Evaluation of Nurses for Nepal Project

Mahakulung Rural Municipality and Mapyadudhkoshi Rural Municipality, Solukhumbu District, Nepal

Field research and preliminary analysis conducted by the Center for Research on Education, Health and Social Science (CREHSS), Kathmandu, Nepal

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It is affirmed that the data and information provided in this report are based on the information provided by the beneficiaries, key informants and the project documents.

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ACRONYMS

AF Nepal	Action for Nepal
AHF	Australian Himalayan Foundation
ANM	Auxiliary Nurse Midwife
ANC	Antenatal Care
CREHSS	Center for Research on Education Health and Social Science
DAC	Development Assistance Committee
DHS	Demographic Health Survey
DoHS	Department of Health Services
FGD	Focus Group Discussion
FCHV	Female Community Health Volunteer
GoN	Government of Nepal
HHs	Households
HFOMC	Health Facility Operation and Management Committee
KII	Key informant interview
NGO	Non-Government Organization
OHW	One Heart Worldwide
OPD	Out-patient Department
ORS	Oral Rehydration Solution
PNC	Postnatal Care
PNGO	Partner NGO
OECD DAC	Organisation for Economic Co-operation and Development's
SBA	Skilled Birth Attendance

SDGs	Sustainable Development Goals
SMC	School management committee
SPSS	Statistical Package for Social Sciences
TD2	Tetanus Diphtheria Vaccine
WHO	World Health Organization

EXECUTIVE SUMMARY

Introduction: The purpose of the Nurses for Nepal project was to improve the health of the people living in Waku in Mapyadudkhoshi Rural Municipality and Chheskam in the Mahakulung Rural Municipality, Solukhumbu District, of Nepal,

and in particular of women and children. The main objectives of this evaluation study were to evaluate the project based on Development Assistance Committee (DAC) criteria, analyze the changes generated by the interventions and offer recommendations for improving the action in the future. Study was also undertaken in two new areas in the Solukhumbu District (Tamakhani and Taksindo) as a point of comparison with Waku and Chheskam and for the purpose of collecting baseline information for a potential new program.

Methodology: This study was cross sectional in design and used mix methods. Both qualitative and quantitative research tools were developed. A structured questionnaire was used to interview beneficiaries for quantitative information. Key informant interview guidelines (KII) were prepared to interview other key stakeholders while focus group discussion (FGD) guidelines were used to conduct focus group discussions with community groups. TheEvaluation Study was conducted in Waku and Chheskam while study in Tamakhani and Taksindo was also conducted for the future project design, as these areas were suggested by the district health office and municipality, as well as One Heart Worldwide (OHW).

Demographic and social characteristics: The average age of the respondents was similar in both the recent program and proposed new areas; 26.9 in the program areas whereas it was found to be 25.7 in the new areas. In terms of caste/ethnicity, the majority of the respondents in both the program (87%) as well as the new areas (84%) were Adivasi/Janjati. The major source of income in both the program areas (78%) and in the new areas (69%) was found to be agriculture. The average family size was found to be 4.4 and 4.9 in the program areas and new areas respectively. Nearly half of the respondents in Waku and 13 percent of respondents in Chheskam mentioned that it took more than an hour to reach the nearest health facility. The average distance (travel time) was found to be 82min in Waku whereas it was found to be 37min in Chheskam. Similarly, the average distance was less in Tamakhani (28 min) than Taksindo (75 min).

Maternal and Child Health: Child breast feeding practice is good in project areas. 87% of the respondents in the program areas compared to 73% of the respondents from the new areas breastfed their child within an hour of the birth. According to the Department of Health Services (DoHS) Annual Report 2018-2019, the percentage of newborns initiated breastfeeding within 1 hour of birth in Nepal is 23.5% and in Province 1 is 48.1%. The majority of the respondents breastfed their child for six months in both the areas. But a higher proportion of the respondents in Chheskam (96%) exclusively breastfed their children for six months as compared with Waku (78%). The DoHS report noted above shows 33.3% exclusive breastfeeding nationally and 55.5% in Province 1.

