

## The Importance of Outreach Birthing Services: Lessons from the Implementation of Maternity Waiting Homes in Timor-Leste

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Timor-Leste has one of the highest maternal mortality ratios in Southeast Asia, with 660 maternal deaths per 100,000 live births (WHO 2006). The high level of maternal mortality, combined with the high fertility rate of 6.6 births per women in Timor-Leste has resulted in a one in 35<sup>4</sup> lifetime risk of maternal death. This is ten times higher than the average for the Asia-Pacific region, which is one in 350 (UNICEF 2009). The factors leading to this increased risk of maternal death in Timor-Leste are multiple and complex. The history of war, famine and ongoing political instability interact with poor social determinants of health such as low levels of employment and education opportunities, lack of food security, poor transport infrastructure and widespread poverty. These socioeconomic and structural issues are particularly problematic in rural and remote areas. The medical model, on the other hand, tends to focus on individual causes of maternal death such as haemorrhage, obstructed labour, sepsis, unsafe abortion and eclampsia which lead to disastrous outcomes when there is limited access to quality emergency obstetric care.

The Timorese Ministry of Health, in its landmark Health Policy Framework, recognised the importance of social determinants and cultural values in health care (MoH 2002a). Solutions in early policy documents centred on equity, cultural sensitivity, and quality and accessibility of health services (MoH 2002a; 2002b). Between 2002 and 2005 there was an increased focus on facility-based delivery in Timor-Leste's maternal health policy discourse. By 2007 the national shift to supporting only facility-based delivery had been cemented in two important policy documents: the Health Sector Strategic Plan 2008-2012 (MoH 2007a) and the Basic Services Package (MoH 2007b). Both these documents outlined the plan to improve institutional delivery rather than skilled attendance at birth. The Basic Services Package goes as far as to suggest that home births should be assisted only in an emergency (MoH 2007b:72).

In order to improve access and facilitate the transition from home birth to universal institutional delivery, the national maternity waiting home strategy was developed by the Ministry of Health and its technical advisors in 2005 (MoH 2005a; 2005b). A maternity waiting home is a residence or house, located near a hospital, where women can wait in the last few weeks of pregnancy prior to birthing in a health facility (WHO 1996). The rationale is that women can then rapidly access emergency obstetric care if complications arise, thereby reducing maternal and perinatal deaths. The concept has been promoted as a strategy to 'bridge the geographical gap', and thus aims to improve access to obstetric services for women in rural and remote areas (WHO 1996:1).

Maternity waiting homes were to be piloted in four districts. However, in 2007 they were incorporated into the Basic Services Package, which proposed they be built at sub-district health centres and health posts throughout the country (MoH 2007b). This has major financial and human resource implications for the health system as well as for the types of birthing services women are able to access. It is therefore important to examine whether the maternity waiting homes that have been implemented so far are meeting the objectives outlined in the national strategy (MoH 2005b). This paper reports on the mixed-methods research that was used to evaluate the maternity waiting homes that were implemented in Lospalos in 2005 and Same in 2007. Particular attention is paid to whether the interventions improved access for women from rural and remote areas. The implications of these findings are then discussed in relation to national maternal health policy and system development in Timor-Leste.

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<sup>4</sup> This is a conservative estimate as it uses a low maternal mortality ratio for Timor-Leste of 380/100,000 live births (UNICEF 2009).

## Methods

This research was conducted as part of a larger PhD project that evaluated the national maternity waiting home strategy in Timor-Leste, from the level of policy analysis through to interactions with the wider health system and the community. This paper reports on the health system component of that evaluation. One hundred and twenty four in-depth interviews were conducted with policy-makers, health workers, women and families. The quantitative component was designed as a before-and-after study using routine data collected at the health centres in Lospalos (Lautem District) and Same (Manufahi District). The specific objectives of this paper are to report the impact of maternity waiting homes on:

