

# The tyranny of distance: maternity waiting homes and access to birthing facilities in rural Timor-Leste

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**Objective** To examine the impact of maternity waiting homes on the use of facility-based birthing services for women in two remote districts of Timor-Leste.

**Methods** A before-and-after study design was used to compare the number of facility-based births in women who lived at different distances (0–5, 6–25, 26–50 and > 50 km) from the health centre before and after implementation of maternity waiting homes. Routine data were collected from health centre records at the end of 2007; they included 249 births in Same, Manufahi district, and 1986 births in Lospalos, Lautem district. Population data were used to estimate the percentage of women in each distance category who were accessing facility-based care.

**Findings** Most facility-based births in Same (80%) and Lospalos (62%) were among women who lived within 5 km of the health centre. There was no significant increase in the number of facility-based births among women in more remote areas following implementation of the maternity waiting homes. The percentage of births in the population that occurred in a health facility was low for both Manufahi district (9%) and Lautem district (17%), and use decreased markedly as distance between a woman's residence and the health facilities increased.

**Conclusion** The maternity waiting homes in Timor-Leste did not improve access to facility-based delivery for women in remote areas. The methods for distance analysis presented in this paper provide a framework that could be used by other countries seeking to evaluate maternity waiting homes.

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## Introduction

Maternity waiting homes are residential facilities where women who live remotely can wait before giving birth at a hospital or health centre. The commonly accepted hypothesis is that more women from remote areas would access birthing facilities if they could wait for the onset of labour in a maternity waiting home. Thus, the aim of implementing a maternity waiting home strategy is to reduce maternal and perinatal mortality by improving access to skilled birth attendance and emergency obstetric care, particularly for women in rural and remote areas.<sup>1</sup>

Maternity waiting homes have been documented in the scientific literature since the 1960s.<sup>2</sup> In 1991, the World Health Organization (WHO) highlighted the potential advantages of implementing maternity waiting homes as part of a package of essential obstetric services. WHO stated that: "More attention should be focused on this little publicized, but highly important, approach to obstetric care at first referral level in rural hospitals, and the results should be evaluated and published."<sup>3</sup> Shortly afterwards, WHO released a review of maternity waiting homes containing a list of what was needed when establishing such homes as part of a national safe motherhood programme.<sup>1</sup> The Safe Motherhood Action Agenda, published in 1997, reinforced the need for further evaluation of this strategy.<sup>4</sup>

Since being included as an option in the safe motherhood programme, implementation of maternity waiting homes has become an increasingly popular strategy in health systems in developing countries. More countries are incorporating these

homes into ministry of health policy, often backed by United Nations (UN) agencies and other large donors. Organizations such as the United Nations Population Fund (UNFPA), The World Bank and WHO have recently supported maternity waiting home projects in countries as diverse as Afghanistan, Cambodia, Eritrea, the Gambia, the Lao People's Democratic Republic, Lesotho, Maldives, Mongolia, Morocco, Mozambique, Nepal, Sri Lanka and Timor-Leste.

Maternity waiting homes represent a significant investment in terms of construction, running costs and human resources, and their efficacy is often contested among WHO and UN country representatives. Furthermore, no research has assessed whether women from remote areas are more likely to use a hospital once a maternity waiting home is available. Two papers that reported on distance simply compared distance from home for users of maternity waiting homes and for those going directly to hospital.<sup>5,6</sup> However, a study design that assesses distance from home between two groups after an intervention provides no indication as to whether or to what extent maternity waiting homes *improve* access for women in remote areas. A before-and-after study based on place of residence for all women giving birth in a health facility would provide a more accurate assessment of whether the establishment of maternity waiting homes affects the use of birthing services.

The implementation of maternity waiting homes in Timor-Leste provided an opportunity to conduct a before-and-after distance analysis. This analysis was possible because of the unique way in which the homes were incorporated into birthing facilities, given that all women who gave birth in the

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health facility also used the maternity waiting home. This study reports on the impact of maternity waiting homes on the use of facility-based birthing services by rural women in two districts of Timor-Leste.

