



Lao People's Democratic Republic
**Maternal Health Out-of-Pocket Expenditure
and Service Readiness in Lao PDR**

Evidence for the National Free Maternal and
Child Health Policy from a household
and health center survey

October 2013



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Executive Summary

Although Lao PDR has made notable progress in improving maternal and child health (MCH), attainment of the MDG5 still remains a challenge.

Maternal mortality decreased from 1,600 per 100,000 births in 1990 to 357 per 100,000 live births in 2012², but is still very high and the country is off-track to attain the government's target of 260 per 100,000 live births by 2015. Low utilization of maternal health (MH) services is a key reason for these poor outcomes as only 42% of births were attended by a skilled birth attendant and only 38% of births occurred in a health facility.

Financial barriers are an important impediment to the utilization of MH services in the country.

Government expenditure on health is low, accounting for only 41% of total health expenditure (THE) or 1.0% of GDP. Hence out-of-pocket (OOP) expenditures are high, amounting to 46% of THE³, and limit the equitable utilization of health services (especially preventative services) and put households at risk of impoverishment.

In order to address these financial barriers, the Government of Lao PDR has introduced a national free MCH policy.

This policy essentially replaces user fees paid OOP by pregnant women with case-based payments by the government, for critical MCH services. In addition, small cash payments are provided to patients to cover opportunity and transport costs. This policy builds on the positive experiences of increased utilization from a pilot program providing free deliveries funded by the Health Services Improvement Project (HSIP) in two districts, and of ongoing Health Equity Funds (HEFs) which provide free deliveries and other health services to the targeted poor.

Non-financial barriers are also crucial in this landlocked, sparsely-populated, and ethnically-diverse country. Physical access to remote communities is challenging and costly, especially during rainy season. Cultural practices and beliefs influence the health-seeking behavior of pregnant women, as would linguistic and gender mismatches between health providers and patients. Educational outcomes are also poor in Lao PDR, with only 41% literacy among women aged 15-24 in rural communities without road access (69% nationally)⁴.

In seeking to inform the implementation and scale-up of this national free MCH policy at this crucial initial stage, this paper reports on findings from a timely household, village and health center survey where for the first time in Lao PDR, large-scale household-level data on OOP expenditure for specific MH services was collected, in addition to data on the utilization of services and household characteristics.

Key findings from this survey, which was conducted among high priority and poor communities prior to the implementation of the policy, are that MH OOP expenditure for an institutional birth at a public health facility is **substantial** – both relative to GDP per capita (4.1%) and relative to monthly household expenditure, especially for the poorest quintile of households (43% of monthly household expenditure). This expenditure is also highly **variable** – depending chiefly on the choice for an institutional births compared with a non-institutional births (a thirteen-fold difference in mean expenditure), but also by the health facility level (approximately doubling when advancing each level), and by the mode of delivery (caesarean births compared with vaginal births). Even within each of these categories, there is

¹ This report was written by Wei Aun Yap, Rong Li, and Ajay Tandon, based on a survey designed by Magnus Lindelow, Chantelle Boudreaux, and Robert McLaughlin. Peer and external reviewers are Valeria De Oliveira Cruz (WHO), Jun Gao (WHO), Pandu Harimurti (WB), and Owen K Smith (WB). Valuable inputs were provided by Eileen Braine Sullivan, Phetdara Chanthala, Toomas Palu, and Sophavanh Thitsy.

² Government of Lao PDR, 2012. Lao Social Indicator Survey 2011-2012.

³ Government of Lao PDR, 2012. Lao PDR National Health Accounts FY 2009-2010.

⁴ Government of Lao PDR, 2012. Lao Social Indicator Survey 2011-2012.

considerable variation in expenditure, making it difficult for households to predict expenditure ex-ante. MH OOP expenditure is also **inequitable**. Households in the poorest quintiles spend 43% of their monthly household expenditure on an institutional birth compared with 26% for households in the richest quintile. Similarly, communities with poor road access (more than 4km away) spend 35% of their monthly household expenditure on an institutional birth compared with 26% for communities with direct road access. Given this context, the rationale and motivation for the free MCH policy in reducing financial barriers and reducing OOP expenditure is appreciated.

The policy implications of these findings are firstly that, although financial protection implied by the national free MCH policy is strong, reducing financial barriers alone would not be sufficient to increase the utilization of services, as other non-financial barriers such as the physical access to services, maternal education, and cultural practices are likely to limit large increases in utilization of MH services, especially among the poor.

Secondly, this policy has the potential to be regressive due to the higher utilization of MH services by wealthier households. If there are no changes in the utilization patterns of households with this policy, the richest quintile will capture 44% of the value of benefits from this policy, compared with 9% for the poorest quintile. In reality, different socio-economic groups are likely to respond differently to the policy and the elasticity of demand for each group cannot be predicted with any certainty. Nevertheless, additional measures should be instituted to promote the uptake of these free services by the poor and marginalized people. The targeting of services may also be considered in the future, in the interests of equity and fiscal sustainability.

Thirdly, health providers at all levels of health facilities would experience substantial marginal decreases in revenue per vaginal birth, given the reimbursement schedules under the national free MCH policy. At lower level facilities, this may encourage inappropriate referrals to higher level facilities. At higher level facilities, there may be incentives for health providers to increase revenues by choosing caesarean deliveries over vaginal deliveries, even if not clinically justified. However, as demand for and the quantity of services are likely to increase, net revenues of health facilities should increase due to this policy.

Finally, the supply-side readiness and management capacity of health centers needs to be improved. The supply-side readiness of health centers to provide MH services is low: only 2% and 10% of health centers fulfilled all the surveyed WHO Service Readiness Indicators for ANC and basic obstetric care respectively. This readiness of health centers is found to be positively associated with increased utilization of MH services. Furthermore, poor households served by health centers with low service readiness are found to be exposed to higher levels of MH OOP expenditure compared with poor households served by health centers with high service readiness.

In order to improve the effectiveness and equity of the national free MCH policy while minimizing perverse incentives, regular reviews of the utilization, pricing, and case definition of services, investments to improve the service readiness of health facilities, and efforts to address non-financial barriers are vital. The autonomy of facilities to manage revenue from this policy should also be enhanced and be accompanied by concurrent reforms in public financial management, as expressed in the Ministry of Health's reform plans.

The remainder of the paper is organized as follows:

- **Section I** provides the background context to the various health financing interventions in Lao PDR to date, focusing particularly on MH, and also provides an overview of the characteristics of the survey population compared with the national population;
- **Section II** presents the analysis of MH OOP – both in aggregate and disaggregated along various dimensions;
- **Section III** presents the analysis of financial protection provided to households with and without the national free MCH policy, and additional demand-side perspectives;
- **Section IV** explores the equity of MH service utilization along four dimensions – economic status, physical access, education, and ethnicity;
- **Section V** views the national free MCH policy from the supply-side perspective, particularly its implications on facility revenue, but also presents analysis from the associated health center survey which reviews the service readiness of health centers to provide MH services and interactions between readiness and utilization and equity; and
- **Section VI** concludes with key findings and recommendations.

Section I: Background

Lao PDR is a land-locked, resource-rich, sparsely-populated, ethnically-diverse⁵ country with a total population of 6.2 million⁶, two-thirds of whom are rural. Administratively, the country is divided into 17 provinces and further sub-divided into 142 districts and then into villages (or 'ban'). It traces its historical origins to the Lane Xang kingdom, founded in the 14th century, and has been governed as a single-party socialist republic since 1975, having previously been a protectorate of France until 1953, when it gained full independence.

The Lao economy is one of the fastest growing in the world and receives large revenues from natural resources, thus enabling it to emerge as a low-middle income country in 2011 with a GNI per capita of US\$ 1,130⁷. Although poverty levels are declining, 34% of the population still live on less than \$1.25-a-day and high incidences of poverty remain in the 'remote areas of the east and southeast along the Vietnamese border'⁸, contributing to significant inequality – the GINI index for Lao PDR is 0.37⁹.

Health Financing Context

Healthcare in Lao PDR was initially funded primarily through the government budget, with external support from the Soviet Union, Vietnam and China, and a small network of health facilities providing a limited range of healthcare services¹⁰. As these external sources of support decreased, alternative sources of financing were required. The government officially adopted user fees through Decree 52 in 1995¹¹ and Revolving Drug Funds in 1997¹². In recognition of the inequalities caused by this shift to private OOP financing, Decree 52 was revised in 2005¹³ with the objective to promote equal access to health care services by collecting user fees from people who can afford to pay, and exempting others (such as government officials and retirees, retired military officials, people with disabilities, students under 18 years of age, monks and novices, and certified poor people). However, the Revised Decree 52 was itself superseded by further reforms introduced with the Curative Care Law¹⁴ and Decree 381¹⁵ later in 2005. The latter decree sets out the principles for the collection of technical revenues by government entities, including usage criteria for this revenue. Decree 3¹⁶ specifies, on a service-by-service basis (including for health services such as deliveries and ANC consultations), the technical revenues payable by users of these government services.

⁵ The Lao Front for National Construction recognizes 49 different groups and 160 subgroups.

⁶ WDI, 2010

⁷ World Bank, 2011

⁸ Epprecht, 2008

⁹ WDI, 2008

¹⁰ Lannes, 2011

¹¹ Government of Lao PDR, 1995. Prime Ministerial Decree 52, 26/06/1995.

¹² Government of Lao PDR, 1997. National Guideline on Revolving Drug Funds in Public Health Facilities 2nd edition, August 1997.

¹³ Government of Lao PDR, 2005. Prime Ministerial Decree 52 (Revised), 3/08/2005.

¹⁴ Government of Lao PDR, 2005. Curative Care Law (11/ 2005).

¹⁵ Government of Lao PDR, 2005. Prime Ministerial Decree 381, 23/12/2005.

¹⁶ Government of Lao PDR, 2008. Decree 3, 19/11/2008.

These health financing and policy changes have been associated with large increases in private health expenditure as a percentage of total health expenditure. The private share of total health expenditure (THE) increased from 40% in 1995 to a peak of 83% in 2005. Government expenditure on health at just 17% of THE in 2005 was extremely low during that period. More than three-quarters of private expenditure came from OOP in 2005¹⁷. Analysis of LECS4 demonstrates that drugs comprise the majority of household health spending and that OOP spending has continued to rise in real terms over the five year period since the previous expenditure survey¹⁸. The latest National Health Accounts (NHA)¹⁹, which covers 2009–2010, indicate that THE is 2.5% of GDP (or US\$27 per capita, at average exchange rates), of which private health expenditure accounts for 59% of THE. OOP expenditure comprises more than three-quarters of this private health expenditure – which works out to just under half of THE. There is also significant dependence on external financing, which comprises 32% of THE.

Various health financing schemes emerged from 2002 to 2006 to improve financial protection. They include Community-based Health Insurance (CBHI), Civil Servants Scheme (CSS) under the State Authority for Social Security (SASS), Social Health Insurance (SHI) under the Social Security Organization (SSO) and Health Equity Funds (HEFs). These schemes cater to the informal sector, civil servants, private and state enterprise employees, and the targeted poor, respectively. Although SHI is compulsory for private and state enterprises, coverage remains low among the target population²⁰. Of relevance to MH policy, households with a pregnant woman are more likely to enroll in CBHI and enrolled households have higher utilization rates and lower OOP expenditure. However, due to the low overall coverage of CBHI, these benefits limit its impact²¹. In 2010, only 12% of the Lao PDR population was covered by any of these schemes, with the highest coverage 5.3% provided by SASS followed by HEFs (2.9%), CBHI (2.3%), and SSO (1.7%). For this reason it is unsurprising that OOP expenditure is a major financing source, contributing to 46% of THE in 2010.

Table 1: Health Financing Schemes in Lao PDR (2010)²²

	SASS	SSO	CBHI	HEFs
Ministerial authority	MOLSW	MOLSW	MOH	MOH
Implementation date	2006 (revised scheme, previously CSS)	2002	2002	2004
Nature of the scheme		Compulsory	Voluntary	Certified by local authority
Legal instrument		Prime Minister's Decree	Ministerial regulation	Ministerial regulation (but project based)
Contribution (sources and level)	Employee 8% Employer 8.5% (where 2% from each is for health)	Employer and employee 2.2% each	Household (Flat amount by family size, and urban or rural residence)	Donor and Lao Government
Benefit package		OPD & IPD		OPD & IPD, travel and food costs

¹⁷ WHO, 2010. National Health Accounts.

¹⁸ Powell-Jackson, 2010. Out-of-pocket spending and health service utilization in Lao PDR: Evidence from the Lao Expenditure and Consumption Surveys.

¹⁹ Government of Lao PDR, 2012. Lao PDR National Health Accounts FY 2009–2010.

²⁰ Powell-Jackson, 2010. Enrollment of Firms in Social Security in Lao PDR: Perspectives from the Private Sector.

²¹ Powell-Jackson, 2010. Community-Based Health Insurance in Lao PDR: Understanding Enrollment and Impacts.

²² Taken from: Government of Lao PDR, 2011. Draft Health Financing Strategy (19 August 2011).

	SASS	SSO	CBHI	HEFs
Payment method and level	Capitation (80,000 KIP) Cost-sharing for high cost/Risk-adjusted capitation for 6 conditions		Capitation (45,000 KIP)	Capitation, 'Fixed fee' and Fee for Services
Target population	Civil servants & dependents	Private sector salaried employees & dependents	Non-poor self-employed & dependents	Individuals in households identified as living under the poverty line
Estimated number of persons in the target population	399,672	386,988	About 3 million	About 1.6 million
Coverage (average)	317,000	105,000	140,000	177,000
Coverage as % of targeted population	79%	27.1%	4.7%	11%
% Coverage of total population	5.3%	1.7%	2.3%	2.9%

It is therefore unsurprising, given this health financing context, that the utilization of MH services is very low in Lao PDR. Only 42% of births are attended by a skilled birth attendant, contributing to high maternal mortality rates of 357 per 100,000 live births. Although the overall causes for this are multi-factorial – including cultural barriers, physical barriers, and the perceived quality of health facilities²³ – financial barriers are a key impediment.

Early Experiences with Free Maternal Health Services

In order to reduce these financial barriers, the World Bank has piloted a free delivery scheme through the Health Services Improvement Project in two districts in Savannakhet province. This pilot pays health providers for providing delivery services for free, based on a fixed-fee schedule. This resulted in a three-fold increase in institutional deliveries albeit from a very low level, from 8.5% to 23.7%. In comparison, institutional deliveries only increased from 13.1% to 18.4% in control districts, during the same period²⁴.

This is consistent with international experiences on fee exemptions for MH services. For example, various studies in Africa have reported increases in primary care consultations after fee exemption policy was introduced²⁵.

Further MH financing schemes in Lao PDR are currently active or planned. At another district in Savannakhet²⁶, free deliveries are provided using the same mechanism as HEFs, but expanded universally to include all pregnant women for MH services. A further World Bank financed project, the Community Nutrition Project, is providing Conditional Cash Transfers to pregnant women who deliver at an institution and attend ANC and PNC as scheduled, and provider reimbursements to health facilities for providing these services without user fees. Preliminary findings (analysis is on-going) suggest that there have been increases in the uptake of MCH services such as ANC consultations, well-baby visits, and institutional deliveries. Other development partners, such as Médecins du Monde and WHO, have also been providing free MH services in other districts.

²³ Manithip, 2012

²⁴ Boudreaux, 2012. Assessing the Elimination of User Fees for Delivery Services in Laos.

²⁵ Morestin, 2011

²⁶ Sepone district

Initial results from pilots such as these have encouraged the government to scale-up a package of MCH services (free deliveries, antenatal and postnatal care) on a national scale starting in five southern provinces and selected poor and priority districts in the north, using financing from the World Bank²⁷ and domestic revenue from the Nam Theun 2 hydropower dam.

