Midwifery 41 (2016) 89–95

Contents lists available at ScienceDirect

Midwifery

journal homepage: www.elsevier.com/midw

Developing a community driven sustainable model of maternity waiting homes for rural Zambia

Jody R. Lori, PhD (Dr.)[a,*], Michelle L. Munro-Kramer, PhD (Dr.)[a], Eden Ahmed Mdluli, MPH (Mrs.)[b], Gertrude K. Musonda (Mrs.)[c], Carol J. Boyd, PhD (Dr.)[a]

[a] Department of Health Behavior and Biological Sciences, University of Michigan, School of Nursing, 400 North Ingalls, Ann Arbor, MI 48109, USA
[b] Africare House, 440 R Street, N.W., Washington, D.C. 20001, USA
[c] Africare Zambia, Flat A, Plot 2407/10 MBX, Off Twin Palm Road, Ibex Hill, Box 33921, Lusaka, Zambia

ARTICLE INFO

Article history:
Received 27 April 2016
Received in revised form
11 August 2016
Accepted 15 August 2016

ABSTRACT

Background: maternity waiting homes (MWHs) are residential dwellings located near health facilities where women in the late stages of pregnancy stay to await childbirth and receive immediate postpartum services. These shelters help overcome distance and transportation barriers that prevent women from receiving timely skilled obstetric care.
Objective: the purpose of this study was to explore Zambian stakeholders' beliefs regarding the acceptability, feasibility, and sustainability of maternity waiting homes (MWHs) to inform a model for rural Zambia.
Design: a qualitative design using a semi-structured interview guide for data collection was used.
Setting: two rural districts in the Eastern province of Zambia.
Participants: individual interviews were conducted with community leaders ($n=46$). Focus groups were held with Safe Motherhood Action Groups, husbands, and women of childbearing age in two rural districts in Zambia ($n=500$).
Measures: latent content analysis was used to analyze the data.
Findings: participants were overwhelmingly in support of MWHs as a way to improve access to facility-based childbirth and address the barrier of distance. Data suggest that participants can describe features of high quality care, and the type of care they expect from a MWH. Stakeholders acknowledged the need to contribute to the maintenance of the MWH, and that community involvement was crucial to MWH sustainability.
Key conclusions: access to facility childbirth remains particularly challenging in rural Zambia and delays in seeking care exist. Maternity waiting homes offer a feasible and acceptable intervention to reduce delays in seeking care, thereby holding the potential to improve maternal outcomes.
Implications for practice: this study joins a growing literature on the acceptability, feasibility, and sustainability of MWHs. It is believed that MWHs, by addressing the distance and transportation barriers, will increase the use of skilled birth attendants, thereby reducing maternal and neonatal morbidity and mortality in rural, low resource areas of Zambia. We recommend that any initiative, such as MWHs, seeking to increase facility-based births with a skilled birth attendant also concurrently addresses any local deficiencies in quality of care.

Introduction

Pregnancy and childbirth continue to be risky in Zambia, and represent a leading cause of death and disability for women of childbearing age. Lifetime risk of maternal death in Zambia - the probability that a 15 year old girl will eventually die from a complication related to childbirth - is 1 in 79 (World Health Organization, 2014). The country ranks 26th out of 184 for maternal deaths (Central Intelligence Agency, 2010) and a reported maternal mortality ratio of 398/100,000 live births (Central Statistical Office (CSO) [Zambia] et al., 2014). In response to the high mortality rates, the Zambian government has instituted an initiative encouraging women to give birth in a health care facility with a skilled birth attendant, such as a midwife or nurse (Ministry of

* Corresponding author.
E-mail addresses: jrlori@umich.edu (J.R. Lori), mlmunro@umich.edu (M.L. Munro-Kramer), eahmedmdluli@africare.org (E.A. Mdluli), gmusonda@africare.org (G.K. Musonda (Mrs.).)caroboyd@umich.edu (C.J. Boyd).

http://dx.doi.org/10.1016/j.midw.2016.08.005
0266-6138/

Health Zambia, 2011).

While many maternal deaths are preventable (e.g. postpartum haemorrhage, pre-eclampsia/eclampsia, sepsis) with appropriate and timely care during labour and within 24 hours post partum, women continue to die from the 'three-delays' in resource poor settings (Lori and Starke, 2012; Combs et al., 2012). The three delays include: (1) delays in decision to seek care (cultural beliefs and myths, gender roles in the decision making process, lack of awareness); (2) delays in reaching the health facility in time (distance, bad terrain, lack of transport); and (3) delays in receiving adequate care once at the health facility (lack of skilled care, equipment, supplies) (Thaddeus and Maine, 1994). Due to these delays, home births remain common in Zambia - on average only 64% of deliveries are attended by a skilled birth attendants (SBA) decreasing to 52% in rural areas (CSO [Zambia], et.al., 2014).