60% of the respondents completed immunization of their children in the program area and 43% in the new area. According to DoHS Annual Report 2018-2019[1], the percentage of children who received all the vaccines was 68% (71% Province 1) in 2018-2019 - SDG targets for 2019 were 88.6% (100% by 2030). Around 2% of the respondents of Waku mentioned that their children had some

[1] https://bnmtnepal.org.np/wp-content/uploads/2020/10/DoHS-Annual-Report-FY-075-76.pdf

kind of disability but all of them mentioned there was no accessibility of the services as the road from house to the HP is not accessible in many areas for children with a disability. In regards to the access of services provided by the health posts, a higher proportion of respondents in Chheskam (90%) had access to the services provided by the health post as compared to those of Waku (40%). A similar proportion of respondents mentioned that their children had diarrhea in the past two weeks in both Waku (15%) and Chheskam (17%). As per the DoHS Annual Report 2018-2019, the incidence of diarrhoea in under 5 children in Nepal was 37.5%% in that year (35.1% in Province 1); Nepal SDG targets are 36.7%% in 2019 (0% in 2030) so in both areas the reported prevalence was higher.

It is encouraging to note that an overwhelming majority of respondents of both program and new areas had ANC check-up during pregnancy. However, only 50% of Waku respondents had four or more ANC visits, but pleasingly 91% of those in Chheskam attended those visits. According to DoHS Annual Report 2018-2019, the percentage of pregnant women attending a minimum of four antenatal visits was 56% (61% in Province 1) in 2018-2019. The SDG Nepal target was however 74.6% in 2019 (90% by 2030). It was found that a higher proportion of the respondents in Waku (72%) had their delivery at home as compared to Chheskam (17%). It could be due to the fact that Waku did not have a birthing center, which is available in Chheskam. Similarly, in the new areas, the proportion of women who had a delivery at home was higher in Taksindo (60%) than in Tamakhani (5%). In both Chheskam (83%) and Tamakhani (95%), the rate of institutional delivery is better compared to the national data of 63% institutional delivery at national level and 62% in Province 1 (DoHS Annual report 2018-2019). The proportion of respondents visiting a health facility for PNC was found to be higher in Chheskam (74%) as compared to Waku (24%). Nationally, in 2018-2019, the percentage of mothers who had three PNC checkups as per protocols was 16% - 9% in Province 1 (DoHS Annual Report 2018-2019). When asked about the reason for not visiting health facilities for PNC, almost two thirds in Waku and more than a fifth (21%) in Chheskam mentioned that the health facility was far away from their home. Similarly, a quarter of the women in Tamakhani and almost half of the women in Taksindo (48%) did not visit the health facilities due to their distance.

Qualitative findings showed that positive changes were observed in women and child health as a result of project interventions. Women had improved health care seeking behavior as they were more aware about the risks and complications during pregnancy, and improved knowledge on nutrition during pregnancy and lactation.

Women's decision-making status: It was found that more than two-fifths (46%) of the respondents in the program areas made their decision alone and almost two-fifths (38%) of the respondents made their decision jointly with their husband for their health care. The proportion of women making decisions on their own was found to be higher in Chheskam (55%) as compared to Waku (37%). Similarly, nine in ten respondents from both the program areas decided family planning use jointly with their husband.

Family planning: More than three-fifths of the respondents (72%) had used a family planning method in the program areas. The proportion of respondents who had used a family planning method was found to be slightly higher in Waku (74%) in comparison to Chheskam (69%). The most prevalent method of family planning by two-thirds of respondents are Depot Medroxyprogesterone acetate (DMPA) in both the program areas (71%) and the new areas (74%).

Perception towards Nurse's activities: Seven out of ten respondents from Waku mentioned that the intervention of the nurse was useful while it is notable that 99% of the respondents from Chheskam mentioned that the intervention of the nurse was useful. It is to be noted that the nurse

supported by the project accompanied the field study team and this may have had an impact on the responses.

Qualitative findings were also in line with the quantitative findings as all of the KIs and FGD participants mentioned that the services provided by the nurses were highly beneficial. The orientation in the mothers' group meetings and the knowledge on health issues provided by the nurses were found to be fruitful which helped change the behavior of the community people.

DAC Findings

Context: Due to the federal government system with decentralisation of power to local government, AF Nepal was able to have frequent and effective communication with local government representatives which made all the processes much easier. The co-ordination and communication procedures were not only easier but also more fruitful as the partner NGO (PNGO) had direct contact with ward level stakeholders. The active involvement of local people, including mother's group and FCHVs and support from local government and One Heart Worldwide was also helpful for proper project implementation. The project was well implemented despite the unfavorable topography and geographical barriers. It has encountered some management challenges such as staff turnover, difficulty to gather mothers for meetings during the initial stage of the project and difficulty in access to health services in Waku due to scattered settlement.