The National Free MCH Policy

Following the approval of the policy of Free Deliveries and Free Health Care for Children under Five by the government, the Minister of Health of Lao PDR, Prof Eksavang Vongvichit, MD PhD, signed the Interim Guidelines for the Implementation of Prime Minister Decree on Free Delivery and Free Health Care for Children under 5 years old (hereafter referred to as the national free MCH policy) on May 29, 2012. Excluding external donor financing, approximately 5 billion kip per year has been allocated from the domestic government budget (NT2 revenue) to fund the implementation. This policy provides fixed-fee reimbursements to health facilities and cash allowances for food and transport for patients as detailed in the Annex. The prices for payments to health facilities are understood to have been calculated centrally by estimating the costs of consumables typically required for each service, as determined by the relevant technical departments.

Implementation of the free MCH policy has begun, covering MH services first, in the southern provinces beginning in early 2013. Selected districts in the northern and central provinces, with poor districts and communities being prioritized, are also receiving financing from NT2 revenue and other donors to implement the policy.

Household Survey of Maternal Health Expenditure

In 2010, a survey sampling 2,918 households²⁸ with at least one child under two was conducted in high priority and poor communities in the southern provinces of Lao PDR. Uniquely, this survey included questions on OOP expenditure for MH services to inform and assess an intervention aimed at increasing the utilization of MH services through conditional cash transfers to pregnant women and payments to providers. This is the first time that a large household survey in Lao PDR has captured this information specifically for MH services. The timing of this survey, at the inception of the national free MCH policy presents a timely opportunity for findings and insights from this survey to inform the scale-up of the national free MCH policy and to confirm the rationale behind the policy. Unfortunately, equivalent expenditure information for child health services was not included – and hence analysis and recommendations are focused on the MH aspect of the national free MCH policy.

Additional methodological details about this household and other related surveys can be found in the Annex.

Survey Population Characteristics

This survey is not nationally representative but instead focused intentionally on communities which are the initial target of health financing interventions for MH services. For this reason, the survey population is reflective of high priority and poor communities in the southern provinces of Lao PDR with a mean household size of 6.2, a large percentage of non-Lao Thai household heads (50%).

²⁷ Health Services Improvement Project Additional Financing

²⁸ Similar analysis on MH OOP expenditure was reported in the Lao Economic Monitor, November 2012. In that earlier analysis three health centers and the households in their catchment areas were excluded resulting in a smaller sample size, as this analysis was initially conducted to inform the baseline of an impact evaluation which included intervention health centers and matched controls. As the importance of maximizing sample size was judged more important in this baseline analysis, which is not primarily intended as an impact evaluation but as a description of the baseline situation, these three health centers and the households in their catchment area were hence included. This results in small differences in the reported figures between the report in the Lao Economic Monitor, November 2012, although the conclusions and implications are the same.

This contrasts with the national Lao PDR population where 33% of household heads are non-Lao Thai and the mean household size is 5.2 (see Table 2 for a detailed comparison of characteristics with the national population).

Physical, educational, and financial barriers towards accessing health care facilities are noted to be significant. About 38% of households live in villages without direct road access and the mean distance to the nearest health center and hospital is 5.5km and 31.2km respectively. For non-emergencies during the rainy season, the mean duration of this journey is 62 minutes and 143 minutes respectively. These mean averages hide the fact that some communities are 180km away from the nearest hospital and a journey to the nearest hospital could take 24 hours during the rainy season. More than one-third of household heads have had no formal education. Furthermore, despite lower mean monthly house-

hold expenditure than the national average, fewer of these households are covered by any health insurance or financing scheme. Even coverage of HEFs, which are intended to cover the poor, is lower in the survey population than the national average.

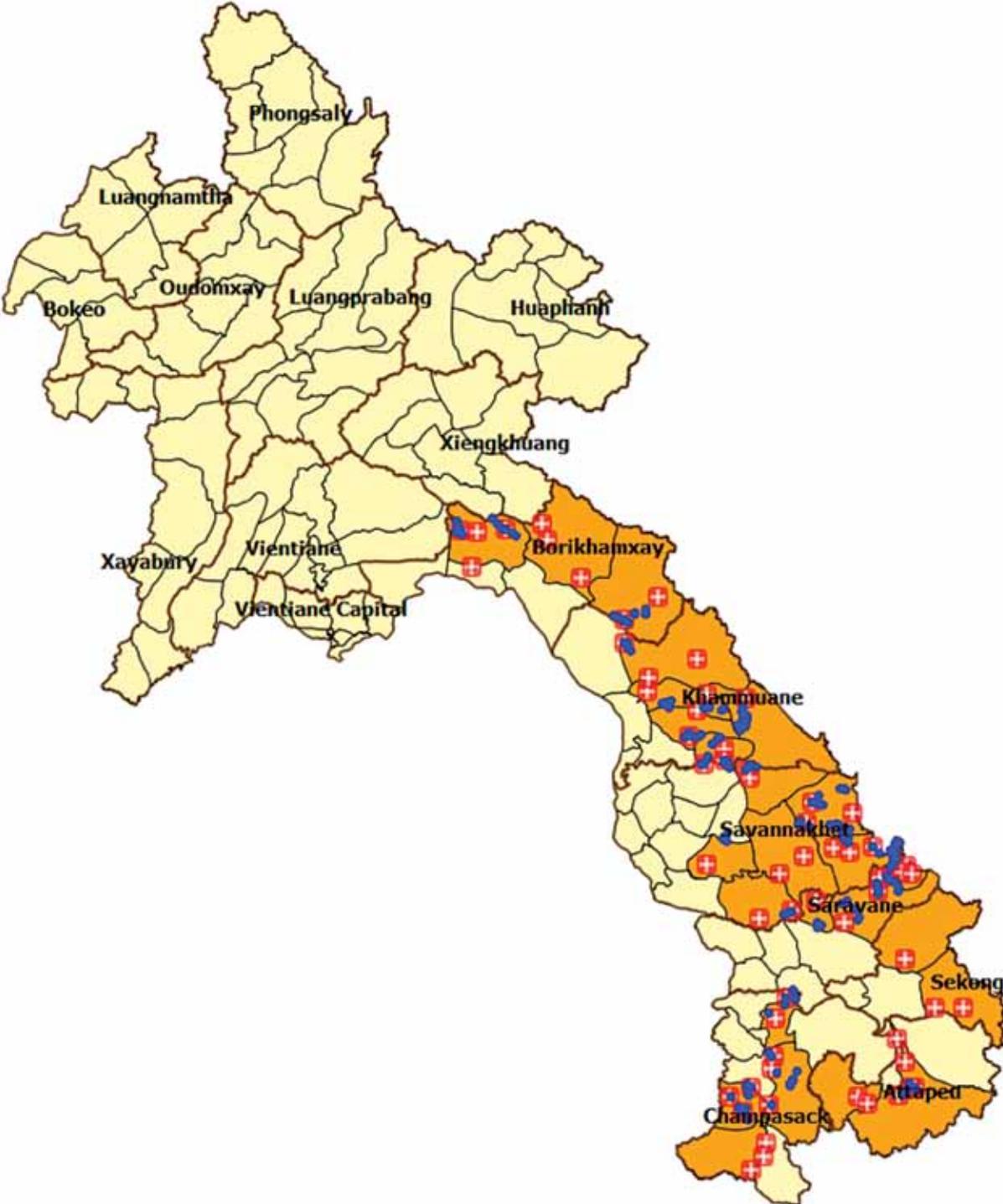
These barriers contribute towards the low utilization of MH services confirmed by this survey. Only 16% of births are institutional and 20% are assisted by skilled birth attendants (either at a health institution or through outreach), suggesting that outreach covers only about 4% of births. The percentage of births by caesarean section is less than 1% and is extremely low compared with international standards²⁹. Similarly, coverage of preventative MH services such as antenatal care (ANC) is also very low. Most pregnant women, 58%, do not attend ANC consultations, and only 24% receive the recommended four or more ANC consultations during pregnancy.



Photo by Bart Verweij/The World Bank, 2013

²⁹ The WHO recommended caesarean section rate is not more than 15% (WHO, 1985).

Figure 1: Lao PDR and the Survey Map



Villages (Blue Dots), Health Centers (Red Crosses), and Districts (Orange)

Table 2: Survey Population and National Population: Household Demographics and Maternal Health Utilization

Household Demographics and Maternal Health Utilization	Survey Population, 2010	Lao PDR National (Data Source)
Household Demographics		(LSIS 2012)
Ethnicity of Household Head		
Non-Lao Thai	50%	33%
Education of Household Head		
No Education	36%	20%
Up to Primary School	40%	45%
Household Size	6.3	5.2
Village Accessibility		
Road to Village	72%	-
Road > 4km away	15%	-
Nearest health center	5.5 km	-
Nearest hospital	31.2 km	-
Improved Sanitation Facility	27%	59%
Monthly Household Expenditure (kip), 2010 prices	1,527,361	1,837,148 ³⁰ (LECS4)
Health Insurance Coverage, Any	3.1%	12.2% (MoH 2010)
Civil Servants Insurance (Public sector)	1.2%	5.3%
Social Health Insurance (Private sector)	1.0%	1.7%
Community-based Health Insurance (Informal sector)	0.2%	2.3%
Health Equity Funds (Targeted Poor)	0.7%	2.9%
Maternal Health Utilization		(LSIS 2012)
Antenatal Care		
None	58%	44%
Four or more ANC consultations	24%	37%
Assistance During Delivery		
Skilled Birth Attendant ³¹	20%	42% ³²
Location of Delivery		
Institutional (Health Facility)	16%	37%
Births by Caesarean Section	0.6%	3.7%

Data Sources for Lao PDR: LSIS 2012³³, LECS4 2007/08³⁴, MoH 2010³⁵

³⁰ Adjusted for CPI to 2010 price levels, from 2007/08

³¹ For the purposes of this study, a skilled birth attendant is a 'health staff' as per the survey questionnaire. WHO (2004) defines a skilled birth attendant as "an accredited health professional – such as a midwife, doctor or nurse – who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management and referral of complications in women and newborns."

³² Women aged 15-49, in the two years preceding the survey

³³ Government of Lao PDR, 2012. Lao Social Indicators Survey, 2011-2012.

³⁴ Government of Lao PDR, 2008. Lao Expenditure and Consumption Survey, 2007-08.

³⁵ Government of Lao PDR, 2011. Draft Health Financing Strategy (19 August 2011).

Section II: Maternal Health Out-of-Pocket Expenditure

Maternal health (MH) out-of-pocket (OOP) expenditure collected in the household questionnaire of this survey come from six different buckets, user fees and transportation expenditure for three key MH services – antenatal care (ANC) consultations, deliveries, and postnatal care (PNC) consultations (see Figure 2). User fees in this context refer to “a financing mechanism that has two main characteristics: payment is made at the point of service use and there is no risk sharing. User fees can entail any combination of drug costs, supply and medical material costs, entrance fees or consultation fees. They are typically paid for each visit to a health service provider, although in some cases follow-up visits for the same episode of illness can be covered by the initial payment”³⁶ Survey respondents were specifically asked to include tips, service charg-

es, room rates, and medicines in these user fees. Transportation expenditure refers to the OOP spending incurred for transportation to access these services. With regards to ANC consultations, OOP expenditure for user fees and transportation was only asked of the most recent ANC consultation (both facility-based consultations and outreach consultations) and of the total number of ANC consultations received during the pregnancy. Deliveries include both institutional births (in a health facility; including both vaginal and caesarean births) and non-institutional births. PNC consultations included both facility-based consultations and outreach consultations. Additional details on the sources of MH OOP expenditure and survey questions are included in the Annex.

Figure 2: Composition of Maternal Health Out-of-Pocket Expenditure in this survey



Public health facilities in Lao PDR include the central hospitals (specialized hospitals located in the capital city, Vientiane), provincial hospitals (in each of the 16 provinces and Vientiane municipality), district hospitals (Type A district hospitals which provide basic surgical services such as caesarean sections and Type B district hospitals which do not), and health centers (which provide basic outpatient services). There are few registered private health facilities which provide delivery services, especially in the rural and remote areas – in this survey only 11 institutional births occurred outside the Lao PDR public health system³⁷.

The referral system in Lao PDR is rudimentary. Patients often bypass health centers and go straight to provincial hospitals or district hospitals to seek care as there are no rules preventing them from doing so. Although, health centers can refer patients and issue referral letters, this function is not generally used for the purposes of gatekeeping, although certain project-based interventions may require these. For example, the Community Nutrition Project requires patients to be referred formally from health centers to hospitals, in order to be eligible for fee exemptions for deliveries.

³⁶ ALagarde, 2008

³⁷ Ten births which occurred outside Lao PDR (in Vietnam or Thailand) and one birth occurring at a “clinic” were excluded from the analysis, out of a remaining total of 2,918 birth events captured for analysis.

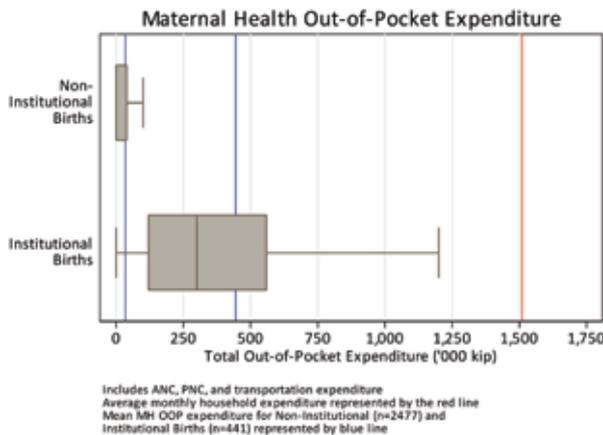
This section is organized as follows: The first part addresses the combined MH OOP expenditure which includes user fees and transportation expenditure for all three basic MH services, the second part explores the user fee component of MH OOP expenditure for each of the three services, and the third part explores the transportation expenditure component of MH OOP expenditure.

Maternal Health Out-of-Pocket Expenditure

Mean combined MH OOP expenditure for sampled births was 111,000 kip. This mean value belies the skewed distribution of this expenditure, which reflects the utilization patterns of these services. Only 15% of all births occurred in a health facility and only 0.6% of all births are caesarean births. For this reason, the median OOP expenditure was actually zero kip, as 84% of all births were non-institutional and 50% of all births were completely unassisted³⁸ (even by unskilled personnel).

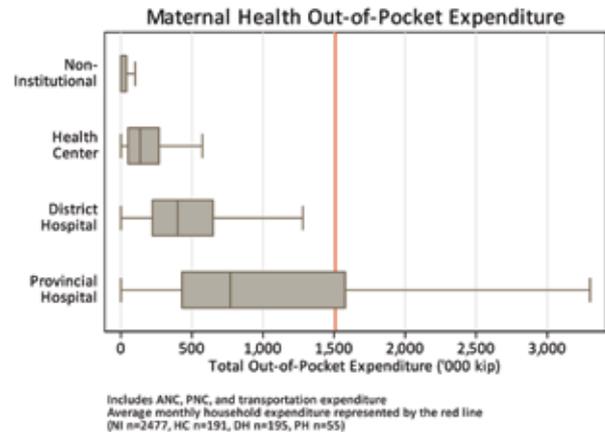
Unsurprisingly, actual utilization of MH services was the major determinant of mean MH OOP expenditure. Where facility-based delivery services are not utilized (84% of births) mean MH OOP expenditure (i.e., including ANC and PNC consultations) amounts to just 37,000 kip but increases precipitously by about 13-times to 489,000 kip where facility-based delivery services are used.

