

ORIGINAL RESEARCH



Assessment of the quality of care in Maternity Waiting Homes (MWHs) in Mulanje District, Malawi

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Abstract

Aim

Maternal Mortality Ratio (MMR) in Malawi remains high at 439 deaths per 100,000 live births, primarily due to limited access to skilled birth care. Although Malawi established Maternity Waiting Homes (MWHs) to improve access to skilled labour, the quality of care provided in the homes has received limited assessment. The aim of this study was to assess quality of care in the Maternity Waiting Homes in Mulanje, Malawi.

Methods

We conducted a descriptive qualitative study in three MWHs in Mulanje district, Malawi, from December 2015 to January 2016. We conducted a non-participatory observation using a checklist, to assess the physical layout of the facilities, six face-to-face in-depth interviews (IDIs) with health providers and four focus group discussions (FGDs) with 27 pregnant women admitted for more than 48 hours in MWHs. We digitally recorded all FGDs and IDIs simultaneously transcribing and translating them verbatim into English. Data were analysed using thematic analysis.

Results

There were mixed perceptions towards the quality of care in the MWHs. Factors that were perceived to indicate higher quality included a quiet environment at the MWH and midwifery services. Lack of cooking spaces, lack of 24-hour nursing care, absence of food and recreation services and sleeping on the floor negatively affected perceptions of quality.

Conclusion

The study has shown that care provided in MWHs varied across facilities. Perceptions of the quality of care were not uniform and a lack of standards contributed to the differences. Efforts should be made to improve, sustain and standardize care in MWHs in order to improve perceptions of quality of care in MWHs.

Introduction

Maternal death is one of the major health problems in the world¹⁻³, with 99% of maternal deaths occurring in developing countries and 57% in sub-Saharan Africa¹⁻⁴. The Maternal Mortality Ratio for sub-Saharan Africa alone is 500 maternal deaths per 100,000 live births³, while in Malawi; MMR is at 439 deaths per 100,000 live births^{5,6}. Although the MMR rates remain high in Sub-Saharan Africa, De Brouwere et al. contend that more than 80% of the maternal deaths are preventable through effective interventions, even in developing countries³. Lack of access to skilled birth care is the leading contributing factor to maternal deaths in developing countries^{1,3,4,7,8}. One of the many interventions in place to improve access to skilled birth care is the establishment of Maternity Waiting Homes (MWHs)⁷. Access to skilled birth care is increased by accommodating pregnant women in nearby hospitals where emergency obstetric care is provided.

MWHs are residential facilities within health institutions where women with high-risk pregnancies are admitted as they wait for their expected date of delivery⁹. Pregnant women with previous still births, operative delivery, high parity and high blood pressure, are some of the factors that define high-risk pregnancies. MWHs also cater for pregnant women who have poor access to skilled birth care from 35-40 weeks gestation⁷⁻¹¹. Some countries developed their own MWH guidelines with admission protocols. For example, Mozambique includes geographical distance and high-risk pregnancy as criteria for admission into MWHs¹².

An evaluation of MWHs published on the World Health Organization's (WHO) website showed that Malawi does not have MWH guidelines and that the admission protocol was not documented⁷. The evaluation highlighted that previously, Malawi used guardian shelters and postnatal wards to accommodate pregnant women close to the hospital instead of MWHs. Few women referred themselves to the shelters and others were recommended by health workers. The WHO evaluation stipulated minimum standards for MWHs which include three elements, health services, education and supportive services⁷.

Malawi adopted and officially implemented MWH interventions in 2012 under the presidential safe motherhood initiative¹³. Currently, 18 districts in Malawi have MWHs, with Mulanje district pioneering the initiative in 2012¹³. The aim was to provide all women with regular checkups and education, especially those living far from the hospital. Despite the expansion of MWHs in Malawi, MWHs' specific guidelines and services management have not been documented^{12,13}. However, anecdotal reports show that, currently, most MWHs are using the Antenatal Care (ANC) guidelines. Although MWHs form one of the pillars of the presidential safe motherhood initiative and aim at linking pregnant women into the formal health system to improve maternal health¹³, there has been limited assessment on the quality of care provided in MWHs in Malawi. This study was guided by the Donabedian structure-process-outcome framework to assess quality of health care services in diverse

health care settings and the minimum standards of quality care in MWHs listed on the WHO’s website^{7,14}. The value of combining the Donabedian model and the WHO MWH’s standards was that the Donabedian model helped to take on board all comprehensive variables that could lead to defining the quality of care in the MWHs, the structure, process and outcome, while the WHO’s standards contextualize the assessment of quality of care using Donabedian aspects. Malawi does not have standards to guard the provision of services in the MWHs. Information on quality will assist in improving MWHs for them to meet their intended purposes of contributing to the improvement of maternal health and reduction of maternal deaths. In this study, we assessed client and provider perspectives on quality of care in MWHs in Mulanje, Malawi.