Relevance: The support of the staff nurses at the health institutions was well accepted by the Health Facility Operation and Management Committee (HFOMC), and the target women. The N4N project was designed and implemented on the basis of findings obtained from the needs assessment. The assessment helped to find out the opinions, perceptions of community people and various problems in the health sector prevalent in the community. The identified problems were prioritized with active participation of the formal and informal leaders, health personnel, local women and men. After the prioritization process, areas that AHF and AF Nepal could support at the time were addressed through the project. Similarly, the project also lines up with AHF's mission and identified geographic focus i.e. to improve the quality of life of the people most in need in remote areas of the Himalaya, as Solukhumbu is a remote district in the Himalayan region; and health one of the strategic focuses of AHF. The mission of AF Nepal is also to empower local communities to develop resilience through improved health outcomes.

Coherence: The project was also coherent with other interventions in the area. 'Aama Surakshya Karyakram' (Safe Motherhood Program) is one of the most important Maternal and Child health programs of the Nepal Government and the activities of the project were also in line with this safe motherhood program. AF Nepal coordinated well with the local government before and during the program implementation, and the local government also supported the program implementation. Similarly, there were organizations like OHW and Suaahara which were also directly or indirectly contributing to maternal and child health promotion. OHW mainly focuses on building health infrastructure and Suaahara works for promoting nutrition of mother and the child. Hence, the project was compatible with other working partners in the same area and was likely impacted by them in some way (and vice versa) which is outside of the scope of this study to assess.

Efficiency: The project initiation could not be done as per predetermined plan. The project started late due to a time consuming staff hiring process and other barriers related to the remote location of the implementation areas. Although most activities of the project were completed on time as per information received from key informants (nurses), some activities planned to be carried out in the

later part of the final year of the project were not accomplished due to the impact of COVID-19 and were rescheduled as part of the extension/evaluation phase.

Effectiveness: Project intervention brought improvement on health of women and children through various ways. Key informants mentioned that women's health seeking behavior has improved as a result of the project. Similarly, the services provided through the nurses in the health post also helped in smooth and effective health service delivery. Likewise, the competence of FCHVs was improved after being trained by the nurses and they were able to organize mother's group meetings easily. The project also carried out orientation to HFOMC members for health facility management, which has proved to be effective as per HFOMC members feedback. In a similar manner, the school health program of the project was fruitful enough to increase the knowledge and practice of students on hygiene and sanitation, handwashing techniques, adolescent sexual and reproductive health and other social issues.

Impact: The most important impact made by the project reported by the study team is the change in not only knowledge but also practice and behavior of women to seek the necessary health care services, and adopt healthy behaviors. Women were reported to have sought increased health check-ups during pregnancy, to have consumed nutritious food and respondents also mentioned an increase in institutional delivery. The active involvement of women in mother's groups and the different health sessions provided within the mothers' groups are also reported as having empowered the women and having helped them make the right decisions about their health. The orientation to FCHVs also empowered them to independently conduct and lead mothers' group meetings. It is to be noted however that there is discrepancy between the qualitative information gathered during the evaluation study and the indicators selected and data from the health post gathered as part of the project, where identification of changes of behaviour is more problematic than it actually was. Quality of health post data has been raised as an issue by different stakeholders, as well as problems due to indicators' denominators being calculated based on government targets (in the absence of accurate data) which are reported to be too ambitious. Future projects will need to include training on data collection and look at ways to better measure progress.

Safeguarding: The project worked with women and children including pregnant and lactating women. The project ensured gender inclusion, equal participation from all socio-economic groups in project activities. The project team read and signed AHF and AF Nepal's child safeguarding policies. The implementers (nurses) also complied with those policies during project implementation. Both the project team and research team also submitted a Police Clearance Certificate to AF Nepal and AHF.

Sustainability: The participation of the local people and local stakeholders was maintained in project planning, implementation, and monitoring stages. It helped them realize the importance of the project intervention and develop ownership. The project was implemented in close coordination with Local level government (Palika), Health facility and FCHVs, which resulted in their ownership of the program. The extended relationship of mother's group with the FCHVs through regular Health mother groups meetings and with the health workers through improved health seeking behaviour have contributed positively towards better relationships between service seekers and providers. Though the support of the health staff in the health post was effective in bringing positive changes in the life of women, the evaluation observed continuation challenges regarding insufficiency of staff and irregularity of staff presence at the health posts after the project phase out as the nurses provided the services only for a limited period of time. Capacity strengthening of existing staff will also help to provide quality health services for the long term.

Lessons Learnt and recommendations

Promising practices:

- ⇒ The mothers' groups were found to be an effective platform to provide knowledge to mothers. The regular meetings and discussions among the members of mothers' groups were a strong motivating factor for the mothers to not only learn about but practice healthy behaviours.
- ⇒ Building capacity of FCHVs was found to be an effective way to carry out health sessions to mothers' groups as it is also a long-term way to increase knowledge and change the health care seeking behavior of mothers.