Figure 3: MH OOP Expenditure for Institutional and Non-Institutional Births



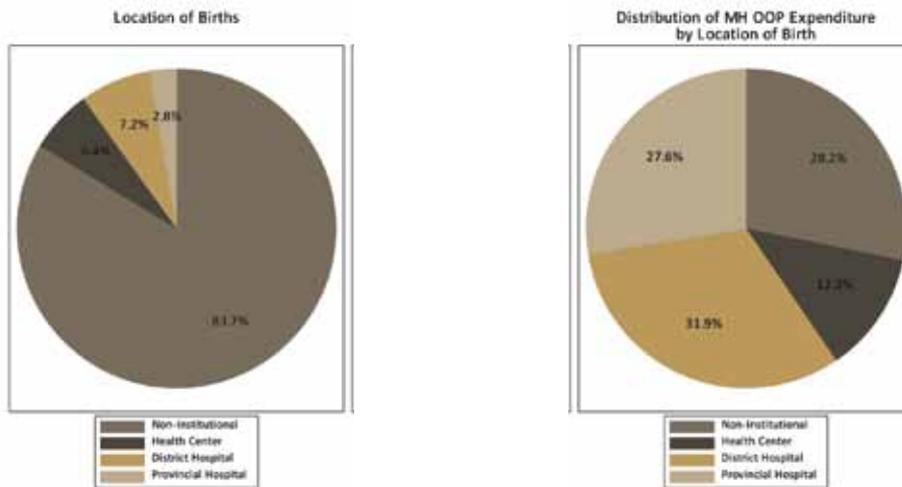
Type of health facility and mode of birth (vaginal or caesarean) were also important determinants of mean MH OOP expenditure. Including only vaginal births, mean MH OOP expenditure varied from 214,000 kip at health centers, doubling to 488,000 kip at district hospitals, and doubling again to 991,000 kip at provincial hospitals (see Figure 4). District hospitals (7% of all births) and health centers (6% of all births) are the main locations for institutional deliveries. Births by caesarean section incurred far greater MH OOP expenditure than vaginal deliveries – 1,466,000 kip (see Table 3), at district hospitals or provincial hospitals, although they account for only a small percentage (0.6%) of all births. Therefore, even though the vast majority of births were non-institutional, more than half of the entire burden of MH OOP expenditure in the sample was borne by the 10% of women delivering in provincial and district hospitals (see Figure 5).

Figure 4: MH OOP Expenditure by Location of Birth



³⁸ Assistance at birth: 50% unassisted, 20% by health staff, 25% by traditional birth attendants or healers, and 4% by village health volunteers.

Figure 5: Where did births occur and where was expenditure incurred?



Mean MH OOP expenditure was not the only indicator of the financial barriers faced by households in accessing MH services. Transparency and predictability of expenditure are also important aspects of an effective financing of MH services as, compared with fee-for-service where the ex-ante costs are unknown, “households prefer fixed charges for episodes of care to fee for service since this reduces the risk that

providers pad out their costs by charging for unnecessary tests and interventions”³⁹. This survey found considerable variation in MH OOP expenditure; even when only cases of institutional births were included – the lowest 10% of expenditure was less than 20,000 kip compared with more than 1,000,000 kip for the highest 10% (also see box plots in Figure 3).



Photo by Bart Verweij/The World Bank, 2013

³⁹ Ensor, 2005

Table 3: Maternal Health Out-of-Pocket Expenditure Decomposed, by Location and Type of Birth

Mean Expenditure (kip)	Non-Institutional Births	All Institutional Births ⁴⁰	Health Center ⁴¹	District Hospital (Vaginal)	Provincial Hospital (Vaginal)	All Hospitals (Caesarean) ⁴²	All Births
% of births in sample	83.7%	16.3%	6.4%	7.0%	2.3%	0.6%	100%
OOP Expenditure by Usage⁴³: User Fees and Transportation Expenditure							
User Fees	26,363 ⁴⁴	381,745	167,514	370,489	756,336	1,302,623	84,351
User Fees as % of Total	70%	78%	78%	76%	76%	89%	76%
Transportation expenditure	11,043	106,978	46,594	117,244	234,861	132,572	26,697
OOP Expenditure by Maternal Health Service⁴⁵: ANC, Deliveries, and PNC							
ANC Expenditure	12,444	52,163	31,394	47,916	124,661	40,133	18,925
Delivery Expenditure	19,693	433,486	179,475	436,097	866,511	1,387,866	87,211
<i>Delivery Expenditure as % of Total</i>	53%	89%	84%	89%	87%	95%	79%
PNC Expenditure	5,268 ⁴⁶	3,073	3,239	3,720	24	5,516	4,910
Total OOP Expenditure	37,406	488,723	214,108	487,733	991,197	1,466,200	111,047

Prices quoted at 2010 levels. 1 USD = 8,259 kip (WDI, 2010)

⁴⁰ Health Centers, District Hospitals, and Provincial Hospitals

⁴¹ Health centers do not have the capacity to perform caesarean births

⁴² n=15

⁴³ User fees for ANC, PNC, and deliveries

⁴⁴ For example, the cost of medications paid to the birth attendant.

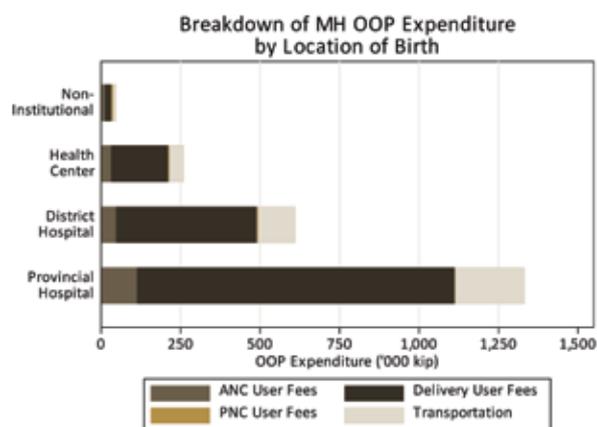
⁴⁵ Including user fees and direct transportation costs

⁴⁶ The costs of subsequent PNC consultations following a non-institutional birth

Breakdown of Maternal Health Out-of-Pocket Expenditure

User fees accounted for three-quarters of MH OOP expenditure, of which delivery user fees accounted for the largest share. As both transportation expenditure (presumably due to the increasing distance of higher-level facilities) and user fees (presumably due to the complications or additional services) increased at higher level facilities, the user fees fraction of combined MH OOP expenditure was fairly constant. User fees related to the actual delivery itself⁴⁷ (excluding ANC and PNC) accounted for most of the overall user fees (see Figure 6).

Figure 6: Breakdown of MH OOP Expenditure, by Location of Delivery



User Fees

On the demand-side, the national free MCH policy provides fee exemptions for facility-based MH services and cash transfers to users to cover food and transportation costs related to a facility-based delivery according to a fixed schedule (see Annex). On the supply-side, the policy provides fixed-fee reimbursements dependent on the type of service and the location of service provision. The mean marginal user fees for each of these services derived from

the survey is contrasted with the fixed case-based reimbursement schedule in Table 4. The supply-side implications of the mismatch between and actual marginal user fees and the implications of the transfer of risk inherent in this change in provider payment mechanism is explored in greater detail in Section V.

Deliveries

User fees for vaginal deliveries increased dramatically by facility level, from 20,000 kip for non-institutional deliveries (e.g., to cover medicines, commodities, and other outreach charges), rising steeply to 160,000kip at health centers, 359,000 kip at district hospitals and 744,000 kip at provincial hospitals. This could be due to the increasing complexity of cases referred to higher levels or the provision of additional services or drugs.⁴⁸

It should be noted that however, even prior to the implementation of the national free MCH policy when this survey was conducted, **many institutional deliveries at public health facilities were already free of user fees** (i.e., 27% of health center deliveries, 14% of district hospital deliveries, and 18% of provincial hospital deliveries) suggesting that there was already some degree of supply-side financing or existing health financing schemes (such as Health Equity Funds), which enabled health facilities to provide these services without charging additional user fees. It should be noted that overall household coverage of any demand-side health financing scheme in this sample is only 3.1% and hence these free services cannot be completely attributed to these schemes. Although the free MCH policy allows for higher payment rates for higher level facilities, this increase is not proportionate to the mean marginal user fees derived from this survey, and may have implications on provider behavior with respect to referrals which will be explored in Section V.

⁴⁷ Although the survey questionnaire included questions to disaggregate user fees (e.g. medicines, tips, room fees, etc.), too few respondents were able to recall the disaggregation for any meaningful analysis to be possible.

⁴⁸ These findings are comparable to those from a cross-sectional study of 581 women at two provincial hospitals (Khammuane and Borikhamxay) in central provinces in Lao PDR in 2010. In that study, medical expenses were estimated at approximately 248,000 kip (USD 30) for vaginal deliveries and 1,272,000 kip (USD 154) for caesarean section births, which is slightly lower than the typical user fee paid pregnant women from this high priority and poor community going to or referred to provincial hospitals to deliver (Douangvichit, 2012).

Unsurprisingly, deliveries by caesarean section incurred higher user charges – on average 1,292,000 kip. However, as the increase in free MCH policy reimbursement for deliveries by caesarean section was even greater and exceeded this mean, this may also have implications on provider behavior by creating a financial incentive in favor of deliveries by caesarean section.

The uncertainty and variability in combined MH OOP expenditure faced by households was further noted even when only delivery user fees were analyzed in a disaggregated manner for each facility level and for each mode of delivery (see Figure 7). For example, the 75% quartile of user fees for a vaginal delivery at a district hospital was 500,000 kip, which was five times what the 25% quartile would pay, 100,000 kip. Hence, on the demand-side, the predictability and reductions of OOP expendi-

ture expected with the implementation of the free MCH policy would likely be very much welcome and associated with enhanced financial protection, but on the supply-side, there would be implications on providers appetite for absorbing the risk, given the small risk pool sizes of under-utilized health facilities spread out over the sparsely populated rural areas, unless significant increases in utilization allow economies of scale to offset some of this risk by expanding the risk pooling and by lowering the average cost of services as fixed costs are diluted.

International comparisons of delivery expenditure are provided in Table 5, where deliveries in Lao PDR appear to be more expensive in absolute terms and as a fraction of GDP per capita, compared with the comparator countries selected for the availability of recent data.

Figure 7: Delivery User Fees

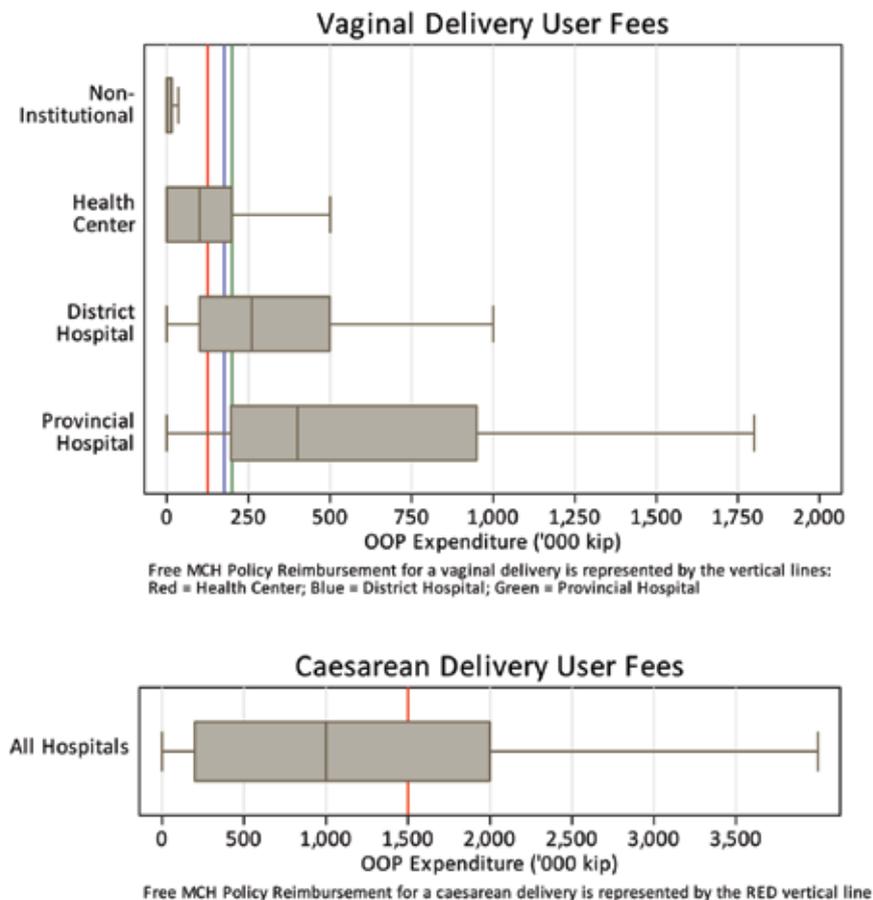


Table 4: User Fees for Maternal Health Services, contrasted with Free MCH Provider Payments

Service	Location of Service Provision:	Non-Institutional	Health Center	District Hospital	Provincial Hospital
Vaginal Delivery	Mean User Fees per Service (kip)	19,693 ⁴⁹	160,209	359,453	743,727
	<i>Free MCH Provider Payments (kip)</i>	0	125,000	175,000	200,000
	% of all births (n)	83.7% (n=2,477)	6.4% (n=191)	7.0% (n=188)	2.3% (n=47)
District And Provincial Hospitals					
Caesarean Delivery	Mean User Fees per Service (kip)	-	-	1,291,851	
	<i>Free MCH Provider Payments (kip)</i>	-	-	1,500,000	
	% of all births (n)	-	-	0.6% (n=15)	
District And Provincial Hospitals					
Service	Location of Service Provision:	Health Center	District And Provincial Hospitals		
Antenatal Care	Mean User Fees per Service (kip)	1,566	4,017		
	<i>Free MCH Provider Payments (kip)</i>	15,000	20,000 for District Hospitals		
	% of all births (n)	21.0% (n=609)	30,000 for Provincial Hospitals	14.8% (n=357)	
Postnatal Care	Mean User Fees per Service (kip)	21,846	261,507		
	<i>Free MCH Provider Payments (kip)</i>	15,000	20,000 for District Hospitals		
	% of all births (n)	1.8% (n=56)	30,000 for Provincial Hospitals	1.3% (n=36)	

Prices quoted at 2010 levels. 1 USD = 8,259 kip (WDI, 2010)

⁴⁹ Costs mainly related to medicine, service charges and tips, for births attended through outreach.

Table 5: Selected International Comparisons of Delivery Expenditure

Country	Year	Uncomplicated Delivery OOP Expenditure at Public Facility (US\$)	Complicated Delivery OOP Expenditure at Public Facility (US\$)	Uncomplicated Delivery OOP Expenditure at Private Facility (US\$)	Complicated Delivery OOP Expenditure at Private Facility (US\$)	GDP per capita (current US\$)	Uncomplicated Delivery OOP Expenditure at Public Facility (% of GDP)	Source
India	2012	28	-	84	-	1,506 ⁵⁰	1.9%	Mohanty, 2012
Lao PDR (urban)	2010	30	154	-	-	1,158	2.6%	Douangvichit, 2012
Lao PDR (rural)	2010	48⁵¹	156	-	-	1,158⁵²	4.1%	This survey
Burkina Faso	2006	6.6 - 13.3	10.8 - 30.4	3.1	4.3	400 ⁵³	1.7 - 3.3%	Perkins, 2009
Kenya	2006	4.3 - 13.5	6.7 - 26.0	13.5 - 42.8	15.4 - 202.4	616	0.7 - 2.2%	Perkins, 2009
Tanzania	2006	2.5 - 5.2	3.4 - 8.6	4.8 - 21.0	6.9 - 28.5	370	0.7 - 1.4%	Perkins, 2009
Nepal	2004	67 ⁵⁴	132	-	-	260	26%	Borghji, 2006

⁵⁰ WDI, 2011

⁵¹ Official exchange rates (period average), WDI, 2010

⁵² WDI, 2010

⁵³ WDI, 2006

⁵⁴ Including transportation; Prices adjusted to 2006

Antenatal Care and Postnatal Care Consultations

The mean user fee for an ANC consultation was 2,000 kip at health centers and 4,000 kip at hospitals. This mean value was relatively low because most ANC consultations were already free of user fees (74% at hospitals, 86% at health centers) even without the national free MCH policy⁵⁵. The high percentage of free ANC consultations suggests that supply-side funding was often adequate. Despite this, few pregnant women (42%) attended for any ANC consultation⁵⁶, perhaps due to transportation expenditure or other financial and non-financial barriers as discussed in the later sections. Furthermore, there would have been little marginal incentive for providers to increase the utilization of ANC visits, except for visits where medications (such as iron or folate tablets) and services (ultrasound scans) can be billed for. These survey findings imply that the national free MCH policy reimbursement rates are generous, which may be appropriate given the context of low utilization if providers are able to appropriately induce increased utilization of these services among disadvantaged communities.