## Methods

### Study setting

Timor-Leste is a small country situated in the Indonesian archipelago. In 1999, after 25 years of occupation by the Indonesian military, Timor-Leste voted for independence. The history of war, ongoing political instability, limited infrastructure and poor social determinants of health have combined to produce one of the highest maternal mortality ratios in the world, recently estimated to be between 557 and 929 per 100 000 live births.<sup>7,8</sup> The proportion of women giving birth with a skilled attendant continues to be low (30%), and only 22% of women give birth in a health facility.<sup>7</sup>

In 2005, the Timor-Leste Ministry of Health and its technical advisers developed the National Maternity Waiting Home Strategy. The aim was to improve access to facility-based delivery for women in remote areas and thus to reduce the high maternal mortality rate.<sup>9</sup> Under this strategy, two maternity waiting homes were piloted – one in Lospalos, Lautem district, in the east of the country, and the other in Same, Manufahi district, in the south. Lospalos and Same, being the district capitals, had the only health centres equipped for deliveries within their districts.

The maternity waiting homes were promoted through community meetings held at the beginning of the piloting process, radio broadcasts and a television commercial. A health promotion film on the importance of facility-based delivery – *Women's War* – was screened in numerous villages across the country. In addition, women were informed about the maternity waiting homes at mobile clinics and during antenatal visits. Despite this fairly extensive awareness cam-

paign, it was difficult to reach women in more remote areas because they generally lacked access to radio, television or village-based health services.

As outlined in the national strategy, any pregnant woman was eligible to stay at the maternity waiting homes from weeks 36 to 38 of gestation and for three or four days after delivery.<sup>9</sup> Priority was given to women with certain risk factors (Table 1) and to those from rural areas. In practice, no systematic referral or data collection mechanism was in place for women with risk factors, and the maternity waiting homes catered to all women regardless of their risk status. Women were more likely to seek facility delivery and use the maternity waiting homes if they were having their first baby, had experienced complications in a previous pregnancy, or had a perceived problem in the current pregnancy.<sup>10</sup>

The maternity waiting home in Lospalos was a separate structure or “wing” that was connected to the health centre by a walkway; births took place in the health centre's delivery room. The

Table 1. Population, expected births and data for health centres and maternity waiting homes (MWHs) in Lautem and Manufahi districts, Timor-Leste, 2007

Population or health service	Lautem	Manufahi
District population	67 465	43 949
Annual expected births	3070	2000
Health centres in the district	5	4
Health centres equipped for births	1	1
Midwives at health centre	7	7
Physicians at health centre	6	3
Travel time to nearest referral hospital	2 hours	4–6 hours
Electricity	Generator (not 24/7)	Generator (not 24/7)
Radio	Not functioning in the year before the research	Yes
Ambulances	1	2 (including 1 maternity ambulance from April 2007)
Date when MWH began functioning	January 2005	February 2007
Cost of MWH (building + equipment)	US\$ 41 000	US\$ 60 000
Monthly running costs for MWH	US\$ 2745	NA
MWH project funded by	Medicos do Mundo, Portugal	Red Cross, Monaco
Beds in MWH	8	5
Space for family to sleep in MWH	No	No
Kitchen for family to use in MWH	No	No
Food provided in MWH	Yes	Yes
Health education in MWH	Cooking demonstrations and health education held in the common room	Women advised individually about nutrition and family planning
User fees (MWH, delivery, medicine)	Free	Free
Criteria for admission to MWH	Women < 16 years or > 40 years of age; first birth; > 6 births; height < 145 cm; transverse lie or other malpresentation; multiple pregnancy; antepartum haemorrhage; severe anaemia or pre-eclampsia; documented 3rd degree tear in the past; previous stillbirth; prior delivery by caesarean section; desire for tubal ligation immediately after delivery; or history of delivery with heavy bleeding, convulsions, by forceps or vacuum.	

NA, not available; 24/7, 24 hours 7 days a week; US\$, United States dollar.

maternity waiting home in Same was built across the road from the health centre and, because of the poor conditions in the health centre, delivery facilities were later moved from the health centre to the maternity waiting home. Because of lack of space at both health centres, all women who delivered at the health facility were accommodated in the maternity waiting home before and/or after giving birth.

The new maternity waiting homes dramatically improved the physical condition of the facilities available to women before and after giving birth. Families were happy with the cleanliness and the fact that the home was a separate space specifically for pregnant and postpartum women, away from “sick” patients. This resulted in greater user satisfaction with birthing services at both sites. Originally, maternity waiting homes were intended to provide space for two family members to accompany each woman. However, on implementation, this policy was changed and family members were allowed to visit only at certain hours during the day. This was largely a result of the way in which the buildings were designed, with all women kept together in one large room and no additional space or separate rooms in which to accommodate families. Children were usually looked after by other family members. The need for additional space for postpartum women and families emerged as a common theme in interviews with users.