Recommendations:

1. Improving governance, facilities and human resources

1.1 Strengthening health service facilities

Staffing, equipment and medicines remain an issue. Qualitative information also showed that respondents had dissatisfaction with the quality of health services in Waku, due to problems such as shortage of equipment and medicines and obviously the absence of a birthing center. Respondents recommended for health management committees to be more active and for health workers 'to be more responsible towards their duties'.

- ***Advocacy and obtaining commitment at local government level for provision of all sanctioned staff, for monitoring regularity of staff attendance at health posts, and also for timely provision of adequate essential equipment and medicines (including Oral Rehydration Solution (ORS) and zinc tablets).***
- ***Capacity strengthening of management committees can help provide quality health services for the long term. Assessment of capacity of health post management in Taksindo should be undertaken (if it is determined as the next focus area for the AHF Health Program) and capacity strengthening plans developed for Waku and Taksindo.***

1.2 Addressing staffing shortage and capacity

Availability of staff in health posts in both Waku and Chheskam in particular remains a critical issue. With decentralisation, health post staff have been asked to go back to their region of origin, leaving gaps. As per government, in each health post there should be a total six staff including one Health Assistant (HA), two Auxiliary Nurse Midwives (ANM), two Assistant Health Workers (AHW) and one office helper. In both Chheskam and Waku currently there are only 4 staff - two ANM, one AHW and one office helper. In addition, the capacity of staff is varied with some having only limited training. Some respondents noted the heavy reliance of the nurses supported by the project in both Waku and Chheskam to

provide services such as ANC/PNC, despite them being employed only for a specific time period. There is a risk that those services might be discontinued if sufficient staff are not available. Sustainability is a key consideration to be discussed.

- ***Assessment of capacity of health post staff should be undertaken in Waku and Taksindo and capacity strengthening plans developed.***
- ***Performance process should be reviewed/implemented in Waku.***
- ***Identify and address staffing gaps in Waku and Chheskam in close liaison with local government and other stakeholders and maximise sustainability.***

1.3 Ensure adequate equipment

Health facilities are lacking essential equipment particularly relating to maternal health, such as ultrasound screening. ***Ensure such equipment is available at health posts in Waku, Taksindo and Chheskam.***

2. Improving access to services and information

2.1 Increased access to services in remote areas

Both quantitative and qualitative findings showed that the maternal health service utilization in Waku is not satisfactory; nearly three-fourths had home delivery, only half had completed four or more ANC visits and only about a fourth had PNC visits. The main underlying reason for this was the inaccessible (in terms of distance) health facility and this was similar in Taksindo.

- ***Hence, interventions should be carried out in such a way that it will ensure the accessibility of health services to the majority of the people. For instance, increased frequency and timely conduction of out-reach clinics (ORC), satellite clinics so that mobile medical teams provide services in hard to reach areas. Interventions should specifically ensure that ANC/PNC (including delivery of TD2) services are available at health posts and through mobile clinics.***
- ***Mobile clinics should be undertaken for provision of***
- ***immunisation, particularly in Taksindo;***
- ***diarrhea treatment in Taksindo and Waku;***
- ***deworming medicine in Taksindo;***
- ***mobile ultrasound screening for pregnant women and ensure they come to the health post for delivery in Waku and Taksindo***

It is to be noted that AHF and AF Nepal, with the support of the local government and One Heart Worldwide are building a health centre in Waku with a birthing suite. It will be important to

- ***ensure completion of health post and birthing centre in Waku, effective management including staffing allocation.***

2.2 Addressing child marriage, early pregnancy and adolescent health

The major maternal and child health problems in the present context were child marriage, early pregnancy and lack of sufficient knowledge on adolescent sexual and reproductive health issues.

- ***Hence, upcoming interventions should focus on addressing these issues. For instance, adolescent friendly health services in the health posts, separating certain class hours to include topics such as early marriage and pregnancy at secondary level (this would also fall under 3. Increasing awareness and advocacy).***

- ***Provide further education on menstrual health in schools of program areas, particularly in Chheskam.***

2.3 Promoting engagement of mothers and FCHV in mothers' groups

Some mothers couldn't attend the meetings because of their household chores and agricultural work. Similarly, the difficult geography was also another factor hindering women's participation. Participation of attendance in mothers' group meetings was less in Waku at 72% than in other locations and respondents noted that FCHV's participation could be increased in Taksindo and Waku. Some respondents also noted that whilst Chimeki Aama Samuha (women saving groups) had 100% attendance, some mothers' groups only had around 60% attendance. Future projects should liaise with those saving groups to identify the best way to promote health awareness.