Mean user fees for a PNC consultation was 22,000 at health centers and 262,000 kip at hospitals. These findings need to be interpreted with caution as the extremely low rates of PNC consultations (only 3.6% of respondents reported a PNC consultation – facility-based or by outreach – which is even lower than the rates of institutional deliveries) imply these were not the preventative routine PNC checks within 6 weeks of childbirth, but are postnatal consultations due to complications following the delivery. These survey findings have implications on the case definition of PNC consultations in the national free MCH policy. Most routine PNC consultations occur before a wom-

an is discharged from hospital (following an institutional delivery) or before the skilled attendant leaves a woman delivering outside an institution. Hence, the reimbursements of these routine PNC consultations should be embedded into the reimbursement that providers receive for institutional deliveries, and these additional PNC consultation reimbursements reserved for non-institutional births which are followed by a routine PNC consultation at a health facility or an institutional birth followed by a routine PNC consultation during a separate visit. An additional reimbursement category and provider payment should be defined for complications following delivery, being aware that these may well be more costly than an uncomplicated delivery, and that coverage of these occasional but high and unpredictable expenditures are important for financial protection.

Transportation Expenditure

Deliveries

Mean transportation expenditure ranged from 19,000 kip to go to a health center, to 77,000 kip and 118,000 kip to go to a district hospital and provincial hospital respectively (see Table 6).⁵⁷ This was less than OOP expenditure on user fees but was still a significant proportion. The average round trip distance to the nearest hospital (46.8km) was seven-times more than the equivalent distance to a health center (6.6km). When measured in terms of time instead of distance, travel time was increased, from 42 minutes (to a health center) to 96 minutes (to a district hospital), but not as dramatically as the increased distances would suggest. Considering that

⁵⁵ The national free MCH policy recommends four ANC consultations – one during the first trimester, one during the second trimester, and two during the third trimester – and two PNC consultations within 6 weeks of birth.

⁵⁶ WHO guidelines for ANC state that 'all pregnant women should have at least four antenatal care assessments by or under the supervision of a skilled attendant. These should, as a minimum, include all the interventions outlined in the new WHO antenatal care model and be spaced at regular intervals throughout pregnancy, commencing as early as possible in the first trimester.' (WHO, 2007. Provision of Effective Antenatal Care, Integrated Management of Pregnancy and Childbirth).

⁵⁷ In a complementary cross-sectional study of 581 women at two provincial hospitals (Khammuane and Borikhamxay) in central provinces in Lao PDR in 2010, non-medical expenses (transportation, food, additional costs, productivity loss) made up a significant proportion of total childbirth expenditure – 49% for vaginal births and 43% of caesarean section births. These non-medical expenses were estimated at approximately 240,000 kip for vaginal deliveries (USD 29) and 958,000 kip (USD 116) for caesarean sections (Douangvichit, 2012).

it was faster and cheaper to travel to a health center to deliver, compared with a district hospital, it is interesting to note that almost the same percentage of deliveries occur in district hospitals, 7%, as health centers, 6%. This likely reflects a balancing of preferences of perceived quality and convenience of travel.

Antenatal Care and Postnatal Care Consultations

Mean transportation expenditure for an ANC consultation at a health center was 6,000 kip, which was about four-times the typical ANC user fee. Transportation costs were much higher at hospitals, 25,000 kip, than at health centers. Considering the dangers, discomfort and inconvenience of traveling in this region, especially if pregnant, it is unsurprising that most women do not choose to spend the 2.8 hours of total round trip travel time required for the

four recommended ANC consultations to a health center or 6.8 hours⁵⁸ for a hospital. The importance of outreach in providing these preventative services is highlighted.

Mean transportation expenditure for a PNC consultation at a hospital, 43,000 kip, was almost double that of an ANC consultation at a hospital, 25,000 kip, even though the mean distances traveled were almost the same. This likely reflected the emergent nature of these consultations, as discussed in the earlier section. Taken together, this suggests that addressing expenditure related to complications following childbirth, would make a significant contribution towards financial protection. Furthermore, greater utilization of quality institutional births and ANC consultations would also helpfully reduce complications following childbirth.

Table 6: Transportation Expenditure for Maternal Health Services

Service	Health Center	District Hospital	Provincial Hospital
Deliveries			
Mean Transportation Expenditure (kip)	19,265	77,494	117,832
Mean User Fee for Vaginal Delivery (kip)	160,209	359,453	743,727
Mean Distance ⁵⁹ (km)	6.6	46.8	N/A
Travel Time during Dry Season ⁶⁰ (hrs)	0.7	1.6	N/A
	Health Center	District And Provincial Hospitals	
Antenatal Care			
Mean Transportation Expenditure (kip)	6,001	24,585	
Mean User Fee (kip)	1,566	4,017	
Mean Distance (km)	5.8	41.3	
Travel Time during Dry Season (hrs)	0.7	1.7	
Postnatal Care			
Mean Transportation Expenditure (kip)	4,542	42,239	
Mean User Fee (kip)	21,846	261,507	
Mean Distance (km)	4.5	42.2	
Travel Time during Dry Season (hrs)	0.7	1.6	

Prices quoted at 2010 levels. 1 USD = 8,259 kip (WDI, 2010)

⁵⁸ During the dry season

⁵⁹ Round-trips

⁶⁰ Travel time is increased by 45% during the rainy season, compared with the dry season (author's analysis of the survey)

Section III: Financial Protection and Demand-Side Financing Implications

Maternal Health Out-of-Pocket Expenditure Contrasted with Monthly Household Expenditure

Measurements of financial protection for health are usually classified into catastrophic and impoverishing health expenditure.⁶¹ Catastrophic health expenditure is defined in terms of a threshold related to a 'household's prepayment income'. An example of this would be OOP expenditure on health exceeding 40% of a household's capacity to pay, defined as 'effective income remaining after basic subsistence needs have been met'.⁶² A household is usually considered to have been impoverished by health expenditure if the expenditure causes the household to cross below the poverty line. As the household survey used in this report does not include detailed household expenditure and consumption modules, a detailed economic exploration of these formal measures of financial protection is not possible nor intended. Instead, total monthly household expenditure is used as the primary denominator in contextualizing MH OOP expenditure, in the interest of comparability with the literature on MH expenditure, while acknowledging that there may be other denominators for contextualizing these costs, such as annual household expenditure and GDP per capita.⁶³ For this analysis, total monthly household expenditure was estimated for each household in this 2010 survey based on expenditure data from the Fourth Lao Expenditure and Consumption Survey (LECS4) 2007/08 using standard methodology described in the Annex.

Without the National Free MCH Policy

Financial protection of women delivering at a health facility was weak without the free MCH policy. Mean combined MH OOP expenditure for a pregnant woman delivering at a district hospital, the most common location for institutional births, was 493,000 kip (see Table 7). When contrasted with average monthly household expenditure of 1,527,000 kip, this OOP expenditure represented 26% of average monthly household expenditure, rising to 52% for provincial hospital births. MH OOP expenditure for non-institutional births by contrast, represented just 3% of average monthly household expenditure.

Using a further measure of economic hardship⁶⁴, more than 10% of households had to borrow money to cover the cost of deliveries, when this happened at hospitals (11% for district hospitals; and 13% for provincial hospitals). The mean amount borrowed by these households was 1,219,000 kip and 1,634,000 kip for district and provincial hospitals respectively. Where these deliveries occurred at health centers, 6% of households borrowed a mean of 651,000 kip to cover the cost of deliveries. Only 3% of households choosing non-institutional births borrowed to cover the cost of delivery, but when they did, the amount borrowed was still substantial – 556,000 kip.

⁶¹ Wagstaff, 2008

⁶² Xu, 2003

⁶³ Goudge, 2009; Perkins, 2009

⁶⁴ Kruk, 2009

The magnitude of MH OOP expenditure and monthly household expenditure is demonstrated in a 'pencil parade' for all 2,918 households in Figure 8, for institutional deliveries (red, on left side and non-institutional deliveries (blue, on right side), ordered by total average monthly household expenditure (the highest converging at the center). The small proportion institutional births (16%) are compacted at the left, but resulted in most of the OOP expenditure which on a household level, often exceeded the average monthly household expenditure, even for households at the lower expenditure quartiles. This suggests that the MH OOP expenditure was non-discretionary and may have impacted the livelihoods of the household. MH OOP expenditure related to institutional births exceeded monthly household expenditure on numerous occasions throughout the whole spectrum of total household expenditure.

On the other side of the spectrum, MH OOP for non-institutional births, which comprised 84% of births, were typically small and rarely exceed monthly household expenditure. Health outcomes may have been adverse, but expenditure was relatively predictable and small, even considering that these households tended to have lower average monthly household expenditure than those associated with institutional deliveries. There were only three occasions in the sample when catastrophic MH OOP from PNC exceeded monthly household expenditure.

Table 7: Financial Protection with and without the national free MCH policy

Location of Birth	Non-Institutional	Health Center	District Hospital	Provincial Hospital
% of births	83.7%	6.4%	7.2%	2.8%
Without the national Free MCH Policy				
Mean MH OOP expenditure (kip)	37,406	214,108	493,379	1,113,404
% of mean monthly household expenditure ⁶⁵	3%	12%	26%	52%
% of households where total MH OOP expenditure exceeds 20% of monthly household expenditure	1.8%	17.6%	52.9%	70.2%
% of households where total MH OOP expenditure exceeds 40% of monthly household expenditure	0.5%	3.7%	21.9%	50.7%
% of households borrowing to cover cost of delivery	2.6%	6.0%	11.2%	13.3%
Mean amount borrowed among those borrowing (kip)	555,538	650,663	1,218,819	1,634,357
With the national Free MCH Policy				
Mean remaining MH OOP expenditure (kip)	11,043	-10,754	26,912	120,037
% of households where remaining MH OOP expenditure exceeds 20% of monthly household expenditure	0.5%	1.5%	2.6%	6.9%
% of households where remaining MH OOP expenditure exceeds 40% of monthly household expenditure	0.0%	0.0%	1.6%	3.2%

Prices quoted at 2010 levels. 1 USD = 8,259 kip (WDI, 2010); Negative numbers imply a net gain due to cash transfers.

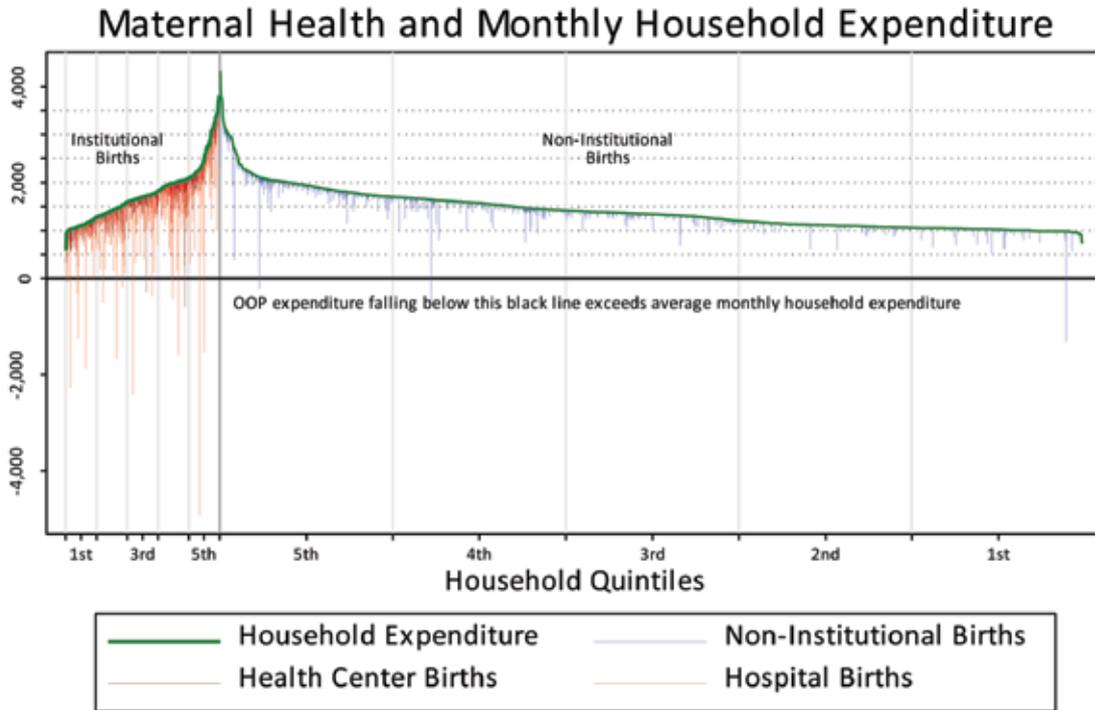
⁶⁵ Monthly household expenditure for the individual household

Figure 8: Maternal Health Expenditure compared with Monthly Household Expenditure, for Institutional and Non-Institutional Births.

Red households (institutional births) ordered by increasing household expenditure

Blue households (non-institutional births) ordered by decreasing household expenditure

MH OOP expenditure (falling lines) crossing the black zero line is greater than average monthly household expenditure



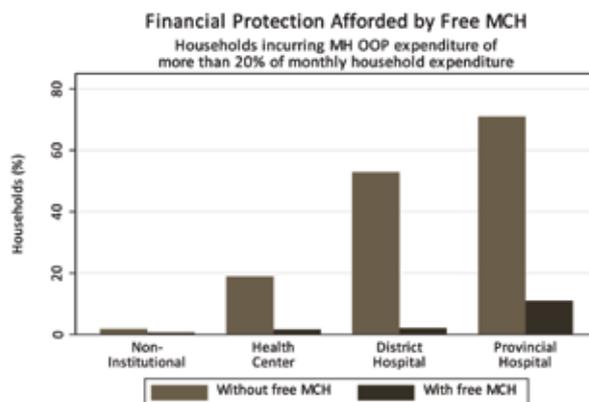
Each falling line represents the maternal health out-of-pocket expenditure for one household
Households are sorted by average monthly expenditure:
Increasing order for Institutional Births (red); Decreasing order for Non-institutional Births (blue)

With the National Free MCH Policy

Financial protection afforded by this policy for maternal services is strong theoretically, with mean reductions in MH OOP expenditure greater than 100% (i.e. households will receive a net surplus due to the cash allowances provided, disregarding other opportunity costs not captured in the survey), for births at health centers. These allowances and fee exemptions will reduce expenditure for delivery at a health center so much that it may often be 'cheaper' than a delivery at home (see Table 7).

These findings are based on analysis which describes the baseline scenario of the free MCH policy on MH OOP expenditure for the same households, assuming no change in behavior or utilization patterns. User fees are exempted and pregnant women receive cash allowances as per the free MCH policy. Where previously MH OOP expenditure accounted for more than 20% of monthly household expenditure in more than half of households delivering at hospital, with the free MCH policy fewer than 7% of households are simulated to incur this proportion of MH expenditure (see Table 7 and Figure 9). Advanced modeling of utilization patterns using this 2010 baseline data was not attempted as data collection for an endline survey has recently been completed in July 2013 and will be used for analysis of actual benefits incidence and changes in utilization. It is probably that different socio-economic groups are likely to respond differently to the policy and the elasticity of demand for each group cannot be predicted with any certainty.

Figure 9: Financial Protection Afforded by the Free MCH Policy, by Place and Type of Delivery



Although theoretical financial protection is strong, there is no certainty that additional informal payments would not occur. International experiences suggest that informal payments are more likely⁶⁶, if services are underpriced, and there is some indication that the reimbursements to providers would be less than what they would normally receive from out-of-pocket payments (more details on the implications for providers are discussed in the later section on Supply-Side Considerations). These informal payments will undermine the financial protection rationale of fee exemptions and may have implications on equity of access. Of potential interest to policymakers in Lao PDR, a study conducted in five countries (Egypt, India, Kenya, Peru, and Vietnam) found that the practice of exemptions has not meant an end to the imposition of informal fees and other costs associated with seeking and receiving MH services⁶⁷. Similarly, in Dhaka, where maternity services are nominally free, there were a number of hidden costs for medicine, blood tests, travel, food, hospital fees, services provided by *ayas*⁶⁸, and tips⁶⁹. Furthermore, if the reimbursements are indeed underpriced and informal payments do not occur, providers may be further dis-incentivized from encouraging the utilization of these services, in the context of already low utilization of MH services. Accountability mechanisms should hence be strengthened, for example, by establishing a mobile phone hotline service to allow patient clients make complaints of informal payments or reluctance to provide services.