No data were available on length of stay at the maternity waiting homes, either before or after birth. The only information collected in health-centre records was the date of delivery. Interviews with families and health centre staff indicated that women tended to come to the maternity waiting homes when labour pains began and thus would stay there for up to two days before giving birth. A major advantage of the new maternity waiting homes was that women could stay from three to seven days after delivery to receive postpartum care.

### Data collection

Ethical approval was obtained from the Human Research Ethics Committee at Menzies School of Health Research, Australia. Permission to carry out the study was provided by the Timor-Leste Ministry of Health. This research was conducted as part of a larger study in

which 124 interviews were conducted with policy-makers, district health staff and users of maternity waiting homes.<sup>10</sup> For the quantitative component reported here, data were collected directly from birth registration books and entered into a data-collection table. Individual records were de-identified and date of delivery, place of birth, type of attendant and village of residence were recorded. Any ambiguous entries were clarified with the midwife. The travelling distance to the village of residence was then added to each record. Precise information on distance was available from UN police offices, which were located in each district. UN staff had mapped the distances by driving the routes and measuring the kilometres travelled on their odometers. It was important to obtain local information on *actual* distance because roads labelled on maps were often inaccurate or impassable, and detour routes provided a more accurate estimation of the actual distance travelled. Other information (e.g. population figures, maps and service targets) was also collected from district offices, UN agencies and local police stations.

### Data analysis

Distance categories were developed based on the divisions present in the data and on biological plausibility. For example, many villages were within 5 km, and a heavily pregnant woman could possibly walk this far. In contrast, 50 km is a long way in the remote context of Timor-Leste, even with transport, and only a few villages were this far away. It was therefore appropriate to divide distance categories into 0–5, 6–25, 26–50 and more than 50 km from the health centre. These categories were also used by Høj et al. to assess the effect of distance to the health facility on maternal mortality.<sup>11</sup> Entries with missing village of residence were excluded from the analysis. Statistical analysis was conducted using Stata version 7 (Stata-Corp. LP, College Station, United States of America). A  $\chi^2$  distribution test with three degrees of freedom was used to measure the difference in the distribution of births in these distance categories before and after the intervention. A *P*-value of less than 0.05 was the cut-off for statistically significant differences.

The expected number of births occurring in a health facility for each distance category was also calculated because such data are lacking for Timor-

Leste. In contrast to the overall urban or rural estimate that is currently available for the country, this calculation can illustrate the use of facility-based birthing services as distance from the health facility increases. Population figures for each village were obtained from the district offices in Same and Lospalos. Each village was matched against its distance from the health centre to calculate the total population in each distance category. To calculate the expected number of births, the population was multiplied by 0.045 (because 4.55% is the accepted birth rate estimate for the country that district health officials use to calculate service targets). The observed number of facility-based births was then divided by the expected number of births in the population to estimate the percentage of women in rural and remote areas who were accessing facility-based care when a maternity waiting home was in place. Pearson's  $\chi^2$  test for trends in ordinal data was used to assess the decline in the expected number of births for each distance category. Again, a *P*-value of less than 0.05 was the cut-off for statistically significant differences.

## Results

### Same, Manufahi district

Most of the women who delivered in the health centre in Same lived within a distance of 5 km, both before and after the implementation of the maternity waiting home (Table 2). As shown in Table 2, there was no significant difference in the distribution of births between distance categories after the maternity waiting home was implemented. This means that women from remote areas were no more likely to have a facility-based birth once the maternity waiting home was functioning than before it was available.

In 2007, only about 9% of all births occurring in Manufahi district took place in a health facility (Table 3). An analysis by distance category showed that for the women who lived within 5 km, 23% of expected births took place at the health facility and the percentage of facility-based births declined with increasing distance from the health centre (Table 3). However, this trend was not statistically significant.

