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Situation Analysis of Access to Healthcare Services in Lao PDR: Overview of Maternal Healthcare

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Acronyms

ADB Asian Development Bank
ANC Antenatal care
CBHI Community-Based Health Insurance
EmOC Emergency Obstetric Care
GDP Gross domestic product
GGE General Government Expenditure
GGHE General Government Health Expenditure
GMP Good manufacturing practice
GNI Gross National Income
HALE Health-adjusted life expectancy
HBV Hepatitis B virus
HEF Health equity fund
HIS Health information system
HMIS Health management information system
HSDP Health Sector Development Plan
HSSMP Health Sector Strategic Master Plan
IHPP International Health Policy Program
IHR International Health Regulations
ILO International Labor Organization
IMR Infant Mortality Rate
LAKLao kip (currency, also commonly abbreviated as LAK)
Lao PDR Lao People's Democratic Republic
LSIS Lao Social Indicator Survey
MDG Millennium Development Goal
MMR Maternal Mortality Ratio
MNCH Maternal, Neonatal and Child Health
MOF Ministry of Finance
MOH Ministry of Health
MOLSW Ministry of Labor and Social Welfare
MPI Ministry of Planning and Investment

NMR	Neonatal Mortality Rate
NSEDP	National Socio-Economic Development Plan
PHC	Primary Health Care
PNC	Post Natal Care
SASS	State Authority for Social Security
SBA	Skilled Birth Assistances
SDG	Sustainable Development Goal
SRH	Sexual and Reproductive Health
SSO	Social Security Organization
SSS	Social Security Scheme
STIs	Sexually Transmitted Infections
TBA	Traditional birth attendant
THE	Total health expenditure
U5MR	under 5 Mortality Rates
UHC	Universal Health Coverage
UNDP	United Nations Development Program
UNFPA	United Nations Population Fund
UNICEF	United Nations Children’s Fund
VHI	Voluntary health insurance
VHV	Village Health Volunteer
WB	World Bank
WDI	World Development Indicators
WHO	World Health Organization

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1. Introduction

Globally, the Maternal Mortality Ratio (MMR) remains high in low-income countries [1, 2]. Women of disadvantaged socioeconomic groups or low education tend to have less access to maternal health care services [1]. Difficulties in using household resources, being subordinated in reproductive health decisions, as well as inequitable traditional gender norms have exacerbate the risks women face during pregnancy [3]. Adolescent pregnancy is a leading cause of death among young girls aged 15 to 19 due to pregnancy and child birth complications [4, 5, 6]. The Sustainable Development Goal 3 (SDG 3) is to ensure healthy lives and promote well-being for all at all ages and targets to reduce maternal mortality to less than 70 deaths per 100,000 live births by 2030. In addition, SDG 5 is to achieve gender equality and empower all women and girls [7].

The Lao People's Democratic Republic is a lower-middle income country in South East Asia with high MMR (197 per 100,000 live births) with comparatively low Human Development Index [8, 9]. Nonetheless, the country has achieved the Millennium Development Goal (MDG) target of reducing its maternal mortality [10]. The country also has a high rate of teenage pregnancy especially among women age 15 to 19 [9, 11]. Young motherhood makes them vulnerable to maternal morbidity and mortality, resorting to unsafe abortion, and Sexually Transmitted Infections (STIs) [9, 11]. Fighting to reduce MMR became one of the priorities cited in Lao PDR National Development Policy. The government adopted SDG3 in 2015 and one of the targets is to reduce the current MMR to 160 per 100,000 live births by 2020 [12]. Some progress has been made in improving the provision of maternal, child health and Sexual and Reproductive Health (SRH) education. But uneven and deep inequities in health access persist and the quality and affordability of healthcare services is limited [4, 13, 14]. This paper attempts to address the following research questions:

- What is the situation of maternal health care in Lao PDR and why do women appear to be the most vulnerable group to MMR?
- What are the challenges in delivering effective and quality maternal healthcare services? How does gender roles and lack of women's empowerment hamper the utilization and access to maternal healthcare services?
- What have been the policy or program focuses by the government and stakeholders on maternal healthcare? And what are the policy options for more equitable and inclusive health services?

The review is based entirely on existing policy documents, journal articles, research papers and available data from various sources such as government official documents, development partner's

websites and open source data available. The report consists of four parts. The first section provides an overview of the trends of maternal health. The second part discusses the changes and the availability of maternal healthcare services and challenges in terms of accessibility and utilization of maternal health services. The existing government policy/strategy and program focuses are illustrated in section three. The last section offers some conclusions.