Methods

Study design

We conducted a qualitative descriptive study at Mulanje Mission Hospital, Mulanje District Hospital and Chonde Health Centre in Mulanje, Malawi, from December 2015 to January 2016 to assess client and provider perspectives on quality of care in MWHs. Of the 23 health facilities in Mulanje, these health facilities were the only three facilities with a MWH at the time when this study was conducted.

Study place and Sample size

We purposively selected Mulanje district because it pioneered the establishment of MWHs¹⁴. We conducted a non-participatory observation of the physical layout of the MWHs using a checklist^{15–18}. We only focused on the perceptions of health workers and pregnant women on the quality of care because of time limitations. We conducted six face-to-face in-depth interviews (IDIs) with health providers, two at each health facility. We conveniently sampled and recruited 27 pregnant women who constituted four focus group discussions (FGDs). The pregnant women were those that were admitted for more than 48 hours in MWHs. At Chonde Health Centre, we did not find enough women to constitute an FGD18. We digitally recorded all FGDs and key informant interviews (KIIs), simultaneously transcribing and translating them verbatim into English.

Health workers assisted in identifying eligible pregnant women as per eligibility criteria. We verified the participant’s demographic data as captured in their health passport book to achieve maximum variation in the selection of individuals with various characteristics to broaden responses^{19,20}. We included both primigravidae and multigravidae who were of different ages and had spent varying lengths of time in MWHs in order to draw on various experiences and broaden the scope of the responses. In each of the two facilities, the researchers divided the women into two groups to constitute FGDs based on participants’ age to promote free expression of their experience in relation to the care they received in MWHs. One group had women aged 18 to 24 years and the other group had women aged 25 years and above. We purposively selected six health workers based on their roles and experiences in the MWHs. We included a nurse midwife and a guard from each MWH who had worked at their respective MWHs for more than 6 months. We decided on a period of six months because participants would have the necessary skills and experience and would offer deeper insights into the quality of care¹⁸. We purposively included a guard because they are a critical human resource stationed at

MWHs around the clock.

Data collection

Data collection in the FGDs and IDIs followed pretested guides (Additional files 1 and 2: IDI and FGDs guide respectively). We collected data on perceptions on quality of care, descriptions and evaluations of care received, and challenges and recommendations regarding MWHs. We collected similar data from health care workers highlighting their perspectives and how they provide the services (Additional file 3). Each participant was interviewed once by research assistants who were trained by the researcher on how to use the data collection tools and administer the consent forms. The IDIs lasted for 45-65 minutes, while FGDs lasted for 60-95 minutes. Data collectors summarised the key findings after each session as a measure of data validation²¹. We stopped collecting data after data saturation, which was achieved when participants did not add any new information to the already collected data²².

We conducted non-participatory observations in all study sites using a checklist (Additional file 4: Non-participatory observation checklist). The checklist was developed to assess structural elements prescribed by the Donabedian theory. The checklist was developed from the minimum standards stated in the review of MWH published on the WHO website to assess whether or not certain structural aspects were present^{7,23}. Prior to data collection, the checklist was reviewed by the College of Medicine Research Ethics Committee (COMREC) and the supervisor’s expert review. The researcher and one research assistant (both nurses) piloted data collection guides at South Lunzu Health Centre to check for validity and no changes were made. We achieved data credibility through collection of data from two data sources: health workers and pregnant women¹⁹. We applied methodological triangulation¹⁸ by using different methods of data collection tools: IDIs, FGDs and non-participatory observations. We verified whether participants’ contributions matched with their intentions by repeating what had been discussed to validate the data¹⁸.

Ethical approval

Prior to study implementation, we sought ethical approval from COMREC on the protocol, consent documents and interview guides (COMREC -P.10/15/1818). We sought support and authorization from the Mulanje District Health Officer and officer’s in-charge of the respective health facilities to conduct the study. We sought written informed consent from participants who were able to read and write and participants that were unable to read and write provided thumb prints on the consent forms in the presence of impartial witnesses. We used codes instead of participants’ names to ensure confidentiality. Although the researcher and research assistants were nurse midwives, their identities were concealed by not wearing uniforms, which helped to avoid compromising research findings. The researcher and assistants were not employees from the study sites.

