Community Perceptions of Facilitators and Barriers to Mother and Child Health Service Use

Implementation research from the Maternal, Neonatal Child Health Strengthening Project in Luang Prabang, Lao PDR

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March 2021

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Executive Summary

Background:
The Swiss Red Cross (SRC) is supporting local partners and Ministries of Health in different countries to achieve the sustainably development goals in health. Decreasing maternal mortality in Asia through improved access to quality reproductive health services is a key intervention area of SRC. Despite many years of targeted support in Bangladesh, Nepal, Pakistan and Laos, in some of the intervention areas the facility-based delivery with use of skilled birth attendants remained stagnant or at best, only gradually increased. This is despite different inputs on provider side to improve quality of care and on demand side to improve knowledge. As a community of practice, the four SRC supported countries and the respective country teams decided that a better understanding of social determinants, barriers and enablers and decision-making processes among couples and within families will be helpful to better address needs and gaps in health seeking behaviour during the continuum of pregnancy, delivery and post-partum period. Therefore, Swiss Red Cross undertook qualitative implementation research across four countries where SRC maternal newborn child health (MNCH) projects were taking place. Each country conducted their own research, using the same research framework and 'study parent protocol' and adapting it to the local context and language.

In Laos PDR, SRC is supporting a MNCH project in two districts in northern Lao PDR, Chomphet and Phonexay. Over the years, significant gains have been made in both facility birth rates and births with a skilled birth attendant (SBA). Both districts combined, had an overall SBA rate of 85.5% in 2020.[5] This SBA rate compares extremely favourably with that of all districts across Luang Prabang province combined, where only 45% of women had SBA in 2019.[5] The two districts demonstrate much higher SBA rates than other rural districts in Lao PDR and also in comparison to the other three SRC supported countires, which undertook the same implementation research (IR).

The literature review identified that data was not available on maternal newborn care seeking decision making in Northern Provinces in Lao PDR. Neither had a qualitative study exploring the combined views of maternal newborn health service users and their husbands, with key community members, health care workers and external maternal newborn health service leaders and experts been undertaken in Lao PDR. Nor has a qualitative study been undertaken that explores the key stages of pregnancy confirmation, antenatal, intrapartum and postpartum periods as separate decision making stages within a continuum of care seeking across the parturient year. The implementation research in Lao PDR will close these knowledge gaps to enhance understanding on barriers and facilitators for women accessing facility based care across the pregnancy to postnatal continuum.

Aim of the study:
The Implementation Research was designed to improve understanding of social determinants of facility-based birth (institutional birth). Community expectations, perceptions and experiences were examined to characterise local beliefs about available services, including whether/when they are necessary, their quality of care, factors that encourage or reduce intention to use services, and facilitators and barriers to acting on such intention. In particular, the study compared experiences of women (and their families) who experienced healthy births as well as those who underwent complications, considering both community-based and facility-based births. Specific to the Loa PDR context, exploration occured to better understand if current SRC activities in the index districts may be having an impact on decision making or the overall achievement of high skilled birth attendant and health facility birth rates.

Methodology:

Study data collection methods included a total of 33 in-depth interviews conducted with women/community members and health care workers in the field. A further six focus group discussions (FGDs) with a total of 54 participants were conducted in the two study sites, Chomphet and Phonexay districts in northern Lao PDR. The in-depth interviews and FGDs with different groups, explored norms, attitudes and decision-making around maternal health care practices. Individual views and experiences of social, physical, and economic facilitators and barriers to facility-based births and the relationship between health care workers and pregnant women were also explored. External stakeholders and other service providers were also asked to share their understanding or their experience of current SRC MNCH activities in the context of user decision making and barriers and facilitators to women accessing facility based MNCH services.

The study interviewed women who had given birth in the 6 months prior to data collection to optimise respondent recall. Bias was addressed as far as possible by matching ethnicity, language and gender between interviewer and respondent and ensuring interviewers and respondents were not from the same district or had a hierarchical professional relationship. Sampling was purposeful with overrepresentation of Hmong and Khmu women in the in-depth interviews as anecdotal experience from SRC Programming indicates lower facility birth rates for both these ethnic groups. Husbands were sampled in slightly fewer numbers than women to harvest their opinions, as an area poorly researched to date. Village health volunteers and village heads were included in the sample to situate 'user' views within other embedded community hierarchies. Health workers, as direct service providers, one head of health centre and a further 4 interviews were conducted with key 'external' stakeholders. These 4 external stakeholder interviews included a senior obstetric clinician (provider), two senior Provincial Health Department MNCH clinical service managers as well as a medical Manager of an NGO leading MNCH services improvement activities in seven other Luang Prabang districts (where SRC had not worked). These interviews were all context informants with diverse MNCH service user and provider experiences.

SRC offered backstopping training and field based mentorship to a team of twelve Laotian partners to build their confidence and capacity to undertake qualitative research in the future. Qualitative analysis of field based in-depth interviews and focus group discussions (FGDs) was undertaken using an iterative and participatory team approach engaging all implementation research (IR) team members. The data was scoured for trends and consistent codes, also considering outliers as in iterative process to eventually draw conclusions regarding decision-making during different time periods and the influences on these time periods. Remote facilitation was offered to the team of twelve in-country data collectors and analysts by two SRC IR team facilitators via video zoom. In-depth interview and FGDs field notes were explored during analysis days which were recorded to enable further reflection to inform coding and thematic grouping of the data by the two remote IR facilitators. Field data was divided into time periods (pregnancy and ANC, birth planning, birth, and post-natal periods), as these are each significant and important decision making time periods in their own right. Detailed notes from the external stakeholder interviews were analysed by a team of two in-country and the two remote IR facilitators using the same iterative, qualitative analytical coding processes. These analysis discussions were again recorded to enhance further reflection and confirmation of consistent codes and themes. In the stakeholder interviews and analysis, a focus was also on exploring current service contexts and proposed future service activities seen to influence women's decision making within the framework of barriers and facilitators to women accessing facility based MNCH services.

Results:
A brief summary of the results are as follows:

- Decision-making was generally initiated between husbands and wives together, particularly for Khmu and Lao women, but women's decision making continued to respond to evolving circumstances and different influences across the pregnancy, birth and postnatal continuum;
- Families need to feel safe and confident with the skills and behaviour of health care workers to seek skilled birth attendant and Health Facility care;
- Physical and economic challenges are significant barriers to accessing Health Facility care;
- Outreach plays a pivotal role in engagement with the health system for women and their families and can be key for women feeling safe and trusting of health care workers;
- Despite the cost of birth at facilities being free, there remain some financial barriers for poorer families, including: transport, time spent away from families, inability to access food allowances and potential costs of placenta disposal;
- Well-equipped, modern and clean HF are important to families;
- Some cultural beliefs and practices expecting women to stay at home for up to one month after birth can be a barrier to women accessing PNC services but this can be successfully ameliorated through outreach home visits by health workers.

Conclusion:

The study has highlighted that social determinants are important drivers for timely maternal newborn care seeking. Respondents are taking active initiative to overcome transport and financial barriers but not always with success. Decisions are shared as a couple and within the family as reflexive responses to various influences across the pregnancy, birth and postnatal continuum. The study found that good quality of care and rapport building with the local health care providers are crucial elements for women feeling safe and thus preparing for and seeking maternal health care in time. Women have some influence and use their influence on enablers at household level with their husband's support seen as important to achieving this outcome. Women often depend on external family enablers to access health facility care. The health care providers' performance and the quality of care offered was a significant determinant to care seeking but women in this study lacked the means to influence either.

Programmes should work further to ensure they meet local perceptions of good quality care and put in place measures associated with women and families feeling safe. Working further on quality of care and respectful behaviour, as well as investing in outreach rounds, home visiting and referral services are suggested as the way forward to maintain and even further increase the uptake of maternal newborn health services with skilled personnel. Further research and innovation in regards to increasing post-natal care within the given cultural context needs to be explored. The study findings will contribute to the strategic development of MNCH care in Laos with the view to enhance quality service models based on primary health care and universal health coverage with a strong focus on consumer trust, appreciation and continuous quality improvement frameworks embedded in service plans.

Acronyms

ANC	Ante Natal Care
CoP	Community of Practice
CMw	Community Midwife
DH	District Hospital
DHIS2	District Health Information System (National database)
DHO	District Health Office
DT	District Trainer
EHS	Essential Health Services
EPI	Expanded Programme of Immunization
FiO	Fully integrated Outreach
HC	Health Centre
HD	Health Delegate
HE	Health Education
HF	Health Facility
HMIS	Health Management Information System
HPD	Health Promotion Day
IMC	Implementation Management Committee
INGO	International Non-profit Organization
IPHCP	Integrated Primary Health Care Project
IYCF	Infant and Young Child Feeding
LFHC	Lao Friends Hospital for Children
LPG/LPB	Luang Prabang
MAM	Moderate Acute Malnutrition (MAM)
MNCH	Maternal, Neonatal & Child Health
MoH	Ministry of Health
MoU	Memorandum of Understanding
MT	Master Trainer
OSDV	On Site Data Verification
PH	Provincial Hospital
PHD	Provincial Health Department
PHIB	Provincial Health Insurance Bureau
PNC	Post Natal Care
SBA	Skilled Birth Attendant
SAM	Severe Acute Malnutrition
SCI	Save the Children International
SNTA	Senior Nurse Technical Advisor
SRC	Swiss Red Cross
UNFPA	United Nations Populations Fund
UNICEF	United Nations Children's Fund.
VHV	Village Health Volunteer
WASH	Water, Sanitation and Hygiene
WB	World Bank
WHO	World Health Organization

Background

Lao PDR Reproductive Health Background

The Lao People's Democratic Republic, also known as Lao PDR or Laos, is a landlocked country in South-East Asia. Lao PDR has a total area of 236 800 km with rugged mountain ranges and flood prone lowlands. This geographical context has been discussed in several studies and reports as presenting significant health care physical access barriers, with many villages in Lao PDR inaccessible during the rainy season or without roads deemed safe to travel on by motor vehicle[1].

Administratively, Lao PDR is run by a one-party government and the country is divided into 16 provinces, with Vientiane the capital city in Vientiane province.[2] In Luang Prabang province in northern Laos there are 12 districts with two being the target of Swiss Red Cross (SRC) Maternal Neonatal and Child Health (MNCH) strengthening projects between 2015-2020: Phonexay and Chomphet districts. Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCAH) remain a key priority for the National Assembly of Lao PDR with seven of the eleven key indicators relating to RMNCAH[1]. The following background sections will explore in more depth what was summarised by the GoL Ministry of Health when discussing Lao PDR's achievements towards SDG's 4-6 in 2020[11:] *"issues of recruitment, deployment in the right place, supervision of skilled health workers, further increase of essential RMNCH service coverage, the provision of resourced facilities implementing Free MCH Policy to address inequity and disparity and the empowerment of women and families in the community to use available maternal and newborn health services and to reduce adolescent pregnancy will be paramount for the achievement of these SDGs* " (p. iii, March 2021).

Ethnicity and Reproductive Health

There are many ethnic groups within Lao PDR, with 49 officially recognised groups. There are three dominant ethnic groups: Lao Lum, Khmu and Hmong, with Lao the official language (however, many ethnic groups do not speak it).[1] 66% of the people of Lao PDR identify as Buddhist, with folk religion accounting for around 30%.[2] The Hmong population are animist, and believe in souls or spirits in their practice of religion. The Hmong believe that the spiritual world co-exists with the physical world. The spirit world consists of many types of spirits that influence the human life, and include ancestral spirits, household spirits, spirits in nature, and evil spirits.[3] Lao Lum people compose approximately 53% of the population, Khmu people approximately 11%, and Hmong people approximately 9%, with smaller ethnic groups composing the remainder of the population.[4] Acceptability of health services by Laos women of ethnic minorities has been explored in several studies. It is recognised when birthing care practices do not align with cultural beliefs this can be a deterrent to women accessing health facility care.[5] A major cultural practice in Lao PDR is women lying on hot beds (a fire nearby) for some days after birth, which is practiced widely in the country and cannot take place in a health facility.[5] This may represent a deterrent for health facility birth but also may incentivise women to return to their village shortly after giving birth in a health facility so they can begin this important ritual of recovery.[5 6] Another major cultural practice is the preference many women have for upright birth positioning, where women stand, squat or kneel which cannot (at this time) be accommodated at health facilities and would represent another access barrier. [5 6]

[1] Dawson A. Human resources for health in maternal, neonatal and reproductive health at community level: A profile of Lao People's Democratic Republic. Sydney, Australia: Burnet Institute; UNSW; 2011.

[2] FAO 2011: Country Profile Lao People's Democratic Republic

[3] Hmong Cultural Center 2000: https://depts.washington.edu/triolive/quest/2007/TTQ07085/pages/religion.htm

[4] Lao Statistics Bureau 2015: Results of Housing and Population Census

[5] Sychareun V, Somphet V, Chaleunvong K, Hansana V, Phengsavanh A, Xayavong S, et al. Perceptions and understandings of pregnancy, antenatal care and postpartum care among rural Lao women and their families. BMC Pregnancy Childbirth. 2016;16:245.

Adolescent Reproductive Health

The population of Laos was recently estimated to be almost 7 million people[6] . It has the highest total fertility rate among ASEAN countries (2.3 in 2020) and therefore is one of the youngest populations.[9] Malnutrition continues to be a serious issue, with stunting (chronic malnutrition) affecting 35% of children under five in 2020.[9] The high percentage of adolescent women in Laos PDR, aged between 15-19 years, with low education levels and who are currently married is also a significant demographic challenge. Comparative data confirmed Lao PDR as having the highest adolescent pregnancy rate in the South East Asian region which presents significant adverse impacts on economic and future health capital for Laos.[7] Adolescent fertility rates in the Lao People's Democratic Republic (94), is followed by Cambodia (57),Thailand (51), and Indonesia (48), per 1000 girls aged 15-19.[7] This is closely related to the high child marriage rates in the region, which are highest in Lao PDR at 35%, compared to 11% in Vietnam.[4] The high adolescent birth rate is a root cause of the intergenerational cycle of malnutrition, with a 42.6% rate of anaemia in girls aged 15-19, increasing the risk of stunting in children.[8]

Key Reproductive Health Trends and SDG's

The maternal mortality ratio (MMR) is also high in Lao PDR, at 185 per 100,000 births in 2017 with a further decline to 160 per 100,000 births in 2019.[9] Laos is almost on track to meet the Sustainable Development Goal (SDG) target for MMR reduction, but the MMR still remains very high for the region as noted in the recent: *Mid-Term Review National Strategy and Action Plan for Integrated Services on Reproductive Maternal, Newborn and Child Health 2016-2025* (Lao PDR Ministry of Health, February 2021).[9]

Lao PDR Trends in Maternal Mortality Ratio (MMR)
(SDG Target by 2030: **70** per 100,000 live births) – almost ON TRACK

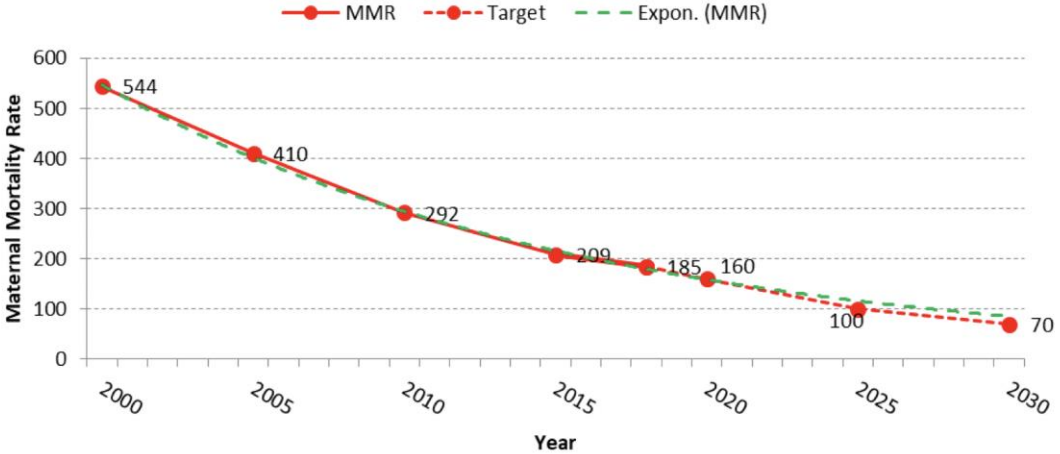


Figure 1: Lao PDR Maternal Mortality Ratio Trends 2000-2030

Similar positive trends have been achieved in reduction in under five child mortality rate (CMR- number of under five year child deaths per 1000 live births) in Laos with a projection the SDG target

[6] UNDP 2015: Country Analysis Report Lao PDR
[7] UNFPA 2018: Report on the regional forum on adolescent pregnancy, child marriage and early union in South East Asia
[8] GoL (2018) Voluntary National Review on the implementation of the 2030 agenda for sustainable development.
[9] GoL Ministry of Health (2021): National Strategy and Action Plan for Integrated Services on Reproductive Maternal, Newborn and Child Health 2016-2025, 3rd Edition. March 2021.

for 2030 will be achievable[9]. However, again when compared with other countries across the region, Lao PDR's CMR is quite high.

Although a positive downward trend, Laos' estimated neonatal mortality (number of deaths in the first four weeks of life per 1000 births) noted in the following *Figure2.* will require a fast reduction to achieve the SDG goal by 2030.[9]

Lao PDR Trend of Neonatal Mortality Rate
(SDG Target by 2030: **12** per 1,000 live births) – almost ON TRACK

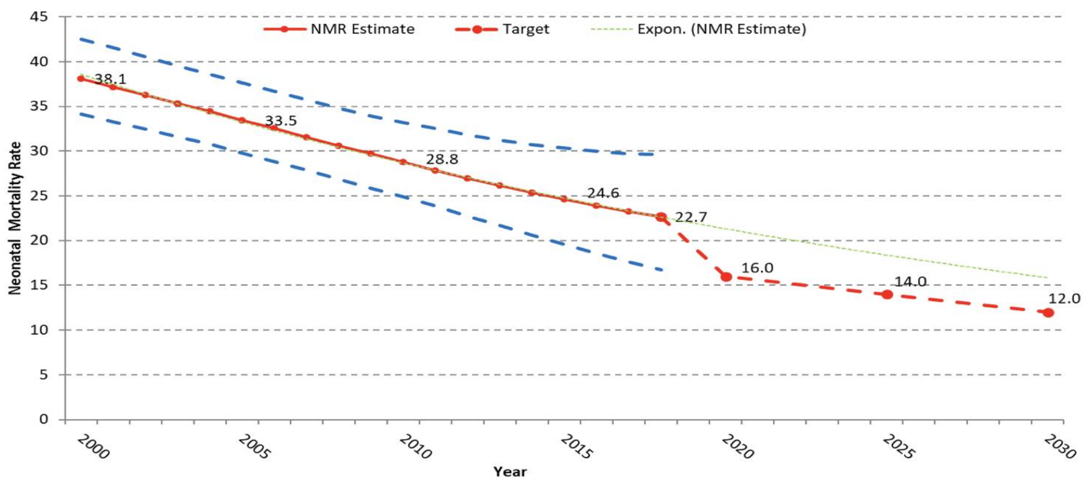


Figure 2: Lao PDR Neonatal Mortality Rate (NMR) Trends 2000-2030

Key Government of Laos Reproductive Health Initiatives

In order to improve maternal and newborn health, the Lao Ministry of Health (MoH) developed an Integrated Reproductive Maternal Newborn Child and Adolescent Health (RMNCAH) package 2009 – 2015 with development partner inputs. A midwifery cadre was trained within 6 years from 2010-2015, from 88 to 1784[10] as a follow-up on the Government of Laos (GoL) Skilled Birth Attendant (SBA) Plan 2008-12, which was operationalised within the RMNCAH package. The SBA Plan focused on promoting midwifery as the key professional team to make the positive impact on MMR reduction. However, the midwifery cadre in Laos is still developing. As yet, it does not meet global competency standards as required to fully appreciate the evidenced successes in reducing MMR. There remains challenges with the varying skill levels of midwives and midwifery teachers, the deployment of midwives to rural and remote health centres where needed, and recruitment of midwifery students from minority ethnic groups to address language barriers and cultural understanding.[10] In 2015, Lao PDR MoH launched the Midwifery Improvement Plan (MIP) 2016-2020 as part of the predecessor to the National Strategy and Action Plan for Integrated Services on Reproductive, Maternal, Newborn and Child Health 2016-2025. The first MIP is currently under review to inform phase 2. Other Government of Laos strategies to support reproductive health were implemented and include the National Emergency Obstetric Care Five Year Action Plan 2013-2017, the Early Essential Newborn Care Action Plan 2014-2020, and the National Immunization Programme Comprehensive Multi-Year Plan 2016-2020. In tandem with these evolving RMNCAH

[10] United Nations Population Fund, Ministry of Health Lao PDR. Midwives in Lao PDR: Scaling up Skilled Birth Attendance: Putting midwives at the community-level towards achieving MDGs for Mothers and Children. Vientiane, Lao PDR: UNFPA; 2012.
[11] Ministry of Health Lao PDR. National Strategy and action plan for integrated service on reproductive, maternal, newborn and child health 2016-2025. 3rd Revision, March 2021, Vientiane: MoH Lao PDR; .

strategies, and to support its pursuit of universal health coverage (UHC), Lao PDR introduced a Free MNCH initiative in 2012. This has since been subsumed within the new National Health Insurance (NHI) programme, which aims to improve facility-based births, with women able to claim back transport, food and medical costs upon giving birth.[11] [12] The revised MNCAH Strategy document (March 2021) indicates that the NHI free maternity care programme has been scaled up to cover 70 % of the districts of the country.[11] Although a promising health financing reform, there is evidence that equitable access is not guaranteed with women from poor, rural or marginalised ethnic groups less able to access free reproductive health services.[12] The overall benefit incidence of the universal social health protection programme was not pro-poor.[12] There remains a divide in Maternal, Newborn and Child Health (MNCH) access and outcomes between the rich and poor in Laos.[9]

Gender and Equity in Reproductive Health

In 2017 access differences between the rich and poor in Laos were demonstrated with the rich 20% receiving immunisation of their children and support with a skilled birth attendant (SBA) three times more often than the poor 20%.[9]

It was noted in the Lao Ministry of Health Integrated RMNCAH National Strategy and Action Plan 2016-2025 (3rd revision) that there has been a lack of gender-sensitive RMNCAH interventions.[9] Gender mainstreaming in planning and monitoring RMNCAH services in Lao was also lacking despite women having limited health care seeking decision making power.[9] Village Health Volunteers were more likely to be male and this was seen as a potential inhibitor to communicating with women about their sexual and reproductive health issues.[9] There are often barriers for women in Laos to accessing reproductive health services dependent on who is the decision-maker in the family.[13] In many cases, childbirth is seen by husbands and grandmothers as a ‘natural event’ that did not require health services, because it is considered ‘low-risk’.[13] Decision-making was often left to the husband, mother or mother-in-law.[15] Some husbands and family members were not aware of the free MNCH policy in Laos, as husbands were not present during outreach services and they held concerns about the cost of health services.[5] It was found that allowing husbands or family members to be present during birth could mitigate some of the stigma of birthing at health facilities.[5]

Quality in Reproductive Health

The quality of MNCH services in Lao PDR varies widely, and affects the decisions of women regarding place of birth. In an exploratory study by Manithip et al. it was found that most health care workers had no additional training or supervision after graduation and they lacked adequate knowledge on risks for pregnant women.[14] They found unskilled health workers were left without support of senior staff, not only to deal with a high workload but also to handle cases for which they were not trained, raising questions about the ability of health care providers to carry out quality services for the women.[6] This aligns with prior findings questioning the capacity of the newly trained cadre of midwives to deliver quality care.[10] Furthermore, health workers have reported they lack adequate language skills (to communicate with ethnically diverse families) thereby reducing the quality of care and health education they can provide.[15] From the patient perspective, some women reported receiving poor quality care, lack of respect from health workers and the inability to conduct cultural

[12] Nagpal S, Masaki E, Pambudi ES, Jacobs B. Financial protection and equity of access to health services with the free maternal and child health initiative in Lao PDR. Health Policy Plan. 2019;34(Suppl. 1):14-25.

[13] Sato C, Phongluxa K, Toyama N, Gregorio ER, Jr., Miyoshi C, Nishimoto F, et al. Factors influencing the choice of facility-based delivery in the ethnic minority villages of Lao PDR: a qualitative case study. Trop Med Health. 2019;47:50.

[14] Manithip C, Sihavong A, Edin K, Wahlstrom R, Wessel H. Factors associated with antenatal care utilization among rural women in Lao People's Democratic Republic. Matern Child Health J. 2011;15(8):1356-62.

[15] Sychareun V, Phommachanh S, Soysouvanh S, Lee C, Kang M, Oh J, et al. Provider perspectives on constraints in providing maternal, neonatal and child health services in the Lao People's democratic republic: a qualitative study. BMC Pregnancy Childbirth. 2013;13:243.

practices at health centres, deterring facility-based births.[5] During the mid-term review of Lao PDR's RMNCAH National Strategy and Action Plan, three common areas of weakness in clinical service quality were identified: "…*weak provision and quality of counselling on health behaviours; missed opportunities to provide comprehensive services to patients during their contact with health providers; and a fragmented continuum of care. Lack of continuity in care can lead to undertreatment or even harmful treatment*"[11] (p4, 2021).

Swiss Red Cross programming in Luang Prabang

Global background

The Swiss Red Cross (SRC) International Cooperation has determined 'Health' as one of its three core areas of intervention and support of local partners. The SRC health policy (2020) outlines reproductive health as one of eight priority themes. SRC supports several partners and country programmes in the implementation of reproductive health projects with the aim to improve quality of services, enhance access to health services and positively change health behaviour. Progress in those three outcome domains is measured by standard indicators and context-specific indicators, which the country programmes apply during their annual monitoring. Data from the 2020 SRC Luang Prabang MNCH2 project Annual Report are referred to throughout this report as demographic background on the two districts where the IR was undertaken in Lao PDR.

MNCH2 Geographical Context

The Maternal Neonatal Child Health Strengthening Phase two (MNCH2) Project (2018-2020) followed an initial 3-year MNCH Project in the same two target districts of Luang Prabang (LPB) Province- Chomphet and Phonexay Districts in Northern Lao PDR.[16] Mountainous terrain with poorly maintained gravel roads and fluctuating river conditions vary across the seasons in both districts. This terrain and geography significantly impacts on access to health facilities, markets and schools for those living in villages in either districts. Each of the seventeen health facilities has a cluster of villages surrounding it with them divided into three zones (see *Table 1* in the Annexe). Zone 1 villages (n=51) are closest, zone 2 next closest (n=9) and zone 3 (n=71) are the most remote villages from the health centre with some having only a village tractor (*tak tak*) or access by foot or motorbike to get from the village to a road on which a motor car could travel to take a person to a health facility, school or market. Wet season periods from May to September would limit mobility even further. Therefore, kilometre travel distance from villages to any of the seventeen individual health centres to that district's District Hospital (n=2) does not accurately reflect travel times or accessibility. Health centres are the lowest capacity level of health care, with the district hospital (one in each district) the next level and the referral hospital – the Provincial Hospital, is situated in Luang Prabang town.

MNCH2 Aims

The MNCH2 aims were to work in close partnership with Laos Health Partners and other stakeholders to contribute to improved Maternal, Neonatal and under 5 Child Health status in Chomphet and Phonexay districts through:

1. Enhanced quality of MNCH services
2. Increased access to MNCH services
3. Enhanced health practices adopted by parents and communities
4. Strengthened guiding capacity of PHD, particularly the Hygiene and Health Promotion Sections of Luang Prabang Provincial Health Department (PHD) and of both target District Health Offices (DHO).

[16] Swiss Red Cross. Annual Country Report: Lao PDR; 2020

MNCH2 Activities and Behaviour Change Outcomes

The MNCH2 worked in close partnership with the Luang Prabang (LPB) Provincial Health Department (PHD) and two District Health Offices (DHO) who managed the health services offered at either District Hospital and the lowest capacity level health centres (total n=17). The key MNCH2 implementation partner in the PHD was the Hygiene and Health Promotion Section which reports to the same section within Ministry of Health (MoH) at National level. The following *Figure 5.* depicts the MNCH2 partnerships (SRC/MoH/PHD/DHO) and their key foci of interrelated activities. An integrated approach to MNCH system strengthening targeted infrastructure and medical equipment improvements and behaviour change of health care workers (HCWs) on the 'provider side' and behaviour change at community and village level (user side). Referral processes were also strengthened as were outreach services to improve the links between user and provider bridging across health facility, community and village levels. Not included in the following figure is the MNCH2 support at health facility, DHO and PHD in strengthening the quality and reporting of health services and outcomes in the District Health Information System (DHIS2). The MNCH2 target population as noted earlier was mothers, neonates and children under 5 years.

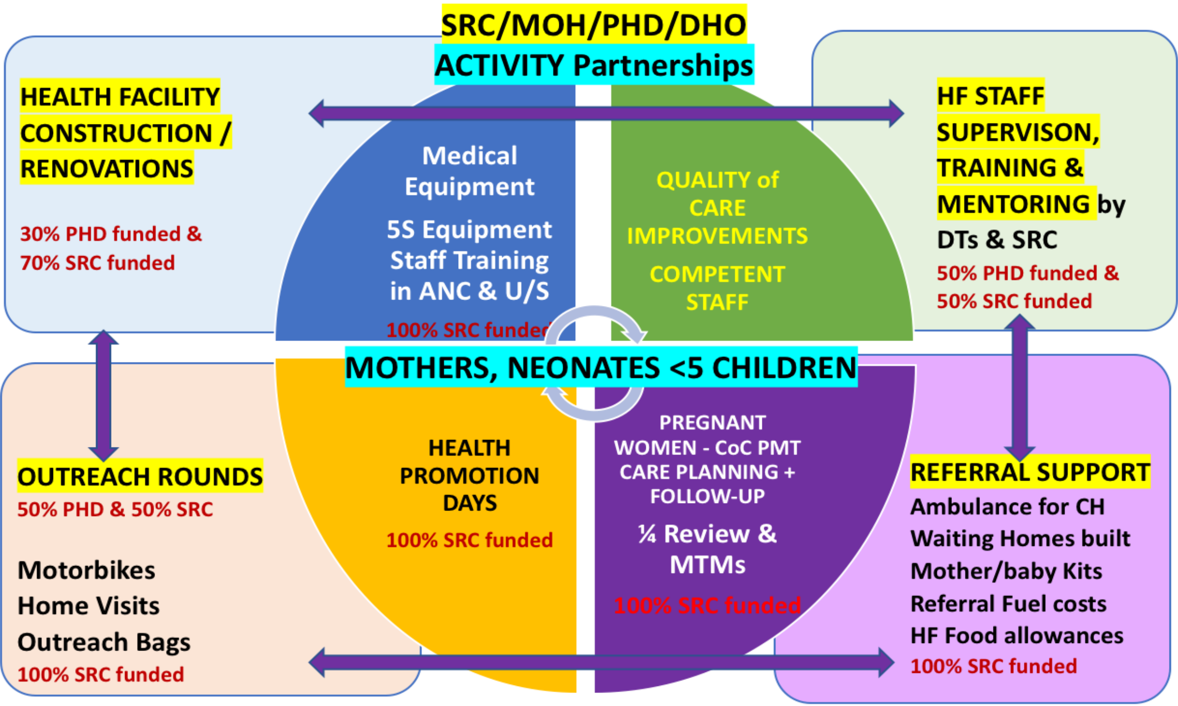


Figure 3: MNCH2 Key Activity Partnership

The following *Figure 4.* links the MNCH2 partnership activities described above (*Figure 3.)* with behaviour change outcomes at both the service provider side and at the user side in 2020. The central line gives key outcome data from the MNCH2 2020 Annual Report including births occuring in a health facility or with a skilled birth attendant (SBA) either at home or in a health facility in both target districts in 2020.