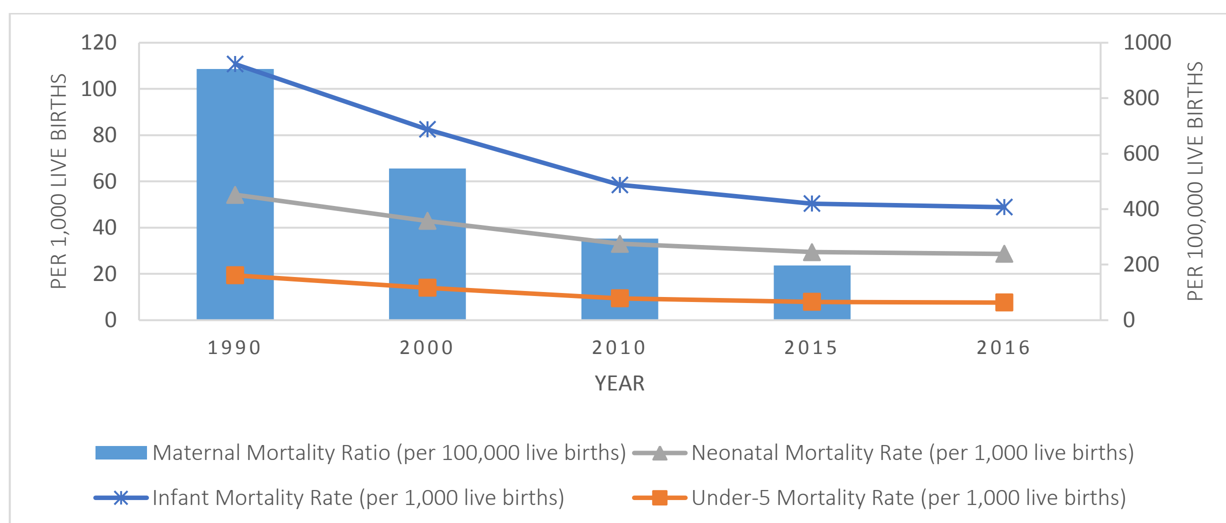
2. The Situation of Maternal Health and Challenges

2.1. Current trends

The population of Lao PDR was 6.89 million in 2015 with an average annual growth rate of 2.1 percent. Women formed almost 50 percent of the total population which is made up of relatively young people. In 2015, about 58 percent of the population was under the age of 25 with an estimated median age of 22 years [8, 15]. Young marriages are common for Laotian women, especially for those from rural areas [4, 16]. Around 37 percent married before the age 18, and 58 percent was married by the age of 20 [16]. The rate of marriage before 18 in rural areas (43 percent) is almost twice that of urban areas (23 percent). Young pregnancy is common in Lao PDR, with 17.8 percent of young women aged 15 to 19 already having given birth to their first child [16]. The consequences of early pregnancy are increased risks of maternal mortality and morbidity compared to adult women due to complications during pregnancy and childbirth, including higher rates of hypertensive disorders, anemia, gestational diabetes, co-morbidities and complications during delivery [4, 15].

Lao PDR has one of the highest maternal mortality ratios in the South East Asian region. Figure 1 shows the trend of MMR from 1990 to 2015. The MMR was 905 per 100,000 live birth in 1990 before dropping to 197 in 2015 [17]. In Lao PDR, the MMR is high among mothers with low education who live in rural or remote areas and from households with a lower socioeconomic status [1].

Figure 1: Trends in Maternal Mortality Ratio (MMR), Under 5 Mortality Rates (U5MR), Infant Mortality Rate (IMR) and Neonatal Mortality Rate (NMR)



Source: World Bank Open Data (Website https://datacatalog.worldbank.org/)