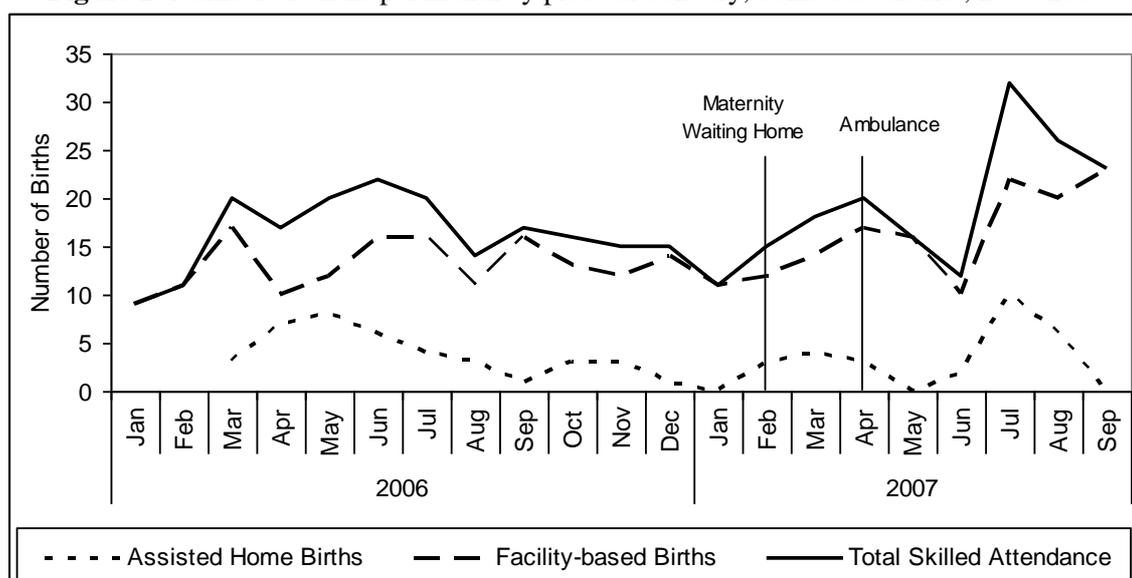
- The number of women birthing with a skilled birth attendant;
- The number of women birthing in the health facility; and
- Access to facility-based delivery for women in rural and remote areas.

## Findings

### *Same: Skilled Attendance and Facility-based Birth*

After the maternity waiting home was established in Same, there was a trend toward increased levels of skilled attendance and facility-based delivery, with a peak in July 2007 (Figure 1).

**Figure 1:** Number of births per month by place of delivery, Same sub-district, 2006-2007



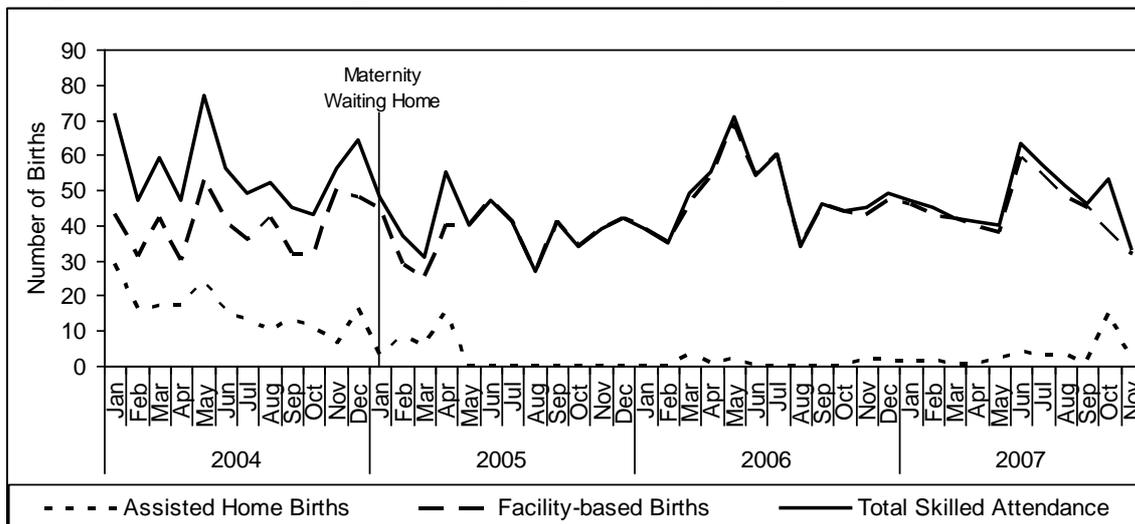
There were a number of factors that were likely to have influenced the utilisation of services in the seven months after the maternity waiting home opened in Same. One important factor appeared to be a maternity ambulance, funded by UNFPA, and responsible for transporting pregnant women, which was available from April 2007 (Figure 1). Other factors that may have contributed to the differences in the number of facility-based births in Same might have been a health promotion film (*Women's War*) about the importance of facility-based delivery. This was screened throughout the district beginning in June 2007. In addition, the ambulance driver got a new mobile phone around this time and people started to call him directly rather than send someone to his house on a motorbike. On the other hand, the shootout and failed attempt to capture Major Alfredo Reinado occurred in Same in March 2007, and the national elections took place in June 2007. These posed security problems and likely reduced access to services.