### Lospalos, Lautem district

In Lospalos, 62% of the facility-based births occurred among women who

Table 2. Facility-based births in health centre before and after maternity waiting homes (MWHs) were implemented, by distance from village of residence to MWH, in Same, Manufahi district, and in Lospalos, Lautem district, Timor-Leste

Distance from MWH (km)	No. (%) before MWH <sup>a</sup>	No. (%) after MWH <sup>b</sup>	Total no. (%) <sup>c</sup>	P <sup>d</sup>
<b>Same<sup>e</sup></b>				
0–5	95 (83)	103 (77)	198 (80)	–
6–25	12 (10)	24 (18)	36 (14)	–
26–50	1 (1)	1 (1)	2 (1)	–
> 50	7 (6)	6 (4)	13 (5)	–
<b>Total</b>	<b>115 (100)</b>	<b>134 (100)</b>	<b>249 (100)</b>	<b>0.397</b>
<b>Lospalos<sup>f</sup></b>				
0–5	291 (61)	948 (63)	1239 (62)	–
6–25	98 (20)	329 (22)	427 (22)	–
26–50	80 (17)	205 (14)	285 (14)	–
> 50	11 (2)	24 (2)	35 (2)	–
<b>Total</b>	<b>480 (100)</b>	<b>1506 (101)</b>	<b>1986 (100)</b>	<b>0.258</b>

<sup>a</sup> January 2006 to January 2007 in Same; January to December 2004 in Lospalos.

<sup>b</sup> February to September 2007 in Same; January 2005 to November 2007 in Lospalos.

<sup>c</sup> January 2006 to September 2007 in Same; January 2004 to November 2007 in Lospalos.

<sup>d</sup> P-value based on  $\chi^2$  distribution test with three degrees of freedom.

<sup>e</sup> A total of 53 births in Same were excluded from the analysis owing to missing village of residence. Of the missing entries, 43 were for July, August and September 2006, as the village of residence was not recorded for any births occurring in those months. All missing entries dated from before the implementation of the MWH.

<sup>f</sup> Village of residence was available for all births in Lospalos, and no birth was excluded from the analysis.

Table 3. Expected births and facility-based births, by distance from village of residence to maternity waiting home (MWH) in Manufahi and Lautem districts, Timor-Leste

Distance from MWH (km)	No. of expected births <sup>a</sup>	Facility births <sup>b</sup>		P <sup>c</sup>
		No.	% of expected births	
<b>Manufahi</b>				
0–5	592	137	23	–
6–25	574	29	5	–
26–50	237	1	0	–
> 50	596	8	1	–
<b>Total</b>	<b>2000</b>	<b>175</b>	<b>9</b>	<b>0.1096</b>
<b>Lautem</b>				
0–5	682	316	46	–
6–25	720	124	17	–
26–50	1209	82	7	–
> 50	458	10	2	–
<b>Total</b>	<b>3069</b>	<b>532</b>	<b>17</b>	<b>0.045</b>

<sup>a</sup> Based on 2007 population estimates.

<sup>b</sup> Facility births occurring from October 2006 to September 2007 in Same; facility births occurring from December 2006 to November 2007 in Lospalos.

<sup>c</sup> P-value based on Pearson's  $\chi^2$  test for trend with three degrees of freedom.

lived within 5 km of the facility, and 84% among women who lived within 25 km (Table 2). As in Same, there was no significant difference in the distribution of facility births between distance categories after the maternity waiting home was implemented. This suggests that women from remote areas were no

more likely to have a facility-based birth once the maternity waiting home was implemented than before it was available.

In 2007, about 17% of all births in Lautem district took place in Lospalos health centre, the only facility in the district equipped for deliveries (Table 3). As in Manufahi district,

the number of facility-based births and distance to the health centre were inversely related. In Lautem, this trend was statistically significant.

## Discussion

The maternity waiting home strategy was designed to overcome the tyranny of distance for women in remote areas of Timor-Leste. However, the results showed that in both Same and Lospalos, women who lived within 5 km of the health centres were the group most likely to use the accommodation facilities at the maternity waiting homes. This finding is not consistent with the results of two other studies that also assessed the distance from home among women using maternity waiting homes. A study in Zambia showed an average distance to home of 22 km for users of a maternity waiting home, compared with 13 km for those who went directly to hospital.<sup>6</sup> In a study in Zimbabwe, women who used a maternity waiting home were more likely to live more than 40 km away (48%) than those who went directly to hospital (22%).<sup>5</sup> However, this comparison provides no basis for knowing whether women using the maternity waiting homes would have gone to hospital anyway.