- **Strengthen engagement of mothers' groups in Taksindo.**
- **Promote greater participation of FCHV and health post staff into mothers' group activities in Taksindo and Waku.**
- **Strengthen planning process to ensure all mothers' groups visited.**
- **Liaise with mothers to identify best time for meetings and promote engagement; assess whether additional mothers' groups are needed in remote areas.**
- **Mobilise further mothers' groups in Waku.**
- **Liaise with Chimeki Aama Samuha and identify the best way to deliver health awareness.**

2.4 Implement camps for treatment of uterine prolapse

A number of respondents in Chheskam and Waku noted the need for camp for treatment of uterine prolapse.

- **Implement camps for treatment of uterine prolapse**

3. Increasing awareness and advocacy

3.1 Addressing entrenched traditional beliefs

Qualitative findings showed that traditional beliefs and practices related to health care lead many people to still seek traditional healers, 'Dhami/Jhankri', when they are ill.

- ***Hence, conducting health education programs to cover the wider group of community people/men, social leaders and traditional practitioners in order to address traditional misconceptions is one important scope in future.***

3.2 Addressing child marriage, early pregnancy and adolescent health (as per 2.2)

3.3 Involving men and support groups in orientations and awareness programs

Although the participation of women in mother's groups was good, there were some women who could not attend the meetings because of lack of family support. ***Hence, men and other family members should also be included in the orientations or health education programs to create an enabling environment for women's participation.***

3.4 Increase awareness and advocacy for maternal and child health

Respondents seem to have received information on a wide range of areas. They diverge however on the sustainability of the interventions.

From the study results, it may be useful to strengthen awareness on some specific areas as noted below

- ***breastfeeding in Taksindo and Waku***
- ***diarrhea prevention/hygiene in Taksindo and in schools in program areas (particularly in Chheskam)***
- ***how to take appropriate hygiene practices whilst taking care of animals, as well as after playing outside in all areas***
- ***diarrhea treatment in Waku, Chheskam and Taksindo.***
- ***communicable diseases in program areas, particularly in Chheskam.***
- ***oral health in schools of Waku and Chheskam***
- ***air pollution in all areas***
- ***importance of 4 ANC visits in Waku and Taksindo***
- ***importance of Tetanus Diphteria Vaccine (TD2) for pregnant women in all areas***
- ***institutional delivery in Waku and Taksindo***
- ***PNC and timeliness in all areas***
- ***improved child feeding practice***
- ***impact of child marriage and early pregnancy.***
- ***drug abuse in Chheskam schools***

- ***Advocate for supply of clean water in Waku***

3.5 Review methods of awareness delivery

Note that some respondents highlighted the use of drama as a good way to raise awareness.

- ***Liaise with key stakeholders to identify the best way of delivery.***

4. Ensure disability inclusion

4.1 ***Promote participation of persons with disabilities***

Women with disabilities are reported as not having been participating to mothers' group meetings, due notably to existing discrimination and superstitious beliefs.

- ***Disability inclusion awareness and education should be included.***
- ***Women with disabilities should be encouraged to attend mothers' groups and involvement of family members for this is important.***

4.2 Ensure services are accessible for persons with disabilities and some respondents raised the issue of access to the health post for children or adults with disabilities.

- ***Enhanced infrastructure (Waku in particular) to allow access for persons with disabilities.***
- ***Implement mobile clinics for improved access to health services for all.***

5. Strengthen project management and sustainability

5.1 Develop clearer project documentation

The initial project design was not very clear and did not have a M&E framework and activity plan. Whilst M&E and activity plans were developed later on, the new project design should have these documents ready at the onset.

- ***There should be a clearer design of the project, as well as M&E plans including a baseline so that the changes/improvements can be tracked better and project management made easier.***

5.2 Development of clear sustainability plans

The project did not have clear sustainability plans.

- ***Clear plans for sustainability should be formed and implemented so that people continue to get benefits for a long period of time and not only during the project implementation period.***

5.3 Address data issues

The project relied on health post data and accuracy and analysis was problematic.

