guide for semi structured interviews (non-users).
Main Topics: Considerations for women to use or not use the MWH in Ifakara

Knowledge, perception of risk, decision making moments in antenatal care

1. Can you tell me what a maternity waiting home is and who uses it?

2. How did you know about the MWH? (PROBE: other women/ nurse/ midwife/ doctor)

3. Do you know women who used the MWH? ,If yes what did they tell you about the MWH?

4. Did anyone recommend you to use the MWH during one of your antenatal visits?

   If yes: ask question 5. Till 10 and continue.
   If no ask question 11. and continue

5. Why they advised you to stay with the MWH? (ask for danger signs/risks)

6. Do you think this /(this signs/distance) are dangerous for you and/or the baby? If yes/no why?

7. Why could (or could not) the MWH be helpful for you?

8. Was there someone you discussed about the decision to use or not to use the MWH ?
   (husband, mother, TBA)

9. If yes: What did you discuss?(being away from home, no income to generate, costs)

10. Why did you decide at the end of the pregnancy not go to the MWH? How did you feel about the decision?(do you think it was a good decision)

11. Would you use a MWH (next time) if it were advised by a health worker and if yes or no, why

12. How did you decide on which location you gave birth the last delivery? (Probe: for formal delivery experiences, money, family influence, TBA)

13. Did you organize transport is (in case you needed it/ or to go to health facility)?if yes How? (Did you have money for transport?)

Modus and outcome of the last delivery

14. How many times you were pregnant? (in general)

15. How many children do you have (Probe, living children, children died while women was pregnant or after the delivery)

16. Can you tell me about this delivery ?
(- How did it start,

- what happened,

- why it happened like this you think?)

- did you have transport Where there any problems/complications before/ during or after the delivery?

(ask all questions INFORMAL the women has to tell her own story of the delivery)

17. Was the baby born alive? if no: what happened? When did it happen? How long was the baby was in the facility

THANK YOU FOR YOUR PARTICIPATION!!!

Annex 4

Topic guide for the Key Informant interviews health providers of the Maternity Waiting Home in Ifakara

- Provide information about the study as in the consent forms
- (Ask for consent and signing of the forms)

To monitor progress and results

Fill the personal data sheet for each participant. Start the interview

DRAFT FOR DATA RECORDING SHEET:

CODE:

DATE/TIME…….

NAME OF MODERATOR ……Sign……

NAME RECORDER……Sign……
TRANSCRIBER……Sign……..

DURATION…….

General comments:

PERSONAL DATA PARTICIPANTS: code:

1) What do you think about MWH? Does it contribute to improving the health of women and newborns? Why/Why not.

2) Do you ever advise women to use the MWH? If yes, which women do you advise to use the MWH? and WHY

3) Do you know a women/or women who were advised by you or a colleague to come to the MWH and who did not? Do you know why this/these women did not listen to you or your colleague and made the decision not to come? Do you know other reasons why women do not use the MWH? (probe the persons that influence the decision as husband, mother-in-law, other family, leaving children behind, being far away from family, leaving work (income) behind)

4) What is your role in the MWH? What is the role of other health facility staff in the MWH? Are here others here who have a role at the MWH/ (TBA, community health providers). Describe the roles; who does what and when

5) What is good about the MWH? What are the problems of the MWH? If yes, what can be done to solve these problems and who can do that? Do you have any suggestions or recommendations that will make more women use the MWH?

6) Is there anything else you want to share with us about the MWH?

Thank you for your participation!

Annex 5

Ethical approval of Research Ethics Committee Royal tropical Institute

Royal Tropical Institute
KIT Development Policy & Practice

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Our reference DEV Education Amsterdam Thursday, 07 February 2013

Subject Decision Research Ethics Committee on Proposal S39B

Dear Maaike van Rijn,

The Research Ethics Committee of the Royal Tropical Institute has reviewed your revised proposal "*Perception from women, about the maternity waiting home in Ifakara, Tanzania as part of an institutional delivery*" (S39B) that was submitted on January 21st, 2013.

The decision of the Committee is as follows:

The Committee has reviewed this revised version and is pleased to see that you have addressed most requested clarifications and amendments to our full satisfaction.

The Committee is of the opinion that the proposal meets the required ethical standards for research and herewith grants you ethical approval to implement the study as planned in de afore mentioned protocol.

Kind regards,

L. Blok, MD, MScCH.
Chair Research Ethics Committee, KIT

CC Fernando Maldonado; Kathy Herschderfer