The analysis of the use of health facilities before and after maternity waiting homes were implemented in Timor-Leste showed the proportion of facility-based births did not increase significantly among women who lived more than 25 km away, in either Manufahi or Lautem. Therefore, the hypothesis that maternity waiting homes improve access to facility-based birth for women in remote areas of Timor-Leste is rejected. This is not surprising, given that more than 50% of Timorese women surveyed in the 2010 Demographic and Health Survey (DHS) claimed that both distance and transport were major barriers to seeking health care.<sup>7</sup> Maternity waiting homes did not bring services closer to women or improve transport; thus, major barriers to accessing care persisted despite the logic behind the implementation of the homes.

Problems with record keeping at the health centre led to the exclusion of 18% of the births in Same from the analysis; village of residence was not recorded for three consecutive months in 2006. Therefore, the findings from Same should be interpreted with cau-

tion. However, the pattern of use evident in Same was similar to that in Lospalos, where there were more births and all records were complete.

The before-and-after study design without a concurrent control group provides limited evidence from which to conclude that successful outcomes are a result of the intervention. However, the absence of an observed effect on facility-based delivery is a significant finding because it demonstrates that accommodation facilities, on their own, are unlikely to have a major impact on the use of services. Other authors discussing the maternity waiting home strategy state that "a combination of approaches may be most effective to overcoming obstacles to care".<sup>4</sup> The findings from this research suggest that a more holistic approach may be warranted. Use of maternal health services in Timor-Leste depends on a range of individual, social, political and health-system factors.<sup>10</sup> Hence, the findings from this study may not be generalizable to other settings. It is important to accurately assess how maternity waiting homes affect access to care; the approach and distance categories used in this study could be replicated in other countries implementing maternity waiting homes.

The percentage of births in the population that occurred in a health

facility was low in both Manufahi (9%) and Lautem (17%) and resembled the rates found in the 2010 DHS (11% in Manufahi and 21% in Lautem).<sup>7</sup> However, much greater inequities in access were demonstrated by providing a breakdown of the percentage of women who accessed facility-based delivery living at various distances from the health centres. For example, the national estimate that 53% of urban women accessed facility delivery compared with 12% of rural women<sup>7</sup> disguises larger gaps in use between those who lived within 5 km of a health centre (23% in Manufahi and 46% in Lautem) and those who lived more than 50 km away (1% in Manufahi and 2% in Lautem).

## Conclusion

A before-and-after distance analysis of the use of the first two maternity waiting homes to be implemented in Timor-Leste has demonstrated that, contrary to its objectives, the strategy of implementing such homes did not result in a higher proportion of women from remote areas giving birth in health facilities in Lospalos and Same. Place of delivery is prominent in many of Timor-Leste's health policies. Given the failure of maternity waiting homes to improve access for remote women,

further research should be conducted to determine which models of care increase coverage and produce the best outcomes for women and neonates. The results of such research could then be used to inform national policy. Fruitful areas of research in Timor-Leste include the impact of maternity transport services, skilled attendance for home births, and decentralization of birthing facilities to subdistricts.

Since the early 1990s, WHO has called for studies assessing the impact of maternity waiting homes.<sup>1,3,4</sup> Because the success of implementing such homes will depend on the context, efforts should be made to evaluate and publish findings on the use of this strategy in other countries. The methodology for distance analysis presented here provides a framework for further research using data collected routinely in rural health centres. ■

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## ملخص

قسوة المسافة: دور استقبال الحوامل قبيل الولادة والوصول إلى مرافق الولادة في ريف تيمور-لشتي

ولوسبالوس (62٪) بين السيدات اللاتي يعشن على بعد 5 كم من مركز الصحة. ولم تكن هناك زيادة كبيرة في عدد الولادات في المرافق الصحية بين السيدات في المناطق الأكثر بعداً عقب تنفيذ دور استقبال الحوامل قبيل الولادة. وكانت النسبة المئوية للولادات بين السكان التي أجريت في مرفق صحي منخفضة في كل من منطقة مانوفاهي (9٪) ومنطقة لوتيم (17٪) وانخفض الاستخدام بشكل واضح مع زيادة المسافة بين مجال إقامة السيدات ومرافق الصحة.