All of these factors, singly or in combination, may have influenced the utilisation of services. Although it is impossible to tease out cause and effect associations, the data from Same suggests that improved facilities (as a result of the maternity waiting home), transport and communication services, and health promotion all played a role in the increased utilisation of health facilities for birth. This highlights the value of introducing a package of health services to be jointly implemented.

*Lospalos: Skilled Attendance and Facility-based Birth*

After the maternity waiting home (*Casa das Maes*) was established in Lospalos there was a trend toward *decreased* levels of skilled attendance and assisted home birth, with very little change in the monthly number of facility-based deliveries (Figure 2). The peak in facility-based deliveries in mid 2006 was likely a result of the crisis in Dili, which saw a large proportion of the population displaced to the districts.

**Figure 2:** Number of births per month by place of delivery, Lospalos sub-district, 2004-2007



The major reduction in home birthing services from 16 to 2 births per month revealed that the overall decline in skilled attendance was due to the concomitant reduction in outreach birthing services (Figure 2). A consequence of building new waiting and birthing facilities was that midwives promoted only facility-based delivery. Midwives in Same and Lospalos, as well as other districts where maternity waiting homes were planned, said that once the new facility was open they would tell the women that they must come to the facility for birth and convince them by saying they would not provide assistance at home.

After the house is ready we have to pass the information to the people and they will understand what this house is used for, to prevent the mother’s death. I think the nurses won’t go to the house to give support anymore, to help the mother with the baby, no. – Midwife, Bobonaro district

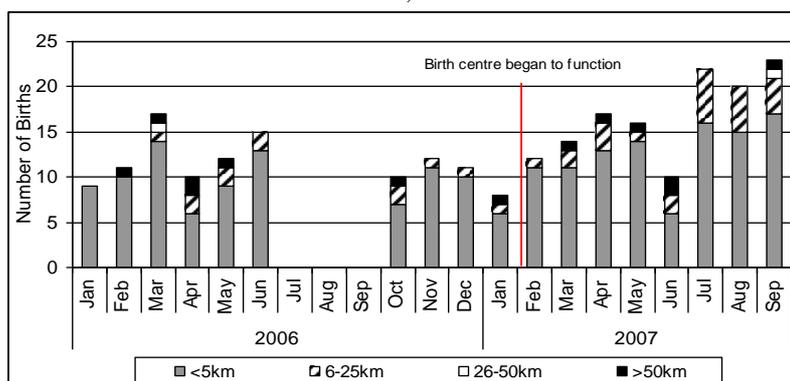
I think that what is perhaps scarier is the idea that you are just promoting facility-based births and you say, the midwife uses the language that I will not go to your home. – Program officer, international NGO, Dili

*Same: Distance from the Health Facility*

An assessment of whether women from rural and remote areas were accessing birth facilities in Same showed the vast majority (80%) of women who attended the facility for birth lived within 5km (Figure 3).

There was a tendency for more women who lived 5-25km from the health centre in Same to attend the facility after the maternity waiting home was established (Figure 3). However, women from more remote areas 26-50km or more than 50km away were no more likely to have a facility-based birth once the maternity waiting home was functioning. Most of the women who I spoke with at the maternity waiting home during September and October 2007 said they had been transported there by the maternity ambulance; hence this may have been a contributing factor to the increase in use for the group of women who lived 6-25km away. The fact that utilisation did not increase for women who lived more than 25km away indicates that maternity waiting homes are unlikely to be the most important variable influencing access to care for women in remote areas.

**Figure 3:** Number of facility-based births, showing distance between village of residence and Same health centre, 2006-2007<sup>5</sup>

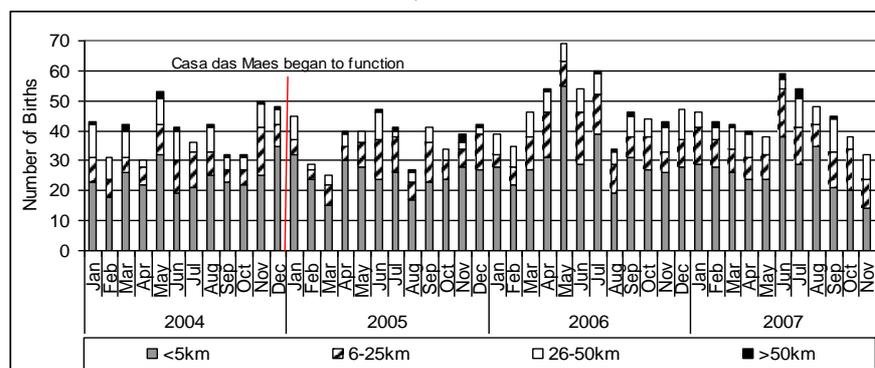


The major reason they don't want to come here is that they are too far away from the hospital to deliver here. The people don't want to have to return from the hospital and have to climb a mountain with their baby without an ambulance... This may be why they prefer to stay at home and deliver there. – Health manager, Manufahi district