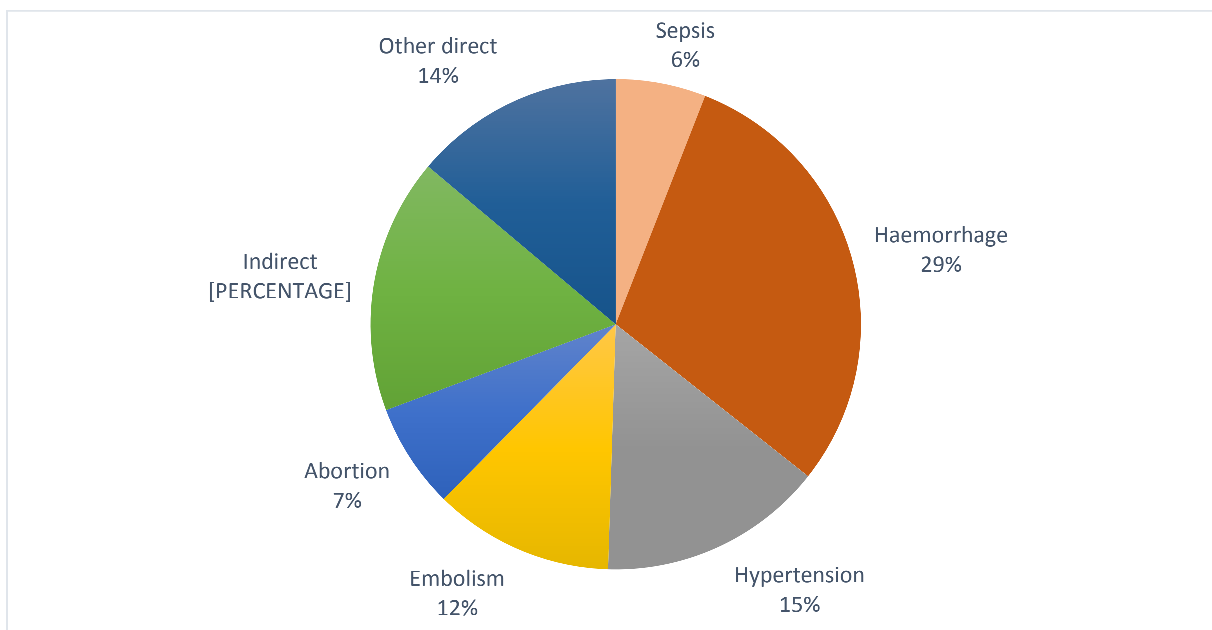
The Infant Mortality Rate (IMR), not only an indicator of mortality among infants, indicates the status of maternal health, nutrition and care during delivery [9]. IMR has decreased from 110 to 50 per 1000 live births between 1990 and 2015 (Figure 1). The intervening years have seen sustained reductions through to 2011. Since the 1990s, Lao PDR has increased its physician workforce and made improvements in health worker capacity [17]. As a result, Lao PDR was on track to meet its MDG 4 and 5a targets (48 and 400 deaths per 1000 live births respectively). The Lao Social Indicator Survey (LSIS) results also show the declining trends of IMR over the past two decades. Taking this progress into account, the Ministry of Health (MoH) has now set the SDG 3 targets as 40 and 30 per thousand live births respectively for under-five mortality rate and infant mortality rate [13].

The IMR is lower for mothers who live in urban areas (36 per 1,000 live births), in the central region (46 per 1,000) and for those who have completed lower secondary (30 per 1,000) or upper secondary education (24 per 1,000). Most infant deaths are related to neonatal conditions and infectious diseases, in particular malaria, acute respiratory infections, diarrhea and epidemics such as dengue fever, measles or meningitis [9]. Sekong province is among the poorest in Lao PDR, with an IMR of 70 per 1,000 live births in 2015 [18].

One of the main factors contributing to high MMR and perinatal mortality is the lack of access to and low use of maternity services [2, 19]. Figure 2 shows that the main causes of maternal death in

Lao PDR are obstructed labor and postpartum hemorrhage, both of which are due in large part to poorly equipped and poorly financed health services and insufficient knowledge about reproductive health among women [2, 19]. In addition, delays in decision-making by pregnant women, such as going to a health center, and delays in treatment have been linked to the high MMR[8]. Inequalities in access to maternal health care services, quality of care, and social determinants (Including education, place of residence, and wealth) are key contributors. Nutritional deficiencies can lead to maternal complications or death. The prevalence of anemia among pregnant women is 45 percent. The situation is similar to other lower middle income countries, where women of disadvantaged socioeconomic groups tend to have less access to maternal health care services, receive low quality services, and die from childbirth related causes [1].

Figure 2: Causes of Maternal Deaths in Lao PDR, 2013



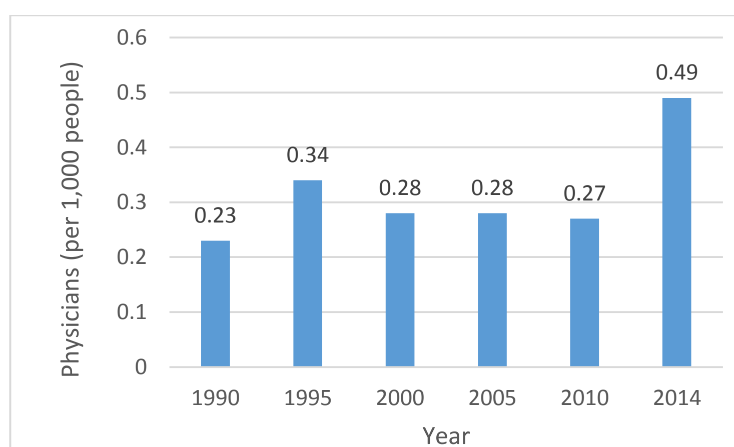
Source: World Health Organization (WHO) 2014

2.2. Availability of maternal health services and workforce

In Lao PDR around 67 percent of the population lives in rural areas and 7.9 percent live in rural areas without road access [16]. By year 2015, Laos' health service delivery system possessed seven central hospitals, four regional hospitals, 12 provincial hospitals, 131 District Hospitals (DH), 905 Health Centers (HC), and a Village Health Volunteer (VHV) network [20]. The number of DH and HC has increased substantially over the last decades. Laos has a severe deficit in the human resources available to provide health services as well as in the facilities required to provide services[9, 21].