- ***Ensure clear indicators of measurement and means of evidence are identified.***
- ***Implement efficient and effective data gathering methods.***
- ***Train relevant stakeholders in data management.***

Conclusion

On the basis of their qualitative findings, the study team from CREHSS believes that the project brought remarkable changes in maternal and child health seeking behavior status in Waku and Chheskam. Women have improved health care seeking behavior as a result of increased awareness and knowledge on maternal and child health issues and due to improvement of services following the recruitment of the nurses (including building of a birthing centre and new health post outside project support). Women report feeling 'more safe' as they are provided with necessary information on maternal and child health and as competent health workers and equipment are available in the health post. As a result, institutional delivery has increased in the community'. (FGD, Chheskam mothers' group). Students also have improved knowledge and practice on handwashing, personal hygiene, and menstrual hygiene. Training provided to the FCHV and the health post management committees have been beneficial and the use of mothers' groups to raise awareness on maternal and child health is a critical component of the success of the education part of the project. The nurses themselves have provided essential health services and filled the staffing gap of those remote communities.

Despite these improvements, many problems were identified during the evaluation study in the community that still need to be addressed mainly in Waku and Taksindo (study indicators gathered do not seem to justify planning a program in Tamakhani and only specific interventions might continue to be supported in Chheskam). The most prevalent problems relating to maternal health and child health identified through FGD and key informants are child marriage, teenage pregnancy, uterine prolapse, and limited knowledge of sexual and reproductive health. In Waku, respondents also raised the issue of birth spacing, home delivery, hygiene and sanitation for children. A high number of respondents communicated having received a wide range of information on maternal and child health, but awareness and education remain to be provided in specific areas and topics relating to hygiene, ANC/PNC and child healthcare in Waku and Taksindo in particular. There is also a need for advocacy for the availability of clean water in Waku. Traditional beliefs and misconceptions are still existent both relating to health seeking behaviour and inclusion of persons with disabilities and need addressing. Use of drama and liaison with organisations working with people living with a disability would be recommended, as well as involving men in health education. Further health education is required in schools in program areas, particularly in

Chheskam. A more targeted and regular education program would be recommended.

However, awareness and education are likely not to result in significant changes of behaviour if services are not improved prior or alongside awareness/education programs. Limited access to facilities for remote areas, issues with staff availability and capacity, and limited equipment and medicine continue to have a significant impact on health improvement indicators especially in Waku and Taksindo. The study highlights that the remoteness and lack of proper transportation for some of the Waku and Taksindo population are great barriers for the utilization of health services by women. The average distance to the nearest health facility was found to be 82 minutes in Waku and 75 minutes in Taksindo. 72% of respondents in Waku and 60% in Taksindo had home delivery as they do not have a birthing center in their own area (building construction in process at the time of writing in Waku and plans for birthing centre are underway in Taksindo) and because of remoteness, and only 44% in Waku and 50% in Taksindo had completed four ANC visits. Therefore, developing

mobile clinics to access remote areas is critical to improve the health of mother and child. This will require adequate human resources which are currently scarce and need strengthening due to limited trained health professionals available and willing to work in remote areas. Staffing issues, medicines and equipment remain problematic and working closely with health post management committees and local government to better plan, manage and advocate for those critical resources are essential. Capacity strengthening of those local governance structures should be a key first step in future program engagement. In addition, the possibility of joint advocacy with other international and local organisations doing similar work and facing similar issues and liaison with national government and health institutions to support solutions to the insufficient number of qualified personnel in remote health posts should be considered.

Contents

CHAPTER 1: INTRODUCTION

1.1 Background

The maternal mortality ratio (MMR) in Nepal decreased from 539 maternal deaths per 100,000 live births to 239 maternal deaths per 100,000 live births between 1996 and 2016. The neonatal death rate has reduced to 21 per 1,000 live births in 2011 from 33 per live births in 2006.[2] The main direct causes of maternal mortality in Nepal are identified as haemorrhage (anti-partum, post-partum and abortion-related) and birth trauma (ruptured uteri, cephalo-pelvic disproportion). Maternal mortality is also caused indirectly by hepatitis, diabetes, malaria, infections, malnutrition, and anemia.[3]

Nepal has set ambitious Sustainable Development Goals (SDG) targets to reduce the MMR to 70 per 100,000 live births, neonatal mortality to 12 per 1,000 live births and to achieve 90% coverage of: four Antenatal care (ANC) visits, institutional delivery, Skilled Birth Attendance (SBA) delivery and PNC of mothers within two days of childbirth by 2030[4].

The overall aim of the Nurses for Nepal project was to improve the health of the people living in Waku and Chheskam and in particular of women and children. The project was started in September 2017 and ended in August 2020. AHF and AF Nepal are committed to improving the health of communities in remote areas of Nepal, particularly maternal and child health. The evaluation is needed to inform future health project development and partnership between both organizations.

