Maternity waiting homes: A panacea for maternal/neonatal conundrums in Eritrea

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Abstract

Background: Maternal mortality which is partly due to low skilled care delivery is still less than 30% in most developing countries including Eritrea. Maternity waiting homes were introduced in Eritrea in 2007 as a strategy to mitigate against the attendant high maternal mortality rates in hard to reach regions.

Objective: To assess pregnancy outcomes verified through maternal mortality and perinatal mortality rates since the introduction of maternity waiting homes in some hard to reach sub-zobas of Eritrea.

Methods: A rapid assessment of the maternity waiting homes was conducted in six sub-zobas of Northern and Southern Red Sea Zones during the period April 20-29, 2009 using questionnaires administered to health workers, community members, traditional birth attendants and the beneficiaries.

Results: Heads of a total of 11 health facilities, community leaders, TBAs and mothers who stayed in the maternity waiting homes were interviewed. A total of 862 mothers had delivered in the 20 months since the introduction of the maternity homes from September 2007 till April 2009 averaging 425 annually compared to 266 deliveries in the same facilities prior to introduction of the waiting homes. No maternal death was recorded in the health facilities during that period. There were seven neonatal deaths and seven still births during the same period making the peri-natal death rate of 1.6%.

Conclusion: Deliveries in the maternal waiting homes increased deliveries by 56% with no maternal deaths reported, making it a successful strategy targeted at reducing maternal and perinatal mortality rates. The study recommends the upscaling of the strategy because it is costeffective and acceptable to the community as evidenced by the support provided by the community

Introduction:

Maternal and childhood mortality rates are unacceptably high especially in developing countries making it difficult for them to achieve the health related millennium development goals (MDGs) 4, 5, and 6 which are intricately interrelated[1]. The attainment of MDGs 4 and 5 is based on good antenatal care, delivery services and care of the new born 2. Some of the contributory factors related to high maternal mortality are non-availability of life savings skills to manage obstetric emergencies[3]. Low skilled attendance delivery especially where pregnant women prefer to use traditional birth attendants (TBAs) has exposed the women to inadequately equipped delivery settings [4,5].

Eritrea has made some progress towards meeting MDGs 4 and 5 on reducing childhood mortality maternal mortality rates respectively [6],. Today, three-quarters of maternal deaths result from the direct obstetrical complications of hemorrhage, sepsis, obstructed labor, hypertensive disorders of pregnancy and septic abortion. Studies on maternal mortality in developing countries have shown that making pregnancy and childbirth safer means ensuring that women have access to a continuum of care, including appropriate management of pregnancy, delivery and the postpartum period together with access to life-saving obstetric care when complications arise [7].

Use of maternity waiting homes is a proven and time tested strategy in practice for more than 100 years that has been demonstrated to reduce pregnancy outcomes by bringing health services to the people rather than expecting the people to seek health service in remote health facilities. Deployment of health workers who have life saving skills in emergency obstetric care including the application of task shifting of higher responsibilities to relatively lowly qualified health workers markedly improved outcomes in many developing countries [4,8].

While maternity waiting homes have been successfully used in reducing maternal mortality in other setups[9,10,] little quantitative research on their utilization rates and user satisfaction has been conducted to prove their efficacy in Eritrea. The Ministry of Health of the State of Eritrea has embarked on improving access to health information and services to the people in remote and in accessible areas. One of the strategies implemented in collaboration with partners was construction of Maternity Waiting Homes (MWH) to improve access to health services for mothers and neonates who reside in remote areas of the two coastal regions namely Northern and Southern Red Sea Zones.

Materials and Methods

Study areas: Northern Red Sea and Southern Red Sea Zones are two of the six administrative zones of Eritrea which are located along the coastline of the Red Sea with a total population of 572,546 and 82,733 respectively. Eleven health facilities in the six sub-zones namely Foro, Gelalo, Araeta, Maekel Denkalia, Debub Denkalia and Asseb, which have maternity waiting homes, were enrolled in the study.

Some of the health workers were trained in life saving skills that included manual removal of placenta and retained products, suture of episiotomies, cervical tears and provision of intravenous (IV) fluids, IV antibiotics, oxytocics and magnesium sulphate. All health facilities with maternity waiting homes had at least one ambulance ready for referral to higher level health facilities during emergencies. Antenatal care services, vaccination/immunization for the mothers and their children, counseling about skilled care attendance, family planning and HIV/AIDS were provided

During their admission, mothers were provided with rations of pasta, rice, oil, milk, soap, OMO, tomato paste and cooking utensils which they return to the homes back when they were discharged. The estimated cost of the consumables provided to mothers was 750.00 Nakfa (50.00 USD) per mother per pregnancy.