Health staff absenteeism was high at health centers given that not enough health staff was assigned and staff also had to provide outreach services. Participants described the skillfulness of health workers as low at health centers, average at district hospitals, and good at provincial hospitals [20]. The country only had a total of 14,189 health workers in 2012. Figure 3 shows that the ratio of physicians to population is 0.2 per 1,000 (2 doctors for every 10,000 people) and the ratio of nurses and midwives to population is 0.9 per 1,000 (9 nurses and midwives per 10,000 people). This number was far below the minimum threshold of 2.28 skilled health workers per 1000 population recommended by the World Health Organization (WHO) [11].

Figure 3: Physicians (per 1,000 people) in Lao PDR



Source: World Bank Open Data (Website https://datacatalog.worldbank.org/)

The main priorities of interventions to reduce maternal deaths include scaling-up the Antenatal Care (ANC) coverage, increasing the presence of skilled birth attendants at deliveries, and improving access to emergency obstetric and neonatal care [9, 22]. More than one third of stillbirths take place intrapartum, i.e. during delivery, and are largely avoidable. However, availability of Basic Emergency Obstetric Care (EmOC) and Comprehensive Emergency Obstetric Care has been introduced. Currently, 15 Comprehensive EmOC facilities have been established in the whole country, close to the standard of 1 per 500,000 population. Another 23 Basic EmOC facilities have been established, most of them providing minus-one signal function, far below the standard of 5 per 500.000 population [9].

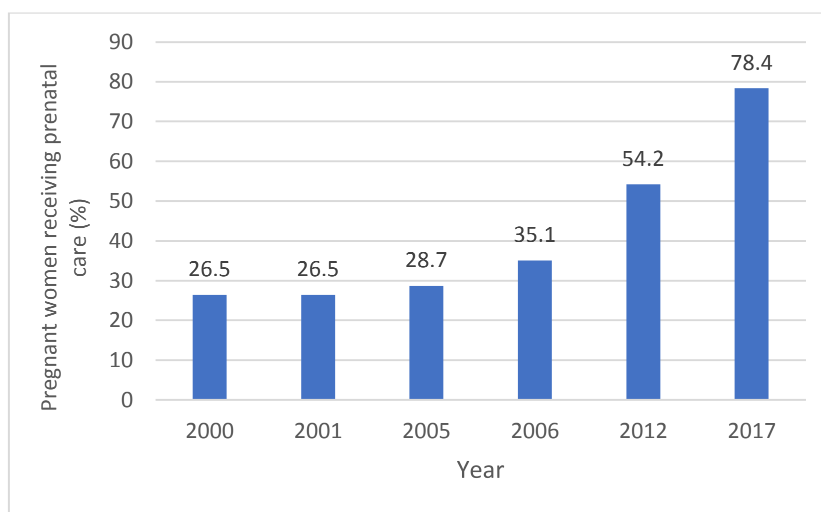
2.3. Accessibility and utilization of maternal health services

Antenatal Care (ANC) among pregnant women is an important factor in reducing maternal morbidity and mortality [19, 22]. Unfortunately, many women in developing countries do not receive such care [2, 19]. In South East Asia from 2010 to 2017, Thailand had the highest rate of

access to ANC services (98 percent), followed by Vietnam (96 percent), Cambodia (95 percent), Myanmar (81 percent) and Lao PDR (78.4 percent) [23, 24]. The use of ANC was associated with the availability of the service or a healthcare worker and with low waiting times for services [2]. Distance was significantly associated with ANC use; women in urban areas used ANC more than rural women [2, 15]. The distance to services or physical access were barriers to ANC service utilization particularly in the rural remote or mountainous regions. Moreover, uncomfortable transport, poor road conditions, and difficulties in crossing big rivers were also barriers [2, 25].

During the past decade, at least one ANC visit increased from 24.2 in 2000 to 28.5 percent in 2005 and 54.2 percent in 2012 (Figure 4) [9]. Lao PDR has adopted the national 'Strategy and Planning Framework of Implementation of Maternal, Neonatal and Child Health Services' in 2007 [26] and developed a Village Health Volunteer (VHV)'s manual and a VHV's kit, which led to community mobilization and introduction of a voucher scheme for the poor to access facility based deliveries [26]. These policy implementations contributed to the progress.