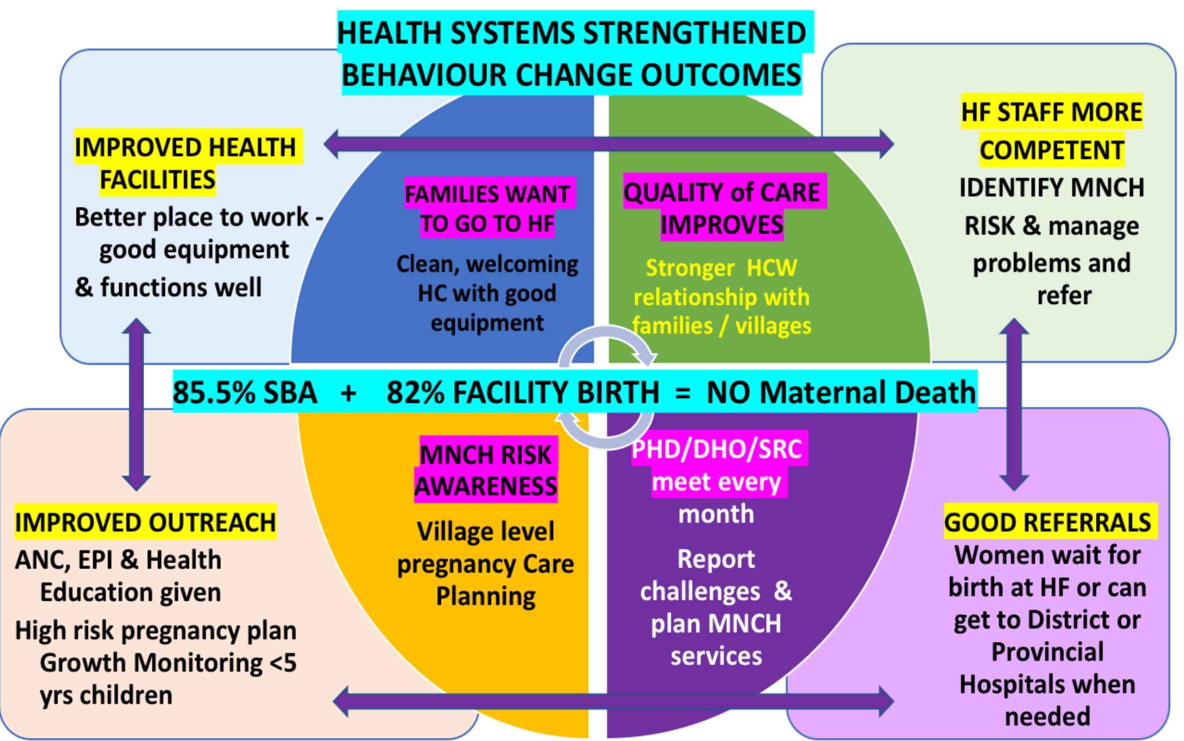


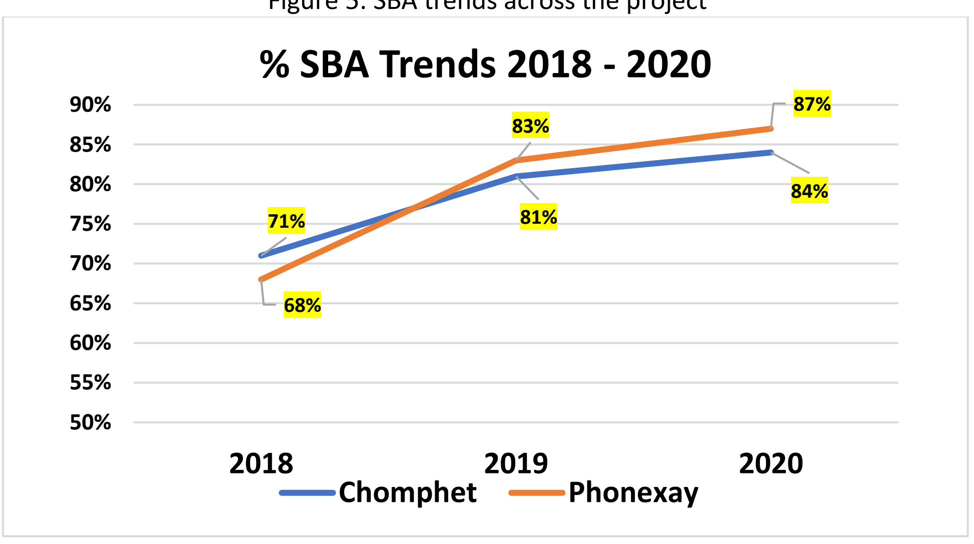
Figure 4: MNCH2 Key Activity Partnership

MNCH Project outcome trends

Trends in both Maternal Mortality Ratio- MMR and Under 5 years child mortality rates in both MNCH Project districts between 2015 – 2020 have been positive. There were no maternal deaths from women receiving care in either district between 2018-2020 following a total of eight maternal deaths in the previous MNCH project triennium[16]. In 2020, the MMR for all of Luang Prabang Province was 46/100,000 and for all of Lao PDR it was 160/100,000 (see *Figure 1.*). Under five child mortality rates (CMR) in both districts declined from 21.5/1000 in 2018 to only 10.3/1000 in 2020 which is well below the National average of 40/1000.[9] Fully immunized children <12 months reached 90% by the end of 2020 in the two project districts which is again higher than National rates.[16]

In the two MNCH2 Project districts of Phonexay and Chomphet in Luang Prabang Province in 2020, 85.5% women received supervised labour and birth care with a skilled birth attendant (SBA) as noted in the previous *Figure 4.* and the following *Figure 5.*[16] This is a rate far higher than the national average for Lao PDR. As noted earlier (*Figure 4.*) the rate of women from both districts giving birth in a health facility in 2020 was 82%.[16] The remaining 3.5% SBA being women having their baby at home in the village with a skilled birth attendant (SBA).[16] Families, village heads and Village Health Volunteers (VHV's) are encouraged to contact the nearest health facility if a women is labouring at home or has given birth at home to seek clinical care and assessment for the woman (and her fetus/baby) by a skilled birth attendant. A National level decision was made in 2018 to cease disaggregating DHIS2 data collection for SBA into either facility birth or birth at home so there is no comparable data available from other districts on SBA and place of birth. Despite 14.5% of women from both project districts not having SBA for labour and birth being a very low rate compared to National SBA rates, there remains the challenge to identify/understand and address the barriers these women experienced in accessing competent SBA care within a well-equipped health facility.

Figure 5: SBA trends across the project



Other positive outcomes of the MNCH2 was an increased coverage of ANC 4 visits (Laos National ANC benchmark) from 53% in 2018 to 71% in 2020.[18] Annual Service Availability and Readiness (SARA) trends for health facilities demonstrated improved availability and readiness to offer both general nursing and MNCH services at all assessed health facilities in both target districts across the 3-year MNCH project time frame. A SARA score of 89% in 2020 indicates good improvements in the service 'provider' side.[16] The 2020 GoL Five Goods One Satisfaction 'user' scoring of health facility services showed overall high scores with satisfaction and waiting times less than 15 minutes with '*clear understanding of treatment*' universally attracting the lowest scores[16] by service 'users'. However other 'user' trends of women accessing reproductive health services were not so positive. The MNCH2 End-line survey (n=470) indicated a decline in women receiving both one and two postnatal care (PNC) visits and family planning uptake also declined over the three year time period.[17] Although significant positive outcomes have been achieved in the MNCH2, there is clearly room for identifying ways to improve women's engagement in reproductive health services (across the parturient year) as MNCH service availability and readiness is certainly apparent. Understanding how and why women make their decisions about seeking reproductive health services is a critical first step to addressing access challenges.

The Implementation Research in Context

Swiss Red Cross Laos, together with Swiss Red Cross delegations in Nepal, Bangladesh and Pakistan, formed a Community of Practice (CoP) in 2017. The purpose of this CoP is for knowledge and learning exchange. In January 2019, the CoP countries shared ideas about research that was needed across the four countries and the topic of maternal health was decided upon as it is a theme that cuts across all four countries' programming. In 2020, the Implementation Research (IR) was prioritised, and was designed to improve understanding of social determinants of facility-based birth (institutional birth) across all four countries.

SRC's implementation research (IR) in Laos is an opportunity to further explore the relationship between the MNCH2 activities and provider and user behaviour change of SRC MNCH health system strengthening activities over the last 3 years. The voices of women who did give birth in a health facility (and their family members) will be explicitly sought and listened to as several qualitative studies have focused only on women experiencing a homebirth in Laos.[15] The role of outreach on

[17] SRC MNCH2 Endline Survey Report, 2021

women's birth-plans and facility-based births will also be explored, as outreach services were also strengthened through SRC activities. Furthermore, husbands and other decision-makers have been discussed at length as potential key influences on decision-making in prior studies, but husbands' own voices have been mostly neglected in research and MNCH service planning. The implementation research attempts to close these gaps in knowledge by interviewing family members following a facility birth and home birth, husbands, village level stakeholders and other important stakeholders working in maternal newborn health. Understanding what influences decision making around health care seeking will optimise the goal to continue to increase the numbers of women who access a health facility for childbirth care in Laos. The implementation research will also offer better understand of care seeking intentions and behaviours during the antenatal and postnatal periods.

COVID-19 in Lao PDR

Lao PDR initially responded to the COVID-19 global pandemic by closing the international borders on March 22 2020. Luang Prabang province was placed in a mandatory lockdown for 1 month beginning late March 2020. The lockdown limited the movement of people leaving their villages, and also limited the movement of people entering villages. Heads of village were often tasked with implementing and enforcing this lockdown, resulting in varied responses. In some villages, heads of villages did not allow health workers to enter, which heavily impacted access to health services as some families rely on outreach as their point of care. In both districts, this lockdown saw major disruption to outreach services, and in some cases, saw challenges in families accessing care outside their villages. Following lock-down being announced, SRC introduced the Continuum of Care Pregnancy Mapping Tool (CoC PMT) to enable identification, risk categorization and continuum of care planning for all pregnant women in both districts[16]. The objective was to ensure continuation of essential reproductive health services. This led to a small upward trend in facility based births and closer 'follow-up' of pregnant women by health care workers until the wet season again presented the predictable access challenges[16]. The IR in Lao PDR was designed to avoid the potential bias of selecting women who had been affected by COVID-19 lockdowns by only sampling women to interview who had given birth after the lockdown in March/April 2020.

Objectives of Implementation Research

Aim and objectives

The overall aim of the Implementation Research, conducted as a CoP, was to generate knowledge on socio-cultural and behavioral barriers and enablers in decision-making and health care seeking for institutional births or in times of maternal health complications. This knowledge will inform design or adaptation of interventions that will improve timely engagement with care and thus lead to reduction in the mortality and morbidity of mothers and their babies.

The objectives of the IR were:

- To understand the process of decision-making mainly related to facility birth, including birth planning and choices made if complications emerge
- To identify facilitators and barriers to use of existing services under normal circumstances and at onset of complications/emergencies
- To explore experiences and perceptions of relevant maternal health services, including local views of their accessibility, acceptability and quality, and how these affect care-seeking
- To document experiences and perceptions of local health care providers, including their opinions regarding community decision-making, facilitators and barriers related to maternal

health care use.

Specific objectives in Lao PDR setting

Whilst the IR has been designed to generate knowledge regarding decision-making for women in four of Swiss Red Cross' country settings, there were also several specific objectives in the Lao PDR setting:

- To build capacity of government counterparts to undertake qualitative research, including data collection and analysis
- To identify facilitators and barriers to use of existing MNCH services in the two project districts and explore if and how SRC's MNCH project activities influenced the use of services
- To explore opportunities for improving programming, in particular as SRC begins the new Integrated Primary Health Care Project in 2021

Implementation Research methodology

Overview

The overall methodology of the IR in Lao PDR was steered by the CoP. The CoP offered guidance and support, and ensured all four countries were aligned in their IR design with a 'parent protocol' in place. The CoP offered an opportunity to discuss and work through challenges as they arose, such as editing the research tools and guides. For example, there were challenges in some countries finding women who gave birth in the last 6 months who were not affected by a COVID-19 lockdown.

The research 'parent protocol' and interview guides were designed by a consultant associate professor from the London School of Hygiene and Tropical Medicine. The consultant engaged with the four countries for their input, and each country was expected to edit the IR tools where needed and provide feedback on challenges in each context to the CoP.

Ethics approval

Ethics approval was granted on 22 October 2020 (attached in Annex 4.) and included:

- Abstract in English and Lao language
- Letter from Luang Prabang PHD supporting the research
- Data collection tools in English and Lao language
- Research overview document in English and Lao language
- Proof of payment
- Documentation of potential risks and actions to mitigate these

Sampling

It was decided in the parent research protocol, which was guided by the CoP, that in each study site (estimated to be between 2-4 sites per country), there should be 4-8 focus group discussions (FGDs) and 15-20 in-depth interviews (IDIs). The Laos context has two study sites: Chomphet and Phonexay districts in Luang Prabang Province, Northern Laos.

To create a sampling plan, the IR took advantage of the CoC PMT system, which had been in place following COVID-19 lock-down. The CoC PMT was designed to help health workers track pregnant women, in particular any high-risk women, to allow for closer follow up and enable care planning.

The Lao context thankfully did not have COVID-19 impacts affecting the women sampled (i.e. the lockdown did not significantly impact women accessing health services other than for those few weeks, so sampling of women was not limited). The decision was made to select women who gave birth at HC or home in the last 6 months. Despite the multi-country research 'parent protocol' being revised to include women who had given birth in the last 18 months to account for potential COVID-19 interruptions to services, it was preferred to interview women who had given birth in the last 6 months in the Laos setting. This would reduce recall bias caused by a longer lapse in time between giving birth and being interviewed or participating in a focus group discussions (FGDs).

In the final sampling plan, SRC overrepresented Hmong and Khmu women in the in-depth interviews, as data indicates these women are more likely to choose home births. The team also were able to use the CoC PMT to select women who gave birth at home with a SBA.

A challenge faced with the sampling was the lack of complicated birth in Lao – two were selected and interviewed, but in reality, one did not have a complication. The lack of pregnancy and birth complications experienced in the Laos IR context is largely due to smaller population size in the study districts and early identification of high-risk pregnancies which are managed either at a district or provincial hospital level.

Husbands were sampled in slightly fewer numbers than women, as men are often cited as the gatekeepers to accessing health services, and their opinions are invaluable. In addition to mothers and their husbands, health workers, village health volunteers and village heads were also included in the sample to situate 'user' views within their embedded community hierarchies along with service providers' views.

Interviews were planned with key MNCH 'external stakeholders' including Save the Children, who have had many years of implementing MNCH activities in other districts of Luang Prabang. Provincial Hospital (PH) Obstetric personnel and Provincial Health Department(PHD) MNCH personnel were also interviewed. These respondents were chosen to explore not only decision making in care seeking but also the core objectives in Laos of identifying facilitators and barriers to service access and how SRC's project activities may influence the use of services from an 'external' stakeholder (provider) perspective. Secondly, these external stakeholders would inform the exploration of opportunities for improving MNCH programming as their collective experience in MNCH service planning and high level MNCH service management or service delivery spanned several decades. This was important, in particular, as SRC begins the new Integrated Primary Health Care Project in 2021 and phases out of the project districts being targeted in the IR.

Given the number of data collectors and time available, 4 catchment areas were selected for in-depth interviews (2 per district), with a different 3 catchment areas selected for focus group discussions (2 in Chomphet and 1 in Phonexay). Within these four catchment areas where interviews were held, a range of women were selected to ensure a broad variety of respondents (i.e. different ethnic groups, different village zones, varying distances to the nearest health facility, and a combination of birth at home and facility births). A total of 33 in-depth interviews were conducted with women/community members and health care workers in the field and a further 54 women participating in the six focus group discussions (FGDs) conducted during village outreach activities. Four external stakeholders were interviewed in Luang Prabang town.

Table 6: Sampling for in-depth interviews

	Khengkhene	Phonthong	Nangiew	Huayking	TOTAL
Mother- birth at Health centre, inc. 2 with complications	3*	1	2	1	**7**
Mother- birth at home with SBA	1	1	0	0	**2**
Mother- birth at home without SBA	0	1	2	2	**5**
Husband- birth at HC	1	1	2	2	**6**
Husband- birth at home with SBA	1	1	0	0	**2**
Husband (birth at home without SBA	0	0	2	2	**4**
Head of village	1	0	0	1	**2**
VHV	0	1	1	0	**2**
Health worker	1	1	0	1	**3**
TOTAL	**8**	**7**	**9**	**9**	**33**

*1 travelled to Provincial Hospital in Luang Prabang for birth

Photo 1: Interviewing a Husband in Phonexay District

Table 7: Ethnicity of in-depth interviewees

	Khengkhene	Phonthong	Nangiew	Huayking	TOTAL
Khmu mother	2	1	1	1	5
Lao Lum mother	2	1	0	0	3
Hmong mother	0	1	3	2	6
Khmu father	1	1	1	2	5
Lao Lum father	1	1	0	0	2
Hmong father	0	1	3	2	6
TOTAL	**6**	**6**	**8**	**7**	**27**

Photo 2: Interviewing a Mother in Chomphet District

Photo 3: Interviewing a VHV in Phonexay District

Table 8: Stakeholder interviews

Organisation	Role	Rationale for interview
Provincial Health Department	Head of Hygiene and Health Promotion Section	One of the most senior counterparts that SRC works within LPB PHD, a direct counterpart of the SRC Health Delegate. Many years of MNCH service improvement management experience
Provincial Health Department	Deputy Head of Hygiene and Health Promotion Section	The most senior LPB midwife with a wealth of maternal health experience and insight, with very clear lessons learned
Save the Children International	Senior Health Officer	SCI works in the districts where SRC does not. The Senior Health Officer was selected to describe activities that differ from SRC, as well as some of the successes and challenges faced
Provincial Hospital	Head of Obstetrics and Gynaecology	Works directly with mothers and their families, knowing personally some of the challenges faced by women. Also has strong insight in to the challenges at the health system level

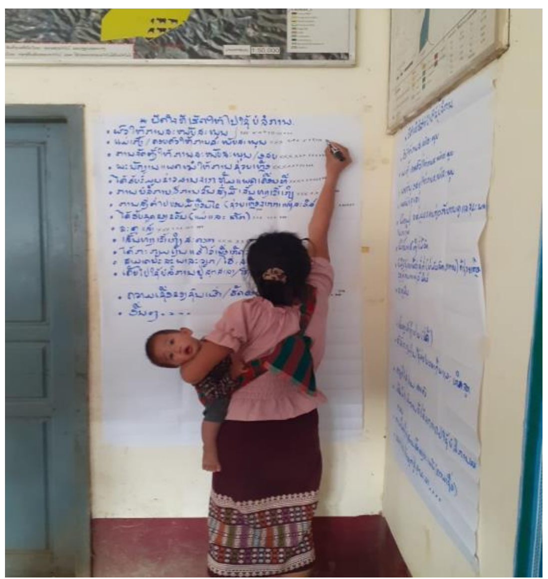


Photo 4: Khmu mother marking barriers and enablers during focus group discussion Phonexay District

Photo 5: Focus Group Community Mapping Chomphet District

Table 9: Focus group discussion sampling

Village	Date of group discussion	Catchment area/nearest HC	Number of women	Ethnicity	Age range	Number of children
Banna	19/20/20	Banna	8	Lao Lum (all)	18-35	1 to 4
Nonggnaxay	20/12/20	Banna	11	Hmong (all)	19-35	1 to 8
Houykhan	19/12/20	Nangiew	8	Khmu (2) Hmong (6)	20-35	2 to 6
Nongchong	20/12/20	Nongchong	9	Khmu (5), Lao Lum (1) Hmong (3)	20-38	2 to 9
Thapo	14/1/21	Thapo	7	Khmu (all)	18-25	1 to 3
Houysala	15/1/21	Thapo	11	Khmu (all)	18-30	1 to 4

Photo 6: Focus Group Community Mapping Phonexay District

Table 10: Ethnicity of women who participated in FGDs

Ethnicity	*Number of women*
Lao Lum	9
Khmu	20
Hmong	25
Total participants	**54**

Data collection planning and moderation of bias

Four teams of three data collectors were used, enabling one interviewer and two note takers for each interview conducted. Ethnicity and gender of interviewers and respondents were considered during data collection planning to address, as best as possible, communication challenges and comfort of the respondent. Bias was moderated also by ensuring an interviewer did not conduct interviews in the district where they worked. Similarly, when planning interviews with key 'external' stakeholders in Luang Prabang, hierarchy and existing relationships were considered. PHD personnel or DHO staff did not interview a senior member of PHD and SRC Luang Prabang also did not interview PHD staff as existing professional relationships were seen as a potential bias. Therefore, it was decided that the M&E officer from SRC Vientiane office would be the most appropriate person to interview both PHD respondents.

Due to no outreach in December 2020 in Phonexay, FGDs could not be held. Two more FGDs were conducted in Phonexay from January 14-15 2021 to ensure both districts were represented. A total of 54 women participated in these 6 focus group discussions. FGDs elicit different responses than in-depth interviews, reflecting community norms and expectations rather than personal experiences, and therefore it was important that time was found to conduct focus group discussions in Phonexay also. The IR training, data collection and data analysis schedule is detailed in *Annex 6.*

Initial IR training

Beginning November 30, a two day IR interactive research training was conducted in Luang Prabang by both SRC in-country team leads and two remote SRC IR team facilitators in Australia (facilitated via zoom video link). A backstopping approach to build in-country research capacity was strongly adhered to. All 11 participants for the Phase 2 and 3 IR training activities had previously been part of the initial SRC Phase 1 quantitative end-line research onboarding. The IR training focussed more on qualitative methods including in-depth interview purpose, challenges and identifying and managing potential bias. A one day interview field test and full day reflection on the field test enabled adaption of tools (interview guides) as necessary. The FGD training was rescheduled for the two teams involved and was conducted before they travelled to the field for group discussions.

<u>Field test</u>

The field test was conducted in Chomphet District Hospital catchment area to ensure an iterative methodological process. Each of the four teams of three interviewed at least one woman. Field test reflection highlighted the need for changes in the interview team structure and the need to simplify language to make questions more understandable for respondents. In order to be able to have a local Hmong speaker in each interview team, the local Village health Volunteers (VHV) were invited to join as "translators", so the views of different ethnic groups could be expressed in their own language.

Data collection

Sixteen days of data collection took place between December 5th 2020 and 15th January 2021, with field photos previously shown. This followed an adjusted schedule matched to outreach activities for both focus group discussions and in-depth interviews conducted at community level (Annex 6).

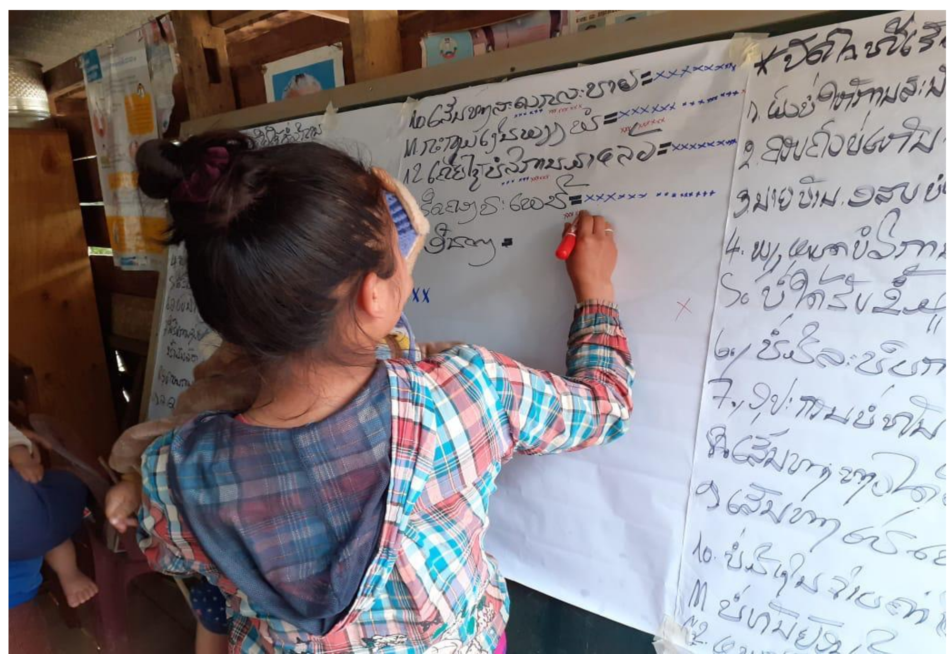


Photo 7: A Hmong mother marking barriers and enabling factors during a FGD, Chomphet District

Data Collection Challenges

When creating the data collection schedule, the team were faced with many challenges and competing activities to navigate. The MNCH Phase 2 endline study was conducted in the weeks prior to the IR so the teams were tired from extensive quantitative field surveys (n=470).[17] Furthermore, the Hmong New Year celebrations takes place in all Hmong villages from December 16th limiting the ability to travel to certain areas, or the availability of some families after this date.

Another significant challenge was the lack of Fully Integrated Outreach (FiO) days which was the point of entry to conduct FGDs in community. During December, both districts postponed their scheduled outreach dates. This led to the IR team brainstorming to identify two small round outreaches planned (single mornings where health workers travel to meet women for ANC or vaccinate several children). Whilst the number of women is usually minimal at these outreaches, the health workers were able to liaise with the village head and arrange more women with children under 5 to be available on the suggested dates. One village was selected to have a FGD on a Sunday, as it is a Christian village and many women congregate after church leading to some in the team worked extended hours. The two final ('extra') FGD's were conducted in late January and the full team of data collectors had then returned to their individual roles. The analysis of these two FGD's was therefore only able to be conducted by the two in-country SRC team leads and the two remote IR facilitators.

Finally, the teams discussed the challenges with notetaking, as women speak in long-winded sentences. SRC reiterated that the IR is to hear the stories of women *from their perspective.* Therefore, taking as detailed notes as possible is the objective, which is why two notetakers are always present. Furthermore, all interviews were recorded to enable cross checking of data if this was deemed necessary, but time and resources were not available to transcribe all interviews. The

SRC remote IR facilitators and in-country team leaders encouraged the teams to confer after each interview to ensure as many of the respondents' actual words and descriptions were in their notes.

Photo 8: Traveling by boat to Khengkhene catchment area in Chomphet District for data collection

Analysis

Analysis of the IR was undertaken as an iterative and participatory process. Two teams would collect data simultaneously over a period of two to 4 days. After teams returned from data collection to Luang Prabang, the two teams would meet with Swiss Red Cross in-country team leads and the IR remote facilitators (always via video zoom) for an initial reflection and analysis session. These 1-day preliminary analysis days occurred following completion of each of the five separate field data collection activities. These initial analysis days would involve guided, open-ended questions using a 'facilitator guide' (see Annex 12) created for the teams to reflect on the data they had collected, and included questions such as:

- Each team – how did interviewing go? Please share who you interviewed? Challenges? What did you enjoy? What went well?
- Pregnancy:
    - What did you learn about why and when women first access services when they first learn they are pregnant?
    - Who makes the decision to use health services and when?
    - What did you learn about why and when women access health services during pregnancy?
    - Who makes the decision to use health services and when?
- Birth:
    - Did all women give birth at the place of their choice? When did they make the choice? Why did they choose to give birth at this place?
    - What were the differences in decision making between the people interviewed?
- Birth planning:
    - Did the women have a birth plan? What plans did women have in place in case of complications and difficulties in accessing health services?
    - Were these different between different women? What were the differences?

Similar questions were asked regarding the views of other village and community stakeholders (VHVs, heads of village and health workers). Focus group discussion preliminary analysis days also were facilitated through an analysis question guide (see Annex 13).

Detailed notes were taken by one of the remote SRC IR facilitator's and these zoom analysis meeting days were recorded. Both remote SRC facilitators where able to probe the team or seek clarification of data and information shared by the teams during these 3 preliminary analysis days. Following this, a process of coding was conducted by the IR remote team – assigning codes to each line of the notes (See Annex 14 for a list of codes created).

All data collectors were brought back together on January 6-8 2021, to reflect more deeply on the data in a three-day analysis workshop which was Phase 3 of the research backstopping process. All 33 community level in-depth interviews, the four external stakeholder interviews and four of the 6 FGD's had been undertaken at this stage. Only the two final FGD's were remaining. To begin this a Phase 3 backstopping, a three-day analysis workshop was conducted. SRC presented concepts of qualitative analysis, including coding, theming and the purpose of analysis. Following the PowerPoint presentation and discussions, the group of data collectors listened to voice recordings of field interviews, which was conducted to refresh them on the IR, as 2 weeks had passed since the group were last all together. This process of listening to the voice recordings was also quality control and an opportunity for the team to build confidence and familiarity with coding. The teams discussed the suggested codes, and then assigned the codes to what they heard in the recording.

It was decided by the IR remote facilitation team to analyse and code the data in time periods (pregnancy and ANC, birth planning, birth, and post-natal periods), as these are each significant and important time periods in their own right. Furthermore, each of these time periods and the care and decision-making during them, have the ability to reflect upon the next time period. Therefore, analysing pregnancy decision-making, and examining the links these have on birth choices and place of birth, was a key analysis framework.