Data analysis

We analysed our data manually following thematic analysis as suggested by Braun et al., which assisted in theme identification and facilitated the organization and report patterns within data in detail²⁴. Our themes were inductively and deductively developed from the data and the study objective, Donabedian and the WHO conceptual frameworks, respectively^{7,23,24}. Prior to analysis, we transcribed recorded data, translated

it verbatim from Chichewa into English and read the transcripts multiple times which allowed for data immersion and familiarization. The two authors independently coded one transcript. Different codes were discussed by the two authors and later, we agreed upon preliminary codes that were used for the other transcripts. We also included other codes that were not realized from the initial transcript as analysis progressed. We examined the codes and collated similar codes into categories to organize them under overarching themes²⁴. We refined our themes by checking them against the recordings to ensure that they correctly represent the data and the conceptual frameworks that guided the study. We defined and explained the components of each theme. Codes that did not fit the established themes were presented separately to achieve an objective presentation of findings. We searched for inconsistent evidence and opposing details and named the themes by looking at the data that was taken on board, looking at the stories behind the themes and why the themes were important²⁴.

Results

Table 1: Demographic characteristics of focus group discussion participants

| Variable | N | % |
|--|--------------|---------------|
| Gravidity Primigravidae Multigravidae | 15 12 | 56 44 |
| Age 18-24 years 25 and above | 14 13 | 52 48 |
| Gestation in weeks 32-35 weeks 36-39 weeks 40 weeks + | 2 18 7 | 7 67 26 |
| Able to read and write Unable to read and write | 21 6 | 78 22 |
| Duration of stay 4 days-3 weeks 4 weeks-8 weeks | 25 2 | 93 07 |
| Marital status Single Married | 02 25 | 07 93 |
| Number of admission First admission Second admission Median age: 24. Age range 18-29 Median gravidity: 1. Gravidity range 1-3 Median gestation age: 37. Gestation age range 34-40 weeks | 25 2 | 93 07 |

The majority of the FGD participants were admitted for the first time in the MWHs (N= 25) and only two were admitted twice. The longest duration of stay in MWHs was 8 weeks and the least was 4 days, with a mean duration of 1.6 weeks.

Most women admitted to the MWHs were married (N= 23) and 4 were single. 6 participants were able to read and write and most of the participants were unable to read and write (N=21). The participants’ median age was 24 years, with the age range of 18-29 years old. The median gravidity of the women in the MWHs was 1, with the gravidity range of 1-3, and the median gestation age was 37 weeks with the gestation age range of 34-40 weeks.

Characteristics of pregnant participants in in-depth interviews

The median age for the participants was 25 years with the age range of 19-30 years. 4 of the participants were married and only 2 were single. There were equal numbers of primigravidae and multigravidae (N=3). Among the pregnant women, 5 had a gestation age of less than 39 weeks with one more than 40 weeks. 4 participants had stayed for less than 3 weeks, while 2 participants had stayed in the MWHs for between four and 6 weeks.4 of the participants were able to read and write while 2 were unable to read and write.

Characteristics of health workers

The health workers included three nurse midwife technicians and three guards. The nurses’ highest level of qualification was a diploma in nursing and midwifery whilst the guards’ highest level of education was the Malawi Junior Certificate of Education (JCE). The duration of employment for the health workers ranged from 6 months to 6 years.

Participants’ satisfaction with quality of care in maternity waiting homes

The major themes that emerged under the theme of ‘quality of care’ were: (a) high quality of care in the MWHs, and (b) low quality of care in the MWHs. Overall, participants had mixed perceptions of the quality of care in MWHs. A list of themes is presented in Table 2 below.

Table 2: Emerging themes and sub-themes

| Emerging themes | Subthemes |
|--------------------------------|---|
| 1. High quality of care in MWH | 1. Quiet environment 2. Midwifery services a. Close monitoring of pregnant women b. Referral services |
| 2. Low quality of care in MWH | 1. Nutrition support a. Lack of cooking space b. Lack of food 2. Lack of 24-hour nursing care a. Challenges during labour b. Human resource i. Health workers’ attitude c. Security at night d. Inadequate material resources i. Documentation supplies and drugs 3. Recreation services a. Recreation supplies 4. Infrastructure a. Lack of beds b. Poor amenities i. Water supply ii. Washroom lighting |

a) Good quality of care in maternity waiting homes

Participants who were satisfied with the quality of care in the MWHs described the care as adequate. Some stated that

study showed that the factors leading to satisfaction with the quality of care were good accommodation, good ventilation of the MWH buildings, close observation by the nurses and provision of food. Similarly, a literature review by Srivastana et al²⁹ showed that pregnant women in developing countries were satisfied with good physical environments²⁹. These findings highlight that not only is nursing and medical care of paramount importance in MWHs but also the physical environment influences satisfaction with services.

Conversely, some pregnant women in our study were dissatisfied with the quality of care in the MWHs. A study by Sialubanje et al³⁰ in rural Zambia reported that participants were dissatisfied with the quality of care as they had problems with sleeping space, cooking space and the availability of water; this influences the quality of care in the MWHs³⁰. These findings highlight the importance of understanding Abraham Maslow’s hierarchy of needs when providing MWH services to pregnant women, which places safety and physiological aspects as fundamental needs of a human being^{30,31}.