Figure 4: Pregnant Women Receiving Prenatal Care (%)



Source: World Bank Open Data (Website https://datacatalog.worldbank.org/)

Table 1 shows that in the current situation in Lao PDR, about 78.4 percent of women aged 15 to 49 years who gave birth in the two years preceding the survey received ANC from a skilled provider, 58.6 percent from a medical doctor, 18.2 percent from a nurse or midwife, and 1.6 percent from an auxiliary midwife. Only 3.5 percent of women received care from a traditional birth attendant or community health worker. However, ANC was received by a higher percentage of women who live in urban areas. For example, over 90 percent of mothers in Vientiane Capital received ANC compared with only 6.5 percent of women in Phongasly Province in the north, 15 percent in Attapeu Province, 18 percent in Saravan Province, and 20 percent in Sekong Province [15]. Literacy

and high levels of education are also more common for women of childbearing age in Vientiane Capital than in all other provinces. The adult literacy rate in Lao PDR in 2005 was 73 percent and female literacy rates were 63 percent. Literacy rates for women in Sekong province were 48 percent, in Saravan province they were 49 percent, and in Attapeu Province they were 52 percent [15].

Table 1. Antenatal care coverage by area

Percent distribution of women age 15 to 49 years with a live birth in the last two years by antenatal care provider during the pregnancy for the last birth, Lao PDR, 2017

	Medical doctor	Nurse/ Midwife	Auxiliary nurse	Community health worker	No antenatal care	% women attended at least once by skilled health personnel
Total	**58.6**	**18.2**	**1.6**	**3.5**	**17.9**	**78.4**
Urban	79.6	13.4	0.4	0.4	6	93.3
Rural	50.7	19.9	2.1	4.7	22.4	72.8
Rural with road	53.7	20.8	1.9	4	19.5	76.4
Rural without road	36.4	15.7	3.3	8	36.3	55.4

Source: Lao Social Indicator Survey LSIS II 2017

The life of mothers could be saved only if women deliver at the health facilities with access to basic and comprehensive emergency obstetric and newborn care. The delivery at the health facility based in Lao PDR increased from 17 percent in 2005 to 38 percent in 2012. However this rate is still behind the MDG target of 50 percent. The health facility delivery was mainly the public health facility (37 percent) [9]. Table 2 presents the place of delivery by areas. The percentage of births delivered in a health facility was 64.5, approximately 34.5 percent of births occurred at home. 62.9 percent were at public hospitals and 1.7 percent at private hospitals or clinics. Most strikingly, while 87.9 percent of women living in urban areas gave birth at a health facility, only 59.6 percent of rural women with road access and 37.7 percent of women living in rural areas without road access used the services [24].

The indicator on proportion of births attended by skilled birth health personnel is critical as it has a significant association with MMR [2, 9]. Table 2 shows the percentage of deliveries assisted by Skilled Birth Assistances (SBA) is higher in urban areas than in rural areas (89.7 percent vs. 55 percent). There was a disparity of delivery by Skilled Birth Attendants (SBA) between ethnicity,

mother's level of education and wellness. The Hmong Mien ethnicity received less SBA compared to Lao Tai ethnicity (45.7 percent vs. 78.2 percent); illiterate mothers less compared to mothers with higher education (36 percent vs. 97.7 percent) [9]. Women's education is a dominant factor determining the utilization of ANC in developing countries. Educated women are more likely to realize the benefits of using maternal healthcare services. Education increases female autonomy, decision-making power within the household, and builds greater confidence and capability to make decisions regarding their own health [2].

Table 2. Place of delivery by Areas, Education and Ethno-linguistic group

Percent distribution of women age 15-49 years with a live birth in the last two years by place of delivery of their last birth, Lao PDR, 2017

	Place of delivery				Delivered in health facility	Person assisting at delivery			Delivery assisted by any skilled attendant
	Health facility		Home	Other		Skilled attendant			
	Public sector	Private sector				Medica doctor	Nurse/ Midwife	Auxiliary nurse	
Total	**62.9**	**1.7**	**34.5**	**1**	**64.5**	**54**	**9.5**	**0.8**	**64.4**
Area									
Urban	84.6	3.3	11	1.1	87.9	82.3	7	0.5	89.7
Rural	54.8	1	43.2	1	55.8	43.5	10.5	1	54.9
Rural with road	58.5	1.1	39.8	0.7	59.6	47.4	10.9	0.9	59.2
Rural without road	36.8	0.8	59.9	2.5	37.7	24.6	8.1	1.4	34.1
Education									
None or ECE	36.2	0.4	61.9	1.6	36.6	23.8	11.7	0.5	**36**
Primary	56.2	1.2	41.5	1.1	57.4	46.4	9.3	0.8	56.5
Lower secondary	71.3	2.1	25.7	0.9	73.4	63.9	9.6	1.1	74.6
Upper secondary	85.6	1.7	11.9	0.7	87.4	77.9	8.3	0.9	87
Post secondary / Non tertiary	92.3	1.3	6.4	0	93.6	80.6	9.7	0.8	91.2
Higher	91.5	5	3.1	0.3	96.5	90.2	6.7	0.8	**97.7**
Ethno-linguistic group of household head									
Lao-Tai	75.2	2.5	21.4	0.9	77.7	69.2	8.4	0.6	**78.2**
Mon-Khmer	48.6	0.4	49.5	1.5	49	34.3	12.2	1.2	47.7
Hmong-Mien	46.1	0.6	53	0.3	46.7	36.7	8	1	**45.7**
Chinese-Tibetan	40.8	2	57.2	0	42.8	26.8	14.2	1.4	42.5
Other, DK, Missing	-50	0	-43.1	-6.8	-50	-43.8	-9.5	0	-53.3