Photo 9: Laos Research team undertaking initial data coding

All information collected during the 3-day analysis workshop was entered in to a Microsoft Excel template by the IR remote facilitation team. This data was then able to be sorted by code/ethnicity/place of birth etc. to draw themes from the data. The data was scoured for trends and consistent codes, also considering outliers as in iterative process to eventually draw conclusions

regarding decision-making during different time periods and the influences on these. The team also created a visual mind map (see following *Figure 16*), placing a mother at the centre, to examine how the themes fit around her and her decision-making.

The team also sat and discussed the following questions to try to ensure all biases and limitations were considered and reflected on during the discussion:

- Were efforts made to *reduce* bias during data collection (lack of privacy, leading questions)
- Did you collect data from different places, types of people, using different tools? (*triangulation*)
- Did *more than 1 analyst* review and code the data?
- Did you seek out *contradiction* and "outliers"?
- Was interpretation discussed with the *research team*?
- Were you able to answer your *research questions*?

To limit bias, two 'external' stakeholder interviews were undertaken by the SRC M&E team member from the SRC office in Vientiane who was assisting the IR work as a team leader in Luang Prabang. The other two stakeholder interviews were conducted by the other SRC IR team lead who does not have any hierarchical or line reporting relationships with those two respondents. The analysis of these interviews were undertaken by the two SRC team leaders in Luang Prabang and the two remote IR facilitators in Australia via video zoom. As with other in-depth interview (IDI) analysis days, these discussions were guided by the IDI analysis question guide, the discussions were recorded and detailed analysis notes were taken by one of the remote facilitators. In these stakeholder interviews and analysis, a focus was also on current service contexts and proposed future service activities seen to influence women's decision making within the framework of barriers and facilitators to women accessing facility based MNCH services.

Considerations and limitations

Due to situational circumstances impacting the methodology and way the IR was conducted, with a heavy focus on backstopping of Lao in-country partners, and facilitation being led remotely from Australia, there were some considerations and potential limitations of this study.

Firstly, the interviews and FGDs were not translated verbatim. The SRC team did not have the capacity nor the resources to be able to translate the interviews. Despite this, every effort was made to ensure that each woman's voice stayed as her own when quoted. However, there remained some limitations of the translation of quotes from Lao to English (i.e., limited Lao vocabulary not translating exactly, nuances likely missed and the capacity of the person translating the words of each woman).

Secondly, there remained some sources of bias throughout the data collection and analysis process and these should be acknowledged:

- The data collectors lacked gender equality, with more male interviewers in the teams, leading to some women being interviewed by men. To mitigate this, and some of the other potential biases, the data collectors were supported to think *deeply* about their own pre-existing ideas and biases, and to *challenge* these through self-reflection
- Language and ethnic differences remained a challenge throughout data collection, this was mitigated by engaging VHVs to assist translation where required, which intern, may have led to some courtesy bias if respondents did not want to disclose certain sensitive feedback to such a close community member who has some inputs into village level health care decisions and reporting to health care staff

- Utilising government staff to collect data was a source of bias due to the hierarchy of government staff, however this was mitigated by ensuring government staff did not interview women in the village or district in which they normally work
- Quality of the data collected improved as the team gained confidence throughout data collection, with earlier interviews not as rich in depth as some of the later interviews
- Due to earlier interviews lacking the same depth of later interviews and challenges with translation, the IR remote facilitation team are not confident that saturation was reached. However, all ethnic groups, both genders and different women's and stakeholders' experiences were represented in the IR to ensure rigour

Despite the lack of depth during earlier interviews and some of the above-mentioned potential sources of bias, the result are presented having mitigated risk of bias as best as possible within the team's capacity and are thought to be an accurate reflection of the views of the people interviewed.

Results

The major themes identified in the data include:

- Feeling safe
- Economic access
- Physical access
- Hierarchy
- Other factors (such as precipitate birth)

Overarching these major themes were: outreach and quality of care**.**

Results are grouped by the different stages of maternal health care (antenatal, intrapartum and post-partum) and by the different respondent groups (mothers and families, local authorities and key stakeholders). Influences on intentions to seek skilled health worker care were seen to be influenced by the different phases of the continuum from pregnancy to the postnatal period.

Pregnancy and Antenatal Care

Confirmation of pregnancy is often the first point of engagement with the health system for pregnant women. For most women interviewed or met with in the IR, the suspicion of pregnancy was associated with certain symptoms, such as delayed period, loss of appetite and fatigue. For women who have multiple children, they first suspect they are pregnant when feeling symptoms that they experienced during previous pregnancies. This was widespread across all ethnic groups and all villages, regardless of remoteness. Upon a woman suspecting she was pregnant, her decision making regarding what to do next varied, with different people influencing this decision. Almost all women interviewed or engaged in group discussions first told their husbands about their suspicions:

" My wife came to discuss with me that she thinks she is pregnant, and so we decide together to see the health worker- HW. (Khmu husband – wife birthed in a HC)

Several women first told their mother, friends or kept their suspected pregnancy to themselves, but it was widely seen that women first told their husbands. Upon discussion with their husbands', some women decided together with their husband to confirm their pregnancy at their nearest health centre (HC) or during village outreach between the 6–12-week mark:

"*My period stopped for 6 weeks and my husband bought a pregnancy test and after that I still was not sure I was pregnant, so my husband and I decided to go to the HC to get my pregnancy confirm*ed". (Khmu mother- birth in a HC)

Husbands generally respected their wives' knowledge on the care of their children. This was seen across all ethnic groups, but less so in Hmong only villages. One husband was happy to pass on decision making about pregnancy care to his wife:

"I rely on my wife's decisions". (Lao Lum husband – wife gave birth at home without SBA)

However, decision-making regarding seeking antenatal care was not always shared between the husband and wife. The following example clearly demonstrates a patriarchal power base for decision making:

"I am the head of the family who makes the decisions".
(Khmu husband – wife gave birth at Provincial Hospital)

Another example of gendered- patriarchal 'gatekeeping' that influenced one woman's agency to seek ANC is highlighted here:

"I don't support my wife going to the Health Center for ANC check up".
(Hmong husband, wife gave birth at home without SBA)

Following discussions with her husband, some women's decisions were influenced by another level of hierarchy within the family. Another husband spoke to this:

"I followed my parent's advice about what they used to practice".
(Lao Lum husband – wife gave birth in HC)

For several Hmong husbands interviewed, pregnancy and childbirth are seen as women's business, with husbands' involvement not important. In the following case, the husband felt completely absolved from any responsibility for his wife and their baby's wellbeing:

"I don't pay attention for the safety of my wife and the baby because it is not my duty".
(Hmong husband, Khmu wife gave birth at home without SBA)

However, Hmong husbands can still hold decision making power around pregnancy care seeking. One Hmong husband shared:

"*My wife didn't tell me she was pregnant and didn't discuss with me, so I didn't know she was pregnant".* He found out when he saw her belly becoming big. He said he didn't do anything to ask her about it, *"I pretended I didn't see; it is up to my wife to decide what to do"*. This same husband went onto say, "*We do not have the family book, so I decided not to take my wife for antenatal care".* (Hmong husband- wife birthed at home without SBA)

As noted earlier, gendered dynamics were one factor in a 'hierarchy' of decision making power that limited women's personal agency in decision making. For example, if a husband or another male family member required the communal transport (such as the family motorbike), it will ultimately be one of them who gets to use it for their own purpose, rather than for his wife's antenatal care (ANC).

Sometimes, husbands were seen to be gatekeepers to their wives' being able to act on their choices, due to external factors rather than patriarchal dominance within their marriage:

"My husband took me to the HC with our motorbike, but sometimes it was difficult to go to the HC because we have only one motorbike and the other family members need the motorbike and use it for the farm. I had trouble with transport for ANC. Then the motorbike was stolen, so we had no transport after that. I had some ANC visits, but I did not go many times."
(Khmu mother- birth in HC)

Other family members were sometimes involved in decision making about accessing ANC. This could vary from them having greater decision making power, or re-affirming what had been the decision already made by the husband and wife before they discussed it with other family members:

"*I felt pregnant at the fourth month, and I told my husband and parents. My parents advised us to go to the HC to confirm the pregnancy. I didn't go to the HC, because the outreach team came. My parents were happy for me to confirm the pregnancy and have ANC when the outreach team came*".
(Khmu mother- birth at home without SBA)

"When I know I am pregnant, I talked to my family and husband - my family and mother told me to go to the HC". (Khmu mother- birth at home without SBA)

"It was my first baby. In the second month I went to the HC to confirm my pregnancy. The health worker said I was 2 months pregnant already. But before I went to the HC, I discussed with my husband and grandfather, and both of them agree with me that I should go to the HC".
(Khmu mother- birth at HC)

Other women changed the initial decision made between them and their husband about where and when to seek ANC once other family members became involved. Often the hierarchy of decision making about seeking ANC was changeable and could include other male or female family members:

"I suspected I was pregnant at my second month already. This was my first baby and I told my husband. My husband and I decided to go to the HC to confirm the pregnancy. During that time, I had headache, nausea and lost my appetite. After discussing with my husband and the grandparents, they said not to go to the HC, because the outreach team will come here and you can go to confirm with the outreach team if you are pregnant. Everyone was happy to wait".
(Khmu mother- birth at home without SBA)

Some women's decisions to attend ANC was influenced by several others including the health care worker:

"My husband and mother, and my friends, advised me to go and have ANC at the HC each month. The health worker advised that 'if you go and have your ANC at the HC then you will know how is your baby, if it is strong or weak', so I decided to go there each month as they suggested".
(Khmu mother- birth at HC)

An external stakeholder (with more than a decade of clinical experience in pregnancy and birth care in Laos) summarised decision making as being dependent on the family status (hierarchy) and interpersonal power dynamics that exists within individual families:

"Decision making depends on family status, sometimes between the parents of the women but sometimes it is by the women and their husband". (Female- External Stakeholder)

There were several households where women were reluctant to attend ANC at village outreach, often due to older family members feeling it is not necessary. However, even in these circumstances, women attended at least one ANC due to village hierarchy being more influential than older family members. Some heads of village shared that:

"*If women do not go for ANC or to give birth at the health facility, we will not support or help the ones who don't go".* (Male- Head of Village)

The district government will give a bad score for the head of village if pregnant women do not attend ANC or give birth at the health facility. Some heads of village interviewed took this directive more seriously. When one woman did not want to have ANC, the head of the village asked her to go and said:

"*If you do not go to the health centre for your ANC, then we will discharge you and your family out of the village".* (Male- Head of Village)

One village health volunteer (VHV) described how he and the village head (also male) used veiled threats or ultimatums to encourage women to attend ANC and go to the health centre for birth:

"Me and the head of village also give the women health education, if they do not go to HC for ANC and when they give birth, and if there are any complications, we won't help them". (Male- VHV)

For some women, particularly those located in zone 3 villages with poor road conditions, accessing ANC was challenging. Some women noted that waiting until the village outreach team came to the village was the decision they made with their husband. As one woman from an area poorly serviced by roads and accessible mostly by river and boats shared:

"*If there was no outreach, then I would never have ANC. I have to wait for them. If there is no outreach team coming, I would just stay home and continue normal work, living as other people."* (Khmu Mother- birth at home without SBA)

For another woman, her husband made the decision to have ANC during outreach due to 'dificulties' in taking her for ANC at the HC and he also considered the care was the same:

"My husband complained about the difficulties to get to the HC and encouraged me to have my ANC at the outreach because it is the same in his opinion". (Khmu mother- birth at home without SBA)

For women nearer to health centres or with their own transport, many travelled together with their husbands to confirm their pregnancy and subsequently have their ongoing ANC. Accessing ANC was often challenging during the rainy season. Some women from zone 2 villages also identified the lack of availability of funds for transport as a barrier to attend ANC at a HC:

"Each time I travelled to the HC on our own motorbike and my husband drove me there. During the drive to get ANC, the road was quite bad and was quite challenging during rainy season, some time we have no money for 1L of gasoline, and so I had only ANC 4 times at the HC."
(Khmu mother- birth at home without SBA)

Poor road access, lack of available transport or lack of funds to pay for transport all limited many women's ability to express decision making agency- to actualise their choice to access ANC at a HC.

There were frequent examples of women not attending their scheduled ANC appointments at the HC because there was no transport, or they did not have money to pay for transport:

"The road is quite bad to the village, and also my husband has no vehicle to bring me to confirm pregnancy or for ANC. We have no money to get to the health centre for ANC."
(Khmu mother- birth at home without SBA)

Some women had extra financial hardship with the dual challenge of travel by road and river required to access ANC:

"For me, access to the health centre is available, but I have no money to pay for the boat fee or to pay for the transport from the village to HC. Even if I can get a taxi boat from the village to LPB, they won't stop at Khengkhene HC because they say it wastes their time and it is difficult for the boat to stop and drop me there. They refused". (Khmu Mother- birth at home without SBA)

Small round village outreach occurs monthly in the two target districts, with all pregnant women able to access ANC regularly without transport or costs associated with traveling difficult distances to the health centres. For many women, outreach was relied on to reduce access barriers for ANC:

"They told me I was four months pregnant. I never went to the HC for ANC. I went every month for ANC at outreach, because to go to the HC is very difficult without a motorbike and it's very far".
(Khmu mother- birth at home without SBA)

Small round outreach rounds were understood to occur regularly so women were able to rely on this service coming to their village as this Head of Village noted:

"First reason I think women do not go to the health facility is because outreach team comes to the village every month, so they know the outreach team will come every 25th so they don't need to go to the health facility". (Male- Head of Village)

Many health centres in the two target districts have health workers trained to attend pregnancy ultrasound at village level during outreach. Some women did not attend ANC at the HC as their husbands would prefer that they wait until the village outreach team travelled to the village. Other husband's (noted earlier) believed the services were the same at outreach as it would be after travelling to the HC for ANC. Women and husbands interviewed were generally well aware of the importance of ANC and felt strongly about knowing the safety of their baby and themselves.

"The reason I went to see the HW at outreach for first ultrasound was to know how the baby is and what is the sex of the baby, to make sure the baby is safe". (Khmu mother- birth at HC)

Outreach was discussed by respondents as an important opportunity to have their pregnancy confirmed and to have regular, ongoing ANC care that they looked forward to attending:

"This was my second baby (first one was born at HC). I felt I was pregnant at the second month, and the outreach team came so I went to see them and they did the urine test and I had my first ANC with the outreach team. I wanted to make sure the baby was healthy and I felt comfortable and wanted to go to outreach. My husband and family were happy for this. I had 6 outreach ANC visits".
(Khmu mother- birth at home without SBA)

Outreach contributed to a feeling of safety due to the stronger relationships being established between health workers and women because the care was regularly accessible (without cost) to women at village level:

"We wanted to make sure the baby was normal. I cannot remember how many ANC I had - but it was many. All at outreach. We followed what the HW said each time". (Khmu Mother- birth in HC)

Many women acknowleged that they wanted to keep their baby safe by having ANC and were reliant on outreach to be able to fulfull this aspiration:

" The HW advised me to have ANC each month, she advised this to make sure the baby is safe but because the road is very bad so I didn't have ANC at the HC as the HW said. I had my ANC every time during outreach". (Khmu mother – birth in HC)

Outreach was also valued as an opportunity for women to receive health promotion messages from HW and to confirm the progress of their pregnancy:

"After this, the outreach team came so I joined the outreach and had my first ultrasound with the HW at the outreach. They advised me to eat as much as possible and a variety of foods. The HW told me again that I was two months pregnant". (Khmu mother- birth at HC)

Health care workers also spoke about the importance of building trusting relationships with women during the ANC period through outreach. They also engaged village members in health promotion during outreach:

"Women come to the HC because they feel confident and safe, also they trust the health centre staff. They trust the staff because each month the staff go for outreach and give health education and also the chief of village does the health education with the women". (Female- HCW)

Health care workers also sometimes informed women outreach was a suitable 'second option' to ensure women received ANC care to keep the mother and baby safe:

"At the HC they said I was already 3 months pregnant. They advised me to eat fish, fruits and eat more than usual. Also, to go to the HC for ANC, and in case I cannot go, they said I can wait for the outreach team. This is to make sure the baby and I are safe."
(Khmu mother- birth at home without SBA)

As another example of patriachal decision making power- one husbands 'decided' for his wife about attending ANC during outreach to make sure the baby was healthy:

"I thought I was pregnant at 1.5 months, I found food boring and lost my appetite. I told my husband and my mother, that I think I was pregnant. My husband decided that I should go to see the outreach team to confirm. To make sure the baby is normal and healthy. I had ANC with the outreach team four times". (Khmu mother- birth at HC)

One village health volunteer (VHV) described the feeling of shyness as a deterrent to seeking care as well as the problem of child care if the mother needs to leave the village to seek ANC at the HC:

"Women do not come to HC because they are shy, and because they don't have money to pay for transport and fee for a vehicle. They do not have their own vehicle. Also – there is nobody to take care of their other children and home". (Male- VHV)

One external stakeholder (with over twenty years of maternal, newborn, child health experience) identified three key areas that challenge women to seek facility based care during pregnancy, birth and in the postnatal period with women feeling shy also being one of them:

"For the challenges that the women have during this time, difficulty remains transportation and road access, finance to pay for transport and some of them are quite shy with the health workers". (Male- External Stakeholder)

Of all the women interviewed or involved in group discussions, only one woman did not want to have any ANC visits at all. This was an older Hmong mother who felt she had enough personal experience and information to not require antenatal care:

"*I did not want to go to outreach for ANC, I already feel like I have had good information and I did not need any more after my other experience".* (Hmong mother – birth at home without SBA)

Another important theme that was linked closely to outreach, was the valuing of quality of care provided during antenatal visits. For example, one outreach team referred three women interviewed to have their antenatal care at the District Hospital (DH), because the health worker had told the women they were considered high risk (young mothers or twin pregnancies). Each of these women were able to articulate the risks associated with their pregnancy and why they felt it important to listen to the advice of the health worker. All three women subsequently had their antenatal visits at the DH, despite the extra distance and travel costs associated with this. The women trusted the health workers and felt their care was of good quality:

"I followed the antenatal appointments every month at the District Hospital, because I wanted to know if the baby is strong or weak. My family also encouraged me to check my baby at the District Hospital". (Khmu mother- birth at DH)

"I followed the health worker advice to go to the DH because I am a young mother and at risk of complications. I was afraid of this and followed the HW advice". (Hmong mother- birth at HC)

Outreach also offerred opportunities for health care workers to offer education to families on pregnancy and birth risks and to describe the advantages of birthing in a health facility:

"First reason is because each time when we go for outreach, we have health education with all women in the village about pregnancy and birth. When the outreach team goes to the village, we have posters showing 'give birth at the health centre and hospital' and we also use the projector to show films about ANC/giving birth/PN". (Female- HW)

Many women appreciated the advise and education given during the antenatal period. They experienced a positive and trusting relationship with the health worker which enhanced their feeling of safety and the overall quality of their antenatal care experience. One woman describes how important the relationship with her antenatal care provider was to her as she approached her birth:

"I planned to give birth at the HC, and when I went into labour, I travelled to the HC. This was my fourth baby. I hoped to travel to the HC and to find the birth attendant would be Miss J, when we arrived Miss J was there, so we felt safe and happy". (Hmong mother- birth in HC)

Outreach was clearly evidenced as a bridge to accessing ANC when travel costs, lack of available transport, being away from other children or poor road / river conditions prevented travel to the health centre. For other women and their husband's, outreach represented a convenient option for

antenatal care that did not incur travel time or costs. Outreach also offered opportunities for multi-method reproductive health promotion messages to be delivered at village level with a focus on supervised birth in a health facility. Finaly, women being able to access antenatal care during outreach was an opportunity for women to develop relationships of trust and familiarity with health care workers.

Birth

Women who planned to and were able to give birth at a health facility

Women could give birth in any of the three levels of health facility service capacity from health centre (HC- lowest capacity) to District Hospital (DH- next level capacity) or the higher level Provincial Hospital (PH) situated in Luang Prabang town. Women were encouraged by health workers to plan for a birth in the Provincial Hospital in 'high risk' situations as defined in the Government of Laos Mother and Child 'Pink Book' used to record the woman's ANC, labour, postnatal and child health history. Some examples of high risks situations would include twin pregnancy, breech presentation or severe thalassaemia. The Provincial Hospital was the only level of facility to offer Comprehensive Emergency Obstetric and Newborn Care (CEmONC) including anaesthetic, operating theatre and blood transfusion services. The Provincial Hospital also has qualified medical doctors specialising in Obstetrics and Gyneacology and paediatric trained doctors available 24/7.

The two District Hospitals and the seventeen Health Centres offer basic Emergency Obstetric Care services (BEmONC). The District Hospitals also have a medical doctor available or 'on-call' and several midwives on site 24/7. All but one of the 'lower service capacity' health centres (HC) did have one midwife on staff who may be available 'on-call' for labouring women but this was not guaranteed. Women who had a suboptimal obstetric history (mild hypertension, anaemia or several prior pregnancies for example) were encouraged to plan to birth at the District Hospital if they were reluctant to go to the Provincial Hospital in Luang Prabang town. This would reduce referral and travel time to the Provincial Hospital if complications arose. Travel time from one of the health centres, where road or weather conditions could make referral lengthy or impossible was seen to frame the recommendation for planned district or provincial hospital birth- dependent on health worker assumed 'risk' status using the GoL Pink Book risk categories.

For women who planned to and were able to give birth at one of these three levels of health facility the factors that influenced their decision varied and these were not always framed by health worker defined risk. However, there were some trends across the women. All women who planned to give birth at health facility attended ANC visits, either at outreach or at the health centre. Outreach was proven to make ANC more accessible and to be a strong influence on women giving birth at a health facility. However, some women who attended outreach for ANC whether for convenience or with their husband's encouragement, for a variety of different reasons, still gave birth at home without a skilled birth attendant.

Outreach was also a time where women were able to strengthen their relationship with health workers and feel safe in their presence, as well as trusting them. Some women were able to identify the risks that health workers had shared with them during ANC, reinforced during outreach, which encouraged them to travel to higher level health facilities for birth.

"I got advice from the health worker that I should give birth at the health centre or district hospital not at home, because I am a fat mother and it looks like I would have difficulties giving birth. I gave

birth at the District Hospital because when I heard the health worker say that to me, I decided better not to risk giving birth at HC and then they refer me, so I go straight to the District Hospital".
(Khmu mother- birth at HC)

Two women were identified as having higher risk pregnancies and were advised by the health worker to plan to birth in either the District Hospital (DH) or Provincial Hospital (PH). Different circumstances arose that prevented each women from birthing in the higher level health facility as planned. However, they both spoke of feeling happy with the care they received at the 'lower level' health facility and their positive relationship with the health worker was fundermental to this:

"I planned to give birth at the DH, but in reality, I gave birth at the HC. I had planned to give birth at the DH because it is more modern and nearby, and it has an ambulance and have referral available easily and not to lose time. I gave birth at the HC because I had pains, and I was not sure if I was going to give birth, so I went to the HC to check if it is the time. When I arrived, the nurse said my cervix is already open and I will give birth soon. I stayed there for three days after birth, and then went home. I was very happy to give birth at the HC with the support of the health worker because I thought the HC was not as good as the DH, but in reality, the HW at the HC was very good to me".
(Khmu mother- birthed in HC).

"I planned to give birth at the PH but in the end, I gave birth at the District Hospital. I wanted to give birth at the PH because it is bigger and more modern and my parents and husband wanted this, because they wanted me and the twins to be safe. The decision changed because I went to the DH for my ANC appointment. I also went there to check if it is time to give birth – I didn't feel any pain. When I arrived there, I felt like I needed to go to the toilet most of the time and after the examination, the nurse said it was nearly time to give birth. So after a few hours I gave birth at the District Hospital. It was good with the nurses there and easy, so I stayed there".
(Khmu mother- birthed at District Hospital)

Most women and family members related birth in a health facility with safety for the mother and their baby. Health care workers and all of the external stakeholders expressed the belief women predominately made decisions to birth in a health facility based on safety:

"The women want to have their baby safely, also the mothers be safe because there are nurses and midwives at the health centre". (Male- HW)

"The reason why they do come to PH is because they thought that the nurse and midwife can save their live". (Female- External Stakeholder)

"Women also come because they believe and trust the HC because they have been trained to save the woman's life" (Female- head of HC)

The quality of care offered was also framed by mothers in terms of the relationship with their care provider and not just about feeling safe if complications arose. Some women spoke of feeling well supported by health care workers and comfortable in a health centre whilst also trusting and having confidence the health care workers could help them if complications arose:

"I was very happy to give birth at the HC, I loved the comfort there and there was the nurse and midwife who supported me and took care of me and my baby most of the time. They followed me most of the time, in case I had any complication, they could help me". (Khmu mother- birth at HC)

Other women expressed this feeling of support and confidence in the health care workers' capacity in the context of being familiar with them:

"I planned to give birth at the HC, because at the HC there are nurses and midwives to help me, in case of any complications, they can help me. The HW and nurse at the HC are very good with the patients, at taking care of me. My house is near the HC, so I am familiar with the HWs there". (Khmu mother- birth at HC)

At times their were gendered and hierarchical influences on women's decision about place of birth that were also framed in the context of confidence in health workers to deal with complications:

"I planned to give birth at the HC, and my husband and grandfather supported this. They advised me also to give birth at the HC, 'if they cannot help you to give birth, then they will refer you to provincial hospital'… so I was happy to go to the HC". (Khmu mother- birthed in HC)

Several women framed their decision making around prior personal birthing experiences or stories of birthing experiences whether shared by family (as above) or friends:

"The two of us (husband and wife) decided to have the birth plan together at the HC because of our experience. We had seen our younger sister give birth at home and it was very difficult, and we were afraid of the risk, that it is not safe for our life". (Khmu mother- birth at HC)

Some women had previously given birth at a health centres and thought the experience was good:

"This is my third child, the two other children were born at HC and I thought it was a good experience, so I had this one in the HC". (Hmong mother- birth at HC)

One well experienced mother had birthed at home previously and acknowledged her husband as the decision maker about care seeking. Following a difficult birth and a positive experience at a health centre her husband was happy for her to go to the health centre for the next birth. Decision making around care seeking was more likely to be led by the husband in Hmong ethnic families:

"My husband is the decision maker, he wanted me to give birth at the HC this time. My first two children were born at home. The third child I had a lot of abdominal pain for three days without giving birth, so I went to the HC to give birth. We had a positive experience at the HC, and had experience with a difficult birth. We did not want another difficult birth at home". (Hmong mother- birth at HC)

During outreach, health workers (HW) also describe the 'mother/baby kits' that are gifted to mothers if they birthed in a health facility (a MNCH2 initiative). One health worker also noted the importance of building trusting relationships that could overcome the mothers feeling 'shy' about seeking health facility care during childbirth:

"*During health education we explain that if you give birth at HC then you get a gift from the HC and also your baby/self will be saved. When we go for outreach, we build the good relationship with the women in the village, so it makes the women feel comfortable and like they want to come and give birth at the health centre, also to help the mothers not to be shy because they have a good relationship".* (Female- HW)

One external stakeholder also identified the importance for health workers building trusting relationships with women through regular health education, so they will want to come for supervised birth in a HF, as they will understand the benefits of doing so:

"The health worker should give more health education at outreach about the good and bad things that happen. If most of the time the health worker gives this education, then the women will understand. For example, most of the problems that happen for the women is that they are afraid and they won't come, but if the health workers give more health education about the benefits for the women and show the bad outcomes if they don't come during pregnancy and birth, then this will make them understand and try to come". (Male- External Stakeholder)

Another health worker also reiterated the importance of using outreach to overcome women's reluctance to come for supervised birth in a HC by consciously working on building trusting relationships with women:

"The health workers, especially during outreach time, they have to sit with the women as a group of pregnant women or mothers with small children, every time they go for outreach and build the relationship with them more and more, to make them comfortable". (Male- HW)

As noted earlier, there were three levels of care available to women to give birth. One of the seventeen small, rural health centres (mainly nurses with a history of on-site BeMONC training with usually one 'on-call' qualified midwife) and one District Hospital in each District with 24/7 medical doctor and experienced midwives available. The Provincial Hospital offered the highest level of care with specialist obstetric and paediatric doctors, highly experienced midwives, operating theatre and blood transfusion services also were available as an CeMONC facility. As noted earlier, the district and provincial hospitals both had experienced midwives and doctors available at all times, with specialist Obstetricians and Paediatricians available at the provincial hospital. Some women felt that the district hospital (DH) or provincial hospital (PH) would be safer than their nearby health centre. They spoke about them having better equipment, having more staff on duty at any point in time and also having more experience in helping women who experience complications:

"I planned to give birth at the DH, because at the DH there are more modern equipment than the HC so they can help me give birth. They have more staff and midwives to save me".
*(*Khmu mother- birth at District Hospital)

One external stakeholder acknowledged women would come to the Provincial Hospital because of its higher resources and health care personnel capacity:

"Provincial hospital is more modern and has more equipment, and has more experienced health workers who can help them, particularly during an emergency". (Female- external stakeholder)

At times, there was a perception that the lower capacity health centres did not offer the human or equipment resources to keep childbirth 'safe' for the woman. As with some ANC decision making, some decisions to birth at the district hospital were shared between the woman and her parents with the husband seen to concur and be proactively enabling of this shared decision. In the following case, the husband believed life-saving services offered by the health staff would again be superior at the District Hospital. His decision, as others noted previously, was informed by a perceived potential risk of complications for the woman and where complications could safely be managed. Of interest is in both of the following cases, there was a disconnect between the planned place of birth (district hospital) and where birth actually took place (local health centre):

"Decision making was by me and my parents. My husband planned to bring me to give birth at the District Hospital because my husband said that it is much more modern at the District Hospital and has more staff and midwives to save me". (Lao Lum mother- birth at the HC)

One mother's decision was based on the ease of transfer from the District Hospital (DH) to the higher level Provincial Hospital (PH) should complications arise:

"I planned to give birth at DH because they are more modern and nearby, and they have an ambulance and have referral available easily and I would not lose time if I need to be referred". (Khmu mother- birth at HC).