In our study, nutrition was one of the factors that led to dissatisfaction with the quality of care, which is similar to the study findings from Tanzania, Democratic Republic of Congo and Ghana^{27,32}. In Tanzania, MWHs provided poor quality food and in small quantities⁷. As with the participants from our study, women in Tanzania purchased and prepared their own food⁷. However, our findings differ from countries like Cuba, Lesotho and Cambodia which provide food to pregnant women^{8,10,11}. Cognizant of the unavailability of adequate food in MWHs in Malawi, we advocate for constant education for the pregnant women on the nutritious food groups and birth preparedness in the event they are admitted weeks prior to their expected date of delivery.

Our findings on the security of pregnant women in MWHs concur with studies in Zambia and Ghana where women were concerned with medical safety, transportation to the hospital and security^{7,27,32}. In Ghana, the location of the MWH was far from the hospital and pregnant women were rarely monitored by nurses. This caused transportation problems when labour started, especially during the night³³. Similarly, in our study, women in labour have to walk to the hospital on their own despite having guards available. This is especially problematic at night; clients use a phone as a source of light along the poorly lit footpath. This is inconsistent with the WHO’s recommendations that MWHs should have health providers to initiate the transfer of pregnant women to the hospital, and in the case where there is limited staff, guards should be present during the night to assist pregnant women as they are referred to the hospital⁷.

However, the WHO’s recommendations state that this kind of arrangement only overcomes geographical barriers and pregnant women still have a risk on childbirth problems⁷. Based on the WHO’s MWH recommendation, our findings indicate that the practice in Malawi still minimises a woman’s access to assisted delivery by skilled labour. Furthermore, the WHO states that there should be an alarm system, transportation arrangements and communication between the MWHs and the hospital to ensure that referral to the hospital is on time and efficient⁷. Our findings show that the recommendation of efficient and timely referral was not met and pregnant women still encounter challenges in accessing skilled birth care, despite admission in the MWH.

Our study showed that in some instances, MWHs are not

fully utilized and this resonates with the study findings in Guatemalan MWHs where pregnant women were admitted to the MWH to create space in the labour ward, not due to eligibility as per WHO admission protocol²⁶. On the contrary, MWHs in Lesotho, Cuba and Cambodia make full use of the MWHs by accommodating the most needed categories of pregnant women who meet the admission criteria to the MWHs^{10,11,34}. Nevertheless, MWHs should accommodate other pregnant women, as there is a potential for a pregnancy to turn into a high risk pregnancy, with a priority placed on women with actual risk factors⁷.

The use of the postnatal ward as a MWH may be expressed as a failure to take advantage of the available MWHs⁷. Another reason that could partially explain the use of postnatal ward for the purpose of MWH could be staff shortages. This is evident in the review of MWHs experience by WHO in 1996, which indicated that Malawian postnatal wards, guardian shelters and antenatal wards were used to accommodate high risk pregnant women⁷. In addition, the findings suggest that health facilities are not accommodating to the formal MWHs. Therefore, there is a need for guidelines to instruct health workers and more workforces to fully adopt the MWHs and use the wards for their intended purposes. The guidelines may also guide health workers on the services that are to be offered in the MWHs to improve the quality of care in the MWH.

Study limitations

Our study had some limitations such as use of heath care workers as research assistants who could have their own biases. However, researchers’ professions and identities were concealed and were not employed in Mulanje District. Our study was limited to Mulanje District and only focused on women that used the MWH; hence results may be limited in application. Nonetheless, our study brings forward the state of the perceived quality of care in MWHs in Mulanje, the first district where MWHs were formerly launched.

Conclusion

The key finding of our study showed that some participants were satisfied with the quality of care in the MWHs, while others were dissatisfied. The factors that positively influenced quality of care in this study were a good environment at the MWH and the midwifery services. A lack of cooking spaces, absence of food, lack of nursing care around the clock, lack of recreation services and a lack of available beds negatively affected perception of quality. The health workers perceived the quality of care to be compromised because there was not enough staff to provide adequate nursing care around the clock and a lack of material resources. The services provided in MWHs include educational services, accommodation and midwifery services. The challenges in MWHs were inadequate human and material resources and compromised security. The unique finding of our study is the lack of guidelines for MWHs which would create variations in the provision of care in the MWHs within a district.

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Authors’ Contributions

LCSK planned the study, developed study methods, developed interview guides and conducted observations, FGDs and in-depth interviews, developed an analysis plan, analysed the data and drafted the manuscript. ALNM supervised the planning, development of the methods, analysis plan, and data analysis and contributed and supervised the manuscript writing. All authors read and approved the final manuscript.

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