⁶⁶ Lewis, 2007

⁶⁷ Sharma, 2005

⁶⁸ Female ward assistants

⁶⁹ Nahar, 1998

Section IV: Equity Dimensions

Economic Status

Utilization and Barriers

Utilization of MH services increased dramatically as economic status increases (see Figure 10 and Figure 11). Only 6% of women in the poorest economic quintile gave birth in an institution compared with 37% in the richest economic quintile. Given this context, it is unsurprising that financial barriers were cited with increasing frequency by poorer households as the reason for choosing a non-institutional birth. However, it is notable that citing traditional beliefs as a reason for choosing a non-institutional birth, was even more strongly associated with the poorer economic quintiles, suggesting that addressing financial barriers alone will not be sufficient in improving the equity of health outcomes. This is further demonstrated by the strong association between low maternal education and/or the physical accessibility, and the economic status of the household (see Figure 12), which implies that the economic status of the household taken in isolation may not be the main or only barrier towards the utilization of MH services.

Figure 10: Location of Birth, by Economic Quintile

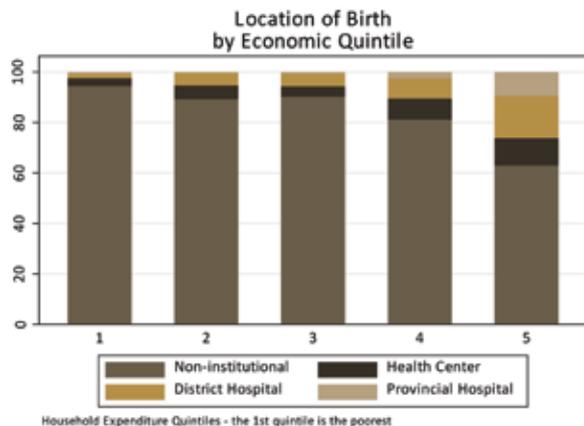


Figure 11: Barriers Against Institutional Births

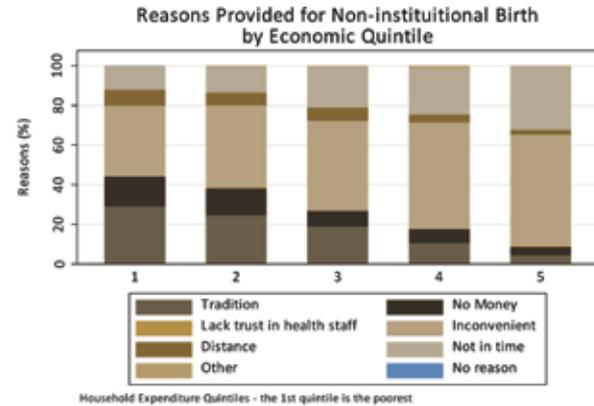
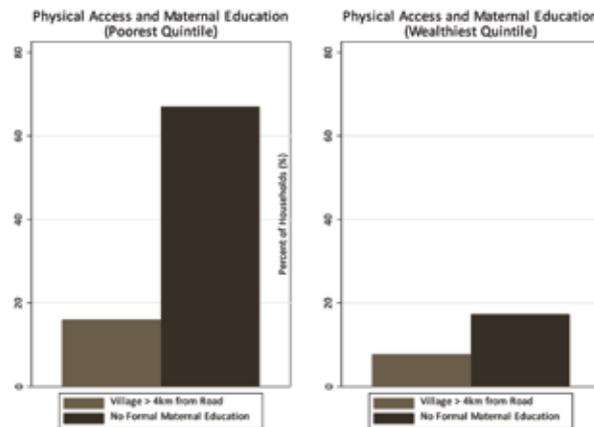


Figure 12: Economic Status is Associated with Other Determinants of Health Access

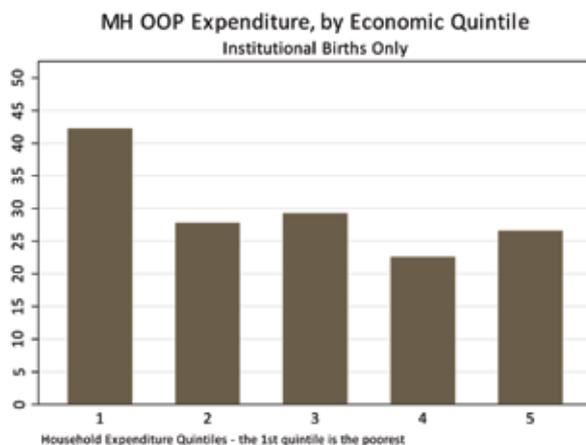


Expenditure without the National Free MCH Policy

Without the free MCH policy, OOP expenditure was regressive among households reporting an institutional birth, with the poorest quintile of households spending a greater proportion of household expenditure, 43%, on OOP expenditure compared with the richest quintile of households, 26% (see Figure 13). Furthermore, more than half (57%) of the poorest households choosing institutional deliveries incurred expenditure greater than 20% of monthly household expenditure and almost one-fifth (19%) borrowed a mean of 1,153,000 kip to cover the cost of the delivery. Richer households spent more on user fees but less as a percentage of monthly household expenditure. This increased absolute spending was unlikely to be due to a greater incidence of complicated pregnancies, and hence it suggests that there may be an element of discretionary expenditure related to these services. Six percent of these households borrowed money to cover the cost of the delivery – but the mean amount borrowed, 1,105,000 kip, was even less in absolute terms than the mean amount borrowed by the poorest quintile.

It should be noted that in these high priority and poor communities, the richest quintile is still relatively poor, and despite significantly higher rates of institutional deliveries, 37%, it is still very low.

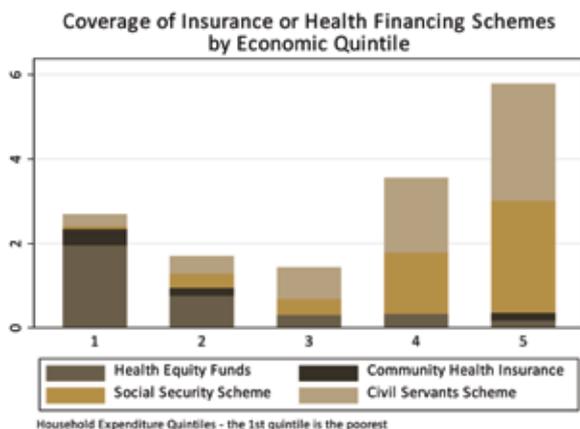
Figure 13: MH OOP Expenditure, by Economic Quintile



Ironically, for the households covered by government health insurance schemes or HEFs, mean MH OOP expenditure for institutional deliveries appeared to be higher, 546,000 kip, than for uninsured households, 371,000 kip, although there were only 24 institutional births represented in this insured sub-sample, as only institutional births are counted to adjust for differences in utilization. There could be many possible reasons for this higher MH OOP expenditure – for example, an inadequate benefit package, poor implementation of the scheme, informal payments, or the choice of patients to spend more on additional health services or pharmaceuticals. This also does not appear to be related to differences in caesarean rates as these are similar among those covered by the schemes and those who are not covered. Reassuringly, despite the increased MH OOP expenditure, these schemes were associated with increased rates of institutional births - 32% compared with 16% among the uninsured. However, if only the poorest quintile was analyzed, coverage of an insurance scheme was associated with lower rates of institutional births than those without coverage - 3.2% compared with 5.7%. This worrying finding again suggests that lowering financial barriers alone may not be sufficient to improve MH outcomes.

The coverage of health financing schemes by economic quintile is presented in Figure 14. Overall coverage was poor – with only 3.1% of surveyed households covered by any scheme. Some households in the poorer quintiles were covered by HEFs which are targeted to the poor, though there is some suggestion of inclusion errors as even households in the 4th and 5th economic quintile were covered. However, the larger schemes – for formal private sector workers and civil servants - covered the richer quintiles more comprehensively. This leaves a U-shaped 'missing middle' not covered by any health financing scheme.

Figure 14: Coverage of Health Financing Schemes, by Economic Quintile



Expenditure with the National Free MCH Policy

As the free MCH policy provides universal (i.e. poor and non-poor alike) fee exemptions for MCH services, the policy has the potential to be progressive—as the same absolute fee exemptions would make up a larger share of expenditure for the less wealthy. However, because utilization of MH services was strongly associated with wealth, a larger share of the benefits of fee exemptions and cash allowances will be accrued by the wealthier households. Figure 15 demonstrates the inequality of MCH policy benefits, with wealthier households receiving more benefits mainly due to a greater concentration of MH service utilization, rather than the due to higher quantity of benefits received per service.

If no additional interventions are used to increase the utilization of MCH services among the poorest, and the same ‘baseline’ modeling assumptions described earlier are used, the free MCH policy will be regressive – with the wealthiest quintile in these poor and priority communities taking 44% of the benefits of the policy, compared with 9% for the lowest quintile (see Figure 16).



Photo by Stan Fradelizi/The World Bank, 2011

As the international perspective suggests that it is not uncommon for the overall distribution of service benefits to favor the richer people⁷⁰, the free MCH policy may be appropriate as a transition towards improved access to quality essential services, and the potential for regressivity noted and mitigated through other means – for example, information campaigns targeted at rural areas.

⁷⁰ Mills, 2012

Table 8: MH OOP Expenditure, by Household Expenditure Quintiles

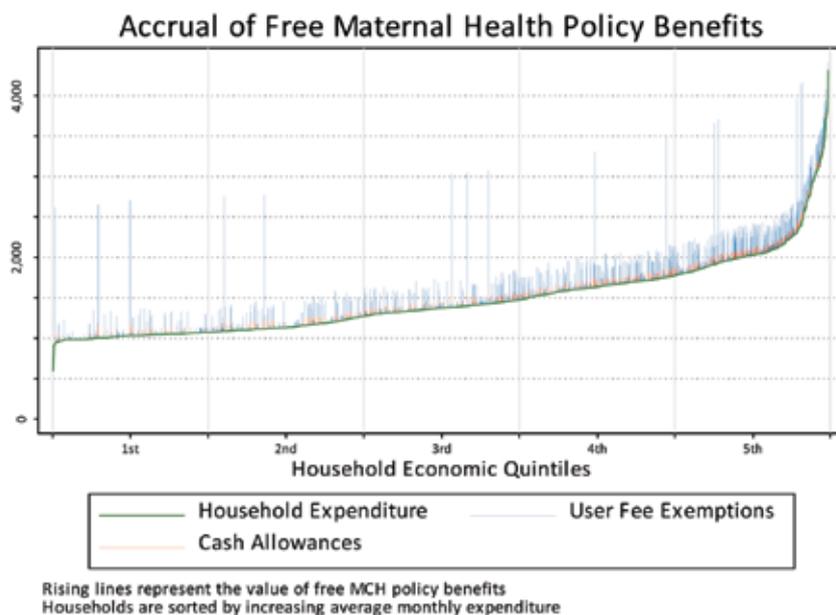
MH Expenditure for households reporting institutional births only are included, in order to compensate for differences due to utilization alone.

Household Expenditure Quintile	Poorest					Richest
	Quintile					
	1	2	3	4	5	
Monthly Household Expenditure, '000 kip	1,033	1,211	1,427	1,708	2,269	
Institutional Delivery Rate (%)	6%	11%	10%	19%	37%	
Institutional Deliveries (as % of Institutional Deliveries in the sample)	7%	13%	12%	23%	37%	
Without the national Free MCH Policy						
Mean MH OOP expenditure (kip)	437,430	340,512	421,963	384,967	613,066	
Mean % of monthly household expenditure ⁷¹	43%	28%	29%	23%	26%	
% of households where total MH OOP expenditure exceeds 20% of monthly household expenditure	57%	43%	52%	39%	38%	
% of households borrowing to cover cost of delivery	19.2%	9.5%	16.6%	9.7%	5.6%	
Mean amount borrowed among those borrowing (kip)	1,153,416	174,308	1,585,432	1,306,564	1,105,027	
With the national Free MCH Policy						
Mean remaining MH OOP expenditure (kip)	12,237	-4,382	34,346	20,400	42,337	
% of households where remaining MH OOP expenditure exceeds 20% of monthly household expenditure	6%	3%	6%	2%	2%	

Prices quoted at 2010 levels. 1 USD = 8,259 kip (WDI, 2010). Negative numbers imply a net gain due to cash transfers.

Figure 15: Accrual of MH Policy Benefits

Red lines represent the value of cash allowances and blue lines represent the value of user fee exemptions.



⁷¹ Mean monthly household expenditure calculated for each quintile separately.

Figure 16: Q-Q Plot of Cumulative Free MH Benefits by Economic Quintile

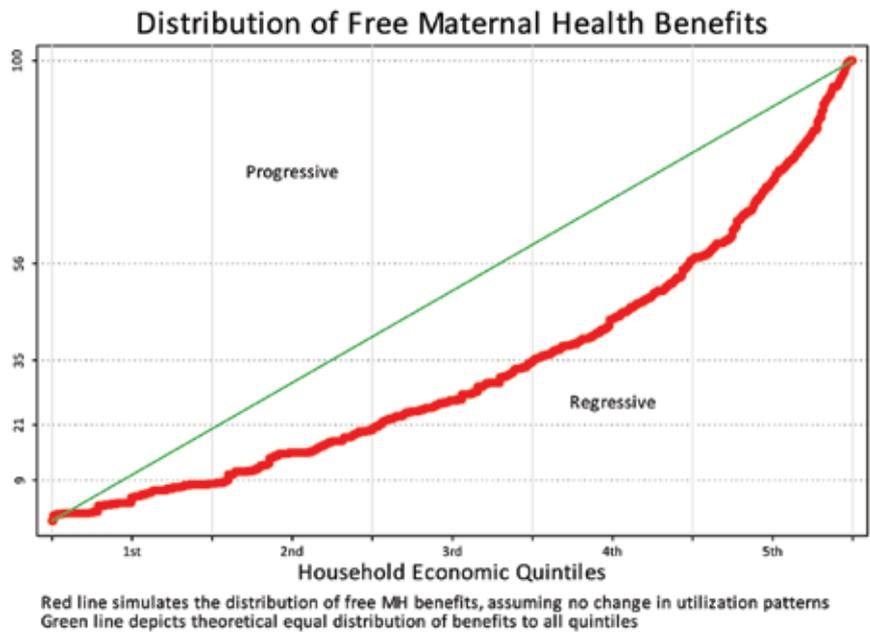


Photo by Bart Verweij/The World Bank, 2013

Box 1: Should Free MCH benefits be targeted?

International experiences indicate the potential for regressivity when fee exemptions for health services are provided universally and analysis of this survey indicate that the free MCH policy may not be an exception. Should free MCH benefits be targeted at marginalized people instead of being provided universally, in the interests of equity and the broader fiscal sustainability of these programs?

Internationally, voucher schemes are often quoted as an example of a mechanism to allow free services to be targeted to specific marginalized groups⁷², to stimulate demand, and to encourage market competition among providers⁷³. In Bangladesh, 'poor voucher recipients were 4.3 times more likely to deliver in a health facility ... than the non-poor recipients', resulting in enhanced equity⁷⁴. However, administrative costs for these schemes 'can be high'⁷⁵, and the population distribution and density of Bangladesh may not be a comparable model for Lao PDR which is land-locked and sparsely populated.

In Lao PDR, there are a variety of targeting mechanisms in existence. Geographic targeting, where eligibility is determined by residence in targeted districts, village development clusters ('kum ban'), or villages, is in practice already being used in the national free MCH policy (and other initiatives across sectors) as the scale-up of national implementation is prioritizes priority and poor districts, given budgetary constraints. In low income and low capacity countries, geographic targeting may often be the most feasible and appropriate targeting method as the administrative burden of sophisticated household-level targeting and the risk of excluding the most vulnerable may outweigh the efficiency gains of excluding the non-poor households in poor areas.