As noted earlier, several women bypassed their nearest health centre and instead gave birth at the higher capacity level District or Provincial Hospitals, with one woman choosing the private Military Hospital. For some of these women, the road access or available transport facilitated their ability to travel the greater distance because they lived on main roads or had their own family transport. Similarly, there were some women who chose to give birth at the DH or PH because the smaller health centre was actually more difficult to travel to because of poor roads or bad river access, and traveling to the Provincial Hospital (PH) or District Hospitals (DH) proved to be easier as described by this head of village:

"Second reason is because there was no passenger boat to pass the area, so it is difficult with transport to the health centre. Third reason, there are some boats that pass by but they don't take other passengers from nearby villages. For example, if they travel from village to the health centre, it's just a little journey, but they make more money if they find passengers that travel all the way to Luang Prabang (where the Provincial Hospital is). Fourth reason, the boat is very small, it is not big like the boats that go to Luang Prabang, so they are afraid to travel in the small boat. The big boats are much more expensive." (Male- Head of Village)

One other woman explained her reasons for bypassing her nearby health centre was to avoid having a male nurse care for her in labour:

"I was too shy to give birth at the health centre with a male midwife or nurse. I think that at the PH there are more women. On the day I felt labour pains, I called the head of the HC and found out that she was not on duty, but a man was. So I chose to go to Provincial Hospital ". (Khmu mother- birth at PH)

For women who gave birth at health centres, physical and economic access did not always cause barriers for them to reach the health centre. Some families sometimes had their own transport, including cars, motorbikes or boats which enabled them to reach a health centre to give birth.

"I have my own boat, so I can travel to HC at any time I want to". (Lao Lum woman- birth at HC)

"I planned to give birth at the HC, and I did. I spent two nights there before returning back home. I travelled there by motorbike with my husband, we have our own motorbike". (Khmu woman- birth at HC)

For women who did not have access to personal transport, traveling became much more challenging. Women and their families borrowed transport (tractor, motorbike, car or boat) or asked a neighbour to help them travel, reimbursing the fuel costs. For a woman in Thapo, she shared:

"*In reality, when I started to feel the pain, at 4pm, my husband took me to the HC. At that time, my husband borrowed a neighbour's motorbike and brought me to the HC".* (Khmu mother- birth in HC)

Similarly, women who gave birth at health centres often recalled that during outreach and ANC at health centres, they had been told by health workers that birth in a health facility is a free service, without costs associated. Furthermore, when asked during a FGD about knowledge of a food allowance fund during their time waiting at the HC, all women claimed that they knew the health facility would support them with the cost of food, receiving 20,000 LAK/day for food allowances. However, two women did not receive this money as they were not on the 'poorest household' list so this financial support was not available to all women. One woman from Nangiew who was on the poorest household list spent 1 week waiting at the health centre and shared:

"I received 20,000 LAK/day, and it was enough. I knew about the money available because of outreach." (Khmu mother- birthed at HC)

One external stakeholder confirmed the importance of explaining the free maternity care (and the gifted mother/baby kits) to women and communities during health education:

*"Also, to try and give health education to the community and at the health centres where there are many benefits, like it is free of charge, and if you give birth, you get the baby kits and other benefits. The health service will help the mother and baby's safety". (*Male- External Stakeholder)

One woman had contact with all three levels of health facility during labour and birth and incurred costs for Provincial Hospital (PH) care despite maternity care in a public facility being free of charge in Lao. This demonstrates that health facilitites can still charge fees despite this being against the Government of Laos principles of free maternity care. She viewed these efforts and expense as worthwhile because of feeling happy and safe with the health care workers:

"I went to the HC after feeling pain, the health worker told me I would have difficulty giving birth, so they told me to go to the district hospital, who then told me to go to provincial hospital. I gave birth naturally and stayed at the provincial hospital for two days. I felt happy that I and the baby were safe, and I felt safe with the staff there." (Khmu woman- birth at PH).

Finally, decision-making between husbands and wives, with women feeling supported by their husbands was identified as a strong influence on facility birth.

"I felt very happy about this, I felt happy that my husband supported me, even though we have no motorbike, he found one to take me. We paid only gasoline 10,000 LAK for the bike".
(Khmu woman- birth in HC)

During the focus group discussions (FGDs), most of the fifty seven women identified the support of their husband as the strongest influence they felt on facility birth, across all ethnic groups. Women who birthed at facilities felt their husbands played a key role in their birth planning. This was particularly important when access during the wet season or the potential for complications saw women needing to wait at the health facility until labour began:

"They asked a relative to bring me to wait at the District Hospital. The health worker advised me to go to DH to be safe, because I was a young mother. I was happy with this, as this baby was bigger. I waited 1 week to give birth before the baby was born. My husband waited with me. My husband has a motorbike so we travelled together". (Khmu mother- birth at DH)

Husbands did not often attend the health care worker's ANC examinations with their wives. Women were often reliant on their husband to respond, with support, to what they reported had been the health care worker's advice. In this way the decision making was shared between the woman and her husband:

"I gave birth at the District Hospital. I chose to go there because I heard the health worker say that it was best for me to go there rather than the HC. I decided it was better not to risk giving birth at HC and then they need to refer me. Better to go straight there. I went with my husband by motorbike to the DH and stayed there for three days and then returned home. My husband took me on the motorbike". (Khmu mother- birthed at DH)

Contrary to this, as noted earlier, decision making was more likely to be led by the husband or other family members when the women was of Hmong ethnicity. One woman was reconciled to agreeing within any decision her husband made regarding care seeking for her pregnancy or birth:

"My husband only made the decision. My husband thought that at the HC there are nurse and midwives who can save my life, and there is modern equipment. I agree with whatever my husband says". (Hmong mother- birth at HC)

Women who planned to give birth at home but gave birth in a health facility

Some women planned to give birth at home because their own mother had 'easy' births at home. In these families, labour and birth was seen to be a safe, family event to take place in the village. However, their were examples where they responded to events during labour by changing their plans to birth at home:

"I planned to give birth at home, because my mother experienced giving birth easily at home. So I thought I might give birth as easily as my mother. But because I had pains for a long time, I decided to go to the Provincial Hospital". (Lao Lum woman- birth at PH)

This change of plan was enabled by the woman's family having the means to travel from home to the Provincial Hospital:

"My family has one big boat – I travelled from Pakbeng to Luang Prabang, in our taxi boat with my husband driving me". (Lao Lum mother- birth in PH)

Another woman planned to birth at home but also had a long labour and decided to go to her nearest health centre (HC) where she gave birth:

"I planned to give birth at home because my mother did give birth easily at home. I had longer pain, long labour, so I decided to travel by boat to the health centre to give birth".
(Lao Lum mother- birth in HC)

Planned place of birth (whether at home or in a certain level health facility) did not always align with the actual place of birth. Both decisions (planned or actual) were often framed within perceived risks and the capacity of different places to deal with complications- to keep the woman 'safe'. The stories from the field often demonstrated the change of plan could occur during labour.

Women who planned to give birth at home and gave birth at home

There were several women interviewed who planned to give birth at home, and what influenced this decision was variable, just as women deciding to birth in a health facility. As noted earlier, perceived good quality of care women previously experienced in a health facility (or stories from other women's birth experiences) had a strong influence on women choosing facility birth. The first reason cited why a woman would plan to give birth at home, was also due to the quality of care previously experienced at a health facility. Quality of care was seen to represent competency of health workers which included knowledge and skills (that kept women/babies safe) and behaviors that were respectful and kind so women trusted them. Even if the physical or equipment environment of a health facility was good (and health worker skills were apparent) - if the health workers did not treat the woman (or family) with respect and kindness, families were discouraged to use facility based care as they did still did not feel happy or safe with the care they received. One woman had her first baby at the health centre but felt that she did not receive quality care from the nurse and midwife during this birth. She recalled that:

"*The midwife played on her computer ignoring me, even my husband cried out many times before the midwife helped out".* (Khmu mother- birth at home without SBA)

This highlights a relationship disconnect between the health worker and the woman (and her husband), where the health worker did not explain what was happening to either of them or offer continuous support. It also evidenced, unkind health worker behaviour (ignoring the labouring woman in this instance) as being a significant disincentive to choosing facility based care for subsequent births.

Other aspects of this woman's care in the health facility did not align with what she would have been able to do or practice if she was birthing at home. She noted that she thought she would be 'more comfortable' labouring and giving birth at home because '…the midwife made me lie down' when she laboured and gave birth at the health facility. It is known many women prefer and are able to labour and give birth in an upright position when at home as this tradition of supportive care is offered to women. This woman also recalled when she gave birth at the health facility the baby was not washed after birth (which is recommended by health workers due to the protective properties of vernix). Women are being encouraged to have uninterrupted skin to skin contact with their baby for at least one hour after birth as part of the Government of Laos Early Essential Newborn package of care. However, if she gave birth at home, this mother knew the baby can take a shower with hot water:

*"If I give birth at the health centre, the baby has no shower. But if I give birth at home, the baby can take a shower with hot water". (*Khmu mother- birth at home without SBA)

Not being able to labour and birth in a position of choice and the baby not being showered after birth evidenced, in this case, a woman's personal preferences as well as culturally informed practices, did not align with the care on offer in the health facility. It is clear this woman was not prepared or did not understand why her baby was not showered straight after birth which speaks to a lack of health education for this family or the care provider lacking understanding of the woman's cultural practices or preferences. As with neglecting the calls for help, communication between the couple and the care providers was lacking and strongly influenced this couple's plan to have their next baby at home in their village where they felt they could have better quality of care.

Despite this woman's negative experience, her family was not completely opposed to birth at HC. In fact they were supportive of taking her, but only if they felt complications arose. This infers feeling

safe and trusting of the care provider, from a woman's (and families' perspective), included feeling safe with behaviours that are kind and supportive as different in fact, to feeling safe if complications arose where health worker knowledge and skills were prioritised. This evidenced shifts between priorities can occur during decision making as a continuum throughout the experience of pregnancy (ANC care seeking) and initial birth planning with labour also presenting another juncture for a change in decision making. As noted earlier, some women planned to birth at home but travelled to a health facility during labour when their labour was no longer 'easy'. It is likely they no longer felt safe to continue labouring at home without the availability of assistance from a trained health care provider in an equipped health facility.

It was shared that some families will engage with a Sharman (traditional healer) to conduct a blessing ceremony (a 'baci') before the birth, but this was not seen to be a big factor inhibiting facility birth due to the timing of this blessing ceremony. In recalling the FGDs, the DHO and PHD data collectors shared:

"Before giving birth, the women ask a Sharman to come and do a 'baci', then the Sharman will ask the women to stay in the house for three days and do not leave. The Sharman believes 'the bad spirit will catch the soul of the baby or the women' if they leave the house. The women said they have to (and would) follow what the Sharman says. The women say that they have to give birth at home if they go into labour during those 3 days but typically the baci is a month before giving birth so it is not a big problem". (Male and Female- PHD and DHO data collectors)

As noted earlier, the Hmong ethnic group (and Khmu to a lesser extent) have strong beliefs in the spirit world with animist practices embedded in daily life in Hmong villages. Lao Lum ethnic group (the dominant ethnic group with Lao Lum language being the linga franca of Laos PDR) are nearly all practicing Buddhist without this strong belief in the spirit worlds affecting daily life.

The second reason cited why women planned to birth at home was family hierarchy.

One Hmong mother felt positively about giving birth at the health centre, because she had previously had a stillbirth and wanted her next birth to be at a health centre. However, the pregnant woman's mother had reinforced to her that she herself had given birth to all her five children at home (in a Hmong village) and it had been safe. In the end, this woman went into labour at night, and despite her fears and knowing that the care would be free if at the health centre, her mother helped her give birth at home.

"After I gave birth one time, the baby was stillborn. This time I chose to go to the HC, I was afraid of the last experience. But my mother also had the decision (sic). She said I have already had 5 children at home". (Hmong mother- birth at home without SBA)

Many family and in-laws believed birth at home is safe, but were beginning to respect the health workers and head of village encouraging women to give birth at health centres. However, health workers interviewed claimed that family members often felt that if women have given birth at home to "*four or five children already, then the other one has no worry, you should be safe"*. This is in fact, contrary to the recognised categorisation (and 'Pink Book' described) 'obstetric risk' if women had more than four babies previously.

Some women's views supported these HW perspectives of experienced mothers feeling safe when labouring and giving birth so they did not feel a need to seek skilled birth attendant care. One Hmong mother had experienced other births at home without complications so she felt she knew

herself and would follow with her next birth at home. She also did not directly choose to engage in ANC until just four days before giving birth, when the outreach team noticed her pregnancy:

"I had just one-time ANC and then gave birth. The previous outreaches I did not attend. This time I brought my other child for immunization, and the health worker saw that I was pregnant and checked me. The health worker told me to give birth at HC, but I know myself, that most times I give birth easily and during night-time so I decided not to go".
(Hmong mother- birth at home without SBA)

Another reason cited why women planned to birth at home was due to physical and economic access barriers. One woman had borrowed money for transport to the health centre for her previous two births at the nearest health facility, but had not yet repaid the debts from her previous births. Her husband and herself both would have preferred to be able to give birth at the health centre, but realised their financial status would not allow this to happen so they prepared to give birth at home.

"We had borrowed money for the previous births at HC, but we were unable to pay the cost back. We waited until the last minute, if any complications we would have gone to the health centre".
(Khmu mother- birth at home without SBA)

As was previously stated, most women recalled that they knew the cost of giving birth at the HC was free, but one woman had moved from Vientiane province and her family had no family book to show that they lived in Phonexay district, instead their family book listed them as Vientiane residents. For this woman and her family, she knew that if she went to the HC, she would have to pay 100% of the costs because of the lack of family book showing their Phonexay residency status.

Health workers and VHVs cited several more reasons why women were reluctant to give birth at a health facility, and these included women feeling shy or ashamed with the nurse or midwife. This echoed the views of some external stakeholders as reported earlier. One health worker explained:

"Women feel shy or ashamed with the nurse or midwife, the women are afraid the nurse will see their vagina. Traditional belief is a challenge, for ethnic minority. Some women are still shy to open themselves, they don't want the health worker or midwife to see their body parts, especially for Hmong and Khmu". (Female- HW)

Similarly, language barriers between health workers and community can remain, if health centres do not have a speaker of each minority language present when conducting outreach or when the woman presents at the health facility for care:

"The language barrier is a problem for some women to communicate with the nurse/midwife. Khmu and Hmong language". (Female- HW)

Women who planned to give birth at a health facility but birthed at home

It was evident that women planned to give birth at a health facility, but for different reasons, this did not happen and they gave birth at home without a skilled birth attendant (SBA) present. Many of these women had decided to birth in a HF because they or others thought it was safe to do so:

"Because my mother said that giving birth at the HF is safe for the baby and the mother".
(Hmong mother- birth at home without SBA)

Conversely, one woman had a more pragmatic approach to her decision making about birthing in a health centre despite later giving birth at home:

"If I give birth at the health centre, I give nothing, because all the work is done by the midwife. If I gives birth at home, myself and the family has to prepare the equipment and everything, but if I go to the HC, then I prepare nothing, just go by myself." (Khmu mother- birthed at home without SBA)

Furthermore, some other women articulated their knowledge of facility birth care being a free service and yet they did not manage their planned and intended facility birth:

"I have two children, this is the third one, so I planned to give birth at the HC. The other two children were born at home, I wanted to change the birth place to be born at HC because I know there is no charge." (Mother- Khmu birth at home without SBA)

Other family members made the decision 'for the woman' to plan a facility birth that was not manifested:

"My aunty makes the decision. The elder sister of my husband. She made the decision to plan for my birth at the HC. At the HC there are nurse, doctors and midwives that can help you and save your life. My elder sister gave birth at the HC and had that experience".
(Hmong mother- birth at home without SBA)

Most women planning to give birth in a health facility shared strong motivations or clarity about this decision, despite it not being realised once labour began. This subset of respondents evidenced a clear disconnect between place of birth decisions and intentions made during pregnancy and the outcome of their actual place of birth.

For several women, the duration of the labour and birth was very fast. One husband cited that by the time he found transport from a nearby neighbour, the baby had been born. Another woman shared that "*by the time my husband put his shirt on",* her baby was born. One other woman also had a very quick labour and did not make it to the health centre despite her clarity about her decision why she did not want (and indeed feared) another birth at home without SBA:

"I made the decision. I had 5 children at my house, but one of them died. After I gave birth, the baby was stillbirth. This time I chose to go to the HC, I was afraid of the last experience. It was my first time wanting to give birth at the HC, but I chose to go because of what happened before".
(Hmong mother- birth at home without SBA)

One woman in a focus group discussion described giving birth on the river on the way to the district hospital (DH) as her labour was so very fast:

"I planned to give birth at DH, but because I was very late to make decision, I travelled to DH and gave birth on the river. I went by motorbike, but decided too late. It is only 15 minutes from my house to DH". (FGD Chomphet District)

However, the main reason women did not achieve their intended health facility birth was due to physical access, with heavy rain or women going into labour at night making traveling on bad roads unsafe. As was shared during a FGD, rain and weather conditions created challenges for women:

"Barrier for the women because they cross the river, and during the rainy season they cannot cross the river to come for ANC or to give birth. They can do nothing, just wait." (FGD in Chomphet District)

Despite good intentions and other enabling factors one woman describes how her planned birth at the Provincial Hospital was thwarted because of a quick labour and heavy rains:

"I planned to give birth at PH, but because of the pain came quickly and the birth came quickly. It was raining hard so I gave birth at home. My father had a car, I was already prepared, but it was too quick". (Khmu mother- birth at home without SBA)

Women who attended multiple ANCs had most often planned to give birth at a health facility, as they trusted the health workers and felt safer with the idea of giving birth at a health facility. In reality, transport and economic barriers were too great to achieve this in several cases:

"My mother and I made the decision together to give birth at the HC. Because at the HC there are nurses and midwives who can help me. I had given birth to previous children at the HC, but this birth happened at home. We had borrowed money for the previous births at HC, but were not able to pay the cost back. We waited until the last minute, if there had been any complications we would have gone". (Khmu mother- birth at home without SBA)

As was previously mentioned, husbands generally supported their wife to choose having their baby in a health facility, albeit less likely the case if they were from a Hmong ethnic minority group. In all six focus group discussions (FGD)- women themselves (n=54) identified that their husband's support was the most important 'enabler' to them having their baby in a health facility.

At other times, husbands were also the gatekeepers to achieving the woman's plan of a health facility birth. For example, a husband, if requiring the communal transport, will still ultimately be the one to use it for other reasons, such as traveling for work. As one woman explained why she gave birth at home (whilst experiencing great fear for her life) having planned to give birth at the HC:

"I planned to give birth at the HC, to save my life and the baby. In reality I gave birth at home because there was no transport because my husband went to another district to work and took the motorbike. I was very afraid I would die if I would have complications. After 1 month my husband returned". (Khmu mother- birth at home without SBA)

Other women were unable or did not prepare transport ahead of time, especially in areas accessed by rivers. Some women went into labour but boats did not want to take them to the health centre:

"If they (the boat taxis) travel from the village to the health centre, it's just a little journey, but they make more money if they find passengers that travel all the way to Luang Prabang." (Male- HW)

All four external stakeholders interviewed, acknowledged the lack of availability and cost of transport was a common barrier to women being able to fulfil their plan and intention to give birth in a health facility. Bad road conditions and heavy rains were also seen as significant barriers. One stakeholder identified both economics and a woman's 'status' in the family as significant factors in her ability to access health facility care.

One woman described how compounding challenges led to her not actualising her preferred plan to birth in a health facility:

"I had planned to give birth at the HC, but because we had no vehicle and no money, and the road condition was very bad, so I gave birth at home. I had saved some money, but we had moved from Vientiane province and we had no family book, and no motorbike, so I had several challenges. I knew that if I went to the HC, I would have to pay 100% because of no family book".

(Hmong mother- birth at home without SBA)

Another woman described going into labour at night and not having a vehicle to travel to the HC:

"I planned to give birth at HC but gave birth at home because I had pains at night, so it was dark and we did not have a vehicle. My parents helped me to give birth, so they used bamboo to cut the cord. They boiled the bamboo before cutting". (Khmu mother- birthed at home without SBA)

These reported challenges with available transport and economic access also link back to quality outreach education and the quality of healthcare being offered (addressing availability and accessibility of facility based care). Some health care workers did give encouragement, guidance and enabled women to wait for labour and birth in a health facility when road access was a challenge. One example, Thapo, women were encouraged to travel early, before their due dates, to Thapo health centre (HC) or the District Hospital (DH). Three women explained that despite that challenges with road access and cost, they travelled a week before their due date, to ensure they gave birth at a health facility, as they knew the risks of birth at home. Women travelled to Thapo or DH early to wait for labour and birth, despite Thapo HC not having a maternity waiting home. The mothers 'wait' in the postpartum room where there are two beds. In both District Hospitals, women 'wait' in the postpartum room or inpatient department. Health workers clearly educated women (mainly during outreach), encouraged and enabled this to take place. Only one woman interviewed reported waiting at Nangiew HC, in one of SRC's two supported waiting homes in Nongchong and Nangiew as these waiting home facilities were only completed at the end of 2020.

One women described how, despite going to wait for birth in a health facility, she felt compelled to return home to her distant village to care for her other children. This resulted in her having her baby at home without SBA as her brother had taken the motorbike she would need to travel back to the health centre in labour. This was another example of a woman having poor self-efficacy or empowerment. Women were seen to be able to make decisions for themselves but they often lacked the capacity to enact them when they were reliant on the requisite support from others to achieve their decision. At times gendered undertones were evident within this context of poor self-efficacy, as was the case with this Hmong family:

"I planned to give birth at the HC, because of distance from the HC to my village, it is very far. I had no transport and nobody could take care of my children at home. I went to the health centre for a few days, but returned to my house because no one was looking after my other children. My younger brother took the motorbike, so when my labour started, I could not go back to the HC".
(Hmong mother- birth at home without SBA)

It is interesting to note that there were no Lao Lum women who gave birth at home. Lao Lum women interviewed generally had their own transport including, in one case: "*I have my own boat, so I can travel to the HC or the district any time I want to*". Most Lao Lum women interviewed lived in Zone 1 or 2 villages with greater access to roads and often have a family history of birth at facility. One Lao Lum woman also clearly articulated her decision making autonomy and family support for her decisions:

"I planned to give birth at the HC, and also my family support me, that it is good to give birth at the HC. The decision making for ANC and birth plans were my own". (Lao Lum mother- birth in HC)

The influence of complications

A focus of this research was the handling of complications, either during pregnancy, birth or postpartum. Using the CoC PMT, only two women were identified as having experienced a birth complication in the last 6 months. The Lao Lum woman mentioned above (with her own boat) had experienced a postpartum haemorrhage (PPH) after her birth. This woman would recommend to all women in her village to travel to the higher level health facility as she did not think there was good quality of care at the local health centre:

"There are a few staff, not many taking care of me, I would recommend to the neighbour to go and give birth at district or provincial hospital because it is a small health centre and the equipment is not modern". (Lao Lum mother- birth at HC)

The second woman was a Hmong woman who experienced a complication during her fourth birth. She previously had two children born at home, and her third child was born at the HC. During the third birth, the mother experienced pain for three days before deciding to travel to the health centre. They had a very positive experience during this birth and did not want another difficult birth at home, so chose to travel to the health centre for their fourth birth. The fourth birth was also a difficult one, with the baby over 4kg and during the birth she had a large vaginal tear which led to a post-partum haemorrhage. Because of this, she was referred to the DH and then the PH for a blood transfusion. Throughout the entire labour and birth process, the mother and her husband felt very happy due to the quality of care they received and would also recommend that other families choose to give birth at a health facility. This was in part, due to them having developed a trusting relationship with the health worker at her local health facility during previous ANC and birth care:

"When we arrived at the health centre, J was there, so we felt safe and happy".
(Hmong mother- birthed in HC)

There was also examples of women who planned to birth at home, as their mothers had done '*easily*' with all their pregnancies. However, they recognised that their prolonged labour required help and they travelled to a health facility:

"I planned to give birth at home. In the reality I gave birth at the PH because I had pain for a long time, so I decided to go to PH. We rented a boat to take me to the PH. My husband and I made a decision together and we had savings to pay for the boat". (Khmu mother- birth at PH)

All four external stakeholders talked about the importance of health education at village level to ensure women and other community member are aware of potential risks of pregnancy and birth complications. One in particularly describing how this education should actively involve the village health volunteers. Another did discuss three serious complication that are often seen and recommended their danger signs should be shared with women. However, all four stakeholders did concur that lack of money, lack of available transport and poor weather during the wet season will impact on women being able to access health facility care, even in an emergency. One other identified the woman's status in the family, and who is making the decisions, will also influence decision making if a complication arises.

One health worker described how to avoid women dying from pregnancy or childbirth complications albeit without acknowledging physical access barriers:

"The other idea is to give health education to the whole community members, especially women and children who live in far villages, especially to inform that it is free of charge. This will reduce the maternal mortality". (Female- HW)

The two SRC target districts where the IR was conducted, had a small population of birthing women in 2020 (n=1,822), limiting the number of women identified as having experienced a complication. However several more women cited potential complications as a motivating factor to have their babies at a health facility. As noted earlier, some women also had family members who experienced complications during birth, which frightened them and left them feeling unsafe to give birth at home. However, these motivations and intentions, did not necessarily lead to a birth in a health facility, for various reasons as described earlier.

Postnatal care

Anecdotal evidence from Laos health care workers and MNCH stakeholders indicates, most women in rural Laos will not want to stay in a health facility for more than twenty four hours after birth, if there are no complications for themselves or their baby. The Government of Laos has a benchmark of only 2 postnatal visits with the second benchmarked to occur within 48 hours after birth. All external stakeholders interviewed did not separate out the postnatal period as being any less challenged by financial, transport, road and weather conditions as barriers to accessing facility based care.

Traditional practices after birth are the main barrier to accessing postnatal care when the voices of new mothers are heard. During pregnancy and birth, the influence of traditional practices was not seen as such a significant barrier in accessing care.

During the postnatal period, the influence of traditional practices acting as a barrier to PNC is much stronger. This is the case whether the woman birthed in a health facility and received some initial postnatal care before discharge home, or if she gave birth at home. For Lao Lum and Khmu women, there is a practice of a smoking ritual, where women sit over a fire or near a fire for the first month post birth. Women are expected to not leave their home during this time:

> *"Because the traditions in the first month is not to go outside or far away. Most Khmu and Lao Lum mothers stay in their house for the first month, for the smoking".* (Khmu mother- birth at HC)

The proposed benefits of the postnatal smoking practice are shared from grandparents and parents to the next generation. There is a belief that there will be a good recovery if you stay 'over the fire', that the woman will be a healthy and strong mother. A District Health Office (DHO) technical officer described the local beliefs around this practice as having long lasting effects:

> "*If you do not stay on the fire, then you will be big and have a lot of pain, and in the future, you will age and not be strong like other women*". (Female- DHO technical officer)

Other cultural practices and beliefs in the postnatal period were also identified. For Hmong women, the traditional belief is that in the first three days after birth, if the mother brings the baby outside their village home *"bad spirits can catch the baby's soul and the baby can die*" as reported by some Hmong members of the PHD and DHO data collections teams. This belief represents a strong disincentive for women to want to seek early postnatal care in a health facility or at outreach.

It was also identified by the DHO and PHD data collection team, that following traditional beliefs and practices varied depending on if the couple and the baby live with grandparents or not. In this way the hierarchy of decision making (from older family members) was an identified influence on

whether these traditional beliefs were seen as important and encouraged to be practiced to protect the mother and or the baby- to keep them safe.

Another traditional practice involves the treatment and disposal of the placenta. No women interviewed or in a focus group discussion cited that the health centre disregarded their request about care of their placenta. The District Health Office staff and PHD (interview team n=11) agreed that all health facilities know about these requests and that the placenta may need to be kept for a family member to deal with. Anywhere in Laos, it is known that families might want to keep the placenta and health staff will ask the family what they would like to do with the placenta. However, it was reported by many women that for the health facility to dispose of the placenta, the family must pay a cost for this service:

"*My husband took the placenta to throw away in the Mekong, because to throw away in the Mekong is free. Provincial hospital does not allow you to hang it from the tree. If you do not take it away, we must pay for the provincial hospital to dispose of it".* (Khmu mother- birth at HC)

"My placenta, my husband cleaned it and buried it at the district hospital area because if we ask the health worker or the nurse to bury or take it, then we have to pay, so my husband decided to clean and bury it. My grandparents suggested us to bury it". (Khmu mother- birth at DH)

For some ethnic groups, the care of the placenta plays an important role in the baby's future. For Hmong families, the practice is to bury the placenta under the house following birth at home:

"I cleaned the placenta first before burying it". (Hmong mother- birth at home without SBA)

For Hmong women who have birthed in a health facility, the family will take the placenta home and wrap it up, then bury it underneath the home. The care of the placenta is ongoing for some time. Every morning, the Hmong family will boil very hot water and pore this water on the place where the placenta was buried to not let any bugs eat the placenta and to keep it safe.

For Khmu families, the placenta is wrapped in a plastic bag or inside a bamboo pipe and hung from a tree, with different beliefs around how this practice can be followed:

"My cousin and grandmother helped me give birth, and helped me cut the cord, especially my grandmother who used the bamboo to cut the cord. The placenta was put in a plastic bag and they hung it from the tree nearby the house, because the traditional belief is that each newborn, the parents have to bring the placenta to hang it on the really green tree not the brown tree with a lot of leaves. If they hang it on a green tree, the baby will have a lot of friends, but if they hang it on a brown tree, the baby will have no friends". (Khmu mother- birth at home without SBA)

As with Hmong families, these ritual practices are also shared across Khmu family members:

"For the placenta, the family member was the one who took it to the forest, they cleaned it and hung it from a tree in a plastic bag". (Khmu mother- birth in HC)

At times it was said that the husband took responsibility to properly care for the placenta and this was seen to help the baby in different ways:

"For my placenta, my husband tied it to a tree so my baby is safe and strong".
(Khmu mother- birth at HC)

“For the placenta, my husband cleaned it and put it inside bamboo pipe and hung it from the tree to help our baby to be strong and smart”. (Khmu mother- birth at home without SBA)

For Lao Lum families, historically the placenta would always be buried. Now this practice is not strongly adhered to and the placenta is generally disposed of in a river, thrown away or it could be buried at the health centre.
The traditional practice of remaining in the home for many weeks after birth is one of the biggest barriers in women accessing PNC. For women who birthed in a health facility, they often felt they received good information from the health workers (HW) about the potential danger signs to look out for, before they went back home:

“After birth, the health worker didn’t come and visit me at the house any time. Before I left the HC, the HW advised me that if I get any heavy bleeding or if I feel any pain, I return back to the HC. That did not happen so I did not return”. (Khmu mother- birth in HC)

For women who birthed at home, unless they felt any excessive bleeding or unusual symptoms (assuming they knew what they were), they did not expect to break tradition and leave their home to seek health care for up to four weeks after they gave birth.