Data collection: Delivery records and other available documentation were reviewed. Interviews were conducted using self administered questionnaires with Zonal Health Management Teams, health workers in each health facility visited, local administrators, TBAs and the pregnant mothers in the Maternity Waiting Homes.

Results of the study

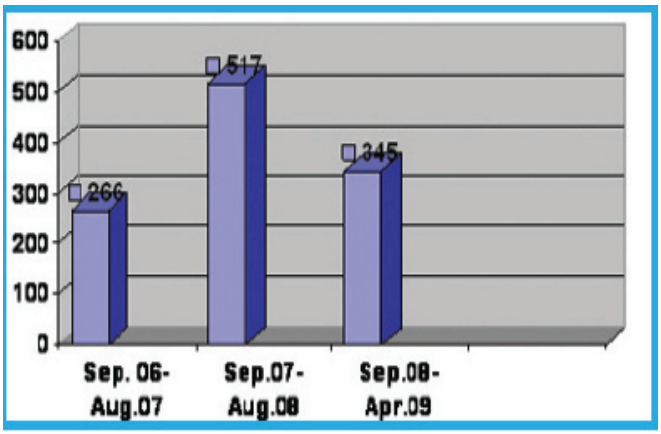
There were a total of 11 maternity waiting homes in the six sub-zones in Northern and Southern Red Sea Zones. The admission criteria for mothers to the maternity waiting homes were any mother who resided from distant areas (distance from the health facility more than 10 kms), who was pregnant for eight months or more, irrespective of her gravidity, parity, medical and obstetrical history was eligible.

The number of deliveries in 11 health facilities in the period September 2006 to August 2007, September 2007 to August 2008 and September 2008 to April 2009 (8 months period) was compared and the result elucidated that there was a 48.5% increment in 2007/2008 as compared to that of 2006/2007.

Available data from September 2006 to August 2007 prior to the introduction of maternity waiting homes, total deliveries were 266 and there were five maternal deaths recorded in the health facilities making case fatality rate of 1.9%. Since the introduction of waiting homes, officials at the health facilities were asked if there was any maternal death in the past 12 months, there were 474 deliveries in the past 12 months (May 2008 to April 2009) and there was no any maternal death recorded in the health facilities visited. A delivery record review for the period September 2007 to April 2009 was done and there were a total of 862 mothers delivered in the health facilities, but there was no any maternal death recorded at the facility (Figure 1).

There were seven neonatal deaths and seven still births in the same period making the peri-natal death rate of 1.6%.

Figure: Number of deliveries in September 2006 to April 2009



Although six out of 11 (54.5%) of the health facilities visited had ambulances for referral, the ambulances lacked tires and fuel which the zoba MOH, minor constraints which were being addressed by the concerned authorities.

Seven out of eleven facilities (63.6%) had a communication facility; four used their own mobile phones to communicate with referral centers and zonal medical offices and three used either administration of Ministry of Defense VHF Radios for communication. Four of the eleven health facilities (36.4%) did not have any means of communication.

All 11 health facilities had at least one health worker, a nurse, midwife and/or an associate nurse who was trained and had the competence to handle emergency obstetric care. The skills that require further training were vacuum delivery and removal of retained products using Manual Vacuum Aspirator and/or Evacuation and Curettage equipment. Only one health facility had not performed removal of retained products and only two health facilities had not performed vacuum assisted deliveries. All health facilities visited administered IV fluids, parenteral antibiotics, sedatives, and oxytocics, administration of magnesium sulphate for management of pregnancy induced hypertension and there were enough stocks of all the medications specified above except ergometrin which was expired seven years before the study.

Seventeen randomly selected pregnant mothers admitted to the maternity waiting homes who were interviewed were satisfied with the services they received from the health facilities.