In addition, the very fact that free MCH services are focused on specific groups – pregnant women and children under five – can also be seen as a form of targeting, which may even have an element of progressivity if fertility rates among the marginalized groups are higher (although in the survey sample, this does not appear to have been a dominant effect).

As the prevalence of poverty declines in Lao PDR, one of the fastest growing economies in the world, the ease of administering geographic targeting schemes may be offset by the inefficiencies of including the non-poor households in poor areas and the dangers of excluding the poor in areas which are not poor in aggregate. The latter is of particular relevance to Lao PDR where, although 'poverty rates are highest in the remote upland areas, these are sparsely populated areas, so most of the poor live in the Mekong River valley'⁷⁶.

Health Equity Funds, which provide fee exemptions for a basic package of health services to the targeted poor in selected districts in the north and southern regions of Lao PDR, have depended on household-level targeting. A variety of methods have been used including the government's 'list of poor' in northern districts and mixed methods in southern districts, which combine geographic targeting, household-level proxy means tests, and a controlled participatory approach. Although universal (or crude geographic targeting) of free MCH benefits may be appropriate at this stage of transition to better access to essential services (by allowing greater volumes of services to increase and allow providers to gain more expertise), there may future justification for more sophisticated household-level targeting as the prevalence of poverty declines and benefit packages are expanded to include more services.

⁷² Borghi, 2006

⁷³ Ahmed, 2011. A maternal health voucher scheme: what have we learned from the demand-side financing scheme in Bangladesh?

⁷⁴ Ahmed, 2011. Is demand-side financing equity enhancing? Lessons from a maternal health voucher scheme in Bangladesh.

⁷⁵ Borghi, 2006

⁷⁶ Epprecht, 2008

Village Accessibility

Utilization and Barriers

Utilization of MH services by households in villages with road access was higher than those lacking road access (see Table 9) and unsurprisingly, distance was increasingly cited as a reason for choosing a non-institutional birth among less accessible households. (Within this sample, villages with no direct road access but with a road less than 4 km away appeared to be poorer and to utilize fewer MH services. This could be a specific feature of this survey sample of high priority and poor communities in the southern provinces rather than a national trend.)

Even when coming from a village with road access, women traveled 12.5km one-way to reach the health facility to deliver, but this was less than half the mean distance traveled by those from villages with road access more than 4 km from the village.

Reported findings from the Lao Expenditure and Consumption 2007-2008⁷⁷ also indicate that 'difficulty to get to' health facilities is the main reason for not getting treatment in 57% of households in rural areas.

Figure 17: Location of Births, by Village Access

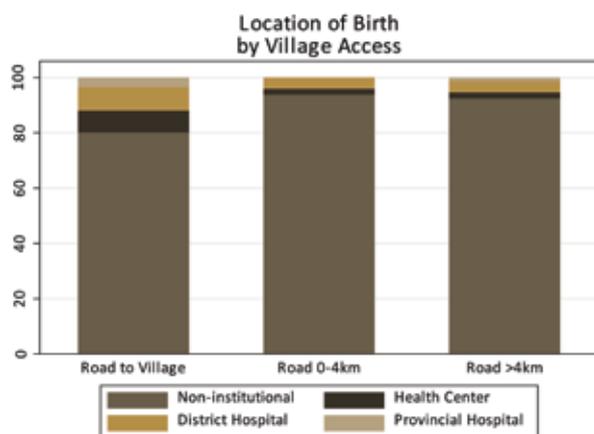
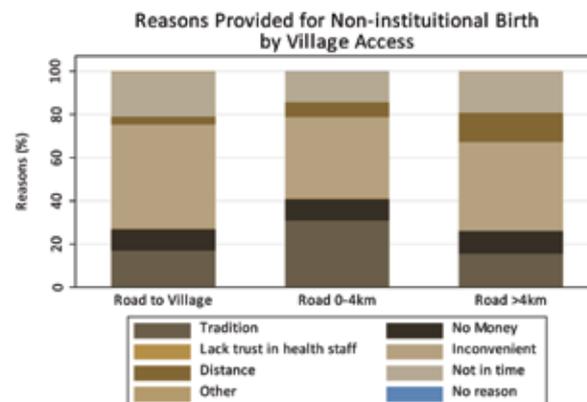


Figure 18: Barriers against Institutional Births



Expenditure

Including only institutional births, women from villages with road access more than 4km from the village incurred more MH OOP expenditure – in total, for transportation expenditure separately, and as a percentage of monthly household expenditure – than women from villages with direct road access. The national free MCH policy which provides variable cash transfers to women based on the distance of their village from the health facility compensates somewhat for the increased expenditure of travel but even with the policy implemented, women from villages with a road more than 4km still end up paying about three-times more OOP than a women from a village with direct road access.

Additional analysis, specifically for informing policy-makers on the appropriate strength of cash transfers to cover transportation costs is included in the Annex.

⁷⁷ Anuranga, 2012

Table 9: MCH OOP Expenditure, by Village Accessibility

MH Expenditure for households reporting institutional births only are included, in order to compensate for differences due to utilization alone.

Households from	Villages with Road Access	Villages with Road < 4km away	Villages with Road ≥ 4km away
Households in Survey (%)	72%	13%	15%
Monthly Household Expenditure, '000 kip	1,909	1,472	1,607
Institutional Delivery Rate (%)	20%	6%	8%
Institutional Deliveries (as % of Institutional Deliveries in the sample)	88%	5%	7%
Actual mean distance travelled (one-way, km)	12.5km	14.1km	31.3km
Without the national Free MCH Policy			
Mean MH OOP expenditure (kip)	494,876	259,597	567,255
Transportation Expenditure (kip)	104,002	56,428	177,003
Mean % of monthly household expenditure ⁷⁸	26%	18%	35%
% of households where total MH OOP expenditure exceeds 20% of monthly household expenditure	42%	38%	50%
With the national Free MCH Policy			
Mean remaining MH OOP expenditure (kip)	25,672	-21,929	88,135
% of households where remaining MH OOP expenditure exceeds 20% of monthly household expenditure	3%	0%	8%

Prices quoted at 2010 levels. 1 USD = 8,259 kip (WDI, 2010). Negative numbers imply a net gain due to cash transfers.

Ethnicity and Maternal Education

Educational and cultural barriers were important constraints against utilization of MH services.

Women without any formal education were much less likely to utilize MH services (see Figure 19) as were women from non-Lao-Tai households (see Figure 21). Institutional birth rates among Lao-Tai households were double (22%) that of Mon-Khmer households

(11%). Similarly, 35% of mothers with upper secondary education delivered at an institution compared with 9% for mothers without any formal education. Traditional beliefs featured prominently as a reason for not choosing an institutional birth, which vary widely by these ethnic and educational parameters (see Figure 20 and Figure 22).

⁷⁸ Mean monthly household expenditure calculated for each quintile separately.

These findings are consistent with international and domestic evidence. A cross-country study involving Demographic and Health Surveys from 31 countries finds that women's 'economic, educational and empowerment status' is strongly associated with the utilization of maternal health services⁷⁹. Hence, in order for the national free MCH policy to be more equitable, non-financial barriers need to be addressed in a comprehensive manner, to include investments in other sectors such as universal primary education, broad poverty reduction, and the empowerment of women. In Lao PDR, these large-scale associations noted by cross-country analysis are contextualized by a recent qualitative study in Lao PDR, which summarized the obstacles that impede institutional births as: "(1) Distance to the health facilities and difficulties and costs of getting there; (2) Attitudes, quality of care, and care practices at the health facilities, including a horizontal birth position, episiotomies, lack of privacy, and the presence of male staff; (3) The wish to have family members nearby and the need for women to be close to their other children and the housework; and (4) The wish to follow traditional birth practices such as giving birth in a squatting position and lying on a 'hot bed' after delivery"⁸⁰.

Figure 19: Location of Birth, by Maternal Education

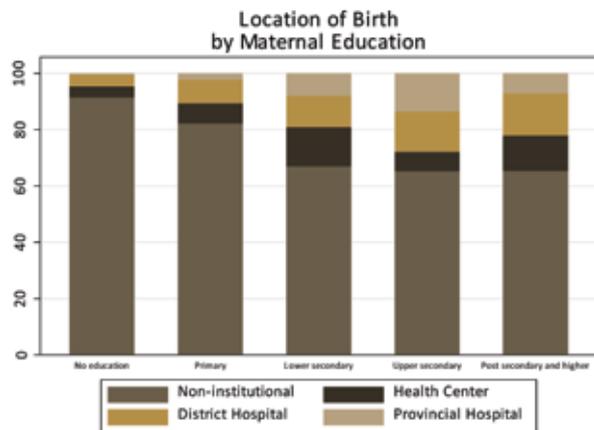


Figure 20: Barriers against Institutional Births

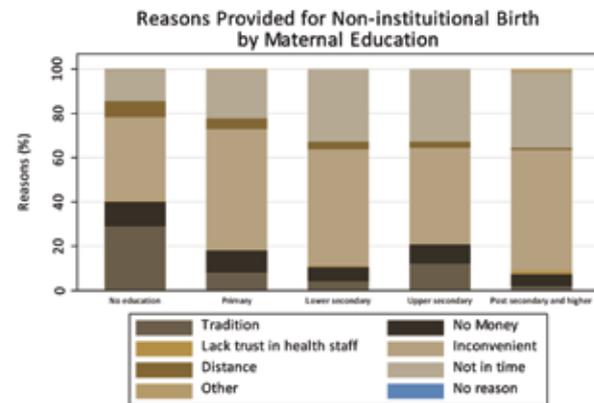


Figure 21: Location of Birth, by Ethnicity

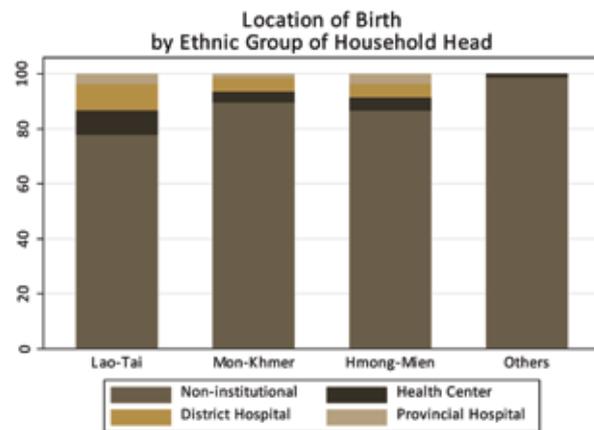
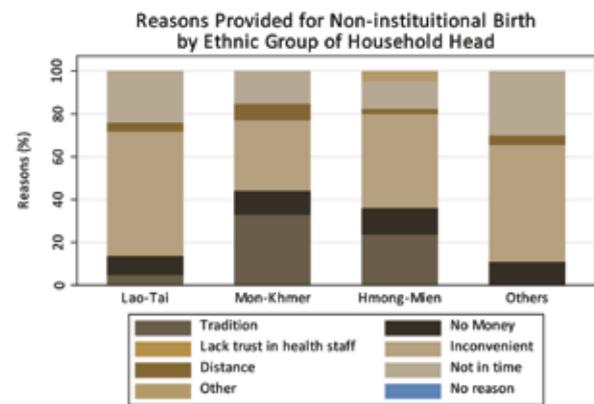


Figure 22: Barriers against Institutional Births



⁷⁹ Ahmed, 2010. Economic Status, Education and Empowerment: Implications for Maternal Health Service Utilization in Developing Countries.

⁸⁰ Sychareun, 2012

Section V: Supply-Side Considerations

Supply-Side Financing Implications

Provider Payment Mechanism

In addition to a change in the financing of MH services implied in the national free MCH policy – from private OOP financing to public financing – there is an additional implied change in the provider payment mechanism – from fee-for-service to a case-based payment mechanism. The former locates most of the risk of variable costs arising from complications onto the payor, while the latter locates the risk onto the provider. For example, if a woman develops an infection following childbirth which requires a longer period of hospitalization and additional medicines: under the previous fee-for-service system, the payor would incur all the risks of these variable costs, but under a case-based payment mechanism, the provider would bear the risks of these variable costs without additional payment from the payor.

Case-based payment mechanisms are usually priced to factor in these variable costs on average, and if providers have large case loads and pricing of the services are appropriate, the additional costs of occasional high expense services would be offset by the additional profit from the usual lower expense services. Indeed, the provider would be incentivized to reduce the possibility of complications as far as possible in order to avoid these high expenses, although other behaviors – such as under-treatment, referral, reclassification of cases⁸¹, and inappropriate discharge and multiple readmissions – are also possible. However, given the low utilization of health facilities in remote areas and their limited financial reserves, the quantity of maternal services provided may not be enough for an individual health facility to confidently accept the occasional high expense services as their risk pool is small. Adjustments of the pricing of reimbursements or other

financing interventions may be required in order to address the risk appetite of these health facilities.

Revenue and Cost

With the implementation of the national free MCH policy, some health facilities, such as district hospitals and provincial hospitals, may experience a reduction in marginal revenue for vaginal deliveries of 184,000 kip and 544,000 kip per delivery. This represents a deep reduction of 51% and 73% respectively, compared with revenue received from user fees without the free MCH policy. Health centers will also experience a reduction in revenues although, if ANC consultations are included, the reimbursement payment for those services may compensate for this reduction in delivery revenues. The picture is more mixed for caesarean deliveries – as district hospitals, which receive the same reimbursement of 1,500,000 kip for caesarean deliveries as provincial hospitals, stand to gain almost 940,000 kip of additional revenue per caesarean delivery because of the free MCH policy. Provincial hospitals, however, would receive slightly less revenue although this could be due to the complexity of cases requiring referral to provincial hospitals from these poor and remote communities. If caesarean deliveries are considered in aggregate, the reimbursement rate is comparable to mean health facility revenues from user fees for a caesarean delivery of 1,292,000 kip.

Findings from the analysis presented in Table 10 simulates the baseline scenario of the free MCH policy on marginal health facility revenue for deliveries, excluding ANC and PNC consultations as these could and do occur at different facilities. Instead of receiving user fees from patients who pay OOP, the health facilities will receive fixed reimbursements from the Ministry of Health according to the free MCH policy reimbursement schedule, per unit of service provided.

⁸¹ According to the national free MCH policy, there are no additional case-definitions for complications except for miscarriages which are priced similarly to deliveries (see Table 12)

Table 10: Supply-side Financing Implications for Free Deliveries

Health Facility Revenue, Per Delivery	Vaginal Delivery			Caesarean Delivery ⁸²	
	Health Center	District Hospital	Provincial Hospital	District Hospital	Provincial Hospital
Without the national Free MCH Policy					
Health Facility Revenue (kip)	160,210	359,453	743,727	560,490	1,634,080
With the national Free MCH Policy					
Health Facility Revenue (kip)	125,000	175,000	200,000	1,500,000	1,500,000
Change in revenue (kip)	-35,210	-184,453	-543,727	939,510	-134,080
Change in revenue (% of revenue without Free MCH)	-22%	-51%	-73%	168%	-8%

Prices quoted at 2010 levels. 1 USD = 8,259 kip (WDI, 2010). Negative values imply a reduction in revenue with the national free MCH policy.

Although this analysis expects a decline in marginal revenues for most types of deliveries, some of this difference may be appropriate as the government is larger and more technically sophisticated a purchaser than an individual patient.

Furthermore, revenue to facilities in the form of user fees from patients who pay OOP may not represent the true marginal cost of these services for several reasons. Firstly, the analysis in Table 10 assumes no change in the utilization patterns resulting from the national free MCH policy. In reality, the decrease in financial barriers is expected to increase demand for and utilization of these MH services. Even though a portion of costs per service provided are variable costs – for example, commodities and medicines, which increase for each additional service provided – a portion of these costs are also fixed costs which do not depend on the number of services provided – for example, staffing, equipment, and utility costs. An increase in the number of services provided will thus allow facilities to divide these fixed costs over the additional numbers of services provided, and thus lower the average per unit cost of MH services. Furthermore, depending on the elasticity of demand, the net revenues health facilities that a health facility would receive could increase due to this policy.

Secondly, user fees charged may have incorporated an element of rent seeking by the provider.