*Lospalos: Distance from the Health Facility*

Analysing the use of birth facilities by distance in Lospalos revealed similar results to Same in that most (62%) women who used the maternity waiting home lived within 5km of the facility, and 84% lived within 25km (Figure 4). There was a slight decline in the percentage of facility-based births for women who lived 26-50km away after the maternity waiting home was opened (from 17% to 14% of all births). This is an important finding in that the maternity waiting home concept in Timor-Leste did not meet its objective of improving access to facility-based birth for women in remote areas.

**Figure 4:** Number of facility-based births, showing distance between village of residence and Lospalos health centre, 2004-2007



**Discussion**

There was a significant 30% increase in facility-based births in Same after the maternity waiting home was implemented. Because cause and effect cannot be established, conclusions about the effect of maternity waiting homes should be drawn cautiously. This research demonstrated other possible factors influencing the use of services, such as the maternity ambulance, health promotion, political (in)stability and improvements in the condition of facilities. In a review of Safe Motherhood interventions, a WHO working group cautions against maternity waiting homes as a stand-alone intervention and states ‘a combination of approaches may be most effective to overcoming obstacles to care – e.g., decentralizing

<sup>5</sup> Village of residence was missing in health centre records for all births from July to September 2006 so these were excluded from the analysis.

care by upgrading rural health posts or health centres to provide emergency first aid, in combination with strengthening referral mechanisms' (Starrs 1997:42).

The fact that Lospalos did not show an increase in facility-based deliveries after the maternity waiting home was implemented illustrates that improved accommodation facilities, on their own, are unlikely to have a major impact on the use of services. The decline in overall levels of skilled attendance and assisted home births in Lospalos was a major concern. Because half of all births attended by a midwife in Timor-Leste occur at home (MoH et al 2004; UNICEF 2009), the withdrawal of home birth services has the potential to dramatically reduce overall rates of skilled attendance. The recent policy shift to only supporting institutional delivery in Timor-Leste is particularly worrying. According to the Basic Services Package, national indicators should only report on the percentage of births assisted in a health facility (MoH 2007b). This is problematic as it will mask any declines in overall rates of skilled attendance occurring across the country. 'When we measure one aspect of matter, other aspects are less observable' (Anderson et al 2005:676).

The maternity waiting home strategy was designed to overcome the problem of distance for women in remote areas. The analysis of utilisation based on area of residence showed that women who lived within 5km were the most likely group to use the maternity waiting homes in both Same and Lospalos. Utilisation of health facilities for birth did not increase for women who lived more than 25km away in either site. This research has demonstrated that the ability of maternity waiting homes to overcome problems of distance in Timor-Leste has been overestimated. This is not surprising given that in the Demographic Health Survey 65% of Timorese said the major reason for not using health services was because they were too far away, and 43% said they had difficulty with transport (MoH et al 2004). As maternity waiting homes did not bring services closer to women or improve transport, major barriers to accessing care persisted despite the 'logic' behind their implementation.

Consistent with the findings presented here, the association between distance to a health facility and the utilisation of services has been widely documented. For example, decreasing rates of utilisation are correlated with increasing distance from a health facility (van den Broek et al 2003; Tanser et al 2006; Baker et al 2008). Others have found that long distances and lack of transport discourages the use of health services (Thaddeus and Maine 1994; Jenkins 2003; Mills and Bertrand 2005). This illustrates the importance of strengthening transport infrastructure and bringing birthing services closer to where women live.

## **Conclusion**

This evaluation demonstrated that the maternity waiting homes in Lospalos and Same did not improve access to facility-based delivery for women in remote areas. In addition, midwives became reluctant to provide assistance to the vast number of women who birthed at home. This withdrawal of outreach birthing services was compounded by the ideology of facility-based delivery promoted from the national level. UNFPA representatives in Bangladesh have cautioned 'shifting care from home to institution level might lead to increased inequities in access' (Ahmed and Jakaria 2009:49). As the Ministry of Health, local and international NGOs and UN agencies target facility-based delivery and embark on a major program building maternity waiting homes, issues of equity, choice around place of birth and precisely who has access to services needs to be carefully assessed.

The findings from this research have reinforced that 'there is no single intervention that is the answer – no silver bullet. This is important to remember when considering policies' (Maine 1997:S261). Including home birth, transport and communication as part of a package of services may be the most effective components to improve overall levels of skilled attendance and increase accessibility for women in remote areas of Timor-Leste.

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