Therefore, the main access point for PNC is again, quality outreach with a stronger access impact in home visiting. For women living in catchment areas where health centres are known to be more active and engaged, women frequently shared stories of their post-natal care visits by health workers at their home. Some of these women had two or more PNC visits in their home. Some women recalled the information they were told by health workers during these visits, including the importance of a varied diet (not following food taboos) and being aware of potential danger signs that could arise and would require care at the health centre.

“Four days after birth the health worker came to my house to check and for PNC. They checked my uterus, my vagina and breasts for breastfeeding and advised me not to follow food taboo. I can eat fish and pork and vegetables. They also vaccinated my child two shots”.
(Khmu mother- birth at home without SBA)

One Lao Lum mother spoke of competing family hierarchies that influenced some of her decisions in the postnatal period about food taboos which indicated some traditional practices and beliefs did continue:

"When I gave birth, my family said I should not eat fish, so I have to avoid fish after birth. Even if my husband's family told me it's safe, I did not want to because my family said it is not okay”.
(Lao Lum mother- birth in HC)

The quality of postnatal care, however, was varied. How many days passed after giving birth before a health care worker went to the woman’s house to offer PNC also varied:

“After birth, 12 days later, the health worker came to my house and advised me about food taboos and how to clean the baby”. (Khmu mother- birth at home without SBA)

“Since I returned home, no one came to visit me. I did not have PNC. I didn’t go back to the district hospital for PNC because the roads are bad and it is far. After 1 or 2 months I saw a health worker at outreach, my baby got the vaccines at this outreach”. (Khmu mother- birth at DH)

For women who live in catchment areas with less active health workers, most did not receive PNC home visits from the health workers and their only engagement with the health system after birth was during outreach rounds which could be some time after birth:

"There was no PNC until the outreach team came, and when they came, the baby was already 1 month and they gave the baby two shots and left". (Khmu mother- birth in HC)

Depending on the woman and her and her family's beliefs, some women sent their babies to outreach with another family member for immunisation and a physical examination whilst she remained at home to follow cultural practices. There remains questions about the quality of PNC at outreach if women are not attending with their babies during the postnatal period. During the interviews and FGDs, no women cited receiving family planning services during the postnatal period.

As with accessing ANC- barriers to PNC remain due to economic, road conditions and transport challenges, inhibiting women from accessing PNC at a health facility. For many women who travelled to a health facility for birth, returning for ongoing PNC was beyond logistical reach, with the added influence of cultural practices:

"I only had PNC at the HC before traveling home, none in the village. I did not go back for more PNC because the road condition is very bad so it is not easy to travel for this, and because the tradition in the first week and month is not to go outside or far away". (Khmu mother- birth in HC)

Outreach was frequently cited as critical link to receiving any PNC for women who gave birth at home:

"I did not have any health worker visit me after birth until the baby was 1 month, and the HW came for outreach and I brought my children to outreach". (Khmu mother- birth at home without SBA)

In another instance, the woman spoke of the head of village advising her about going to outreach for PNC following her giving birth at home. However, the health worker went to the woman's home (a 'home visit' contact) to offer PNC which could have been with understanding of the smoking ritual being a priority in the first month after birth for this Khmu mother.

"After the birth I had no PNC because the health centre is too far away. The chief came to our house and told us to go to the outreach for vaccinations. But the health worker just gave the vaccinations at home". (Khmu mother- birth at home without SBA)

One health worker discussed the importance of health workers working more closely with village level gatekeepers to ensure women access health facility care, including in the postnatal period:

"For the community, what I think will help improve the women to come and use the service during pregnancy, birth and after birth is that the health worker needs to work through the village head and the village leaders, and also to work with the village cluster, including VHV, to work more closely". (Female- HW)

Women themselves identified significant cultural beliefs and practices (offering perceived benefits for their baby or themselves) that impacted on their decision to seek care in a health facility in the postnatal period.

Stakeholder views and recommendations on existing health seeking practises in maternal care

The four external stakeholder respondents were chosen to explore not only decision making in care seeking and the core objectives of identifying facilitators and barriers to MNCH service access- as has been reported in prior results sections. They were also asked to give feedback on how SRC's project activities may influence the use of MNCH services in the two districts. Finally, they were questioned on their views for improving uptake of facility based care as potential recommendations for informing future MNCH programming. They collectively offered extensive senior MNCH service planning, clinical service delivery or development partner MNCH programming perspectives.

As all interviewed stakeholders noted, finance and transport availability, poor road or weather conditions remained as significant barriers to accessing health care across the continuum of antenatal, birth and postnatal periods. It was acknowledged that improving road conditions was beyond the mandate of the PHD and they needed to 'work within the existing structures'. One PHD stakeholder did acknowledge the continuation of a strategy to address some physical access barriers for women:

"It is very important for the health worker to communicate and share their phone number to communicate as much as possible with the woman. In case the woman cannot come for her ANC, the health worker can go to meet the woman halfway or in case of any emergencies, trying to bring the woman halfway and the health worker travels and meets them there".
(Female- external stakeholder)

Women feeling shy with health workers was also identified by some stakeholders as influencing decision-making. Some women and a busy health centre manager also spoke about women feeling too shy to 'open themselves' and that:

"*… they don't want the health worker or midwife to see their body parts, especially for Hmong and* (*Khmu*". (Female- head of health centre)

Some stakeholders thought health education during outreach, was seen to be optimised if not delivered in a big group together as one village. Another stakeholders spoke of including family members in building relationships to overcome shyness of women:

"The health worker has to build a good relationship with women and the family members who accompany the women, to make them feel comfortable and not shy". (Female- external stakeholder)

One stakeholder noted a strong association between the relationship building 'performance' of health workers and community members accessing health services. He regarded health workers building trusting relationships with women as having the potential to influence a community:

"Also, the health worker's performance, then the women in the community will believe and trust the health worker to come and use the service". (Male- external stakeholder)

One stakeholder was clear about the association between health education at both user and provider levels and decisions about place of birth:

"Women give birth at home because of lack of health education at all levels. To improve this, health education needs to be improved at community, health centre, district and provincial hospitals. If the health workers do a good job, and use available resources, this will help".
(Female- external stakeholder).

Stakeholders also noted that family members not pro-actively supporting health facility birth was a barrier to accessing facility based care. Decision making was also seen by stakeholders to be a reflection on the woman's own position or 'status' in the family with sometimes the husband, parents or others competing for decision making power evidencing a lack of personal agency for some women. One stakeholder went as far to say some times it is *"…the case the family who decides entirely"*.

Two stakeholders identified modern buildings and equipment as an incentive for women to seek facility based care with another three speaking specifically about clinical competency of well-trained staff helping women to feel safe if complications were to arise. However, there was a recurring theme about 'performance' of health workers and this not only being based on clinical skill competency but also including 'behavioural' aptitude that enhanced care seeking behaviour:

"*Performance of the health worker who can build the relationship with the woman to come and use the system, this is very important for the health worker".* (Male- external stakeholder)

She identified that the PHD simply does not have the 'human resources' to address language barriers- "*they do not have health workers of different ethnic groups in each health centre"*. As noted earlier, Lao Lum is the universally accepted primary language in Laos and both Khmu and Hmong families may not speak or understand Lao Lum.

A key PHD respondent shared her concerns about the discrepancies between health workers' performance and motivations across Luang Prabang Province. Some health workers are very active, which was seen throughout the IR data collection. Some women highlighted that health workers were very active and came to their village home for PNC and outreach very regularly, and they felt they received clear advice from health workers. However, some health workers display less motivation and skill than others. The PHD has a new strategy to manage health worker performance, which will be implemented in 2021. This will target health workers who are known not to perform well or are less motivated. The new strategy for addressing poorly performing health workers was described as a three step process. Firstly, poor performing health workers will receive an initial verbal discussion about their work and will possibly be given re-training opportunities. This would be followed by a warning, with the final consequences suggested to move the staff to work in remote areas. This form of managing poor performing health workers has happened in the past in Laos.

One stakeholder noted the difficulty that working across three main language groups has with regard to health education building community understanding to promote care seeking:

"For example, if wanting to explain the importance of family planning, the translation can often be poor and the community does not understand. Or wanting to explain the benefits of ANC, but when speaking about this, the community do not understand".
(Female- external stakeholder)

One key PHD informant compared outreach support by SRC with that of other development partners She felt SRC had greater results and encouraged this model of outreach support to continue. She felt that SRC's MNCH interventions overall perform better because SRC supports the health worker closely, but for other DPs, the focus is on VHV support. VHV's were responsible for liaising with

community but often have lower capacity and commitment. VHV's were heavily dependent on phone support of community and this was seen to not be adequate, whereas the support SRC offers for health workers, undertaking home visits in particular, was seen to be 'life-saving':

> *"SRC, because the HW goes directly to the household, they can really help the women. The PHD are really happy for this, because the health workers can save the women and refer if any danger signs or bring them to the health centre or district hospital".*
> (Female- external stakeholder)

She added further, that skilled health workers traveling for outreach is very important because the health education provided is of better quality than what VHVs could offer. During the outreach health education, she described health workers being able to give important health education for women who have ANC visits, encouraging them to have at least four ANC. The women then know what keeps them healthy and associated risks with home births, which will help them choose to use the facility service as much as possible. She also noted that the data for both ANC1 and ANC4 visits in the two SRC supported districts is higher than in any other districts in Luang Prabang Province. It was also identified that SRC's two target districts were benchmarks for successes in high rates of facility birth:

> *"Compare other districts to SRC districts, SRC districts set very good examples to encourage women to give birth at HC".* (Female- external stakeholder)

Both PHD stakeholders mentioned the SRC supported 'mother/baby' kits as part of a package of incentive strategies, along with education about free maternal health care (and building trusting relationships with health workers) that were promoting facility based birth.

Stakeholder Recommendations for improving MNCH programming

During IR interviews with government stakeholders and partners, many recommendations for future MNCH service programming were presented, with several aligning with the stories shared by women and their families. Some of these recommendations have been previously discussed when exploring facilitators to accessing maternal, newborn child health services.

One key PHD stakeholder respondent offered several suggestions on improving birth at a facility, as well as improving quality of care. He noted the value of the training and supervision of health workers offered by SRC and recommended that health education should be given to all family members, not only to women during outreach. Explicitly including husbands and older family members who influence decision making was also seen by another stakeholder to be important with health education at household level:

> *"Trying to have the health education with all the women and then go to households for health education. If the woman does not understand, bring the husband together to give them health education together, this is very important. If both of them understand, then the total birth at home will decrease, especially since some decision making is the husband".*
> (Female- external stakeholder)

DHO and PHD data collectors agreed, and suggested to give more health education to the families, with the men and the women together. Health workers working more closely with VHV and heads of village was also recommended by stakeholders to strengthen village level co-operation and knowledge. These different strategies align with addressing the gendered and hierarchical decision

making influences which were identified by both field based and external stakeholder IR respondents.

PHD stakeholders also suggested conducting smaller health education sessions with the newly pregnant families (including the husbands) or the families with newborns to enable practical, targeted ANC and PNC advice. One female PHD key informant suggested health education sessions to be supplemented with additional resources, including showing the community videos and resources such as posters about PPH and high risk signs and available health services. Furthermore, sharing or distributing any flyers which can be given to women and families who are not at outreach if they are at their farms was seen as useful. Health workers at Phonthong and Khengkhene, as well as IR data collectors recommended the same use of additional visual resources with multi-language versions.

Another reproductive health service issue was raised by two PHD respondents. The issue of family planning service access had not been raised by community members interviewed. A decline in family planning uptake was noted to be important by the PHD respondents and was included in health education recommendations:

"Last year, family planning decreased to 47%. I think people are afraid to come because of COVID. I also think that the lack of the injection was a problem. I think it is very important that the health workers provide good health education about family planning, trying to bring them to understand what is family planning and why it is important." (Female- external stakeholder)

A key recommendation relates to continuing capacity building of health workers. Two PHD and one Provincial Hospital stakeholder mentioned health facility level training and clinical mentorship as having built competency in MNCH care provision. These three stakeholder also identified specific emergency care topics that also should be share with community members during health education. Continuing to focus on supporting health staff overall competency (rather than targeting VHV's) was also suggested by these three stakeholders. Building clinical competency of health staff was seen as 'life-saving' but also they acknowledged that health education was an important part of health worker performance and this was critical for incentivising facility based care seeking through building community trust in health services.

One key stakeholder identified both outreach and home visits for clinical care and health education as critical strategies that should continue into the future. She saw both being conducted by health workers and not VHV's as life- saving, enhancing timely identification of complications and supporting referrals. Both outreach and home visiting village level engagement between provider and users was recommended to continue to strengthen trusting relationships to promote health care seeking behaviours.

Discussion

To better inform the discussion, the qualitative findings from the IR will be, at times, triangulated with recent MNCH2 quantitative data from the two MNCH2 project districts (site of community level IR data collection) including the 2020 MNCH2 Annual Report and MNCH2 Endline Report (2021). Global evidence will also be included to further contextualise these discussions.

Decision-making processes

It was found during the IR that planning for care and decision making was 'changeable' (unpredictable at times) as women, couples and families traversed the dynamic process of pregnancy, birth and postnatal periods. Often decision making power around seeking confirmation of pregnancy and antenatal care was deferred to the woman's husband, or strongly influenced by other family members. The 54 women who participated in the implementation research focus group discussion consistently noted that the most important facilitator for them accessing health care services was their husband's support. In-depth interview findings also demonstrated husband's finding transport and taking women to a health centre for care. External stakeholders identified the importance of including husbands and other family members in village level health education to promote decisions to engage with health services.

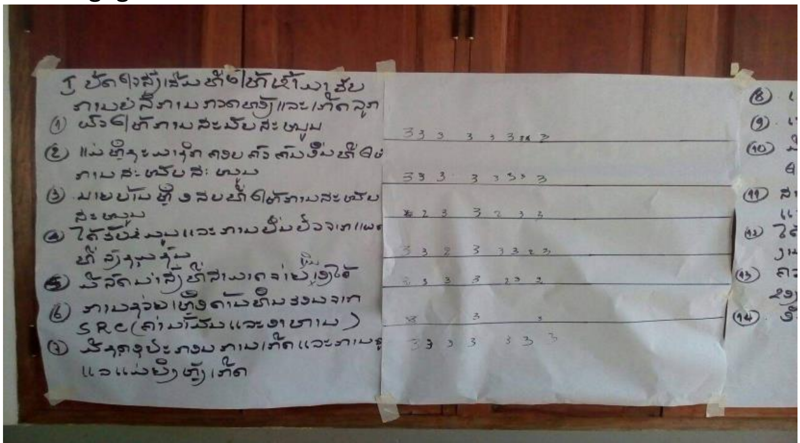


Photo 10: FGD material created by women showing that husband support was the biggest enabling factor

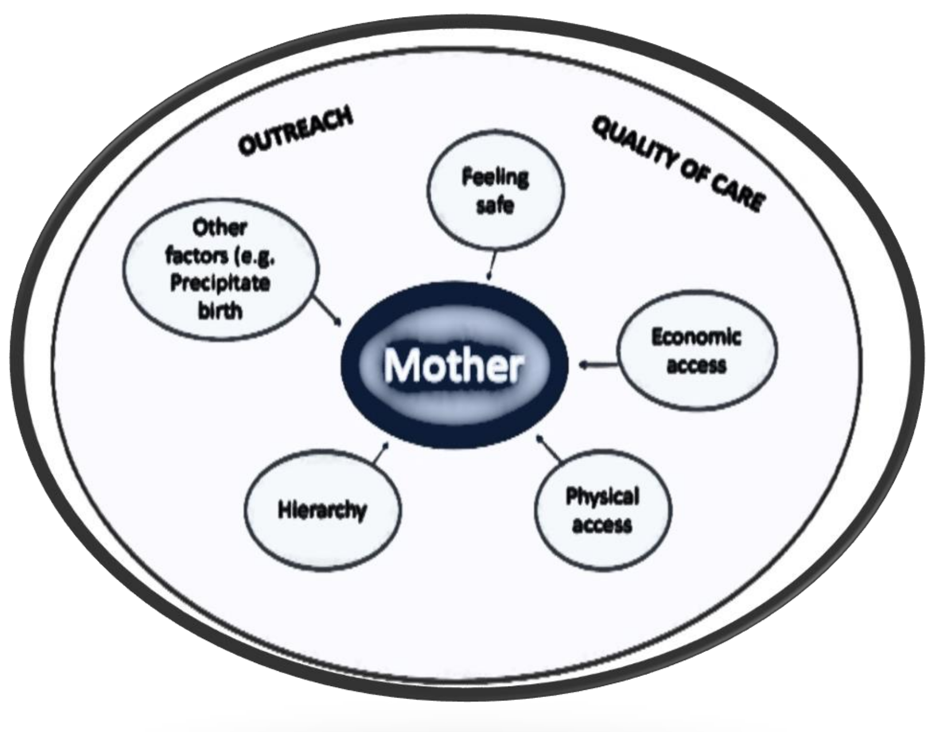
Addressing barriers to accessing facility based care presented evolving challenges to families that were dependent on multiple factors both internal- (marital, family dynamics with both gendered and hierarchical underpinnings) and external factors like wet season rainfall, dangerous road conditions, availability of transport and the perceived quality of facility based care.

Photo 11: Woman at FGD rating the different factors affecting her decisions around care seeking

It could be said, that the IR demonstrated women's decision making as contested through relational dynamics where personal, cultural and logistical factors intersected.

The following diagram represents the key personal and logistical factors that influenced women's decision making processes. Both outreach services (including home visits) and the perceived quality of care were repeatedly demonstrated to be the most significant links between women and engagement with maternal newborn health services.

Figure 11: Themes central to the decision-making of mothers



There was a common theme of a husband and wife initially discussing antenatal care (ANC) and birth plans together as a couple but this was countered at other times by either a husband having decision making power or other family members strongly influencing the woman's decision making agency. As previously noted, consensus was reached by women across all focus group discussion (n=54 participants) that their husband's support of them was critical for them to actuate their choices for care. Not just husbands', but other male family members were also critical to supporting women to access health facility care during the continuum of care across pregnancy and birth, with a lesser influence during postnatal care when other cultural beliefs and practices were a stronger influence. The findings in the study confirm the recent (2021) report indicating there has been a lack of gender-sensitive RMNCAH interventions and this was despite it being understood that women having limited health care seeking decision making power in Lao PDR.[9] However, three key stakeholders recommended gender sensitive approaches to including husbands (and other key family members) in targeted health education at village level and engaging more closely with predominately more

male village heads and village health volunteers to enhance community participation in outreach services.

It was reported in the IR that some women experienced village heads and VHV's exercising punitive or cohesive power over their health care seeking decision making as another situation of gendered hierarchy effecting women's decision-making agency. It was not identified in the IR that previously reported male gender of VHV's presented a barrier to women discussing reproductive health topics with them.[9] However, one women interviewed spoke of choosing to bypass her most accessible health facility during labour to travel to another distant health facility as there was only a male working in her nearby health facility and she did not want him to care for her during labour and birth.

At times, decision making also included other family members (sisters, aunties or parents / grandparents) as found in prior studies.[15] [13] Strong support from husbands was also cited by women as a key enabling factor in having a facility birth. Some men were exceptions to this, with Hmong husbands more frequently cited as gatekeepers preventing or discouraging their wives from accessing ANC or health facility care to give birth. However, many Hmong women and their husbands also cited that the decision-making is more equal, showing that decision-making processes are evolving. At times, other males in the family with ownership of transport (motorbike, car or boat) had an unequivocal influence on women accessing health facility based care as an aspect of gender hierarchy impacting on whether a woman's decision making preference could be achieved.

Furthermore, lived personal experience or stories from other women in the community also directly influenced women's care seeking plans. In these circumstances, 'safety' for themselves and/or their baby informed their decision, with 'safety' being a personally constructed concept. Women did not only view 'safety' within the narrow lens of physical safety, but psychological safety (confidence and trust in self and care providers) was also spoken of as very important to women. The quality of care being offered, in particular the behaviours of health workers was seen to be fundamental to this latter construct of psychological safety. Stakeholders interviewed emphasised the importance of health workers having respectful communication competencies to build trust in communities as a critical component of health worker 'performance'. The Government of Laos has responded in 2021 to the WHO encouraged, country wide monitoring of quality of care by introducing quality of care indicators within RMNCAH data collection in Lao.[9] Global evidence indicates the importance of targeting improvements in quality of care to ensure facility birth affords improvements in reproductive health outcomes as birth in a facility does not guarantee improved outcomes unless quality of care is offered.[18, 21]

At other times, voices of women interviewed in the IR indicated 'safety' was seen to include the realms of 'spirits' that could affect the safety and wellbeing of either the woman or her baby. This relationship with the spirit world was most influential on care seeking decisions in the postnatal period, beginning with the treatment of the placenta. Certain ethnic groups had strong beliefs that were reinforced by specific practices to ensure 'spirit mediated' safety and wellbeing could be conferred on the woman and her baby.

The IR demonstrated different constructs of 'safety' for mothers and babies with health worker informed 'safety' predominately framed within standardised 'obstetric risks' as defined in the Government of Lao 'Pink Book' of mother child health. Contrary to this, several women (predominately Hmong or Khmu) were often influenced by other family members to believe

[21] Kruk, et al. High-quality health systems in the Sustainable Development Gaols era: time for a revolution. The Lancet Global Health Commission. The Lancet Vol 6. November 2018

childbirth was inherently ‘safe’ due to birthing histories across generations that re-enforced that birth can (and should) take place safely at home without needing medically trained assistance. In fact, some older family members told the pregnant woman that in birthing many times at home they remained ‘strong’ with an inference this was both a physical and ‘spirit’ mediated strength. These perceptions were often reinforced by transgenerational ethnic beliefs and practices around ways to enhance safety and wellbeing of both mother and baby- with influences for them both. At times, care practices of the placenta and newborn, and the practices of the mother in the first postnatal month were also seen to influence the life of the newborn child and the mother longer term.

As another example of shifting perceptions, many women, husband’s and other family members from Hmong or Khmu backgrounds also related health workers and equipped, facility based care as important to keep the woman safe if complications arose during labour and birth. Similarly, when health workers identified ‘high risk’ events during antenatal care, women interviewed accepted the necessity to travel to a higher level facility for ongoing care, to keep them and their baby ‘safe’. It was therefore seen in the IR that decision making was often framed within different and changeable perceptions of ‘risk’ and ‘safety’ across the pregnancy, birth and child health continuum. There was however, a more common, shared understanding expressed across health workers, stakeholders and women interviewed. This was that respectful behavioural traits of health workers was linked with building trust and a sense of ‘safety’ with health workers and facility based care. So the relational dynamics between user and provider was paramount.

Whatever the influence, it was repeatedly seen that the majority of women made decisions that were reactive/responsive to their individual socio-economic, geographical, cultural and gendered relationships and realities. These reactive decisions also responded as a continuum of different influences across the antenatal, birth and postnatal periods, as evidence of decision making unpredictability. Care seeking decisions also had variable duration of impact depending on individual family beliefs and practices.

The IR demonstrated that pregnant women were often thwarted in their attempts to maintain complete agency over their decisions around care seeking for themselves and their newborn baby. Their personal care plans were not always achieved. This was evident from plans to confirm pregnancy, during ANC care seeking and also evident with the initially decided (or preferred) place of birth not being achieved once labour commenced.

Barriers and Facilitators to use of existing health services

BARRIERS

Across all stakeholders, women, families community members and health service providers interviewed, there was a consensus that physical access barriers for many women was highly significant. Whether dangerous road or river conditions, wet weather, or the lack of available or affordable transport, many women had to successfully address these physical access challenges to be able to engage with health services at facility level. Socio-economic, cultural and geographical indices intersected to influence physical access to facility based reproductive health services within the IR population.

It was interesting to note, there were no Lao Lum women who gave birth at home. Lao Lum women interviewed generally had their own transport, and lived in Zone 1 or 2 villages with easier access to health facilities, better roads and often had a family history of birth at a health facility. Findings in the MNCH2 End-Line Report confirm these demographics and also gave evidence that Lao Lum women are less likely to depend on subsistence farming and are more likely to have stable government employment and income.[17] The ‘universal’ language of Lao Lum was known and used

by health workers so families from this ethnic group also had easier understanding of health promotion messages and communication from care providers in health facilities.

Contrary to earlier studies, women, families and community members (Village Heads and VHV's) almost universally knew that birth at a health facility were free and that there were funds available to buy food whilst waiting for birth.[15] Despite this, some concerns surrounding financial aspects remained as barriers to care seeking. Firstly, transport costs remain a large barrier for women and their families who do not have personal transport. Furthermore, according to DHO and PHD data collectors, the fund available for women to access 20,000 LAK/day for food has not been difficult to access, but it does depend on the context. For example, if the woman and her husband are from the Government of Laos 'poorest household' list and they have the document from the village head certifying this, then they can get the money easily. For those that are poor but not within poorest household groups, they are still eligible to receive this food allowance, but only if they receive documentation from the village head supporting the need. If women labour and travel at night, they cannot get the documents from the head of their village. The health worker can only pay women a food allowance if they have correct documents. Furthermore, another highlighted issue was the cost of disposal of the placenta, which contradicts the 'free' MNCH services. Many families prefer to keep the placenta to take home following birth in a health facility, but for those without traditional beliefs attached to the placenta, they are required to pay for the disposal of the placenta or find a place to dispose of it themselves. IR study findings indicate that challenges to meet the costs of reproductive health care services remains for the poor and this aligns with recent GoL findings of a continuing divide between the rich and poor having access to MNCH services.[9]

As noted earlier, the quality of reproductive health services across Laos is quite variable.[9, 10] The 2020 MNCH2 Annual Report gave evidence that the health facilities in the two IR districts (and SRC MNCH2 project implementation sites) had high scores for both health facility service availability and readiness (SARA) which includes equipment, essential commodities, trained staff and clinical guidelines.[16] These SARA scores have been steadily increasing with SRC funded activities implemented over several years. It was also noted in the IR that the modern equipment and cleanliness in the local health facilities were valued by some women interviewed. Either the district hospital or provincial hospital were seen by all respondents to be the best equipped and having more experienced and available midwives and doctors than the 17 health centres. This would align with the information shared with families that women should plan care in either the district or provincial hospital if complications were considered possible.

The capacity in Laos of trained midwives and other health workers to offer competent maternal, newborn and child health services has been questioned.[10, 14] Competency does not only refer to clinical skills and knowledge but also the attitude and behaviours of the health workers. Extensive SRC inputs have focussed on improving the clinical competency of all cadre of health worker in the two IR (MNCH2) districts. The lack of adequate and effective communication and disrespectful care has been reported by women in Laos and this led to their perception of poor quality of care.[5, 10] Women's inability to conduct cultural practices at health centres has also been cited in the literature as a deterrent to facility-based births.[5] The IR gave evidence of both disrespectful care being provided and cultural beliefs and practices (several respondents) as an influence on some women's decision not to seek facility based care for birth or in the postnatal period.

Health workers themselves have also identified they lacked adequate language skills (to communicate with ethnically diverse families) thereby reducing the quality of care and health

education they can provide.[19] This presents a significant barrier to effective user/provider communication and explanations and would logically prevent women feeling safe with health workers. Trusting relationships that encourage feelings of safety (to expose body parts as one example in the IR) are difficult to foster when language is not shared. Khmu and Hmong ethnic minority groups are disadvantaged when health workers deliver health education in the universally accepted Lao Lum language which many of them do not speak. One key Provincial Hospital stakeholder echoed that lack of health worker motivation and language barriers remain a challenge for women to access quality care at health centres, and this she noted, needs addressing before facility-birth will be universal. Many women in the IR spoke about not receiving home visit care when required as an example of poorly motivated health workers who may be in the village to conduct outreach every month but do not visit the woman in her home.

The IR findings did not align with the Government of Laos (2021) proposition that village health volunteers were more likely to be male, creating a potential inhibitor to communicating with women about their sexual and reproductive health issues.[9] However, it was evidenced in the IR that some male village heads and VHV's together used coercive or threatening language when speaking with pregnant women about their health care choices.

Key Luang Prabang PHD stakeholders confirmed plans to move forward with re-introducing a strategy that could lead to poorly performing health workers being moved to remote locations to work. However, SRC has significant concerns if less competent and less motivated staff are moved to more remote areas to work. This could have negative consequences on the quality of care available in remote locations. As noted previously, women in remote locations are more vulnerable to other barriers to access, as identified in the IR and the MNCH2 Endline Report and GoL strategic documents.[9, 17] Remote areas are often where the highest percentage of ethnic minority groups live.[17] It is well evidenced that physical and economic access is known to be more challenging, communication between families and health workers is more difficult due to language barriers and 'acceptability' of health services is less likely where cultural beliefs and practices influence care seeking.[6,9,10,13] The potential to re-locate poorly performing health workers to remote areas will create even wider equity gaps than those already noted to be concerning in Lao PDR, with the more vulnerable and disadvantaged families being affected.[9] It is would be counterproductive in terms of accessibility, affordability and quality of health services that underpin accepted Primary Health Care and Human Rights in Health Care principles to re-locate poorly motivated and poorly performing health workers to remote location.[9,21]

A challenge remains in the low uptake of postnatal care (PNC), with traditional practices acting as an identified barrier to accessing PNC. Similar concerning trends in low PNC for women were identified in the Endline Report.[17] Smoking traditions and expectations of women to remain at home are longstanding traditions that inhibit attendance of women at outreach and also prevent women from traveling to PNC appointments at health centres. After giving birth at health centres, women cited receiving postnatal advice before returning to their villages. However, many women noted the extended time periods (mostly unpredictable) that passed before they received any postnatal care following discharge home. It is likely they did not feel that returning to the health centre for more PNC visits was feasible (affordable and/or acceptable due to cultural practices). It was seen that women with previous pregnancy experience and family to support them at home, were more likely to not receive PNC.

[19] Sychareun V, Phommachanh S, Soysouvanh S, Lee C, Kang M, Oh J, et al. Provider perspectives on constraints in providing maternal, neonatal and child health services in the Lao People's democratic republic: a qualitative study. BMC Pregnancy Childbirth. 2013;13:243.

There also remains questions about the quality of PNC at outreach if women are not attending with their babies during the postnatal period. During the interviews and FGDs, no women cited receiving family planning services during the postnatal period. This was corroborated by family planning data reported by PHD stakeholders and data collected in the MNCH2 Endline survey of 470 women in 2020 showing significant decreases in family planning uptake.[17] Family planning services in the postnatal period are not only supportive of reproductive health but they also offer an important opportunity for families to build on the relationships with local health workers to sustain a positive care seeking feedback loop.