This survey does not collect information which would provide evidence on the existence or scale of rent seeking, even though that may be influenced by the current remuneration of civil servants and volunteers at health facilities. Technical staff employed by the civil service receive a total net remuneration equivalent to only 49% of the consumption of a rural household⁸³. Although there are planned substantial increases to the wages of civil servants including health staff from 2013 to 2015 according to Government Decree 221⁸⁴, this increase is starting from a very low base as even senior staff – for example, the head of a district hospital – received about US\$100 per month in net remuneration.

Incentive Structure

The balance of the pricing of reimbursements for MH services and the marginal cost of providing these services generate incentives. Ideally, the pricing of case-based payments should be fairly neutral (exceptions would be to incentivize an appropriate increase in utilization, increasing uptake of preventative services, and to promote good practices) and that decisions on the clinical management of patients – e.g., referrals, choice of delivery mode—are made on clinical expediencies.

⁸² n = 15 (7 at district hospitals, 8 at provincial hospitals)

⁸³ World Bank, 2010. Lao PDR Civil Service Pay and Compensation Review: Attracting and Motivating Civil Servants.

⁸⁴ Government of Lao PDR, 2012. Decree 221 (30 May 2012).

If the service reimbursements are too generously priced, there is the risk of supply-induced demand with providers encouraging the utilization of health services. Considering the context of extremely low utilization of MH services in Lao PDR, this is desirable as long as increased fiduciary risk and equity concerns are addressed.

If service reimbursements are substantially underpriced, health facilities may be reluctant to even accept pregnant women for deliveries or to attempt extract informal payments, which will have implications on the degree of financial protection and may fail to increase utilization of these services. Furthermore, if and when a woman does attempt to deliver at a particular health facility, there would be an incentive for the health facility to refer the case on to a higher level facility, even if there are no clinical reasons to warrant referral and the woman can safely give birth at the original health facility. Of further concern for provincial hospitals and some district hospitals⁸⁵ where caesarean sections can be performed, the health facility may well face a financing deficit if the woman gave birth vaginally, and face a financing surplus if the woman gave birth by caesarean section. This financial incentive to promote or encourage a caesarean delivery, even where there is no clinical reason for doing so, would be of great concern and may be harmful to both mother and child.

The provision of preventative services such as ANC and PNC consultations – for which the pricing appears generous and the costs are more predictable – should also be encouraged in order to build up the financial resilience of facilities, especially lower level facilities. It should be noted, however, that on the demand-side, the vast majority of ANC consultations are already provided for free and hence fee-exemptions may not have a strong effect on the demand-side, especially since most of the OOP expenditure related to these services is spent on transportation, which is not covered for preventative services under the free MCH policy.

The pricing of reimbursements may also affect the quality of services. If facilities are not adequately compensated, they may not have the resources to ensure the availability of commodities and drugs⁸⁶.

Supply-Side Readiness

The readiness of health centers to meaningfully provide these basic MH services was generally low. Using the WHO's Service Availability and Readiness Assessment (SARA), the readiness of the 41 surveyed health centers was measured (see Table 11, Figure 23 and Figure 24). As not all the SARA Service Readiness Indicators were included in the questionnaire, only a subset of available indicators was analyzed. Based on this assessment, the readiness of health centers to provide MH services was extremely limited – for example, only 2% of health centers fulfilled all the available ANC service-specific indicators and only 10% of health centers fulfilled all the available basic obstetric (i.e., delivery) care service-specific indicators. There was also a large amount of variation in health center readiness, considering that all these health centers are publically-financed (though some may have received additional donor-financing).

In order for increased utilization of health services expected with the reduction of financial barriers implied in the national free MCH policy to result in improved health outcomes, the service readiness of health facilities needs to be improved. This may require initial supply-side investments which can be then maintained and enhanced with the revenue health facilities receive from this policy, provided that health facilities are given effective decision rights and the right management incentives to do so, as current guidance on the usage of free MCH revenue are unclear. This lends weight to the importance of management reforms, which are on the agenda for health sector reform in Lao PDR.

⁸⁵ Caesarean sections are only performed in certain district hospitals (designated as District Hospital Type A).

⁸⁶ Ridde, 2011

At the health facility-level, the autonomy of public providers in managing revenue is unclear. A cross-sectoral decree on technical revenues issued by the Ministry of Finance⁸⁷ indicates that budgeting units which receive technical revenues can use these revenues to firstly pay utility bills and to improve service quality, but the surplus cannot be used for

management or administration. In addition to technical revenues, health facilities are permitted to operate a revolving drug fund. According to the national guidelines⁸⁸, public health facilities are allowed to mark-up the sales price of drugs by 25% to be used for (i) transportation costs, (ii) losses/inflation/safety margin, and (iii) management costs.

Table 11: Health Center Service Readiness, with International Comparators

Service Readiness Indicator ⁸⁹ Domains	% of Health Centers fulfilling all surveyed indicators per domain	Mean fulfillment of surveyed indicators per domain, un-weighted %	Sierra Leone, 2011 ⁹⁰ (Mean Scores for Community Health Centers)	Zambia, 2010 ⁹¹ (Overall Readiness Score Health Centers)
General Service Readiness				
Basic Amenities	37%	64%	58%	64%
Basic Equipment	44%	81%	76%	86%
Standard Precautions for Infection Prevention	5%	59%	57%	77%
Diagnostic Capacity	2%	9%	18%	40%
Service Specific Indicators				
Family Planning Services	41%	82%	80%	78%
Antenatal Care Services	2%	45%	64%	77%
Basic Obstetric Care	10%	28%	58%	59%

Note: Not all SARA Service Readiness Indicators were ascertained in the health center survey. This table summarizes only the surveyed indicators.

⁸⁷ Government of Lao PDR, 2010. Ministry of Finance Decree 727: Guidance on Management of Revenue-Expenditure of Technical Service Charges of Budgeting Units and Government Funds.

⁸⁸ Government of Lao PDR, 1997. National Guideline on Revolving Drug Funds in Public Health Facilities 2nd edition, August 1997.

⁸⁹ Service Readiness Indicators, WHO 2012. Available from: http://www.who.int/healthinfo/systems/sara_indicators_questionnaire/en/index.html

⁹⁰ Government of Sierra Leone, 2011. Mean Score for Community Health Centers. Note: The exact indicators used between for the Sierra Leone survey and for the Lao PDR analysis would not be identical.

⁹¹ Government of Zambia, 2010. Overall Readiness Score for Health Centers. Note: The exact indicators used between for the Zambia survey and for the Lao PDR analysis would not be identical.

Figure 23: Selected General Service Readiness Indicators

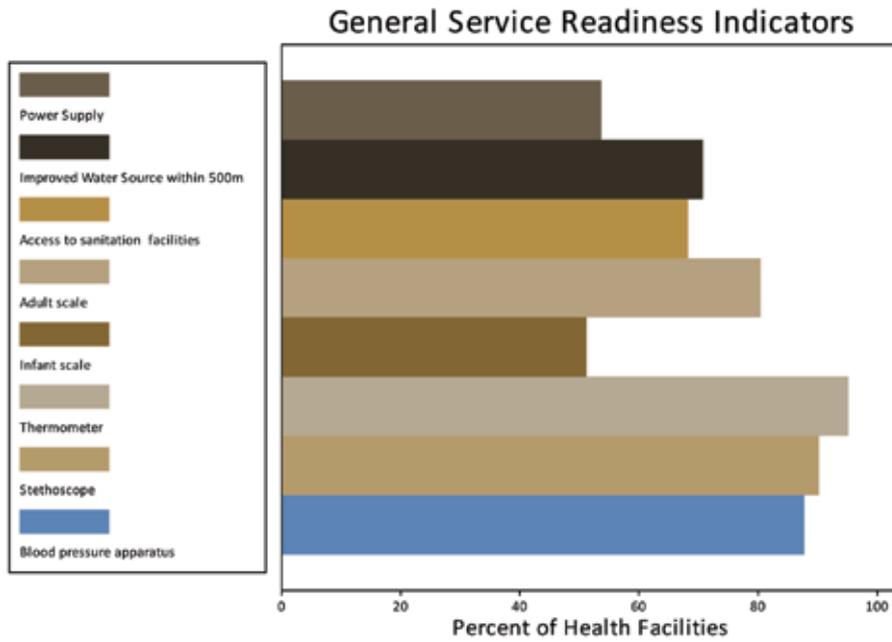
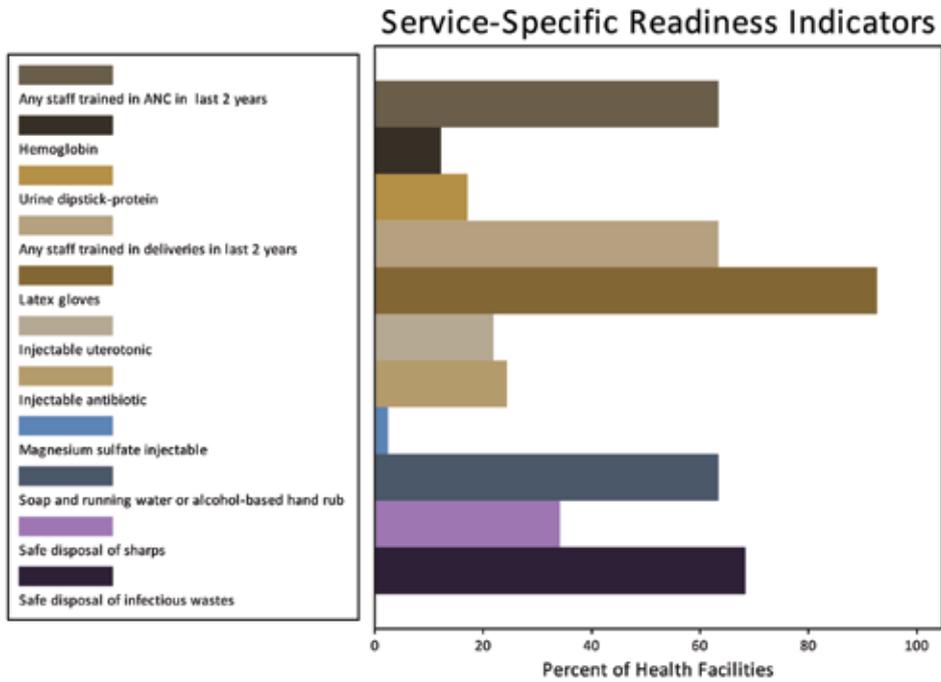


Figure 24: Selected Service-Specific Readiness Indicators



Implications of Supply-Side Readiness on Utilization and Equity

Utilization of MH services-i.e., institutional births -was associated with service readiness. The greater the mean SARA Service Readiness score of a health center, the more the births that occurred at that health center (see Figure 25). Furthermore, there is a general trend that Type A health centers, which are better equipped and staffed than Type B health centers, are linked with increased utilization of MH services and with mean SARA Service Readiness scores. Although causality is not implied, it is possible that health centers which were more ready to provide services attracted more clients, and/or that greater utilization of health centers induced improvements in their readiness. Of concern is the observation that the utilization of health centers which fulfill half or less of these service readiness indicators was very minimal. Hence, although health centers are expected to and allowed to use revenues from the national free MCH policy to finance investments in their supply-side readiness, many of the least ready health centers will not be able to depend solely on these utilization-based revenues, but will require an initial investment in order to 'break out' of this cycle of low utilization (low revenues) and low service readiness (greater need for investments).

There is also some indication that the poor among communities served by health centers with low mean SARA scores, were more exposed financially when opting for an institutional birth. Figure 26 presents the mean MH OOP expenditure for households choosing institutional births, by economic quintile. The paired bars further disaggregate these households by those covered by health centers with low mean SARA scores, and those with high mean SARA scores, using 0.5 as the cut-off. Although mean MH expenditure among the richer two quintiles did not vary a lot depending on the readiness of the health centers serving them, the households in the poorest quintile served by health centers with low readiness scores spent a mean of 869,000 kip, which was more than double that spent by similarly poor households served by health centers with high readiness scores.

Figure 25: Utilization of Health Centers (for deliveries) and Service Readiness Score of Health Centers Type A and Type B

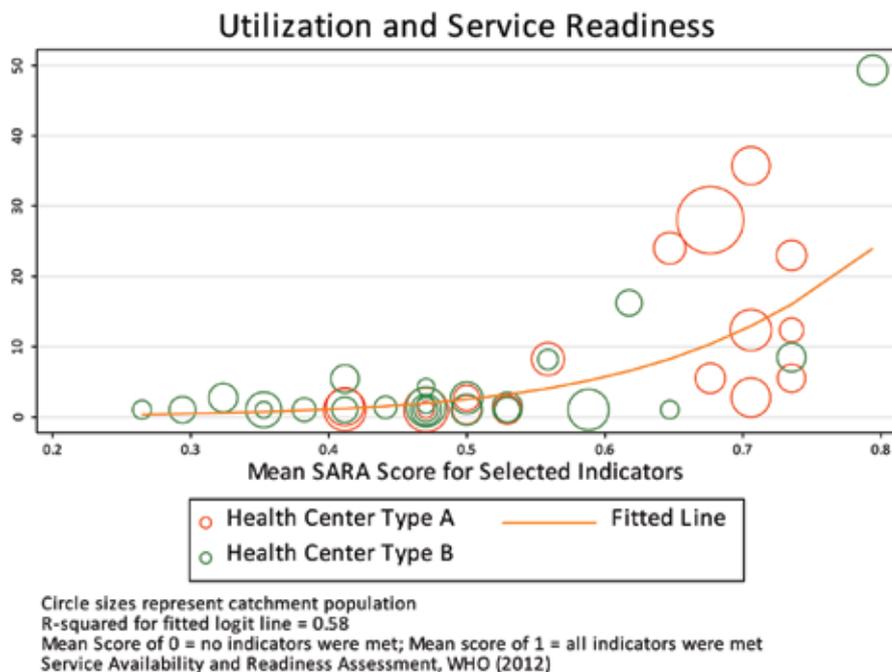
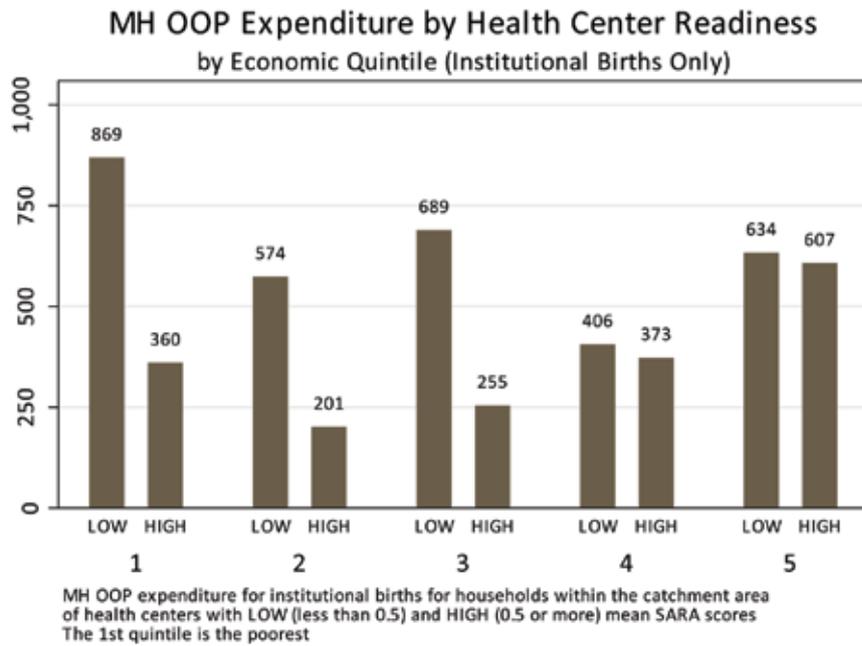


Figure 26: Maternal Health Out-of-Pocket Expenditure by Health Center Readiness



These two indications – associations of supply-side readiness with both utilization and depth of financial protection – suggest that even **supply-side financing activities aimed at improving the readiness of**

health centers, especially those serving marginalized and poor populations, could achieve some of the goals of the demand-side financing emphasis of the national free MCH policy.