Source: Lao Social Indicator Survey LSIS II 2017

The proportion of births attended by skilled birth attendants increased by 20 percent between 2000 and 2010, and assistance from a health professional at delivery increased to 40.1 percent in 2012 before reaching 64.4 percent in 2017 (Table 3) [24].

Table 3. Births attended by skilled health staff

Indicator Name	2000	2001	2005	2006	2010	2012	2017
Births attended by skilled health staff (% of total)	16.7	19.4	14.6	18.9	37	41.5	64.4

Source: World Bank Open Data (Website https://datacatalog.worldbank.org/) and Lao Social Indicator Survey 2017

Post-Natal Care (PNC) within 48 hours of delivery is crucial because a significant proportion of maternal and new born deaths occur during delivery or in the post-partum period. PNC is important for both the mother and the child, not only to treat complications arising from the delivery, but also to provide the mother with important information on how to care for herself and her child. Less than half (41 percent) of newborns received either a health check or PNC visit within two days of delivery. Four in 10 received a health check while in the health facility or at home, while 7 percent received a PNC visit within two days following delivery (2012) [9].

2.4. Affordability of maternal health services

There is significant relationships between economic factors (Cost of services, socio-economic status or income of the household, occupation of woman/husband and employment) and ANC utilization [2]. Financial constraint was the most important factor in non-use of ANC services. The costs of the service including transportation and necessary laboratory tests were major factors prohibiting service utilization [26]. The cost of ANC services charged by private hospital is too expensive for most poor women [25, 27]. Free or subsidized services improved uptake of ANC among urban slum-dwelling women. Household economic status has a positive and significant impact on use of ANC. Women with high economic status were more likely to receive adequate and early ANC than those with low economic status [2]. Financial constraints and service costs were definite barriers to accessing maternal care. In addition to service costs, if a wife leaves home to receive antenatal or postnatal care, there was no one to take care of the family or tend to the fields [20].

Delivery by a Skilled Birth Attendant (SBA) in hospital is recommended by maternal health workers in order to provide prompt treatment and thus reduce the mortality rate of mothers and their newborns. However, high healthcare expenses impede the utilization of hospital-based care, especially in countries where the majority of people are forced to pay out-of-pocket. Evidence has shown that a high rate of out-of-pocket expenses occurs in countries with a high rate of home deliveries.

Table 4. Place of delivery by Wealth index quintile

Percent distribution of women age 15 to 49 years with a live birth in the last two years by place of delivery of their last birth, Lao PDR, 2017

	Place of delivery				Delivered in health facility	Person assisting at delivery			Delivery assisted by any skilled attendant
	Health facility		Home	Other		Skilled attendant			
	Public sector	Private sector				Medical doctor	Nurse/ Midwife	Auxiliary nurse	
Total	**62.9**	**1.7**	**34.5**	**1**	**64.5**	**54**	**9.5**	**0.8**	**64.4**
Wealth index quintile									
Poorest	33.6	0.3	64.5	1.6	33.9	20.9	10.9	0.8	32.6
Second	52.8	0.4	46.3	0.5	53.2	39.1	10.1	1.7	50.9
Middle	70.5	1.8	26.9	0.7	72.3	61.2	10.3	0.7	72.2
Fourth	83.9	1.4	14	0.7	85.3	77.8	9.3	0.3	87.4
Richest	89.7	5.3	3.7	1.3	95	90.3	6.1	0.4	96.8

Source: Lao Social Indicator Survey LSIS II 2017

Women who had higher family incomes were able to pay for more non-medical care expenses. The effect of health insurance on service utilization was noted by women and SBAs. In addition, the delivery assisted by SBA is higher in high income families than low income families. Table 4 shows that less than one third of poor mothers delivered at health facilities while most pregnant women from richer quintiles can afford the services [24]. Out-of-pocket expenses for health care have been shown to be associated with an increased risk of impoverishment and catastrophes.