PHD IR respondents identified a challenge throughout 2020 of a lack of family planning services being delivered. Luang Prabang Province and SRC districts did not reach their targets. The MNCH2 Endline Report demonstrated a decrease in family planning uptake across the three year project time frame. COVID-19 played a small role in this decrease in 2020 due to some commodity shortages. The popular, long acting injectable contraceptive given every few months, Depo Provera, had very low supply levels as this is normally procured from India and was not accessible following strict border closures. PHD IR respondents reiterated that it is very important that the health workers provide good health education about family planning, trying to build understanding about what family planning is and why it is important. However, if postnatal care is minimal and does not include family planning education and service provision, then access and uptake will remain problematic as an unmet need for family planning.

FACILITATORS:

Difficult road and river access, and bad weather remain a significant challenge for women who go into labour, especially at night or during the rainy season, with those from poor households or living in the more remote zone 3 villages most disadvantaged. Key stakeholders recommended to further reinforce through health education and ANC for women to plan to have funds available to travel to wait at health centres to give birth if they are due in the rainy season or where physical access is unreliable. The IR data show that most women who did plan for the costs of transport were able to get to a health facility, even in difficult circumstances. If this does not occur, a key PHD stakeholder recommends that health workers are encouraged to go out to visit women in their village home, if they require antenatal care or if they are labouring at home. In 2020, in the two MNCH2 project (and IR) districts, 3% of women had a birth in their village with a skilled birth attendant present. PHD leads also actively encourage health staff to travel out towards the village to meet up with the labouring woman and transport her back to the health centre as another option to ensure a skilled birth attendant for birth. Both home visits and referral fund support is offered to women in the two SRC target districts where the IR study was undertaken. Road and river access will remain a challenge that cannot be easily solved without higher level infrastructure reform, and therefore current solutions need to incorporate these challenges. It is recognised, that until physical access is dramatically improved, quality outreach services (including home visits) will be pivotal for families to receive essential reproductive health services and to be incentivised to plan and achieve facility based births.

Antenatal care is critical for the health of mothers and their babies. Quality care during pregnancy is important for the health of the mother and the development of the baby as pregnancy is a crucial time to promote healthy behaviours and parenting skills. Quality ANC links the pregnant mother and her family with the formal health care system, and contributes to good health through the life cycle.[9] Inadequate antenatal care breaks a critical link in the continuum of care, and has negative effects on both pregnant women and their babies.[22] End-line Survey data collected from 470 women in the two IR study districts in November 2020 demonstrated a significant decrease in birth at home between women who have no ANC (4%) and those that have only 1 ANC (1%) visit. So, there is a ‘protective’

factor of minimal engagement- at least 1 ANC visit with birth in a health facility being more likely. Quality antenatal care should focus on positive pregnancy experiences, to ensure not only a healthy pregnancy for mother and baby, but also an effective transition to a positive experience of motherhood. [20,23] Bringing ANC to the village level during monthly outreach is one mechanism to overcome physical access barriers to ensure women have the opportunity to engage with health workers providing ANC and health promotion messages. Evidence has linked outreach ANC services to facility based birth.[24] However, uptake of outreach services, is to some extent, reliant on village heads and VHV's notifying women of outreach dates to encourage them to attend when farm or other family duties may present competing priorities. Women, their husbands and others stakeholders interviewed, noted that regular interactions with local health workers built trust in them if they offered quality health services.

Quality of care was seen to represent competency of health workers which included knowledge, skills and behaviours that were respectful and kind. Throughout the interviews, the effect of outreach and the quality of care (including respectful communication) continued to present strong overarching themes. As evidenced in the IR, the relationships between women and health care workers is important to promote a feeling of trust and safety, and this can mean both psychological (being respected) and spiritual safety to women. ANC and birth care is also a time when information and advice can support health promoting decisions. Access to sensitive and appropriate health education and care through regular contact with health workers was seen to enable trusting relationships to develop, and this in turn, motivated women to seek a facility based birth. Stakeholders suggested to strengthen health centres, there needs to be available a native speaker of the three major languages – Lao, Khmu and Hmong languages, to remove this specific barrier of quality care and help women feel more comfortable with the services they are receiving.

SRC's support of regular DHO supervision at health facility level also was seen to improve the quality of services families receive through 'on-site' health worker training and mentorship. For other development partners working across Laos, there is a reliance on the VHV in each village to follow up in the their community. It was noted by stakeholders that this relies heavily on phone contact and may not give women in communities the level of support they need and certainly does not offer clinical assessment by a skilled health worker. As noted earlier, the majority of VHV's are males, which may present some challenges for them wanting to engage in reproductive health services. Some development partners have suggested increasing the number of VHVs, but SRC and IR participants interviewed suggest a preferred strategy. They suggest to strengthen the capacity of existing VHVs to be part of the notification system for when health workers attend outreach, as well as supporting health workers when they come to the village and informing ahead so families can attend. This facilitation and communication role of VHV's was seen as more appropriate by PHD stakeholders as it enabled skilled clinical care from a health worker team who have greater capacity to offer health education and clinical services. It also enables the development of a 'reputation of quality of care' that would build trust in community members through them engaging more frequently with health workers during outreach rounds. Development of trusting relationships with health workers incentivises women to seek skilled care at the health facility as evidenced in the IR responses.

Outreach was clearly highlighted throughout the IR as a key bridge between women and their families, and the health system as noted in prior studies undertaken in ethnic minority villages in Lao PDR.[24] Women who engaged with outreach for ANC were more likely to give birth at health facilities

[22] WHO 2006: Practical data, policy and programmatic support for newborn care in Africa
[23] WHO 2016: New guidelines on antenatal care for a positive pregnancy experience
[24] Sato C, Phongluxa K, Toyama N, Gregorio ER, Jr., Miyoshi C, Nishimoto F, et al. Factors influencing the choice of facility-based delivery in the ethnic minority villages of Lao PDR: a qualitative case study. Trop Med Health. 2019;47:50.

and felt safer and more comfortable with health workers. However, more can be done to strengthen the reach and quality of outreach services. One challenge that persists with outreach services is that in reality, if the outreach team goes to a village for ANC and the woman is not there, the outreach team returns back. For this issue, DHO IR participants suggested to improve the notification system by working closer with VHV and village heads to make sure women stay in their village during outreach.

It was also noted in the IR that several women were seen by an outreach health worker in their own home as a place of health service engagement during the postnatal period when cultural beliefs and practices presented access limitations for women to physically attend outreach. However, there may be quite some delay before the health worker first attends a home visit to offer postnatal care to the woman. Irrespective of the timing, this was another example of the important ‘bridge’ outreach offered linking women and reproductive health services. However, this ‘bridge’ is strong in both IR districts in part to funding and mentorship support by SRC that sees monthly outreach rounds proactively supported whereas the GoL schedule of outreach rounds is only four times per year.

As noted in the IR, many women had very limited access to postnatal care. Strengthening the home visit system was seen by several IR respondents as imperative to improving postnatal care uptake. Given the challenges women face in accessing PNC due to traditional practices, home visits act as a link so women can engage with health workers to receive PNC. Whilst other development partners have suggested increasing VHV participation in PNC, by providing VHVs with PNC guidelines including danger signs, it has been suggested by PHD senior staff to increase the capacity of health workers to conduct home visits is the preferred strategy. When the health worker goes directly to the household, they can offer direct, skilled support and clinical assessment of the women and her foetus or baby. The PHD expressed that they were really happy about this, because the health workers have skills to identify MNCH complications and can refer if there are any danger signs or bring the woman to the required level health facility. Currently, health worker facilitated referral following a home visit, in either the antenatal, birth or postnatal period is viewed by the three PHD and Provincial Hospital IR respondents as extremely effective and important in ‘saving lives’ and promoting improved reproductive health outcomes.

Further IR interview feedback was focussed on referrals and the home visit funds as strong facilitators for engagement in health services. Both DHOs and PHD IR participants are concerned about SRC project changes removing the funding for home visits and referrals, as PHD do not have the financial capacity to support this 100%. According to Chomphet DHO staff, around 10 women per month are referred during birth, including women who give birth at home and experience complications, or if a woman calls the district office requesting transport. These referrals sit within the two types of referrals: village to HC, or HC to DH/PH. Both facilitate important facility based care during complicated cases. It is noted, within the IR target districts there has been no maternal deaths in the last three years since home visiting support has been offered by SRC.

Experiences and perceptions of maternal health services- local views of their accessibility, acceptability and quality, and how these affect care-seeking

The local views of the accessibility to health services has been discussed at length previously within the framework of barriers and facilitators. Acceptability of health services is best located within a ‘user’ viewpoint if focussing on greater engagement with them. Currently the GoL has limited feedback mechanisms for recipients of reproductive health services, but these are planned for in the revised RMNCAH strategy.[9] Most women interviewed felt health services were acceptable but there were incidents when care during labour and birth was perceived to be unacceptable and of poor quality due to disrespectful health worker behaviour. Other women identified the local health centre as not having the preferred level of equipment or adequate numbers of trained or skilled staff. There

were other women who had planned to give birth in either the District or Provincial Hospital for reasons of superior equipment and or staff skills, or because of health worker identified health risks, that found the care they received during their unexpected birth at their local health centre was both positive and safe for them and their baby.

Quality of care was seen to represent competency of health workers which included knowledge, skills and behaviours that were respectful and kind. It is important that the full spectrum of clinical competency- knowledge, skills and respectful behaviours become universally adopted by all health staff. Global, International Confederation of Midwives (ICM) standards in midwifery education and clinical standards and competency are recommended as the framework for promoting optimal reproductive health services. Evidence is very strong for this standard of midwifery training and service provision being linked to quality of care and the GoL is working towards aligning midwifery training and supervision with global standards.[9]

A strong focus of SRC program activities is to strengthen the capacity and competency of health partners including to identify high-risk pregnancies, with the new GoL Mother Child Health 'Pink Book' a valuable tool. Health workers are trained, supervised and mentored to identify high-risk women during ANC, and encourage them to birth at district or provincial health facilities, and refer where necessary. Data from the MNCH2 Annual Report confirmed an increased trend in births at either the District or Provincial Hospital in the last three years. The outcome of improved clinical competency of health workers and SRC referral support was very positively acknowledged by three of the four key stakeholders. There was a recognition that the end to maternal death in the three years of MNCH2 was in part due to these improved competencies of health workers and SRC's enabling referral logistics. Some women interviewed were among the women who had been identified as high-risk by health workers, and they trusted the health workers knowledge and expertise when they advised them to have antenatal care and to plan to give birth at a higher level health facility. Some women were referred to the District Hospital, and were willing to travel the extra distance for their safety.

Where the perceptions or experience of acceptability of health services is less favourable for more women was during the postnatal period as previously discussed. It was acknowledged that specific cultural beliefs and practices were not able to be integrated into health facility care. There was a clear association of bridging between women receiving postnatal care and home visits by health workers either during village outreach or as an identified home visit at another time. This was a clear example of MNCH2 project supported interventions creating a synergy that addressed three key areas of accessibility, acceptability and quality. Interestingly, external stakeholders did not identify cultural beliefs and practices in the postnatal period as 'stand-alone' barriers to accessing skilled care.

Influence of SRC's project activities on the use of MNCH services

A total figure of 85.5% of all women in SRC's two target districts giving birth with a skilled birth attendant (SBA) supporting them in 2020 is an enviable and very high percentage for any district in Lao PDR.[9] Several MNCH2 activities were identified in the IR as having facilitated women accessing care from a trained health worker during pregnancy, labour/birth and the postnatal period.

Both regular outreach rounds and home visits at other times, were noted repeatedly by women and other respondents as facilitators to women engaging with health workers across the continuum of care starting when women first suspected they were pregnant.

Physical and Economic Access Facilitators

Several MNCH2 activities address some of the significant physical and economic access barriers women experienced. Motorbikes were distributed to health centres as were well equipped outreach bags therebye facilitating health worker home visits at village level (across ANC, labour/birth and PNC periods). Home visit costs were also reimbursements by SRC. A 4WD ambulance was purchased for one district and SRC incentivised appropriate referrals in both districts through reimbursement of costs for referral transport enabling higher level care when indicated (most often in an emergency). Both home visits and frequent referrals were evidenced in the SRC MNCH2 Annual Reporting and acknowledged as important (and 'life-saving') by PHD and Provincial Hospital IR repsondents. Inpatient health facility food allowance support was available for pregnant women (and those with sick children under 5 years) to ensure staying in a health facility was practicle and affordable. Mother and baby dignity kits for facility birthing also help to address some of the economic barriers women experienced for birth in a health facility. Regular outreach rounds were supported with SRC funding for improved frequency and mentorship was offered by SRC staff and multi-media health education resources were sourced to improve the quality of outreach services. The numbers of outreach rounds conducted in both index districts is far higher than in other rural areas in Laos. The mentorship of outreach teams included targeted engagement with VHV's and vilage heads and other family members to promote awareness of the benefits of facility birth and health promotion behaviour change was incentivised with multi-method approaches.

Quality Service Improvements

Staff were trained and supervised on-site, in comprehensive, respectful ANC, EMONC and new GoL clinical policies and procedures to build their capacity to offer qualty MNCH services. These capacities could be exercised by health workers at both health facility and during outreach/home visits. Health workers were also trained and mentored to identify and refer higher risk women with closer follow-up of pregnant women by health staff being facilitated by the Continuum of Care Pregnancy Mapping Tool (CoC PMT), again with home visit cost reimbursements an incentive. The PHD praised the positive outcome of the CoCPMT and plan to utilise it across other Luang Prabang districts. Several health workers were trained and resourced with mobile ultrasound machines to assist women to appreciate SBA pregnancy and birth care at both facility and village levels. Health facility infrastructure and medical equipment purchases improved the aesthetics and functions (SARA) of health facilities in both districts. Construction of maternity waiting homes, with kitchens, in late 2020 had not yet begun to realise their impact before the IR was undertaken.

Relationships Between SRC Project Activities and IR Findings

This IR research examined the views of women and beneficiaries of these activities, as well as the views of health workers SRC supported and other government stakeholders and partners. The following table situates the key IR findings beside the related MNCH2 activity as a summary of these relationships.

IR RESULTS	MNCH2 SRC/PHD/DHO ACTIVITY LINKS
Decision-making was generally initiated between husbands and wives together, particularly for Khmu and Lao women, but women's decision making continued to respond to evolving circumstances and different influences across the pregnancy, birth and postnatal continuum	Husbands are encouraged to attend Health Promotion days- 100% SRC funded, to hear health messages. Husband's may be contacted through CoC PMT to assist ANC, Birth and PNC planning. Village heads are VHVs are supported to give good health education encouraging skilled birth attendance and health facility based care

Families need to feel safe and confident with the skills and behaviour of health care workers to seek skilled birth attendance and health facility based care	50:50 cost sharing for frequent health facility based training, supervision and mentoring of all HCWs. GoL MNCH policies and 'Pink Book' trainings conducted. Upgrading training of staff sponsored by SRC.
Physical and economic challenges are significant barriers to accessing Health Facility care	SRC purchased U/Sound machines and trained staff to use them and to follow new ANC and other 'Pink Book' guidelines at outreach. Motorbikes, outreach bags supplied. EMONC and risk identification trainings conducted, Ambulance purchased for Chomphet DHO and all referrals funded
Outreach services play a pivotal role in engagement with the health system for women and their families and can be key for women feeling safe and trusting of HW	50:50 cost sharing and SRC mentorship support of HCWs during outreach Health Promotion - HP resources purchased. SRC supplied 11 motorbikes and equipped outreach bags for every health facility. SRC funds HW home visits for pregnant, labouring and postnatal women in their village home
Despite the cost of birth at facilities being free, there remain some financial barriers for poorer families, including: transport, time spent away from families, inability to access food allowances and potential costs of placenta disposal	SRC reimbursed referral costs and offer food allowance for pregnant women in a HF or if staying with a sick child <5 years in a HF. Mother/baby kits given to mothers with essential supplies for birth and the baby.
Well-equipped and clean health facilities are important to families	PHD:30% SRC:70% cost sharing for major infrastructure and minor renovations of all 17 HC. Over $115,000 USD medical equipment funded and staff trained by SRC. Also, 5S equipment, incinerators, instrument sterilisers, equipment storage and curtains for privacy all purchased and distributed by SRC.
Some cultural beliefs and practices expecting women to stay at home for up to one month after birth can be a barrier to women accessing PNC services but this can be successfully ameliorated through outreach home visits by health workers.	SRC funds home visits by HCWs including for PNC and 11 motorbikes have been purchased. The CoC PMT is used to support ANC, birth and PNC care planning and closer follow-up across the pregnancy, birth postnatal continuum

Moving Forward

There is a strong relationship between specific findings in the IR and SRC MNCH strengthening activities that have been supporting the PHD and DHO to deliver MNCH services in both districts over several years. It would be reasonable to extrapolate a direct relationship between user and provider targeted SRC activities and the high ANC, skilled birth attendant and facility based birth rates documented for both districts. When compared to other rural districts across Lao, these key indicators of engagement with MNCH services is extremely high and would justify the concerns expressed by some PHD stakeholders that SRC will be scaling down such support during 2021. The PHD will be challenged to sustain such important outcomes and indeed address the remaining 14.5%

of women who do not have a skilled birth attendant beside them during labour and the significant challenge of increasing women's access to quality postnatal care including family planning services.

Conclusion

Supporting global literature, it was found in the IR that women engaging with antenatal care is a positive predictor of birth at a health facility. Also that the quality of care, including the competency of health workers- their skills, knowledge and respectful behaviours influence decisions to engage with ANC (and follow the advice given) and to seek facility based care. Trusting and feeling safe with health care providers is important for women to engage with health services. Even if the physical environment of a health facility was good and health worker skills apparent- if health workers did not treat the family with respect and kindness families were discouraged from using facility based care as they did not feel safe.

For the foreseeable future, physical and economic access barriers to health services will remain significant for many women, with zone 2 and 3 villages most impacted. Similarly, cultural, gendered and hierarchical influences on decision making, that limit women's capacity to engage with regular facility based care, will continue to be a challenge for many women, especially Khmu and Hmong women. The local Provincial Health Department is recommending gender inclusive approaches to health education at village level and multi-language, multi-media approaches to facility-based reproductive health promotion. Throughout the analysis of IR data, the effect of outreach and quality of care (including respectful communication) continued to present as a strong overarching theme. When outreach is done regularly and women are proactively followed-up both during pregnancy and after birth, there is a greater trust in health workers and the health system. Similarly, VHVs and heads of villages can enhance health service access as they act to encourage outreach attendance by pregnant women to ensure all women, where possible, are able to access antenatal and postnatal care. Outreach and home visits also act as a bridge between families and health services, when families would often not engage with the formal healthcare system because of economic and physical barriers and/or cultural beliefs and practices. The CoC PMT being operationalised in 2020 is as a very positive conduit to enable more appropriate and timelier follow-up of at risk women across the ANC, birth and PNC continuum. Whilst language barriers and traditional practices remain to be a challenge for health workers when working within diverse communities, outreach services do serve as a platform for meeting women and understanding their feelings and challenges. It is also key to identifying those women who may be pregnant or have given birth with minimal engagement with health services so the engagement gap can be closed.

Achnowledgements

This IR Report was compiled by Cara Stephenson, M&E lead in the MNCH2 Project in partnership with Heather Gulliver, SRC MNCH2 Health Delegate 2019-2020. Both offered remote facilitation (from Australia) of the three phase backstopping processes with Cara leading all IR logistics. We would both like to sincerely thank all MoH, PHD and DHO colleagues who ensured the backstopping approach was embraced and the IR was completed. Of importance is to express gratitude in particular to Dr Chirasak Houmphanh, Head of Hygiene and Health Promotion Section in the Luang Prabang PHD. Dr Houmphanh has remained a remarkable technical lead for SRC projects in Luang Prabang Province over many years. His wisdom, willingness to guide SRC and proactive support for improvements in reproductive health in Luang Prabang Province is indeed worthy of praise. The SRC MNCH IR team leader in Luang Prabang – Por Hatchit, warrants expressed acknowledgement for his tireless efforts over three months. Por enabled complex challenges to be addressed quickly and effective team dynamics to flourish with all his Laos counterparts who joined in the learning and

achievements of the IR. He was well supported to meet these challenges by the small but committed SRC MNCH2 team in Luang Prabang, who's logistical support is also acknowledged. Finally- SRC would like to deeply thank all of the 91 men and women who participated in either an IR in-depth interview or focus group discussion. We sincerely hope your voices are heard by National Ministry of Health Leaders in Laos, Provincial and DHO managers and individual health care workers to better understand the challenges families face in accessing reproductive health services in rural and remote settings in Laos. May the professional partners in MNCH health services planning, funding and clinical service provision use the results and recommendations from this Report to continue to promote safe environments for families to birth and to grow strong and healthy children in Lao PDR.

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Annex 1: Background Demographics

Map of Lao PDR

Table 1a & 1b : Health Centres in SRC Project Districts, including distance and Zones of villages

Health centre	*Distance to district*	*Zone 1 villages*	*Zone 2 villages*	*Zone 3 villages*
Chompet District Hospital	0 KM	21	0	0
Banna health centre (HC)	20 KM	1	2	7
Nongchong HC	21 KM	1	2	4
Pakleum HC	24 KM	1	0	3
Nangiou HC	39 KM	1	1	8
Kengkhen HC	39 KM (by boat)	2	0	7
Songtai HC	50 KM	1	0	2
Vangsa HC	65 KM	1	0	3
Houynathong HC	88 KM	1	0	0
8 HC + 1 district hospital – 69 villages		**30**	**5**	**34**

Health centre	*Distance to district*	*Zone 1 villages*	*Zone 2 villages*	*Zone 3 villages*
Phonexay District Hospital	0 KM	12	0	0
Sobjia HC	12 KM	1	1	6
Thapo HC	15 KM	1	2	4
Chomechieng HC	27 KM	1	0	4
Houykhing HC	38 KM	1	0	5
Katangsaleuang HC	43 KM	1	0	2
Longnged HC	48 KM	1	0	3
Hintang HC	58 KM	1	0	4
Donekham HC	58 KM	1	0	4
Phonthong HC	60 KM	1	1	5
9 HC + 1 district hospital - 62 villages		**21**	**4**	**37**

IMPACT TRENDS of SRC + MOH/PHD/DHO Implementation partnership 2015 - 2020

MATERNAL DEATHS and MMR 2015 – 2020 **ZERO MATERNAL DEATHS 2018-2020**

Maternal Deaths	2015	2016	2017	2018	2019	2020	MMR 2018	MMR 2019	MMR 2020
* LPB Province	10	7	14	5	11	4	34/100,000	125/100,000	46/100,000
Chomphet	0	1	3	0	0	0	0/100,000	0/100,000	0/100,000
Phonexay	1	0	3	0	0	0	0/100,000	0/100,000	0/100,000

UNDER 5 – U5 CHILD MORTALITY RATES and CMR 2015 – 2020 **<5CMR Achieved in 2020 = 10.3/1,000**

Under 5 deaths	2015	2016	2017	2018	2019	2020	CMR 2018	CMR 2019	CMR 2020
LPB	102	209	187	187	150	124	21/1000	17.0/1000*	13.9/1000
Chomphet	13	22	5	18	12	8	46/1000	13.7/1000	9.4/1000
Phonexay	15	31	25	16	18	11	29/1000	18.6/1000	11.2/1000

Table 2a. and 2b. MMR 2015 – 2020 and <5CMR 2015 – 2020

2020 Place of birth	Life births by Health Centres	Still birth >28 wks	Birth at home with SBA	Birth at home without SBA	Birth at Provincial Hosp	Birth at Military Hosp	Birth at District Hospitals	Total
Phonexay	619	9	32	131	73	20	91	975
Chomphet	426	2	22	137	142	11	107	847
Total	1045	11	54	268	215	31	198	**1822**

Table 3: Place of birth in 2020 in SRC Project Districts

Lao PDR Trends in Under 5 Child Mortality Rate (CMR)
(SDG Target by 2030: **25** per 1,000 live births) – almost ON TRACK

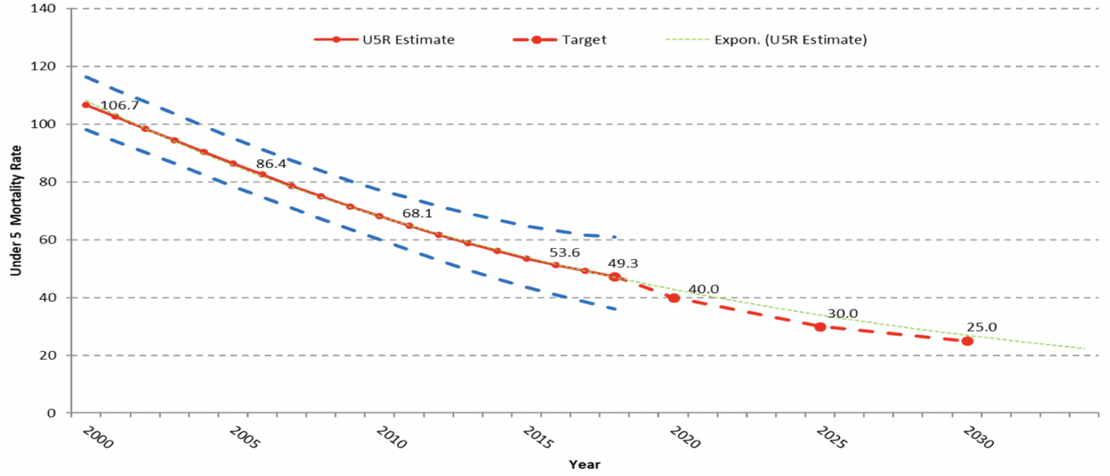

Figure 4: Lao PDR Child Mortality Rate (CMR) Trends 2000-2030

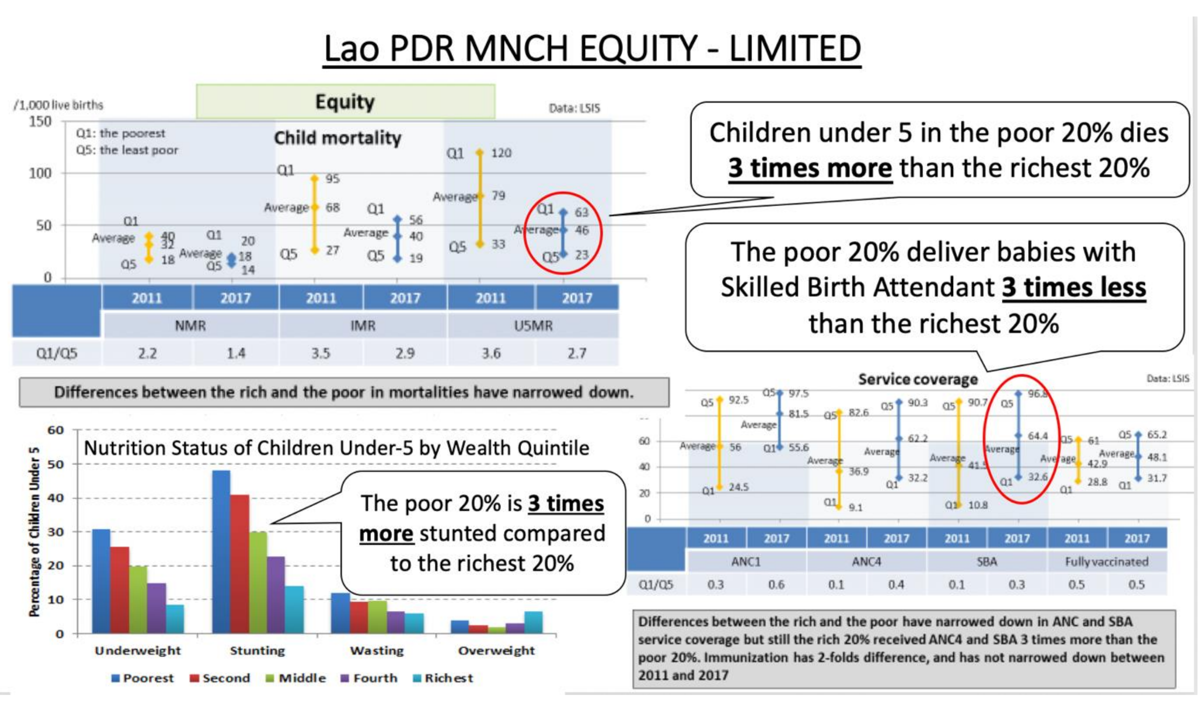

Figure 5: Lao PDR MNCH Equity

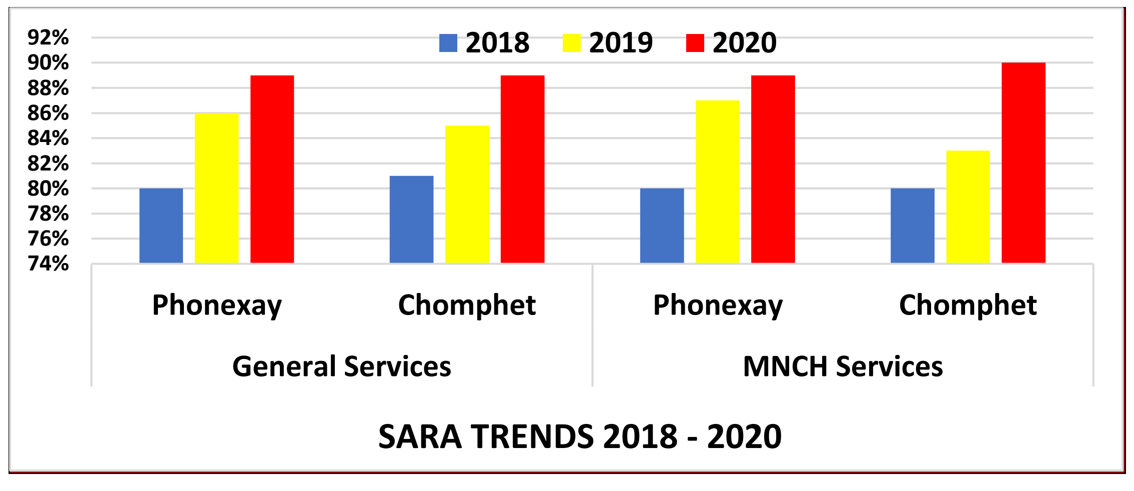

Figure 6: SARA trends 2018 - 2020

Table 7: GoL 5 Good and 1 Satisfactory scores in SRC Districts

		2019		2020	
Q	**Satisfaction**	**Chomphet**	**Phonexay**	**Chomphet**	**Phonexay**
Q3	Warm Welcome	96%	94%	99%	95%
	Waiting time <15 min	100%	88%	99%	97%
	Clear understand about treatment	74%	73%	70%	73%
Q4	Warm Welcome	100%	98%	100%	95%
	Waiting time <15 min	93%	91%	94%	97%
	Clear understand about treatment	67%	85%	63%	73%

Annex 2: Literature review – Skilled births attendance in Lao PDR

Background

Globally, despite gains in access to health care services, women are still experiencing high rates of maternal death. The maternal mortality ratio (MMR) is high in Lao PDR, at 185 per 100,000 births in 2017 with a further decline to 160 per 100,000 births in 2019.(1,2) Laos is almost on track to meet the Sustainable Development Goal (SDG) target for MMR, but the MMR still remains very high for the region.(1) Births with skilled birth attendants (SBA) increased dramatically in the last 15 years, from 19.4% in 2000 to 41.5% in 2012.(2) However, as with many of the MNCH indicators, SBA was much lower amongst rural women and those in the lower income and educational groups. In 2017 the rich 20% in Lao were three times more likely to have a skilled birth attendant assisting them during childbirth than the poor 20%.(1) This increase in SBA is partly due to the introduction of a midwifery cadre with over 1,000 midwives trained.(3) However, as the midwifery cadre is still developing, there are challenges with the varying skill levels of midwives and midwifery teachers, the deployment of midwives to rural and remote health centres, and recruitment of midwifery students from minority ethnic groups.(4)

In Swiss Red Cross project districts in Lao PDR (where the implementation research was conducted), Chomphet and Phonexay, significant gains have been made in both facility births and births with SBA. In 2020, the percentage of births without SBA decreased in Phonexay from 32% to 13% from 2018 to 2020.(5) In Chomphet, the percentage decreased from 29% in 2018 to 16% in 2020.(5) Both districts combined had an overall SBA rate of 85.5% in 2020. This SBA rate compares extremely favourably with that of all Luang Prabang province where only 45% of women had SBA in 2019.(5)

In its pursuit of universal health coverage, Lao PDR introduced a Free MNCH initiative in 2012, which has recently been subsumed within the new National Health Insurance (NHI) programme. The NHI program aims to improve facility-based births, with women able to claim transport, food and medical costs back upon giving birth in a health facility.(3) In 2017 access and equity differences between the rich and poor in Laos were demonstrated with the rich 20% receiving immunisation of their children and support with a skilled birth attendant (SBA) three times more often than the poor 20%.(1) Despite the Government's NHI initiative, significant equity gaps exist in maternal and child health service access.