Discussion

The Ministry of Health State of Eritrea introduced maternity waiting homes as a strategy to offset the high maternal and perinatal mortality rates experienced in hard to reach areas. During the year prior to the introduction of the homes, there were 266 deliveries, 5 maternal deaths in the health facilities and the maternal mortality rate was nearly 2%. After the introduction of maternity waiting homes, 866 deliveries averaging 415 annually; an increase of more than 50% , from 2007 to 2009 for a period of 20 months were recorded with no maternal death. The perinatal mortality rate of 1.6% was reported after the introduction of the maternity waiting homes.

Developing countries including Eritrea are confronted by high maternal mortality and infant mortality rates for which there is urgent need for interventions. One of the tested and proven strategies is the establishment of maternity waiting homes a practice which has been in existence for more than 100 years [9-11]. In developing countries even under the best of times, the delivery rate in health facilities is less than 30% with as low as 15% in other settings [6]. Clearly, if the MDGs 4 and 5 which are closely related to delivery, health services have to be brought to the people rather than wait for people to come to them.

Hard to reach areas can be accessed through mobile health services for immunization and other primary health care services. Because of the unscheduled

nature of deliveries and the preponderance for deliveries to occur at night compounded by non-availability of transport and ambulance services, the need for maternity waiting homes becomes apparent [9]. Pregnancy outcomes from high risk pregnancies for mothers who delivered in maternity waiting homes were reported to be similar or better than those who delivered in the home under the services of TBAs [2].

The complementarities between the services offered by the existing TBAs and the introduction of maternity homes have been strengthened through the training of TBAs on life saving skills plus the recognition of early danger signs and when to refer [12]. Trained TBAs in our study encouraged their clients to deliver in the maternity waiting homes and even accompanied them to the facilities. The observation on the facilitator role of TBAs in implementing de facto task shifting of higher functions by lower levels of human resources for health, has obviated the need for additional higher levels of trained staff to be deployed for deliveries.

Although the perinatal mortality rate was still unacceptably high, that level of 1.6% was still better than has reported from other developing countries [1]. The causes of the still births mainly were obstructed labor due to the restriction of the vaginal opening (infibulations) as Female Genital Mutilation/Cutting (FGM/C) is widely practiced in the areas[13]. The neonatal deaths were mainly due to birth asphyxia with low APGAR score, birth trauma during opening of the infibulated vaginal canal, they caused trauma to the new born and this was followed by infection, sepsis and death and one congenital abnormality recorded as a cause of neonatal death. All still births and neonatal deaths were from mothers who came after long hours of labor and failed attempt to deliver the child at home.

Some mothers came to the maternity waiting homes already late in labor and/or among those who gave birth at home. Birth asphyxia related to infibulations and birth trauma during failed attempts to deliver mothers at home by unskilled traditional birth attendants played a role sin some mothers. The majority of the still births and neonatal deaths which happened in recent years were due to unwanted pregnancies. This needs further investigation, to elucidate why peri-natal death among these groups of women is high.

In conclusion, the presence of maternity waiting homes and the voluntary use of the services were contributing to the increased skilled care attendance during last trimester of pregnancy, childbirth and postnatal periods and reduction of maternal mortality in the two regions. The maternity waiting homes whose location was selected by the community were acceptable to the community as indicated by the support to the facilities by the community in the form of maintenance and supplies, and the TBAs accompanying pregnant women to the homes.

Recommendations:

1. The presence of Maternity Waiting Homes is contributing to the increase in skilled attendance during pregnancy, childbirth and postnatal periods in Northern & Southern Red Sea Zones. Coordinated and systematic support to create demand and sustain the operations of the maternity waiting homes is recommended.
2. Health facilities with Maternity Waiting Homes should be staffed by qualified and competent health workers to provide quality emergency obstetric care when complications arise. Continuous refresher courses and supportive supervision to provide on job training is recommended.
3. Provision of communication and trans portation facilities for online consultation, preparedness and referral should be an integral component of maternity waiting homes.
4. Traditional Birth Attendants and local administration are playing key role in bringing mothers to the maternity waiting homes. These groups of the community should be optimally utilized and a system put in place to motivate them. A bi-yearly consultation meetings and refresher courses are recommended.
5. The outcomes of birth for the infibulated mothers (FGM Type III) seem to be a dreadful event. Mass sensitization and education on the harmful effects of FGM and upgrading knowledge and skills of health workers to deal with infibulated mothers to improve the quality of care for the mothers and the newborns is recommended.
6. Peri-natal deaths are common among young, unmarried mothers; the reason for high mortality rate among these groups of women needs to be studied.

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