The Government of the Lao PDR has provided the voucher (or pink card) card system for poor pregnant women. This is part of the Maternal, Neonatal and Child Health (MNCH) program to reduce maternal mortality and to promote women to attend ANC and deliver at health facilities. For example, pregnant women attending ANC at least four times and having a pink card will receive an incentive for travelling costs based on the distance travelled up to 3 km (LAK 10,000), 3 to 6 km (LAK 20,000) more than 6 km or higher (LAK 50,000) for gasoline. In cases of farther distances, they will receive no more than (LAK 150,000). For a normal delivery, the program will pay for delivery at a district hospital (LAK 175,000) or at a HC (LAK 125,000). The patients also receive LAK 40,000. In case of a caesarean the program will pay the hospital (LAK 1,500,000) and will pay for food for patient at LAK 40,000 per person [26].

2.5. Cultural practices and the utilization of maternal healthcare services

Cultural beliefs and practices, gender roles, religious norms and other socio-cultural factors still have strong effect on women decision to use modern maternal healthcare services [28, 29]. Many Laotian women continue to practice a wide range of traditional beliefs and practices during pregnancy, childbirth, and the postpartum period. The lowest rates of maternal healthcare utilization often belong to the most marginalized groups, such as ethnic minorities, women living in rural areas, women with little formal education, and women with a low economic status [28]. Traditional beliefs and practices regarding pregnancy and childbirth are generally passed down inter-generationally from mothers and mothers-in-law to daughters and daughters-in-law [28]. Women in some cultures do not use ANC because of the perception that the modern healthcare sector is intended for curative services only [2]. Traditional beliefs and fear are strong in some communities, and may explain low ANC utilization.

Community and household constraints related to cultural practices, gender roles in decision-making, access to transport and out-of-pocket expenses hamper women affordability to healthcare services [26]. Some believe that delivering at home was the correct thing to do which reinforces community norms and practices [26]. Husbands and parents made decisions about care in the case of delivery complications, but the initial decision about place of delivery was made by a nurse. Women's position in the household and society and women's autonomy was positively related to use of ANC in rural areas. Husband's refusal was one of the major reasons for non-utilization of ANC.

3. Government Policy and Expenditure on Maternal Healthcare

3.1. Policy on maternal healthcare

Lao PDR has made significant progress in improving the health of women and children and is on track to achieve Millennium Development Goals (MDGs) 4 (To reduce child mortality) and 5a (To reduce maternal mortality) and later Sustainable Development Goal SDG 3 [1, 7, 12]. To keep on track with the SDG, the country aims to reduce the current MMR to 160 per 100,000 live births by 2020 [14]. Lao Health Sector Reform 2013 to 2025 sets the framework to achieve health sector development including the improvement of maternal health. The policy aims to continue building on the foundation of primary health care with a special focus on women and children, poor people, and people in remote areas and aims to achieve Universal Health Coverage (UHC) by 2025 [13, 14].

The Ministry of Health (MoH) has made significant progress in terms of improving health policy formulation and decentralization of health services at the provincial, district, and health center levels since the 1990s. The primary health care policy of 2000 sets service delivery at the public Primary Health Care (PHC) level as a priority area [30]. Key policy interventions include free baby delivery and free healthcare for children under five [14]. With financial support from donors, major hospitals in the district can now provide the caesarean service along with other basic obstetric and newborn care [31, 32]. However, studies reveal that some of the poor still rely on their own money to cover the healthcare expenditure [33]. Although the government puts a strong focus on addressing national maternal health issue, there is usually incoherence between government policy focuses versus external partner interest [34].

Health financing, health governance, human resources for health, health service delivery, and health information systems have been progressively improved with the implementation of the reform framework supported through eighth of Health Sector Development Plan (HSDP8) programs from 2016 to 2020 [17, 30, 35]. The government has positioned maternal health care services as the entry point to strengthen the healthcare system in the Health Sector Reform agenda. Various programs have been implemented, including comprehensive health system strengthening interventions and free deliveries [17]. Some studies suggest an additional need for the government to address the issue of low wages and incentive among health workers and the provision of additional training to enhance their skills and knowledge in order to boost staff motivation and competencies [15].