الاستنتاج لم تنجح دور استقبال الحوامل قبيل الولادة في تيمور-لشتي في تحسين الوصول إلى خدمات الولادة في المرافق الصحية للسيدات في المناطق النائية. وتقدم طرق تحليل المسافات الواردة في هذا البحث إطاراً هيكلياً يمكن استخدامه من جانب الدول الأخرى التي تسعى لتقييم دور استقبال الحوامل قبيل الولادة.

الغرض فحص تأثير دور استقبال الحوامل قبيل الولادة على استخدام خدمات الولادة في المرافق الصحية للسيدات في مقاطعتين نائيتين في تيمور-لشتي.

الطريقة تم استخدام تصميم ما قبل الدراسة وما بعدها لمقارنة عدد الولادات في المرافق الصحية للسيدات اللاتي يعشن على مسافات مختلفة (0-5، 6-25، 26-50 وأبعد من 50 كم) من مركز الصحة قبل وبعد تنفيذ دور استقبال الحوامل قبيل الولادة. وتم جمع البيانات الروتينية من سجلات مركز الصحة في نهاية عام 2007؛ وقد ضمت 249 حالة ولادة في سيم، بمنطقة مانوفاهي و1986 حالة في لوسبالوس، بمنطقة لوتيم. وتم استخدام بيانات السكان لتقييم النسبة المئوية للسيدات - في كل فئة مسافة - اللاتي يصلن إلى الرعاية في المرافق الصحية.

النتائج أجريت معظم الولادات في المرافق الصحية في سيم (80٪)

## 摘要

### 距离的严酷性：东帝汶农村候产房和分娩设施的使用

**目的** 调查东帝汶两个偏远地区的候产房对女性使用住院分娩服务的影响。

**方法** 使用研究前和研究后方案来比较居住在距离卫生中心不同路程（0–5、6–25、26–50 和 >50 公里）的妇女在配备候产房之前和之后的住院分娩数量。2007 年末收集的卫生中心记录的常规数据显示，在马努法伊地区的萨姆有 249 例分娩，在劳腾地区的洛斯巴洛斯有 1986 例分娩。人口数据用于估计每个距离分类中使用住院分娩照顾的女性的百分比。

**结果** 在萨姆 (80%) 和洛斯巴洛斯 (62%) 地区，绝大多数住院分娩的女性都居住于距离卫生中心 5 公里的范围内。在配备候产室之后，更为偏远地区的女性住院分娩数量并未显著提高。马努法伊地区 (9%) 和劳腾地区 (17%) 住院分娩人口百分比都很低，且随着女性居住地和卫生院所之间距离的增加，使用数量更是显著减少。

**结论** 东帝汶候产室并未改善偏远地区女性使用住院分娩服务的状况。本论文中提出的距离分析方法可为其它希望评估候产室的地区提供一个框架。

## Résumé

### La tyrannie de la distance: foyers d'hébergement pour futures mamans et accès aux centres de naissance dans le Timor-Leste rural

**Objectif** Étudier l'impact des foyers d'hébergement destinés aux futures mamans sur le recours aux services des centres de naissance par des femmes appartenant à deux districts isolés du Timor-Leste.

**Méthodes** On a appliqué un mode d'étude avant-après pour comparer le nombre de naissances ayant eu lieu dans des centres de naissance pour des femmes vivant à différentes distances (0–5, 6–25, 26–50 et > 50 km) du centre de soins avant et après la mise en place de foyers d'hébergement pour futures mamans. Des données courantes ont été recueillies dans les registres des centres de soins de santé fin 2007. Elles faisaient état de 249 naissances à Same, district de Manufahi, et de 1986 naissances à Lospalos, district de Lautem. Des données démographiques ont servi à estimer le pourcentage de femmes ayant accédé aux soins des centres de naissance pour chacune des catégories de distance.

**Résultats** La plupart des naissances ayant été réalisées dans les centres de naissance de Same (80%) et de Lospalos (62%) ont été enregistrées

pour des femmes vivant dans un rayon de 5 km de ces centres de soins de santé. Il n'a pas été constaté d'augmentation significative du nombre des naissances s'étant produites dans des centres de naissance pour les femmes vivant dans des zones isolées suite à la mise en place de foyers d'hébergement pour futures mamans. Le pourcentage de naissances intervenues dans un centre de soins de santé était faible à la fois dans le district de Manufahi (9%) et dans celui de Lautem (17%) et le recours à ces centres diminuait nettement plus la distance entre le domicile d'une femme et le centre de soins de santé était importante.