It was noted that there has been a lack of gender-sensitive RMNCAH interventions.(1) Gender mainstreaming in planning and monitoring RMNCAH services in Lao was also lacking despite women having limited health care seeking decision making power.(1) In 2017 Village Health Volunteers were more likely to be male and this was seen as a potential inhibitor to communicating with the women about her sexual and reproductive health issues.(1)

Despite the gains in maternal deaths and births at health facilities increasing annually, women are being left behind, with homebirths without SBA still an ongoing concern, particularly in rural areas in Lao PDR. The purpose of this literature review is to examine what is already understood and researched about decision-making surrounding birth, to inform SRC's implementation research on barriers and facilitators of facility-based births.

Findings

Key word on-line searches were undertaken and a total of 13 studies conducted in Lao PDR between 2008 and 2019 were included in the literature review, and further government reports and reviews included. The journal articles revealed that there are several major barriers that women face for facility-based birth. These include: physical barriers to access, including cost and distance; family roles and cultural practices and quality of health services.

Barriers to access, including cost and distance
Several studies identified physical barriers, such as poor road access and cost, as barriers to accessing health facilities for birth. Road access barriers including the distance needed to be travelled to access a health facility were discussed in several studies and reports, with many villages in Lao PDR inaccessible during rainy season or roads deemed not safe to travel on.(6) In a cross-sectional study by Douangvichit et al., examining health care expenditure for hospital-based delivery in Bolikhamxay and Khammouane Provincial Hospitals, it was found that only one-quarter of the study population was insured, and given this was a mostly urban sample, the proportion of rural women insured would be far lower.(7) To combat the lack of insured women, Lao PDR introduced its 'Free Maternal Health Services Policy' in 2012, to promote the utilisation of maternal health services and reduce financial barriers.(3,8) The policy includes costs related to treatment, transport and food allowance.(3,8) In a study of 360 women who gave birth in Oudomxay between 2014 and 2015 in health facilitates, the majority of women had heard about the policy and cited it as motivation to birth at a facility.(8) However, poorer women were more likely to not have heard about the policy, as were women with poor access to health services.(8) This highlights that the policy, whilst it is promising in theory, does not reach all women in practice. Although this was a major national health financing reform, several evaluations have examined the extent to which it improved equitable access to MNCH services. In a large World Bank evaluation study by Nagpal et al. the research team analysed surveys that provide information on demand-side and supply-side factors influencing access and utilization of free MCH services, especially for vulnerable groups. (9) Inequity was accentuated by issues related to the distribution and nature of human resources, supply-side readiness and thus quality of care provided across different geographical areas.(9) These findings followed two rounds of household surveys (2010 and 2013) conducted in southern Lao PDR involving, respectively 2766 and 2911 women who delivered within 24 months prior to each survey. Significant differences were found in the utilization of health services by both economic status and ethnicity.(9) Relatively large costs for institutional births were incurred by the poor and did not decline between 2010 and 2013.(9) The overall benefit incidence of the universal programme was evidenced in 2021 as not being pro-poor.(1) Other costs were cited as motivation for home births, including lost income when fathers were unable to continue working.(9,10,11)

Family roles, cultural practices and experiences
Family roles and responsibilities can dictate how and if women may access MNCH services. Acceptability of health services by women of ethnic minorities has been explored in several studies. It was found that allowing husbands or family members to be present during birth could mitigate some of the stigma of birthing at health facilities.(11) Also, allowing traditional birthing practices that do not conflict with medical evidence, such as tying *baci* (blessing) strings or putting water on a women's abdomen, would enable families and women to feel as though the birth aligns with their cultural beliefs.(11) A major cultural practice in Lao PDR is women lying on hot beds (near a fire) after birth, which is practiced widely in the country.(12) At present, this practice is not possible in health centres, and is a further deterrent from birthing at facilities. Another major cultural practice is the preference many women have for traditional birth positioning, where women squat or kneel, feeling uncomfortable with the birth position at health centres.(12,13)

Furthermore, beyond cultural practices clashing with care at health centres, there are often determinants involving who is the decision-maker in the family. In many cases, childbirth was seen by husbands and grandmothers as a 'natural event' and did not require health services, because it is considered 'low-risk'.(12, 14) Decision-making was often left to the husband, mother or mother-in-law.(14) Some husbands and family members were not aware of the free MNCH policy, as husbands were not present during outreach services.(14) Husbands also relied on their wives to contribute to the family workload, even close to birth.(11) Understandably, older generations of women have

often conflicting messages of seeking health care.(11) During their lifetime they have seen women birthing alone in the forest, to childbirth at home, and then in a facility.(11) Family dynamics can be powerful, and have been found to have both positive and negative impacts of younger women seeking care, highlighting the role that community and family play on decision-making.(11)

For women with previous negative experiences during home-births, such as difficulties during labour or the death of a child after birth, facility-based births became the preference.(14)

Quality of health services

The quality of MNCH services in Lao PDR vary widely, and affect the decisions of women regarding place of birth. From the patient perspective, some women reported receiving poor quality care, lack of respect from health workers and the inability to conduct cultural practices at health centres, deterring facility-based births.(15) Some women also reported having prior negative experiences and felt shy with male health workers and the lack of privacy.(12) There were also complaints from mothers that some health centres were not sanitary.(15)

In an exploratory study by Manithip et al. it was found that most health care workers had no additional training after graduation and they lack adequate knowledge on risks for pregnant women.(16) The study found that unskilled health care workers were left without support of senior staff, not only to deal with a high workload but also to handle cases for which they were not trained, raising questions about the ability of health care workers to deliver quality services to the women.(17)

From the service provider side, there are many challenges to offering quality MNCH care. Basic EmOC facilities are scarce, and better access to emergency care would be a step in improving quality of maternal healthcare in Lao PDR.(18) Furthermore, health workers have reported to feel they lack adequate language skills and face a shortage of trained personnel in rural health centres, with increased workloads reducing the quality of care they can provide.(6,12) Lack of government funding for salaries and low salaries can drive health workers to urban areas where they can supplement their income, resulting in poorly staffed rural settings, often lacking experience due to low numbers of births.(6,19) In a qualitative study of 45 health workers, almost all reported that the health centres had insufficient delivery kits, medical equipment and medicines.(19) These studies offer some context for some women's perceptions of inadequate quality of care. On the contrary, outreach services from health workers, performing antenatal care and helping women prepare birth plans, were determinants promoting women birthing at facilities.(15)

<u>Current gaps in the literature</u>

Firstly, whilst there have been several qualitative studies examining women's experiences during birth in Lao PDR, the studies have been concentrated in southern provinces of Lao PDR (Champasack, Sekong, Bolikhamxay and Savannakhet), with only few studies in the northern provinces (Xieng Khuang and Oudomxay).(8,11,12,13,1415,16) Luang Prabang province, where SRC works, has not yet been researched. Also, two of the qualitative studies by Sychareun et al., focusing on women's experience of homebirths, had some limitations in that they did not interview any women who gave birth at health facilities, and male interviewers interviewed some women, likely biasing results.(12, 13)

Secondly, a qualitative study exploring the combined views of maternal newborn health service users and their husbands, with key community members, health care workers and external maternal newborn health service leaders and experts has not be undertaken in Lao PDR. Nor has a qualitative study been undertaken that explores the key stages of pregnancy confirmation, antenatal,

intrapartum and postpartum periods as separate decision making stages within a continuum of care seeking across the parturient year.

Finally, quantitative data indicates births occurring in health facilities and overall skilled birth attendant rates to be significantly higher in the two SRC target districts, than in other rural districts in Laos.(5) Between 2018 – 2020, no maternal deaths have occurred in either Chomphet and Phonexay districts where SRC has been implementing maternal, newborn, child health strengthening activities for these three years.(5) SRC's implementation research in these two districts presents an opportunity to also explore SRC activities and their potential influence on women's decision making and access to maternal and newborn health services using qualitative methods. Health service providers and external stakeholders involved in maternal and newborn health services will also be interviewed. Maternal, newborn health service users will be the primary data collection focus. Women and their husbands will be interviewed to explore their decision making processes regarding engagement with health services from pregnancy being suspected through to the postnatal period. Husbands and other decision-makers have been discussed at length during prior studies, but their inputs have been mostly neglected. The proposed study will attempt to close these different gaps in current knowledge.

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Annex 3: Abstract

Skilled birth attendance in a health facility is a key factor for maternal and newborn health in Lao PDR. The study will explore the process of decision-making by women, their family members and other influential community actors about where to give birth and whether to use maternal health services, with a focus on uptake of facility-based birth during labour considered "normal" as well as at the onset of complications or obstetric emergency. Fieldwork will be conducted in Phonexay and Chomphet Districts of Luang Prabang to capture diversity in socio-demographic population composition that may affect health care-seeking behaviour. This research is designed to improve understanding of social determinants of facility-based birth. Community expectations, perceptions and experiences will be examined to characterise local beliefs about available services, including whether/when they are necessary, their quality of care, factors that encourage or reduce intention to use services, and facilitators and barriers to acting on such intention. In particular, the study will compare experiences of women (and their families) who experienced uncomplicated (normal) births as well as those who underwent complications, considering both community-based and facility-based births.

Aim: The aim of the study is to generate knowledge on socio-cultural and behavioral barriers and enablers in decision-making and health care seeking for institutional births or in times of maternal health complications. This knowledge will inform design or adaptation of interventions that will improve timely engagement with care and thus lead to reduction in the mortality and morbidity of mothers and their babies.

Study Title: Factors influencing women's decision in seeking healthcare in a health facility during child birth in Chomphet and Phonexay districts of Luang Prabang province, Lao PDR.

Objectives of study:

- To understand the process of decision-making mainly related to facility birth, including birth planning and choices made if complications emerge
- To identify facilitators and barriers to use of existing services under normal circumstances and at onset of complications/emergencies
- To explore experiences and perceptions of relevant maternal health services as defined above, including local views of their accessibility, acceptability and quality, and how these affect care-seeking
- To document experiences and perceptions of local health care providers, including their opinions regarding community decision-making, facilitators and barriers related to maternal health care use.

Time schedule: August to September 2020.

Area: Chomphet and Phonexay districts, Luang Prabang province

Target: Women who have given birth within 6 months prior to the commencement of the data collection and their family members who agree to be involved in the study. Health care providers and decision makers at community, District and Provincial Health levels.

Method: This exploratory qualitative study will be conducted from approximately August to September 2020 using purposeful sampling. Swiss Red Cross team members will offer 'back-stopping' support to mainly Lao PDR national staff who will be partner researchers, to support the development of capacity to undertake qualitative research methodologies to produce new evidence. Data will be collected using semi-structured interviews and group discussions with women who have recently given birth, husbands, village authorities, and health care providers. PHD, DHO and other stakeholders will also be interviewed.

Budget: The amount of budget is 8,500,000 LAK from SRC budget

Annex 4: Ethical Approval

Lao People's Democratic Republic
Peace Independence Democracy Unity Prosperity
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Ministry of Health
National Ethics Committee
for Health Research (NECHR)

No 082 /NECHR
Vientiane Capital 22/10/2020

Approval Notice

Heather Gulliver
Email: womensbusiness@hotmail.com
Tel: +61428891722

RE: Ethical Approval for Health Research

Title: "Factors influencing women's decision in seeking healthcare in a health facility during child birth in Chomphet and Phonexay districts of Luang Prabang province, Lao PDR." (Submission ID: 2020.69.Lua)

Dear Heather Gulliver,

The National Ethics Committee for Health Research of the Lao People's Democratic Republic have reviewed and approved your research.

Please note the following information about your approved research protocol:

Approval period: October 2020 – October 2021
Approved Subject Enrollment: 68
Study Site: Luangphrabang Province
Sponsor: Swiss Red Cross **Budget**: 8 500 000 Kip (LAK)
Implementing Panel/Project Investigator: Heather Gulliver

Please note that the Ethics Committee reserves the right to ask for further questions, seek additional or monitor the conduct of your research and consent process.

Principle Investigator is required to notify the Secretary of the National Ethic Committee for Health Research:

- **Any significant change to the project and the reason for that change, including an indication of ethical implications (if any);**
- **Serious adverse effects on participants and the action taken to address those effects;**
- **Any other unforeseen events or unexpected developments that merit notification;**
- **The inability of the Principal Investigator to continue in that role, or any other change in research personnel involved in the project;**
- **Any expiry of the insurance coverage provided with respect to sponsored clinical trials and proof of re-insurance;**
- **A delay of more than 12 months in the commencement of the project; and,**
- **Termination or closure of the project.**

Additionally, the Principal Investigator is required to submit a progress report on the anniversary of approval and on completion of the project.

President of National Ethics Committee for Health Research

Prof.Dr. Douangdao SOUKALOUN

Annex 5: Sampling tool

	Chomphet				Phonexay				
	Kheng-khene	**Nongc-hong**	**Nangiew**	**District Hospital**	**Huayking**	**Chome-chieng**	**Thapo**	**District Hospital**	**TOTAL**
Women and husbands									
Women having given birth during last 12 months - normal - at facility	1		1		1	1	1		**5**
Details: name, village, village zone, ethnicity									
Husband of woman having given birth during last 12 months - normal - at facility	1		1		1	1	1		**5**
Women having given birth during last 12 months - complications - at facility (PPH)		1							**1**
Details: name, village, village zone, ethnicity									
Husband of women having given birth during last 12 months - complications - at facility		1							**1**
Women having given birth during last 12 months - normal with SBA- at home			1		1		1		**3**
Details: name, village, village zone, ethnicity									
Husband of women having given birth during last 12 months - normal with SBA- at home			1		1		1		**3**
Women having given birth during last 12 months - normal without SBA- at home	1		1			1	1		**4**
Details: name, village, village zone, ethnicity									
Husband of women having given birth during last 12 months - normal without SBA- at home	1		1				1		**3**
Women having given birth during last 12 months - complications (PPH) - at home with SBA		1			1				**2**

Details: name, village, village zone, ethnicity									
Husband of women having given birth during last 12 months - complications (PPH) - at home		1			1				**2**
Health workers, VHVs and DHO									
VHV		1	1			1			**3**
Details: name, village, village zone, ethnicity									
DHO staff				2				2	**4**
Details: names									
Health care workers	1	1			1		1		**4**
Details: names									
Heads of village	1	1	1		1	1	1		**6**
Details: name, village, village zone, ethnicity									
TOTAL	**6**	**7**	**8**	**2**	**8**	**5**	**8**	**2**	**46**

Annex 6. Schedule of training, data collection and analysis

Mon	Tues	Wed	Thurs	Fri	Sat	Sun
30 Nov Training	1 Dec Training	2 Dec Public Holiday Laos	3 Dec Field test - CP District area	4 Dec Discuss field test	5 Dec Data collection Teams 1 and 2	6 Dec Data collection Teams 1 and 2
7 Dec Data collection Teams 1 and 2	8 Dec Data collection Teams 1 and 2.	9 Dec Data collection Teams 1 and 2. Return to LPB	10 Dec Prelim data analysis with Team 1 and 2	11 Dec Team 3 and 4 travel to data collection	12 Dec Data collection Teams 3 and 4	13 Dec Data collection Teams 3 and 4.
14 Dec Data collection Teams 3 and 4	15 Dec Data collection Teams 3 and 4. Return to LPB	16 Dec Interviews with key stakeholders Team 3 and 4	17 Dec Prelim data analysis with Team 3 and 4	18 Dec AM: Training on FGDs PM: Travel to FGDs	19 Dec Focus group discussions in CP	20 Dec Focus group discussions in CP
21 Dec Prelim data analysis of FGDs	22 Dec Financial clearance	23 Dec Financial clearance	24 Dec	25 Dec SRC finances close for 2020	26 Dec	27 Dec

28 Dec IR team on leave	29 Dec IR team on leave	30 Dec IR team on leave	31 Dec IR team on leave	1 Jan Public Holiday Laos	2 Jan	3 Jan
4 Jan All SRC return to work – finalising budget/invites for analysis	5 Jan	6 Jan Analysis with all data collectors	7 Jan Analysis with all data collectors	8 Jan Analysis - final day with ALL data collectors	9 Jan	10 Jan
11 Jan Analysis of key stakeholder interviews with SRC staff	12 Jan Financial clearance and budget preparation for FGD	13 Jan	14 Jan Travel to FGDs in PX with Chomphet DHO, PHD Conduct 1 FGD	15 Jan Conduct 1 FGD, return to LPB **SRC team analysis conducted Monday 18th**	16 Jan	17 Jan

Breakdown of data collecting team members

Teams	Sex	SRC staff and location for data collection	FGD data collection
TEAM 1 MCH-PX Malaria Technical -PX HR Technical - PHD	F M M	SRC field officer (M) Khengkhene, Chomphet	Banna, Chomphet
TEAM 2 Statistics - CP MCH - CP M&E Technical - PHD	M F M	SRC M&E officer (F) Phonthong, Phonexay	
TEAM 3 EPI – PX Health Insurance – PX EPI Technical - PHD	M F M	SRC field officer (M) Nangiew, Chomphet	Nongchong, Chomphet
TEAM 4 MCH-CP MCH-CP No PHD for initial data collection	F F M	SRC M&E officer (F) Huayking, Phonexay	Thapo, Phonexay (1 PHD attended from Team 3)

Annex 7: Interview guide and informed consent form

Women who gave birth in past 6 months (no complications)

Areas of Inquiry	Specific Topics	Suggested Probes
Introduction/ Background	Please ask the respondent to introduce herself and talk about herself and her family.	• Please can you describe your family and living situation? • How many children do you have, and what are their ages? • What kind of work is your family engaged in? What are your daily tasks?
Pregnancy	Now I would like to talk to you about your most recent pregnancy. Did you consider it to be a "healthy pregnancy"? Why or why not? Can you explain step-by-step about your pregnancy? When you first realised you are pregnant, Whom did you consult about your pregnancy? Can you tell me what kind of advice you received from different kinds of people? During the pregnancy, what (if anything) specific did you do to have a health pregnancy and birth experience?	• What made you feel it was healthy or not healthy? • How did it compare to any previous pregnancy? [if relevant] • Describe in your family whom you informed. What was their reaction and advise? What about your husband or family members? [PROBE: spouse, parents, in-laws, siblings, friends, shamans, VHVs, other community members • Did you care for yourself in specific ways? • Did you change any of your regular habits or behaviours? • Are there other things you wanted to do during your pregnancy to help make it healthy but that you found difficult? Please explain
Birth planning	As your pregnancy progressed, what were your thoughts about care? What kind of informal or formal care did you receive during your pregnancy? Are there any other types of care that you wanted to have but were not able to obtain? As your pregnancy advanced, how were you feeling? What were your thoughts about where you wanted to give birth? With whom did you discuss your decision about where to give birth? Did you make any plans prior to the birth, such as where and with whom you wanted to give birth? Who else helped you plan?	• Describe any providers or services that you consulted. • Can you describe how you decided whether or not to have care during your pregnancy and where? • With whom did you discuss these decisions? • Why? Can you give examples? • Did you disagree with anyone about what care you should have? Can you explain? [PROBE: spouse, parents, in-laws, siblings, shamans, VHVs, other community members] • Can you explain how you made your decision? • What did they tell you? Did you agree or disagree with them? Did you consult anyone else?
Giving birth	Please tell me about your birth experience. What happened step-by-step, from the time you went into labour? Please take your time to think about everything that happened and how your felt about it.	• Where were you/ what were you doing at onset of labour? • Who else was around? • What did you do? Whom did you call or tell? • **Then what happened?** • **What happened next?** • Was anyone present at the birth? Who?

	How did your birth experience compare to what you had planned? Were here any decisions that had to be made during your labour and birth? If so, please describe. Do you feel you had a good birth experience? Why or why not? Looking back, what would you have liked to do differently or would do differently in future? What advice would you give to a friend or your sister who is pregnant about care during pregnancy and birth?	• What did they do? • Anyone else? • Did anything unexpected happen? • What do you feel went well or poorly compared to your expectations? • Would you change the place you gave birth? • Would you change who was present? • What would you recommend for pregnancy care? Why? • Where would you recommend women to give birth? Why?
After the birth	Tell me about any care you and your baby have received since you gave birth? Has anyone come to visit you in the home to check on you're and the baby's health? Who and what do they do? How were decisions made about the kind of care you should receive after the birth? How are decisions about your baby's care normally made?	• What kinds of care have you received? • From whom? • Do any health workers or VHVs visit? How often and for what purpose? • Who is involved? [PROBE: VHVs, spouse, parents, in-laws, siblings, shamans, other community members] • What do other people advise? • Are there any disagreements about care? Please describe.
Planning for complications/ emergency	Luckily your last pregnancy was healthy, and you had a routine birth. But if you had experienced a health problem or complication during the pregnancy or at time of birth, what do you think you would have done? Where would you have gone for help? What kinds of barriers might have made it difficult for you to get good care in an emergency? Can you describe the kinds of challenges women in this community face during pregnancy and birth if they have a complication or emergency?	• Please explain? • Who would have made the decision about what to do? • How could help be obtained? [PROBE: means and costs of transport] • Why would you have gone there? • Please can you describe any situations you know or have heard about? • What happened?
Wrap-up	Thank you for sharing your personal experiences with me. Is there anything else you would like me to know?	• Do you have any final questions for me about the study?

INFORMED CONSENT FORM

You have been selected as a participant for interview as part of the [country name] case study, which is being conducted by the Swiss Red Cross in order to understand community opinions and experiences of local maternal health care services for pregnancy and labour. We feel that you have valuable information to contribute towards improving our understanding of how decisions are made about maternal health care.

PLEASE READ THE INFORMATION SHEET ABOUT THE STUDY PROVIDED FOR YOU TO KEEP.

WHAT IS INVOLVED

For Group Discussions

We would like you to join a group discussion of about 8-12 people, which will last between 1 and 2 hours. We will conduct some activities that you can participate in with the others in the group to identify how women in this community decide whether to use maternal health services during pregnancy, birth and after, and what is your opinion about the different care options. Notes of the discussions and photos of any visuals produced such as map/diagrams during the discussion will be taken. We will not record your name or private information during the activity, and everything that is said will remain confidential in the study. We would like to audio-record the interviews and to take notes in order to ensure we capture the information you provide accurately.

For Individual Interviews

We would like to conduct an interview with you that will last between 45-90 minutes. Topics that will be addressed are how you and your family members took decisions about care at different stages of your pregnancy and your experience and perceptions of health services during pregnancy and birth. You do not have to answer any questions that you do not want to, and can leave the interview at any time. We would like to audio-record the interviews and to take notes in order to ensure we capture the information you provide accurately.

RISKS AND DISCOMFORTS:

For GROUP: None of the topics that we discuss will be personal, so the discussion should not pose any risks or make you uncomfortable. You can contribute as you wish, and there is no obligation to answer any question that you do not want to.

For INTERVIEW: Some of the topics we discuss will relate to what happens in case of complications or emergency situation during pregnancy and/or labour. This could be distressing for you if it brings up difficult memories or issues. We can stop the interview at any time and you do not have to answer any question that you do not want to. I can also arrange for you to talk to a counsellor afterwards if you feel it could make you feel better.

BENEFITS AND/OR COMPENSATION:

The study results will help us understand how to improve MNCH services here and in other places, and to learn what kinds of conditions make it easier for women to obtain the care they need. There are no immediate benefits to you as an individual. Taking part in the study will not cost you anything and we will not pay you to take part in the study.

CONFIDENTIALITY:

If you agree to take part in this study by signing this document, all information obtained will be stored using an ID number in computer files, with your name and other identifying information removed. No names of participants will be recorded, and we will treat all the information received confidentially. The only people who will hear the recording or see the notes are those who are working directly on this research project. In reports and papers about this research, we may use some of what you say in the interview as an example of local experiences, but your name will not be mentioned.

VOLUNTARY PARTICIPATION:

Involvement in this study is voluntary. If you decide not to take part in this study, your decision will not affect your future access to local services. You are free to withdraw your consent and assent and stop your involvement at any time.

Before you sign this form, please ask any questions on any aspect of this study that is unclear to you.

AUTHORIZATION

YOU ARE MAKING A DECISION WHETHER OR NOT TO TAKE PART IN THIS STUDY. YOUR SIGNATURE SHOWS THAT YOU HAVE READ AND UNDERSTOOD THE INFORMATION PROVIDED ABOVE, HAVE HAD ALL YOUR QUESTIONS ANSWERED, AND HAVE DECIDED TO TAKE PART.

I have read the information sheet concerning this study and I understand what will be required YES/NO
I understand that at any time I can withdraw from this study without giving a reason YES/NO
I agree to take part in this discussion YES/NO
I agree for this interview to be recorded YES/NO
I agree that what I say may be included in reports and papers as anonymous quotes YES/NO

Name (Print) ____
Date ______________________
Signature

Annex 8: Focus group discussion guide, adapted

Interactive Group Discussion Facilitation Guide
Introduction (10 minutes):

- Welcome the participants and introduce yourselves.
- Explain the purpose of the discussion
- Read out the Informed Consent form
- The discussion will be audio-recorded, explain that this is to help notetaking
- Explain that the research team will NOT record names, **ask if everyone can agree to keep the information shared private and not talk with other people about it**
- Ask if there are any questions, and if anyone would like to leave right away.
- Ask everyone to introduce themselves briefly, please share about their children and which ethnic group they are from. Hand out markers to each participant: Hmong participants to receive a red marker, Khmu to receive a blue marker, and Lao Lum to receive a green marker. SRC and facilitators can use black. Ask them to keep their marker with them.

Part 1: COMMUNITY MAPPING: ***What does your community look like?***

All Participants- 30 minutes to complete

Facilitators: 1 person guiding / facilitating discussion with help from 2 SRC notetakers.
The notetakers should record key discussion points for all sessions. Places and people that are important during pregnancy, also record places and people that are important during birth. Why and why not are certain places or people important? Probing participants may be helpful at times…. Including: "why do you think this happened- who may have made the decision?"

Hand out the flipchart paper (the group may need more than one page) The aim is to encourage everyone to contribute – try to avoid letting 2-3 louder participants do all the work.

Materials: Flipchart paper; coloured pens, sticky tape (to tape pages together if needed)

Explain to Participants:

1. We want you to draw a 'community map' showing places and people visited during pregnancy and birth. This can be family, friends, health workers, heads of village, traditional healers etc.
2. This can be drawn with pictures or words to describe the people and places.
3. Encourage the participants to know there is no "right" or "wrong" way to draw their community map. Leave the group alone to draw their map for 5-10 minutes. Facilitators can prompt the participants by asking questions like "is there anyone else you go to early during pregnancy?" "is there any other places visited during labour?" etc.
4. Discuss the community maps. Let the group explain their drawing to you. Ask questions about what is on the map and also what is *not* on the map. What are important places and persons why? Community or religious meeting places? a school? Head of village? Shops? The residence of a village health volunteer? Where the village healer lives? The health centre?
5. The groups can add places that they have forgotten, or they can explain why they did not include some things on it. Remember (and remind them) that it is *their* map, so they choose what should or should not be included and **they can make changes at any time**. There is NO wrong way to draw their community map!
6. When the groups are finished drawing their community maps, **briefly review the community map and probe to ensure the group has included all possible locations for health-care seeking and advice for pregnancy/childbir**th (family, friends, relatives, health worker, VHVs, traditional healers etc.)

Part 2: PREGNANCY PATHWAYS: ***What are common local experiences for pregnant women?*** *All Participants- 30 minutes to complete*

Participants: all together

Facilitators: pre-prepare a timeline, divide the page in to 10 months, from conception to birth at nine months, then one month post-natal. Some women may not know they are pregnant until month 2 for example or may not seek care until month 3 or when the baby moves. Each woman is different.
Notetaker to take detailed notes as the facilitator asks the guiding questions. E.g. "who does a woman tell when she first thinks she is pregnant?" Can probe participants for more information.