3.2. Financing on maternal healthcare

The out-of-pocket payment has an implication on access and equity and the burden of population in health care. High out-of-pocket costs remain a key barrier to health access in Lao PDR. Most costs are paid for by patients and their families, which has resulted in people not accessing health services as often as necessary. Health financing efforts have focused on increasing government allocations to health, expanding health insurance schemes, and supporting free health care for pregnant women and children. Government spending on health increased from 3 percent to 9 percent between 2010 and 2015 to support acceleration towards MDGs [30, 36]. A sign of strong political commitment for reforming the health system was shown in the fiscal year of 2013 to 2014, the health budget allocation increased to 9 percent of general government expenditure [30]. The

Government has committed to achieving 50 percent coverage by 2020 with the health financing scheme by 2015 and has introduced a national policy on free maternal and child health services in 2012 [30]. However, the 2020 targets are unlikely to be met due to weaknesses in Primary Health Care (PHC) services and managerial capacities of the implementing agency, as well as low public expenditure on health, geographical, language and cultural barriers to accessing care, and the limited range and quality of services at PHC facilities in rural areas [30].

There are four health financing schemes: (1) Social Security Organization (SSO) for salaried private employees; (2) State Authority for Social Security (SASS) for civil servants; (3) Community-Based Health Insurance (CBHI) for non-poor workers in the informal sector; and (4) a Health Equity Fund (HEF) for the poor. Population coverage by these four main prepayment schemes is limited to around 19.6 percent of the population (excluding coverage of fee exemption schemes, police and military personnel) [30]. Both SSO and CBHI have low coverage of their targeted populations. Donor-financed HEF covered around 40.7 percent of the poor in 2012 [30]. The low coverage of these social protection program means that out-of-pocket payments remain the dominant sources of household health financing [30].

4. Development Partners Working on Maternal Healthcare

There are currently 52 countries and international organizations and a further 66 international non-government organizations working on maternal health-related programs [15]. The main donors in the health sector are the World Bank, the Asian Development Bank, the Global Fund Japan, Luxembourg, the Republic of Korea, and the United States of America [17, 35]. The government adopted Sector Wide Coordination (SWC) mechanisms to improve coordination and development coherence in the health sector development. The Maternal and Child Health Technical Working Group is responsible for coordinating the work between government and development partners [17].

A number of UN agencies are working on various activities to promote health sector development, including maternal healthcare. The World Health Organization (WHO) provides support to the Ministry of Health and other partners in the implementation of the National Strategy and Action Plan for Integrated Services on Reproductive, Maternal, Newborn and Child Health 2016 to 2025. Key interventions include (1) promoting the access to quality maternal healthcare and expanding

the reach of essential newborn care in rural areas; (2) capacity building and implementation of MNCH integrated package in 17 provinces [37].

The UN Population Fund (UNFPA) focuses on poverty reduction, gender development, health and education programs, along with the specific priority areas of maternal and child health and training skilled birth attendants [37]. The program, jointly implemented by WHO, leads the component on "Making Pregnancy Safer" and UNFPA which is responsible for Human Reproduction Program and delivery care. UNICEF is more involved in antenatal and postnatal care [15, 37].

Financial institutions such as the Asian Development Bank (ADB) fund a number of projects to support maternal health programs. Their programs focus on expanding social protection programs such as the Health Equity Fund, and free delivery [37]. International donors such as Japan and Australia also have programs to support maternal healthcare in different provinces of the country[37].

5. Conclusions

The Government of the Lao PDR integrated SDG 3, including three previous MDGs (Child health, maternal and reproductive health, and HIV, malaria and other diseases) in the form of targets into the eighth National Socioeconomic Development Plan. The government has put maternal healthcare services as the entry point to strengthen the healthcare system in the Health Sector Reform agenda. The country has achieved the international MDG target of reducing its MMR of 197 per 100,000 live births by 2015.

However, the MMR is still high. Most maternal deaths could be avoided if the available services were within reach. The lack of reproductive health knowledge is among the contributing factors. There is also a huge disparity in access to maternal healthcare among different segments of population. Mothers with low education, who live in rural or remote areas and from households with a lower socioeconomic status tend to have less access to maternal healthcare services than those living in urban areas or having higher education and from higher wealth quintile. This indicates huge inequalities in health access. The review confirms that low income, long distance, insufficient or expensive transportation services are major obstacles to maternal healthcare access for pregnant women. Women of disadvantaged socioeconomic groups, including ethnic minorities, tend to receive lower quality services due to poorly equipped and poorly financed health services

and cannot afford the cost of healthcare. Household economic status and women's autonomy or empowerment have a significant impact on the use of maternal healthcare services. In addition, Cultural beliefs and practices, gender roles, religious norms and other socio-cultural factors still have strong effect on women decision to use modern maternal healthcare services

The allocation of state budget to the healthcare sector has increased but the country is still struggling to provide adequate healthcare support and facilities for the poor and those in rural areas. The country still faces a severe deficit in the human resources available to provide health services as well as in the facilities required to provide these. Provincial and district hospitals do not have sufficient health staff to provide outreach services. The relatively low rate of facility-based delivery and the poor quality of health services are issues that impede the country's progress towards achieving SDGs.

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