**Conclusion** Les foyers d'hébergement pour futures mamans au Timor-Leste n'ont pas amélioré l'accès à l'accouchement en centre de naissance par les parturientes des zones isolées. Les méthodes d'analyse des distances présentées dans ce rapport offrent un cadre susceptible d'être utilisé par d'autres pays cherchant à évaluer les foyers d'hébergement pour futures mamans.

## Резюме

### Деспотизм расстояния: стационары для беременных и доступность родильных домов в сельской местности Тимор-Лесте

**Цель** Изучить влияние стационаров для беременных на уровень использования услуг родильных домов женщинами в двух удаленных районах Тимор-Лесте.

**Методы** План исследования до и после появления стационаров для беременных был применен с целью сравнения количества больничных родов у женщин, проживавших на различных расстояниях (0–5, 6–25, 26–50 и > 50 км) от медицинского центра. Текущие данные были собраны на основании записей в медицинском центре в конце 2007 г.; они включали в себя 249 родов в Саме, район Мануфахи, и 1986 родов в Лоспалосе, район Лаутем. Данные о населении были использованы для оценки процентного соотношения женщин по каждой категории удаленности, пользовавшихся услугами больницы.

**Результаты** Большая часть больничных родов в Саме (80%) и Лоспалосе (62%) имела место среди женщин, проживавших в пределах 5 км от медицинского центра. Не было значительного

увеличения количества больничных родов среди женщин в более удаленных регионах, несмотря на открытие стационаров для беременных. Процент родов среди населения, принятых в медицинском центре, был низким как в районе Мануфахи (9%), так и в районе Лаутем (17%), а пользование услугами родовспоможения заметно снижалось по мере увеличения расстояния между местом проживания женщины и медицинскими учреждениями.

**Вывод** Стационары для беременных в Тимор-Лесте не улучшили ситуацию с доступностью больничных родов для женщин в удаленных регионах. Методы анализа расстояния, представленные в настоящем докладе, представляют собой основу, которая может быть использована другими странами, стремящимися произвести оценку своих стационаров для беременных.

## Resumen

### La tiranía de la distancia: hogares maternos y acceso a las maternidades en las zonas rurales de Timor-Leste

**Objetivo** Examinar qué impacto tienen los hogares maternos sobre el uso de los servicios de las maternidades entre las mujeres de dos distritos alejados de Timor-Leste.

**Métodos** Se utilizó un estudio tipo antes y después para comparar el número de alumbramientos en centros sanitarios entre las mujeres que vivían a diversas distancias (0–5, 6–25, 26–50 y >50 km) del centro sanitario en cuestión antes y después de la instauración de los hogares maternos. A finales de 2007 se recopilaron los datos rutinarios procedentes de los registros de los centros sanitarios. Estos datos incluyeron 249 nacimientos en Same, en el distrito de Manufahi, y 1986 nacimientos en Lospalos, en el distrito de Lautem. Se utilizaron los datos sobre población para calcular qué porcentaje de mujeres accedió a la asistencia en centros sanitarios dentro de cada categoría de distancia.

**Resultados** La mayoría de nacimientos en centros sanitarios en Same (80%) y Lospalos (62%) se produjeron entre mujeres que vivían a menos

de 5 km de dicho centro sanitario. Tras la instauración de los hogares maternos no se observó un aumento significativo en el número de partos en centros sanitarios entre las mujeres procedentes de áreas más alejadas. El porcentaje de nacimientos en la población que tuvo lugar en un centro sanitario fue bajo tanto en el distrito de Manufahi (9%) como en el distrito de Lautem (17%), y el uso de estos servicios descendió drásticamente cuanto mayor era la distancia entre el centro sanitario y la residencia de la mujer.

**Conclusión** Los hogares maternos en Timor-Leste no mejoraron el acceso a los servicios de asistencia al parto en centros sanitarios de las mujeres procedentes de las zonas más alejadas. Los métodos para el análisis de la distancia que se incluyen en este artículo ofrecen un marco de trabajo que podrían emplear otros países que deseen evaluar la eficacia de los hogares maternos.

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