The Nurses for Nepal Project saw the recruitment of two nurses to work each in Waku and Chheskam health posts in Solukhumbu to address the gap identified at needs assessment of health personnel and particularly female health personnel; provide health awareness training to schools; support the Female Community Health Volunteers to provide health awareness to mothers' groups and oversee regularly the mothers' groups' meetings. The project also provided training to the Health Post Management Committee to build their capacity to manage the health posts.

1.2 Objectives

The main objectives of this evaluation study were to:

⇒ Analyze the changes generated by the interventions.

⇒ Offer recommendations for improving the action in the future.

CHAPTER 2: METHODOLOGY

The following methodology was applied in this study:

[2] https://www.dhsprogram.com/pubs/pdf/fr336/fr336.pdf
[3] https://dhsprogram.com/pubs/pdf/FA118/FA118.pdf
[4] https://www.npc.gov.np/images/category/SDGs_Baseline_Report_final_29_June-1(1).pdf

2.1 Research design

This study was cross sectional in design. Cross sectional study involves looking at data from a population at one specific point in time. This study used convergent parallel mixed methods (both quantitative and qualitative methods at the same time) for the data collection.

2.2 Study Area

This evaluation study was conducted in Waku and Chheskam wards of Solukhumbu district. However, two new areas (Tamakhani and Taksindo) were also covered in this study for comparison and new project design purposes using the same tools.

2.3 Tools for data collection

Both qualitative and quantitative research tools were developed. Structured questionnaires were used to interview women who have children and students, as well as those who directly benefited from the program. Key informant interview guidelines (KII) were prepared to interview other key stakeholders while focus group discussion (FGD) guidelines were used to conduct focus group discussions with community groups.

Tools for KII were developed based on ToR and also included DAC/OECD criteria with internationally recognized technical standards. The following components were included.

Relevance: Assess the extent to which the objectives were consistent with beneficiaries', partner and country's needs and priorities.

Coherence: Assess the extent to which the intervention is compatible with other interventions in a country, sector or institution.

Effectiveness: Assess the extent to which the targeted project objectives were achieved (or are expected to be achieved).

Efficiency: Assess how economically and timely resources/inputs were converted into results.

Impact: Assess the long-term effects produced by the project (directly, indirectly, intended and unintended).

Safeguarding: Assess the extent to which the intervention sufficiently mitigated risks to children and risks of sexual abuse and exploitation.

Sustainability: Assess the extent to which the benefits are likely to continue after the project and recommend areas for improvement to ensure sustainability of benefits.

2.4 Recruitment and Training

A total of 5 team members (3 based in Kathmandu and 2 based in the field) were involved in this evaluation study. The two experienced research assistants/enumerators were hired for both qualitative and quantitative data/information collection in the field.

A three-day orientation training was provided to the field researchers by the core team members. During the training, the program objectives and the purpose of the survey was explained along with the sampling methodologies being adopted for selection of respondents. Similarly, the researchers under the guidance of the core team did a thorough study and discussion on the tools to identify any shortcomings. AF Nepal participated in a session during the training of researchers.

2.5 Sample size and sampling procedure

Sample size for the quantitative study was calculated using scientific formula after obtaining the number of beneficiaries following consultation with Action for Nepal. The following formula was used to calculate the sample size.

$$n = \frac{N}{1 + Ne^2}$$

whereas: n = Number of samples

N = Total population

e = Error margin / margin of error

The project report showed that a total of 22,630 people benefitted from OPD consultations over the course of the project, 11,884 in Waku and 10,746 in Chheskam. Based on this figure, the total sample size was calculated to be 393. In 2019-2020, over 60% of the people benefiting from OPD consultations were female.

On average, a total of 1047 students (419 boys and 628 girls) in Chheskam and 688 students (315 boys and 373 girls) in Waku participated in the school health awareness sessions.

If we add the total number of people who benefitted from OPD consultations and the number of students who participated in the school health awareness session, we get a total number of beneficiaries of 24,365.

We have used the below formula to calculate the sample size.

$$n = \frac{N}{1 + Ne^2}$$

By using the total number and above formula, the sample size is 395. And the sample distribution is as below. A total of 315 were selected from the evaluation sites (Waku and Chheskam) while 80 (40 from Tamakhanai and 40 from Taksindo) were selected to compare the finding with the evaluation area. The sampling frame (list of mothers' group members) was prepared with the

consultation of the nurse in Chheskam, then the required number of women was selected randomly.