Materials: Flipchart paper; coloured pens

1. Explain to the participants what each month on the timeline represents, starting from conception to birth, then one month postnatal.
2. Ask the group members to think about themselves or close family members/ friends. They should think about what happens to themselves (or women in the local community) from thinking they might be pregnant through to giving birth (or experiencing a negative outcome)
3. Use the below guiding questions to find out what happens at each key step of pregnancy.
4. Guiding questions to ask the participants- please make sure EACH participant gives an answer and not just only one or two people:

Pregnancy:
- **How** and when does a woman first **think** they are pregnant? (e.g. missed period, feeling baby move) – **put an X on timeline** (notetaker records these details)

- **Who** would she tell if she thinks she is pregnant? (notetaker records these details)

- **Where** might she go for advice or to confirm she is pregnant? (notetaker records these details)

- **When** does she go for advice or **to confirm she is pregnant**? – **put XX on timeline**

- Does she usually seek health services? **Why or why not**? (notetaker records these details)

- **Who helps** her to decide to seek health services or not? (notetaker records these details)

- **Where and who** might she go to for advice and care as the pregnancy proceeds? (notetaker records these details)

- **Who helps** a woman make these decisions about who and where to go for care during pregnancy? family members? friends? health providers? (notetaker records these details)

- Are there **other things that may influence her decision** to seek care during pregnancy? (notetaker records these details)

- **What happens** if a woman has a **complication or poor health** during her pregnancy? What does she do? Where does she g? Who does she see? (notetaker records these details of what, where, who and why they go for this care)

- What might cause a pregnant woman **not to seek care from a trained health provider**? (notetaker records these details)

- Have you heard of **other women making different choices for care or advice during pregnancy**? Can you describe this further? (notetaker records these details. May need to probe further to find out **who makes the decision and what they would do and why**)

- Can anyone share any **other examples of stories or past experiences that affect decisions about seeking care during pregnancy**? (notetaker records these details)
- Does anyone have any questions or comments before we now talk about giving birth?

Birth:

5. Guiding questions to ask the participants- please make sure EACH participant gives an answer and not just only one or two people:

   - **Where do women commonly choose to give birth during normal birth**? (notetaker records these details) – **ASK each participant to draw or write this location on the map**

   - **Why** do women choose this place? (notetaker records these details. May need to probe further to find out **who makes the decision and why**)

   - Have you heard of **other women making different choices for place of birth**? Can you describe this further? (notetaker records these details: May need to probe further to find out **who makes the decision, where they would give birth and why**)

   - **What happens IF there is an emergency at the time of giving birth or just after birth**? (notetaker records these details. May need to probe participants further for what happened, who is doing what, how and why). IF there is nobody who has had an emergency in the group - then ASK them to share what they think they would do IF an emergency happened… or a story they heard of what someone else did in an emergency (notetaker must then record this is a plan or story and NOT a participant's actual experience of a birth complication).

   - Among women experiencing **complication or an emergency during or after birth, are there some who might make different decisions on what to do and where to go**? Why do you think they make these decisions? (notetaker records these details. May need to probe further for who makes the decision and what they would do and why they think they did it)

   - Any other thoughts on how different women may be influenced by family, other community members or trained health workers about where they give birth and what they choose to do if a birth complication happens?

6. **Discussion**
   Bring out the community maps drawn earlier. Ask them to take a look at their maps along with their pregnancy and birth time.

Guiding questions to ask the participants- please make sure EACH participant gives an answer and not just only one or two people:

- Which places and persons identified on the community maps were also included in the discussion on pregnancy and birth timeline? Why? (notetaker records these details)
- Which places and people identified on the community maps were NOT included in the discussion on pregnancy and birth timeline? Why not? (notetaker records these details.
- Have you heard of other women making different choices for care or advice during pregnancy and birth? Can you describe this further? (notetaker records these details)
- Which people and places are most commonly visited during pregnancy and birth care seeking? Why do you think this is the case? (notetaker records these details)
- Which people and places were least visited during pregnancy and birth care seeking? Why do you think this is the case? How does this differ across groups of women and their families and communities? (notetaker records these details)
- Any other stories or experiences you want to share about care seeking during pregnancy and birth? (notetaker records these details)

Part III: Helpful and not helpful *facilitators and barriers to health care seeking*

All Participants- 30 minutes to complete

In this case, we will ask the group to think about the challenges communities face in using available health care services- from trained health workers (nurses, midwives or doctors) for ANC and childbirth. We will also ask them to identify any factors or programs that already exist or could be introduced to support greater use of these services. We know this will include health care services from trained health workers in both facilities and at village levels.

Materials: Flipchart with helpful factors, flipchart with NOT helpful factors. Markers for each participant: Hmong participants should have a red marker, Khmu a blue marker, and Lao Lum a green marker. SRC facilitators and notetakers can use a black marker. Explain to participants we want to know about having care or advise with a trained health provider (nurse, midwife or doctor) as well as where they get this care from a health provider.

Identifying helpful factors for seeking care with a trained health provider

- Supportive husband
- Supportive mother or other family member/s
- Supportive head of village or VHV
- Supportive health worker (or stories of supportive health workers)
- Information heard or care given during outreach services
- Affordable and available transport
- External referral fund support from SRC (fuel and food)
- Mother and baby kits for birth and mothering
- Dry weather
- Good road access
- Personal savings for pregnancy and birth
- Ability to leave family and farm work
- Previous good personal experience with the health care providers
- Ethnic beliefs or practices
- Other
- Other
- Other

1. Read out the list of helpful factors on the flip chart
2. Ask the participants if they have any other helpful factors they would like to add to the list
3. Each participant should rank **EVERY** factor with their own marker pen:

   If the factor is VERY important (essential) then mark XXX

   If f the factor is quite important (not essential but very important) then mark XX

   If the factor is a little important (helpful but not essential or very important) then mark X

   If the factor is NOT helpful at all, then do not mark anything.

Identifying Barriers

Identifying not helpful factors for seeking care with a trained health provider

- Unsupportive husband
- Unsupportive mother or other family member/s
- Unsupportive head of village or VHV
- Unsupportive health worker (or stories of unsupportive health worker)
- Lack of information, lack of pregnancy care or not good pregnancy care given during outreach services
- Unaffordable and unavailable transport

- Lack of external referral fund support from SRC (fuel and food)
- Lack of baby and mother supplies for birth and mothering
- Wet weather
- Bad road access
- Lack of personal savings for pregnancy and birth
- Farm work and family responsibilities
- Previous BAD personal experience with the health care providers
- Ethnic beliefs or practices
- Other

4. Read out the list of not helpful factors
5. Ask the participants if they have other NOT helpful factors they would like to add to the list
6. Each participant should rank **EVERY** factor with their own marker pen:

   If the factor is VERY important (essential) then mark XXX

   If f the factor is quite important (not essential but very important) then mark XX

   If the factor is a little important (helpful but not essential or very important) then mark X

   If the factor is NOT helpful at all, then do not mark anything.

Discussion (note taker record details of the discussions and may need to probe for more information: who, what, how and why?)

- Which helpful factors do you feel are most important? Why do you feel this?

- Which NOT helpful factors do you feel as more important? Why do you feel this?

- If there is a complication during pregnancy or birth, how do these helpful or not helpful factors affect what happens?

- Are there any existing services that help to overcome the NOT helpful factors?

- How would you address these not helpful factors if you could?

- Are there any projects in the area that are helping women access care?

- Ask for **specific examples** from community experience, for example "Do you know of cases in the community when a woman experienced a serious complication during pregnancy or an emergency? What happened? Can you describe what the helpful factors and not helpful factors were in those situations?"

Part IV: WRAP UP

- Ask the group to look at all of the visuals they have produced.
- Ask permission to photograph and bring them back to Luang Prabang for analysis.
- Ask if there are any additional ideas or information they would like to share.
- Thank the group for their active participation. Tell them we appreciate their time and thoughts, which will be added to other information that is being used to better understand local perspectives on maternal health services in the area.
- Remind the group that all information collected is confidential and that we agreed not to share each other's information and personal stories.

Annex 9: Tip sheet for data collectors

Before interviews:

- Ensure your team knows the schedule!
  - Team 1 to Khengkhene on December 5-9. December 10 meet in Luang Prabang to discuss results
  - Team 2 to Phonthong on December 5-9. December 10 meet in Luang Prabang to discuss results
  - Team 3 to Nangiew on December 12-15. December 16 and 17 meet in Luang Prabang to discuss results
  - Team 4 to Huayking on December 12-15. December 16 and 17 meet in Luang Prabang to discuss results
  - For group discussions: Team 1 to and Team 3 to Nangiew and Banna on December 18-20. December 21 to meet in Luang Prabang to discuss results
- Plan and call ahead
  - Use Document 4 to help you plan your time in the villages
  - Call ahead to VHVs, women and health workers to help you make sure the women/husbands are home when you plan to visit
- Read the interview guides
  - The interview guides are long!
  - Read them <u>**all**</u> during the training week so you are comfortable with the content!
  - This will help you during your interviews
- ASK QUESTIONS! If you have a question, please ask! Ask SRC staff members, who will ask the IR lead if needed

During interviews:

- Always ask for informed consent before beginning (Document 2). Make sure you explain the research and get consent
- Record the interview! Use the recording device provided to record the interview!
- Be flexible
  - If a respondent is telling an interesting story, ask for more information
- Probe for more information
  - If a respondent is shy, ask for more information or use the guide to ask another question
  - What is more important is that a respondent is comfortable and tells us their thoughts on pregnancy/birth and decision making
- One person MUST take detailed notes
  - During the interview, make sure at least one person is writing detailed notes. These will help us later during the analysis

After interviews:

- <u>**Everyone**</u> that was present in the interview must fill in the Summary sheet (Document 6 or 7)
  - Reflect on the interview in a quiet spot **alone**
  - Ask yourself "what new information was in this interview?"
  - Ask yourself "was anything that was said sound familiar to me?"

At the end of each day:

- Reflect as a team
  - Use the time each night to talk about the day: what was challenging, what did you learn.
  - Make extra notes about anything you found interesting and want to share during the analysis sessions
  - Use this time to plan for the next day and make sure everyone is ready
- <u>SRC only:</u> Fill in the summary sheet (Document 13) and the end of every day – and on nights where you have signal, send to IR lead

Annex 10: Summary sheet for interviews with mothers

SUMMARY OF INTERVIEW (MOTHERS/FATHERS/FAMILY MEMBERS)

Date:

Name of data collector:

Name of person interviewed:

Village:

District:

Place of baby's birth:

Ethnicity:

Experience of pregnancy:

Experience of planning the birth:

Experience of the birth:

After birth:

What new information came out of this interview?

What did this respondent say that confirms what others have said?

Did the respondent say anything different than you've heard before?

Annex 11: Checklist for SRC support team during data collection

End of each day of data collection checklist:

- Sit with your team and REFLECT upon what you learned
  - What worked well?
  - What didn't?
  - Did any questions need revising?
  - Did we learn anything new?
- Plan the following day
  - Call ahead and make sure the families are available and home
  - Call the health workers/VHVs to help ensure the interviewees are available and home
- Check in with IR lead if needed/any changes with interviewees

End of data collection with each team:

- Ensure all voice recordings are uploaded to the computer
  - If possible, label all with name of person interviewed, village and date
- Collect and collate all:
  - Notes on interviews from data collectors
  - Daily notes on interviews by SRC
  - Flip charts and any other materials

Annex 12: Preliminary analysis questions for in-depth interviews

1. Reflect on how the data collection went
Each team – how did you go? Please share who you interviewed (for families: place of birth, ethnicity and village)? Challenges? What did you enjoy? What went well?

<u>2a. Family perspectives on pregnancy, birth and birth planning decisions:</u>
Pregnancy:

- What did you learn about why and when women first access services when they first learn they are pregnant?
- **<u>Who</u>** makes the decision to use health services and **<u>when</u>**?
- What did you learn about why and when women access health services during pregnancy?
- **<u>Who</u>** makes the decision to use health services and **<u>when</u>**?

Birth:

- Did all women give birth at the place of their choice? **<u>When</u>** did they make the choice? **<u>Why</u>** did they choose to give birth at this place?
- What were the differences in decision making between the people interviewed?

Birth planning:

- Did the women have a birth plan? What plans did women have in place in case of complications and difficulties in accessing health services?
- Were these different between different women? What were the differences?

<u>2b. External stakeholder perspective on pregnancy, birth and birth planning decisions:</u>

- What did VHVs think were the reasons women **<u>DID</u>** access care during pregnancy and birth? What did they think were the reasons they **<u>DID NOT</u>** access health care during birth?
- What did Heads of village think were the reasons women **<u>DID</u>** access care during pregnancy and birth? What did they think were the reasons they **<u>DID NOT</u>** access health care during birth?
- What did health workers think were the reasons women **<u>DID</u>** access care during pregnancy and birth? What did they think were the reasons they **<u>DID NOT</u>** access health care during birth?

<u>2c. Differences between people who make decisions (who has the power?):</u>

- Were there any differences between husbands and wives in relation to decision making when accessing health services during pregnancy and birth planning?
- Were there any differences between different ethnic groups in relation to decision making when accessing health services during pregnancy and birth planning?
- Were there any differences between village level stakeholders (VHV or head of village) and health workers in relation to decision making when accessing health services during pregnancy and birth planning?

- What did you hear that was different to what you expected?

<u>Positive reflection: Listen to a recording as a group</u>

- How did the team go asking questions?
- Is there anything you can learn from this group about how to conduct interviews?
- Do you have any suggestions for the group about how to conduct interviews in the future?
- Did you learn anything different about decision making?

Annex 13: Preliminary analysis questions for FGDs

How did they go?

- Who were the participants? How many? Village? Ethnicity? approximate age? How many children did they have?
- What worked well doing the FGDs? Why?
- What didn't work well? Why?
- How did you encourage women to participate?

Part 1: Community mapping

- What places or people were important on their maps?
- Were any places or people on there that you didn't expect?
- Were there any places or people on there that were not on there?

Part 2:

Pregnancy pathways

- Who do women tell if they think they're pregnant?
- Where and when does she go for advice to confirm she is pregnant?
- Where and who does she go for advice and care as the pregnancy goes on?
- Who helps a woman make these decisions?
- Are there other things that influence her decision to seek care during pregnancy?
- What happens if a woman has a complication during pregnancy?
- What might cause a woman not to see care from a health worker?
- Are there any stories that were shared about making decisions to seek care during pregnancy?

Birth:

- Do women make different choices for place of birth?
- Why do women choose to give birth at home?
- What happens if there is an emergency at the time of giving birth?
- Are there any stories about how different women may be influenced by family or other community members about where they give birth?

Part 3: helpful and not helpful

- What were the most helpful factors? Why?
- Did everyone agree?
- What were the most unhelpful factors? Why?
- Did everyone agree?
- Are there any services that help overcome the not helpful factors?
- How do the women suggest to address the not helpful factors?

Annex 14: Codes created with team and from preliminary analysis

Husband or father makes decisions
Woman's mother or other family makes decision
Shy with showing their body
Traditional or ethnic practice and beliefs
Perceived cost of health services
Modern and clean health facilities and equipment
Previous pregnancy and birth experience
Road access
VHV or head of village makes decisions
Family/farm commitments
Complications arising
Outreach services
Affordable and available transport
Weather
Positive or negative experience with health care worker
Other
Husband and wife decide together
Fast birth

Annex 15: Template for analysis

Time period	Data source	Code	Name/interviewee	Village	Ethnicity	Respondent type	Quote or example from data	Remarks
	e.g. IDI					e.g. mother birth at home		

Annex 16: IR Evaluation for data collectors

Implementation Research Evaluation

Name: **Date:**
Job role:

Training (Nov 30 – Dec 4)
Can you please rate your overall experience of doing the 3 day IR training and 1 day field test?
Please circle your chosen rating: Bad OK Good Very Good
Can you please explain your rating:
____
____
____

Are there any more research topics you would have liked to learn about during the training? Yes or No If YES then please explain more about the extra topics would you like to have learnt about:
What topics? ____
Why these topics?____

Data collection
Can you please rate your overall experience of doing field interviews? Please circle your chosen rating: Bad OK Good Very Good
Can you please explain your rating: ____
____
____

What did you enjoy about doing the field interviews? ______________________________
____

What did you find challenging doing the field interviews? ___________________________
____

For the teams (1 and 3) who were involved in doing focus group discussions, please rate you experience of doing these focus group discussion:
Please circle your chosen rating: Bad OK Good Very Good
Can you please explain your rating: ____
____

Analysis (Jan 6 – 8)
Please rate your overall experience of doing the data analysis – e.g. categorising data:
Please circle your chosen rating: Bad OK Good Very Good
Can you please explain your rating: ____
____

Can you please describe your overall experience of discussing the data as a group?
____

What was challenging about the analysis process? _________________________________
____

What do you think worked well about the analysis process? ___________________________
____

Overall
Please rate your overall experience of participating in the IR work:
Please circle your chosen rating: Bad OK Good Very Good
Can you please explain your rating: ____
____
____

What did you find the most interesting during the IR work ? ___________________________
____

Can you please list three (3) different things you have learnt about how or what affects families making their decisions about where to give birth:
1.____
____
2.____
____
3.____
____

Can you please suggest any ways SRC could better support families to have a supervised birth in a health facility: ____
____
____
____
____

Is there anything you have learned that will change how you work in your current role? Can you please explain what this is and how it will change how you work now? ______________
____
____

Would you be interested in supporting further research work for SRC? YES or N)

Thank you for your time and effort given while participating in SRC's Implementation Research!

Annex 17: Dissemination plan

The IR has been conducted in collaboration with Luang Prabang PHD, Chomphet DHO and Phonexay DHO. This IR Report will be translated and submitted to the Lao Ethics Committee in the first instance. The results and recommendations from this IR Report will be made available to SRC's partners. The Lao Ministry of Health and Provincial health partners in Luang Prabang will be encouragement to take leadership in this Report's dissemination in Laos. A process will be supported by SRC for Luang PHD and DHO to present this Report at technical meetings as they see fit. This is in recognition of Luang Prabang PHD and DHO partners being key leaders in undertaking this IR. The specific purpose is to ensure ownership of the findings by the PHD and DHO counterparts, 11 of who dedicated 6 weeks of their time to this body of work. It is expected that the PHD will consider the recommendations and present the IR findings at the National level. This dissemination process being led by the PHD, will facilitate the use of the IR research for strategic gains towards strengthening maternal, neonatal and child health services in Lao PDR. This is a fitting closure following 6 years of MNCH strengthening activities by SRC in the two target districts in which the IR was embedded. There will be potential for adaption of the IR recommendations in to program planning, as SRC districts have significantly higher rates of SBA births than other districts of Laos. This particular MNCH2 project result is noteworthy and will bring greater recognition and 'voice' to the sharing of the IR work in policy settings. The IR team should be commended for bringing village women's voices into policy dialogue in Lao PDR.

Annex 18: IR evaluation results

	PX DHO	CP DHO	PHD	PX DHO	CP DHO	CP DHO	PHD	PX DHO	PX DHO	PHD
Can you please rate your overall experience of doing the 3-day IR training and 1 day field test?	Good	Good	Good	Good	Good	Good	Good	Good	Very good	Very good
Please explain your rating	This training was well planned and its interview guidelines also came with detailed instructions	NA	The trainers managed this project excellently and gave a great assistance to the team members during the fieldwork.	The training had detailed and well-constructed plans. Also, the fieldwork has its clearly defined target groups and had done the training before the real fieldwork started	Every person worked together as a team, every person is ready to work on their assigned position and help each other	The team was working together harmoniously, know how to separate and collect the data, every of the team members know their own duties	By joining this training, I have more understanding and practicing towards these related areas, as well as experiencing good fieldworks	It allows me to learn the problems and asking the probing questions for information that we want to get "such as why and how"	We successfully collected the information as needed for the project, and this project was encountered only a few obstacles due to the fact that we only aim for a small target group, thus we preform our works as planed	Information given by the participants were detailed data
Are there any more topics you would have liked to learn about?	Yes	Yes	Yes	Yes	No	No	No	No	No	No
If yes, what?	Training on "how to educate women that will lead to their behaviour change"	More practice on conducting the interview and compare it with a real interview	The questionnaires are not matched with the record forms	Want to be trained on how to give an effective health education to women that will finally leads to behaviour change	NA	NA	NA	NA	NA	NA
If yes, why these?	So that women will be able to make decisions by themselves in coming to the health facilities for services	There are differences when doing the virtual interview (practice) Vs. a real situation	NA	Want women to change their behaviour related to the decision making to use health care services in health facilities	NA	NA	NA	NA	NA	NA
Data collection										
Can you please rate your overall experience of doing field interviews?	Very good	OK	Very good	Good	Good	Very good	Very good	Good	Good	Very good

Please explain your rating	villagers were very cooperative and provided us with a lot of information	NA	The teams achieved its objectives during its fieldworks	Data collection has a well-constructed plan and has well-defined objectives. Given enough time for summarizing the information that was interviewed and allowed for discussions in every case.	Women are very friendly. The interview team was very well prepared their questions to ask for information	Witness the ways of living of people from each area and ethnic group, saw the rate of using health services of each areas. Experiences of women in giving birth at home and in the health centre	The women are very well participated which make the data collection were very successful	Can perform the interview to get the information related to the current situations of women from each ethic group such as Lao-Loum, Hmong and Khmu	We can get the very importance information for this research and this data is the target information as needed for the project	During the data collection at the field, participants were very well participated, honestly and friendly
What did you enjoy about doing the field interviews	I can learn about the living behaviour of the participants. I also realized that all team members worked together harmoniously	Allows to speak freely and a very friendly exchange the ideas with the participants	Encouraging all pregnant women to receive the ANC at health centres	Finding the reasons for the pregnant women about their decision to use the health care service at the health facilities	Knowing the ways of living and behaviours of the pregnant women during their own pregnancy was a great experience	I like working in a team and researching in to the new things that have never heard before	NA	Knowing that health care staffs at the facilities are preforming their practices according to the (MOH) strategies to the women that come to receive health care services	The team worked together, and the women were also very well participated	The staffs of this project facilitated very well for the members of a team and the local participants
What did you find challenging doing the field interviews	Different languages used in communication with the participants and the local villagers	There are still some problems of understanding and communication (language) between participants and interviewers	Some women still give birth at home	Group discussion and communication with the local Hmong participants (Nonggnaxay Village)	Traveling to the target villages, asking question, as well as understanding the answer, languages	Questions used for the interview	Problem caused by the participants that gave the information (did not specified which type of information)	Speaking language difficulties, especially, the Khmu ethic group and some women cannot answer and give us 100% of information	The questions were not detailed enough and the women sometime did not allow us to do the interview	Some local people refused the interview
For the teams (1 and 3) who were involved in doing focus group discussions, please rate you experience of doing these focus group discussion:	Very good	Very good	Very good	Very good			Good	Good	Very good	Very good
Please explain your rating	a lot of information was collected during the interview	keeps privacy and allows all participants to participate	Team 1 & 3 worked together harmoniously. We also discussed about which questions to ask to the women to make them understand	It is an interview that allows to collect multiple answers at the same time and allows to compare the different experiences between each person		NA	Interview with the women in each of the groups were very clear	Some women gave very details information. However, some staff cannot use the probing question to probe for this information. Though, in general all staffs performed well	the team work harmoniously, and the women also were very friendly which was very convenient for the team to work	NA
<u>Data analysis</u>										

Please rate your overall experience of doing the data analysis – e.g. categorising data	Very good	Good	Very good	OK	Very good	Very good	Very good	Good	Good	
Please explain your rating	This activity helps us to understand how to categorize the type of information and allows us to explore our collected data in more deeper details	Data analysis is a new thing and very challenging for me. It was an importance lesion as well	Trainers contributed a lot of energy and time in making the probing questions	Categorizing the type of information (responses from the participants) in data analysis is not completed, for example, should include the type of decision making, and receiving health information of the pregnant women	All information was collected, all information was well-categorized	Know about the data analysis and research	Have a great discussion about the details data analysis process with the real data that were collected from the field	Allows to know the reasons and to categorize the information	Some types of information were confusing and were out of the context that were asked from the participants	The team worked together and can perform the probing for information very well
Please explain your overall view towards doing the data analysis in group	It allows us to share our experiences and to generate the new information	It was a very good idea to separate into different group because we can know more about the different situations among different groups	Each group contributed to the questionnaires	Data analysis by grouping information is finding information of every person that might have similar or different problems for comparison and explore the clear solution for these findings	Every person in a team is very helpful, every person will know the information from the areas that they were not responsible for interviewing	The team had its unity, worked together to categorized and performed the analysis until it was competed	Majorly, working in a group is the main working process for this training which include in this data analysis phrase as well	It was harmonizing between member of the team to find out the possible reasons of the problems. It allows us to understand the decision making of each of the women to come to use ANC and give birth at the health facilities	In general, working together in a team was well harmonized for every person	Every person worked tirelessly
What was challenging about the analysis process?	To recall the information that was previously asked the participants	It was a new thing that I have never done it before	The challenge is that the data analysis is the process which deals repeated data	Participants may not tell the complete and truthful story	The types of information that was pre-defined from the instructor were still confusing, and some types were overlap with the other types	Question or analysis process was confusing, messing up (not following as a step by step)	Using the collected data for the analysis	Some information was not complete and we did not think of some others possible reasons for the problem	The information collected was not matched with the type of information that we intended to analyst. Further, the time spent for this was short	NA
What do you think worked well about the analysis process?	Remembering the information that was previously asked the participants	According to my data analysis, it is comparing between the data collected in the field and the one that appears from the analysis	Primary data collection (from the field) was well collected	Finding the problem that are blocking the pregnant women in accessing the health care services	During reading the summary of interviews records (during the day 2 of training)	I can separate each process and understand the time when the interview happened	Focus group discussion	Some information was complete and looks feasible for the situation	Focus group discussion, because when we trend to skip any of the topic, the group will remind us	NA
<u>Overall</u>										

Please rate your overall experience of participating in the IR work	Very good	Good	Very good	Good	Very good	Good	Good	Good	Good	Very good
Please explain your rating	Learn new things, help in gaining new experiences	I have quite different experiences with this project. In particular, during the real interview I can observe different and similar interviewing processes from the one that I was trained	Both project staffs and the government staffs working together for the data collection for this project	I could perform the interview with the target participants to find out the problems, then I classified the type of information that I have interviewed and explored the negative problems in order to find the ways and appropriate solutions for these problems	Every person knows each progress of this project at the same time, share ideas, and participate in the project activities	I am grate that I have all these experiences from going to the field for interview, data collection, analysis and research	Worked together harmoniously between government's staffs and the project's staffs	Knowing situation that happened with women during pregnancy, their ANC, giving birth, post-delivered period, care from the husband/family, separated by each ethic groups	A lot of new information was collected during this fieldwork, which include sharing experiences with technical staff from the project, staff from the provincial level, Chomphet district. I can interview women, health village volunteer and father of that family	Very well performance on each step of this fieldworks
What did you find the most interesting during the IR work ?	When discuss with the participants	The understanding of the local people (towards the healthcare facilities/project activities), economic status of the family and trust between local people and the local healthcare providers	Women in some ethnic groups remain illiterate for Lao Language which make the interviewing received inconsistency data	NA	Using services at the health centre, receiving information	Women in different ethnic groups have different ideas, and received different information	Some women can't speak Lao language (Lao-Loum language)	NA	Interviewing the Hmong ethnic group that does not understand Lao Language was very challenging, and some women refuse for us to do the interview	NA
Can you please list three (3) different things you have learnt about how or what affects families making their decisions about where to give birth: 1:	Don't want to go to the health facilities for giving birth because they don't have enough money		Decision for giving birth at the health centre remains to be the decision of the husband and parent	Husband is the only person who make the decision	No vehicle to come, no money, a house is far from the health centre	Weather: heavy rain courses road to health centre cut, thus women give birth at home	husband, family	Some people planned to give birth at the health facilities, but end up giving birth at home	Families are having difficulties in traveling a far distance, which include no vehicle and no money	Because poor family does not have money
2:	Don't want to go to the health facilities for giving birth because of cold weather	The local committees that have the direct responsibility for this task are not paying attention enough	Villages are far from the respective health centre, road as well as transportation remains to be a problem	Difficulty in traveling to the health facilities	Weather: rain, land slide, can only use the road for only one season	Far distance, no vehicle, husband is not supporting	Villages locate far from the health centre	Some women planned to give birth at home, but end up giving birth at the health facilities	In the family there is no body to take care of the baby	No transporting vehicle

3:	Don't want to go to the health facilities for giving birth because of their husbands do not allow to do so	Local villagers have a difficulty in communication as it was shown that sometimes we couldn't understand their speaking	Some family still do the home birth	The birth plan was planned, but it was not successful	Normal practice (never come to give birth at the health centre), pregnant women don't dare to come to give birth at the HC if they come, they don't know how the doctors will do to them	In labour at night time, husband hesitate to find the vehicle	Some families still give birth by themselves	Some women wanted to give birth at the district hospital, but end up to giving birth in the middle of the way (road). Some planned for the district hospital but end up at the provincial hospital	Don't want to give birth at the hospital because of being shy to expose a body to doctors and toilets at hospitals are dirty	Belief
Can you please suggest any ways SRC could better support families to have a supervised birth in a health facility:	Building more representative in the village to help promotion health-related activities	Health education to the local villagers and local authorities. Further, support local people for medical expenses during their hospital visit	Support an incentive for the government staff to do a health education at the outreaches, which will help to improve the understanding of the local people	Build more representative within the village for assisting and being prepared all the time to help the pregnant women when they need services at the health facilities	Influencing factors: towel, baby and mother post-partum kits, soap and detergent, and some incentive	Some small gift such as a gift package, incentive (money), to influence women to come to give birth at the health care facilities	Support the government's staffs to go to the outreach for giving health educations	Give knowledge, give health education, strengthen the village and set up some regulation for this task	Give health educations, especially, include the involvement of the Women Office to this task to educate, working with the women and promote the gender equity	Traveling support (money) for the remote family
Is there anything you have learned that will change how you work in your current role? Can you please explain what this is and how it will change how you work now?	I want to know about the ways and techniques used in persuading pregnant women to come to health facilities for ANC and giving birth	I can adapt these experiences to my work such as using different questions for asking for different things. We do this because sometimes, responders can say different things from what we intend to ask	NA	I have learned more that each ethnic group has different problems and will change the way our current working process, that might increase access to the pregnant women in each villages. Further, forming the representative that is available for help in the village would be helpful	I learned many things and will use for my work such as working as a member of a team, that need a working together environment to make any project success. These might also take in to consideration the details, correctness, appropriateness of the work	Learned the way to do the interview, analyse the data, working in a big team, pretending to be a different roles such as interviewer and recorder.	NA	Simplify the questions for an interview and a section for conclusion	NA	NA
Would you be interested in supporting further research work for SRC?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Reason for: Would you be interested in supporting further research work for SRC?		Because I can gain more knowledge and share my experiences with other team members.		Interested and need to participate in the data analysis because I hope to use these findings to improve the problems that are blocking the pregnant women to receive health care services						