Photo by Bart Verweij/The World Bank, 2013

Section VI: Key Findings and Recommendations

Key Findings and Policy Implications

Among the high priority and poor communities sampled, this survey finds that MH OOP expenditure for an institutional birth at a public health facility was **substantial** – both relative to GDP per capita (4.1%) and relative to monthly household expenditure, especially for the poorest quintile of households (43% of monthly household expenditure). This expenditure was also highly **variable** – depending chiefly on the choice for an institutional births compared with a non-institutional births (a thirteen-fold difference in mean expenditure), but also by the level of health facility (approximately doubling when advancing each level), and by the mode of delivery (caesarean births compared with vaginal births). However, there remained considerable variation in expenditure even within each of these categories of location and mode of delivery, making it difficult for households to predict this expenditure ex-ante despite choosing the location of birth. MH OOP expenditure was also **inequitable** as households in the poorest quintiles spent 43% of their monthly household expenditure on an institutional birth compared with households in the richest quintile which spend only 26%. Similarly, communities with poor road access (more than 4km away) spent 35% of their monthly household expenditure on an institutional birth compared with 26% for communities with direct road access.

The policy implications of these findings are firstly that, although financial protection implied by the national free MCH policy is strong, reducing financial barriers alone would not be sufficient to increase the utilization of services, as other non-financial barriers such as the physical access to services, maternal education, and cultural practices are likely to limit large increases in utilization of MH services, especially among the poor.

Secondly, this policy has the potential to be regressive due to the higher utilization of MH services by wealthier households. If there are no changes in the utilization patterns of households with this

policy, the richest quintile will capture 44% of the value of benefits from this policy, compared with 9% for the poorest quintile. In reality, different socio-economic groups are likely to respond differently to the policy and the elasticity of demand for each group cannot be predicted with any certainty. Nevertheless, additional measures should be instituted to promote the uptake of these free services by the poor and marginalized people. The targeting of services may also be considered in the future, in the interests of equity and fiscal sustainability.

Thirdly, health providers at all levels of health facilities would experience substantial marginal decreases in revenue per vaginal birth, given the reimbursement schedules under the national free MCH policy. At lower level facilities, this may encourage inappropriate referrals to higher level facilities. At higher level facilities, there may be incentives for health providers to increase revenues by choosing caesarean deliveries over vaginal deliveries, even if not clinically justified. However, as demand for and the quantity of services are likely to increase, net revenues of health facilities should increase due to this policy.

Finally, the supply-side readiness and management capacity of health centers needs to be improved. The supply-side readiness of health centers to provide MH services is low: only 2% and 10% of health centers fulfilled all the surveyed WHO Service Readiness Indicators for ANC and basic obstetric care respectively. This readiness of health centers is found to be positively associated with increased utilization of MH services. Furthermore, poor households served by health centers with low service readiness are found to be exposed to higher levels of MH OOP expenditure compared with poor households served by health centers with high service readiness.

In order to improve the effectiveness and equity of the national free MCH policy while minimizing perverse incentives, regular reviews of the utilization, pricing, and case definition of services, investments to improve the service readiness of health facilities,

and efforts to address non-financial barriers are vital. The autonomy of facilities to manage revenue from this policy should also be enhanced and be accompanied by concurrent reforms in public financial management, as expressed in the Ministry of Health's reform plans.

Recommendations

As Lao PDR has reduced maternal mortality rates by almost three-quarters from 1,600 in 1990 to 357 per 100,000 live births in 2012, most of the low hanging fruit have already been harvested. In order for Lao PDR to continue this improvement to achieve its target of reducing the maternal mortality rate to 260 per 100,000 live births by 2015⁹², MH services need to be made more accessible by marginalized and poor communities. The Government of Lao PDR is to be congratulated for the foresight evident in the national free MCH policy in lowering financial barriers for a critical health service expected to accelerate this progress over the last few decades in improving MH, while also addressing the issue of financial protection.

Case-based payments are an appropriate provider payment mechanism currently but the **pricing of MH services** (especially for vaginal and caesarean deliveries at each facility level) will require regular reviews throughout implementation. **Strong monitoring systems** should be institutionalized to monitor the utilization (especially rates and appropriateness of caesarean deliveries) and referral patterns among health facilities, and the reimbursement schedule adjusted periodically to ensure the right incentives towards encouraging the utilization of appropriate preventative services and the lack of perverse incentives for inappropriate services (e.g., caesarean births without any clinical justification). **Strengthening referral mechanisms** and adopting an integrated incentive mechanism may also be helpful in facilitating clinically-justified referrals while reducing unnecessary referrals. The **case definition** of PNC consultations should be reviewed with a separate category for addressing complications following births and a separate category for routine PNC consultations which occur as a separate episode from the birth itself. **Accountability mechanisms**, such

as mobile phone hotline services, may be helpful in ensuring that fee exemptions are truly effective without a compromise in quality.

Given the context of low supply-side readiness and low utilization among many health centers, it would be appropriate to allow the pricing of MH services to be generous at the initial stage to allow these health facilities to equip and ready themselves, gain more experience in smoothing the variability of actual costs of routine and complicated cases, encouraging increased utilization, and to learn how to manage revenues from the policy. Many health centers which are the least ready to provide services, will likely need an initial investment (unlinked from utilization) to improve their readiness in the beginning. Increased facility revenue and autonomy to manage this revenue will need to be matched by concurrent financial management and general management reforms (e.g., financial controls, verification procedures, and operating standards) at the facility-level, as expressed in the Ministry of Health reform plans, ideally in collaboration with the Ministry of Finance and the State Audit Authority.

It may not be desirable for every single health center in this sparsely populated country to be expected to provide a full-range of maternal health services. An appropriate balance is required – between allowing adequate service volumes at key referral facilities to permit quality improvements as providers gain expertise from servicing higher numbers of patients, and promoting access to services to remote communities, which should also be improved through strengthened referral systems.

Non-financial barriers must also be addressed – by improving the knowledge and awareness of marginalized and poor communities of this policy and of the importance of MH services, by bridging cultural, ethnic, and linguistic barriers between providers and patients, and by improving the physical accessibility of these MH services. With regards to the latter, reimbursements of transportation expenditure will be helpful, as recognized by the policy. These barriers are not only vital for improving the equity and allocative efficiency of the policy, but to prevent these barriers from being the next constraint once financial barriers are lowered.

⁹² Government of Lao PDR, 2011. Seventh Five-year National Socio-Economic Development Plan, Vientiane, October 7, 2011

Annex

Data Sources

Maternal Health Out-of-Pocket Expenditure

Data on user fees and transportation expenditure associated with ANC, deliveries (including caesarean sections), and PNC, was obtained from a household survey⁹³ conducted in high-priority and poor communities in six central and southern provinces of Lao PDR, Borikhamxay, Khammuane, Savannakhet, Saravane, Champasack, and Attapeu, from March to April 2010. This household survey only included households with at least one child under two and expenditure information was asked of the most recent birth. The survey data included 2,918 households in 207 villages, which are within the catchment area of 41 health centers. Births occurring in health facilities outside Lao PDR (for example in neighboring Vietnam) have been excluded from the analysis.

Data on distances (in terms of travel time and physical distance) from health facilities was matched from an associated village questionnaire conducted at the same time, in the same villages, and by the same survey firm.

Survey Sampling and Design

This household survey was originally designed in order to evaluate the impact of MCH and nutrition interventions⁹⁴ within the catchment area of 62 selected health centers (HCs). Of these 62 HCs, 20 were randomly selected for inclusion in the survey. These HCs were matched with control HCs, based on a number of criteria including size and catchment area terrain, the ethnic composition and staffing of the HC, and distance from major towns. For each HC, survey teams conducted a series of interviews with health facility staff, with village chiefs, and with local households.

For the village survey, five villages (from a panel of all villages in the catchment area of each HC as maintained by the HC) were surveyed. If there were fewer than five villages, all villages were surveyed. In each of the five villages, the village chief was taken through the village questionnaire. This questionnaire provided important information on village characteristics, for example, distances to health facilities.

For the household survey, households were sampled from the villages selected for the village survey. In each village, survey teams worked with village chiefs to generate a panel of eligible households – i.e. those with at least one child under two. From this panel, 15 households were surveyed using interval selection (random starting point). If there were fewer than 15 eligible households, all households were surveyed. Survey teams attempted to survey a target of 75 households per HC catchment area (5 villages x 15 households). If more than 70 households were surveyed, additional households were surveyed from other surveyed villages in the HC catchment area. If 70 or fewer households were surveyed, an additional sixth village was randomly selected and surveyed as per the methodology of the initial five villages. Despite best attempts, the target of 75 eligible household per HC catchment area was not always achieved. During the analysis, village-level sample weights were used to compensate for the varying probability of inclusion in the survey based on the village population.

Household Expenditure Questions

Information for the six buckets of MH OOP expenditure are taken from six survey questions, which are addressed to the mother of the youngest child under two in the household.

⁹³ This survey was commissioned as a baseline survey in order to evaluate the Community Nutrition Project (CNP), a US\$ 2.4m World Bank-funded project with specific demand- and supply-side interventions to improve nutrition and MCH in seven central and southern provinces of Lao PDR. These interventions are targeted at specifically identified health centers (HCs) in high-priority and poor districts, and their surrounding catchment villages.

⁹⁴ These health center level interventions are part of the Community Nutrition Project, financed by the World Bank.

User Fees

- ANC Consultations (most recent visit): “What were you charged for the following ... (i) blood pressure, (ii) urine test, (iii) blood test, (iv) HIV/STD test, (v) iron tablets, (vi) folate tablets, (vii) deworming tablets, (viii) malaria drugs, (ix) bed nets, (x) service charge, (xi) tip, (xii) others, and (xiii) total?”
- Deliveries: “Can you tell me what services you received and what you paid? ... (i) blood transfusion, (ii) injections for mother, (iii) vaccines for baby, (iv) medicines, (v) room, (vi) meals, (vii) service charge, (viii) tips, (ix) other, and (x) total”
- PNC Consultations (most recent visit): “What were you charged for the following: (i) iron supplementation, (ii) folate supplementation, (iii) folic acid supplementation, (iv) vitamin A tablets, (v) child vaccination, (vi) curative care, (vii) counseling, (viii) others, (ix) service charge, and (x) total?”

Transportation Expenditure

- ANC Consultations (most recent visit): “How much did you spend on transportation for this most recent ante-natal visit?”
- Deliveries: “How much did you spend on transportation for the delivery?”
- PNC Consultations (most recent visit): “How much did you spend on transportation for this most recent post-natal visit?”

Health Center SARA Scores

An associated questionnaire for the 41 health centers serving the 207 villages in the sample was conducted at the same time, by the same survey firm. These included various questions on the availability of equipment, staff training, and facility infrastructure, which was matched to indicators on the WHO Service Availability and Readiness Assessment (SARA), June 2012, available from:

http://www.who.int/healthinfo/systems/sara_indicators_questionnaire/en/index.html

The questions from this survey do not exhaustively cover all indicators in the WHO SARA indicators.

Monthly Household Expenditure

Household expenditure data was obtained from the Fourth Lao Expenditure and Consumption Survey (LECS4)⁹⁵ conducted in 2007/08. Using common housing characteristics (building materials and household size) and a common asset list as independent variables, and total average monthly household expenditure as an outcome variable for the LECS4 households, regression analysis was used to predict total average monthly household expenditure in the 2010 household survey. Household expenditure was adjusted for inflation by using the compounded increase in the consumer price index (CPI)⁹⁶ for the period 2007 to 2010.

Prices are quoted at 2010 levels, using the local Lao currency (kip). For conversions to and from USD, 2010 market exchange rates of USD 1 equivalent to 8259 kip⁹⁷ are used in this paper.

National Free MCH Policy Benefit Package

The benefit package of the Lao PDR National Free MCH Policy was obtained from the Department of Finance, Ministry of Health. The schedule of benefits and prices is included as Table 12.

⁹⁵ Department of Statistics, Lao PDR, 2008

⁹⁶ Bank of Lao PDR, 2011. Year-on-year base calculation.

⁹⁷ WDI, 2010

Table 12: National Free MCH Policy Schedule

Services	Method	Calculation	HC	DH	PH
1. Compensation rates to health providers					
Ante Natal consultation (ANC)	ANC 1 to 4	ANC including blood pressure measurement, consultation booklet and ferrous drug 50 tablets	15,000	20,000	30,000
Delivery	Delivery and miscarriage Caesarean section	Number of new cases	125,000	175,000	200,000
Post natal consultations (PNC)	PNC 1 - 2	Number of new cases (service to be defied)	15,000	20,000	30,000
2. Compensation rates to pregnant women or transporter					
Transport	From Home to HC or Hospital	Lump-sum case based	20,000 50,000	20,000 50,000	List/district List/district
	Referral From HC to DH	Agreed list of lump-sum case based rates from each HC to DH		List/district	List/district
	Referral From DH to PH	Case-based for ambulance and private transport depending on season and day/night		List/district	List/district
Food allowance	Delivery Caesarean or complications	Lump-sum case based	40,000 100,000	40,000 100,000	40,000 100,000
1. Compensation rates to health providers					
OPD Healthy children	Consultation	Per child US in the coverage area of the facility per year	2,000	4,000	6,000
OPD Sick children	Consultation	Per child US in the coverage area of the facility per year	6,000	8,000	12,000
IPD	Observation at HC B	For observation and overnight at HCs with limited capacity (staffing, duty hours)	40,000		
	Admission at HC (IHC/A)	Only for overnight stay at HC with 24h duty, MA/Sec. staff, patient file, max 2 days?	90,000		
	Admission without surgery			200,000	300,000
	Medium surgery Major surgery			1,000,000 1,200,000	1,200,000 1,500,000
2. Compensation rates to US child or transporter					
Transport	From Home to HC or Hospital	Lump-sum case based	20,000 50,000	20,000 50,000	List/district List/district
	Referral From HC to DH	Agreed list of lump-sum case based rates from each HC to DH		List/district	List/district
	Referral From DH to PH	Case-based for ambulance and private transport depending on season and day/night		List/district	List/district
Food allowance	Delivery Caesarean or complications	Lump-sum case based	40,000 100,000	40,000 100,000	40,000 100,000

M a t e r n i t y

C h i l d U S

Additional Analysis

Transportation Expenditure and Proposed Reimbursement

The national free MCH policy will reimburse delivery transport on a fixed schedule based on village distance bands. This reimbursement is intended to cover return transport for the pregnant woman and one accompanying person to the nearest health center (or hospital, if this is nearer). However, implementation of this reimbursement differs on a project-by-project basis. In the southern provinces, this reimbursement will be provided to the patient.

If only OOP transportation expenditure is accounted, the national free MCH policy reimbursement schedule appears to be adequate in more than 70% of deliveries. As OOP transportation expenditure likely to make up only a proportion of the overall opportunity costs, not to mention the risks and inconvenience of travelling while pregnant, it would be difficult to predict if the delivery transportation schedule would equitably encourage the least accessible households to deliver at facilities. Furthermore, in the absence of public transport and vehicles, additional financing alone may not be adequate in reducing physical barriers, especially during the rainy season.

Table 13: Actual Delivery Transportation Expenditure for Health Center Births

Distance from Village (km)	% of health center births	Reimbursement to Patient ⁹⁸ (kip)	Actual Mean Expenditure (kip)	% of Deliveries whose Transportation Expenditure would be Covered by the Reimbursement
< 3	57%	0	5,602	70%
3 – 6	22%	20,000	38,255	70%
> 6	21%	50,000	36,300	88%

Prices quoted at 2010 levels. 1 USD = 8,259 kip (WDI, 2010)

⁹⁸ Intended to cover return transport for the pregnant woman and one accompanying person

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The World Bank Group

The World Bank Lao PDR Country Office
Patouxay Nehru Road
P.O Box: 345
Vientiane, Lao PDR
Tel: (856-21) 266 200
Fax: (856-21) 266 299
Websites: www.worldbank.org/lao

The World Bank
1818 H Street, NW
Washington, D.C. 20433, USA
Tel: (202) 4731000
Fax: (202) 4776391
Website: www.worldbank.org