While all the delays are equally important, one of the most important unanswered questions in the maternal health field remains the 'distance problem' women face when trying to reach a midwife or nurse who works at a health facility. Namely, how can we best bring women closer to higher-quality childbirth and immediate postpartum care with a SBA? This remains particularly challenging in rural and remote areas where delays in seeking care exist due to challenging terrain, vast distances between communities and facilities ill equipped and understaffed to provide high quality care, and a lack of reliable transportation options that restrict women's access to care (Greeson et al., 2016).

Maternity waiting homes (MWHs) are residential dwellings located near health facilities where women stay to await childbirth with a SBA and receive immediate postpartum services. They have been used in a variety of settings as a 'geographic bridge' to overcome distance and transportation barriers that can prevent women from receiving timely skilled midwifery or obstetric care (Lee et al., 2009). Studies indicate MWHs are a potential solution to these barriers and have shown a correlation between MWH utilisation and improved maternal and newborn health outcomes in variety of low resource countries (Cardoso, 1986; Knowles, 1988; Chandramohan et al., 1995; Spaans et al., 1998; Eckermann, 2006; Bhutta et al., 2009; Lee et. al., 2009; Lori et al., 2013a). Unfortunately, conclusions regarding the effectiveness of MWHs are constrained because the evidence-base is weak and implementation tends to be small-scale, unstandardised, and with limited attention to replicability (Stekelenburg et al., 2006; van Lonkhuijzen et al., 2012).

Maternity waiting homes already exist in Zambia; however, there is currently no model to ensure that the MWHs are meeting the needs of the women in their communities or that there is a plan for sustainability of the MWH. Thus, many of the pre-existing MWHs are in disrepair and underutilized. Two qualitative studies conducted in the rural Kalomo region of Zambia found that both men and women interviewed recognised the role of MWHs in improving maternal health outcomes, but had concerns about the condition of the homes such as sleeping space, kitchen facilities, water, and sanitation (Sialubanje et al., 2016; Sialubanje et al., 2015). These concerns coupled with financial constraints resulted in low use of maternal health services, such as MWHs. This has been documented in previous studies in Zambia (Gabrysch et al., 2011; Sialubanje et al., 2014; Stekelenburg et al., 2004). There is a gap in the literature on the community engagement principles used to involve a community in planning for MWHs prior to building the homes; although community involvement is assumed if the MWH is to be used and sustainable.

The purpose of this study was to explore stakeholders' beliefs surrounding the acceptability, feasibility and sustainability of MWHs in two districts within Zambia. The research questions were: (1) What do stakeholders believe is the acceptability and feasibility of establishing MWHs in the target districts? and (2) What is the ideal community approach for a sustainable MWH model in rural Zambia? Data presented here were collected to inform the development of a core model and provide input into the design for potential funding agencies planning to construct MWHs in Zambia.

Methods

A qualitative study design employing a semi-structured interview guide for individual interviews and focus groups was used to explore the acceptablity, feasiblity, and sustainablity of MWH in rural Zambia. Demographic data were collected on all participants. The Maternal and Newborn Quality of Care Survey, Essential Inventory (USAID, 2012) was used to collect descriptive health care facility data. Latent content analysis was used to analyze focus group and individual interview data. All instruments and protocols received institutional review board (IRB) approval by the University of Michigan and Ethics Reviews (ERES) Converge IRB in Zambia.

Setting and sample

Two districts in the Eastern province of Zambia with high rates of maternal mortality were chosen for this study by the funding source, Lundazi and Petauke. Lundazi had a projected population in 2013 of 354,877 with 78,073 women of reproductive age and 19,163 expected pregnancies (Lundazi District Health Department, 2013). The majority of the population in Lundazi belongs to the Tumbuka tribe. Petauke had a total projected population of 275,219 with 61,649 women of reproductive age and 16,862 expected pregnancies (Petauke District Health Department, 2013). The majority of the population in Petauke belongs to the Tonga tribe.

A convenience sample including SMAG members, husbands, women of reproductive age, and key leaders from the catchment communities surrounding 15 health care facilities in the two districts was purposively recruited. Health care facilities associated with MWHs ($n=5$) and without MWHs ($n=10$) were included to gain insights on best practices and limitations of existing MWHs.

Data collection

Seven experienced Zambian research assistants (RAs) - literate in the local languages - were trained on data collection protocols and assisted in development of the semi-structured interview and focus group questions. Data were collected over a two month time period in 2013. Forty-seven focus groups were conducted and included: (1) Women of reproductive age ($n=168$); (2) members of SMAGs, Community Members, and Traditional Birth Attendants ($n=177$), and (3) Men/husbands ($n=155$). Forty-six individual interviews were conducted with key community leaders: chairperson – an elected member of the community with high ranking and decision-making power; headman – the official leader of the community with decision-making power; counsellors; church leaders; and health centre staff. Additionally, descriptive data were collected on facilities (rural health or zonal health centres; $n=15$) using the QoC Essential Inventory Survey (USAID, 2012). This survey captures the infrastructure conditions of the health care facility as well as the number of antenatal visits, deliveries, and available resources. Due to low literacy levels in the communities verbal informed consent was obtained prior to data collection from all participants. Interviews were audio-recorded, translated, and transcribed verbatim by the Zambian RAs.