Table: 2.1 Sample size- Quantitative study

Type of respondents	Sample size
Women-Waku	113
Women- Chheskam	100
Boys children- Waku	24
Girls children- Waku	25
Boys children- Chheskam	26
Girls children- Chheskam	28
Women-Tamakhani	40
Women-Taksindo	40
Total sample	395

For the qualitative study, the following sample size was covered.

Table: 2.2 Sample size for qualitative study

SN	Target respondents	Sample size
A	Key informant interview	
1	Women and men with a disability	4 (2 Waku +2 Chheskam)
2	Female Community Health Volunteers	4 (2 Waku +2 Chheskam)
3	Health Post Staff (Health post in-charge and one ANM	4 (HP In-charge and 1 ANM in each Waku and Chheskam
4	Nurses supported by AHF and AF Nepal	2
5	Health Post Management Committee representatives	2 (1 Waku and 1 Chheskam)
6	Rural Municipality Health Coordinator	2 (1 Waku and 1 Chheskam)
7	Other Rural Municipality Representatives	2 (1 Waku and 1 Chheskam)
8	District Representative	1
9	Action for Nepal Staff	1
10	Other NGO representatives (One heart, Save the Children) working in the area, particularly those focusing on health and education	2
	Total KII	25
B	**Focus Group Discussion**	
11	Community members: men and women	4 groups (1 men group +1 women group in Waku and same number in Chheskam
12	School children divided into two age groups (as per training provided) - only for evaluation	4 groups (2 from secondary school of Waku (1 boy group + 1 girl group) and 2 from Chheskam) 4 groups (2+2 from basic level- Mix group)
13	School teachers	4 (2 from Waku and 2 from Chheskam)
14	Mothers' group members	4 groups (2 from Waku and 2 from Chheskam)
15	Case studies	2 (1 from Waku and 1 From Chheskam)
	Total FGDs	22

2.6 Data collection

Both Quantitative and qualitative data gathering was administered adopting the COVID-19 safety measures. We followed the guidelines of the Ministry of Health and Population and World Health Organization (WHO). Researchers participated in a three days training and then went to the field for data collection. The structured questionnaires were used for interviewing the women and the data was recorded on mobile/tablets (Open Data Kit (ODK) software) and the data shared with AHF and AF Nepal. For qualitative data collection, the core team took a few key informant interviews through mobile phone/internet. FGDs and other key informant interviews (which were not accessible through phone) were conducted through face to face interviews by the researchers in their community.

2.7 Data management and analysis

Quantitative data was analyzed using descriptive analysis. SPSS Software was used to analyze the quantitative survey. Univariate analysis was performed with key indicators/variables. The preliminary results of the analysis were shared with AF Nepal Program Director and AHF Head of Program for review and feedback before finalization.

For the qualitative information, a summary of key informant interviews was translated into English. Qualitative data was analyzed thematically with key themes.

2.8 Quality assurance mechanism

Specific measures were taken before data collection, during data collection and after data collection.

A three-day training was provided to the enumerators. During the training, the objectives and the purpose of the survey was explained along with the sampling methodologies. Similarly, detailed discussion on the tools was done to make researchers familiar with the tools and make necessary changes if any. The enumerators explained to the respondents the objectives of the study, why and how she/he was selected (methodology). Only after getting verbal consent from the respondents, the researchers asked questions. Data quality was assured after data collection: after the researcher uploaded the filled questionnaire, the data management officer checked the filled questionnaire in the office.

2.9 Ethical considerations

In addition to getting individual consent from respondents, permission for the interview was taken from the rural municipality/ward office before interviewing the beneficiaries and other stakeholders. The objective, benefits, opportunities and risks of the study was shared with concerned authorities and all research participants prior to interviews. All the personal identifiers were kept confidential and no real name was disclosed throughout the study and a pseudo name was used for quoting useful quotations.

CHAPTER 3: FINDINGS

3.1 QUANTITATIVE FINDINGS

3.1.1 Background characteristics of women respondents

38% of the respondents were between the age of 25-29 years in the program areas whereas slightly over one-third of the respondents (34%) were between the age of 25-29 years in the new areas. The average age of the respondents was 26.9 in the program areas whereas the average age of the respondents was found to be 25.7 in the new areas. In terms of caste/ethnicity, the majority of the respondents in both the program areas (87%) as well as the new areas (84%) were Adivasi/Janajati. Area-wise analysis showed that very few (0.9%) of the respondents were Brahmin/Chettri in the program areas whereas none of the respondents were Brahmin/Chettri in the new areas. In regards to religion, 88.5% of respondents in Waku are Hindu and 84% in Chheskam are Kirat. In the new areas, the majority are Hindu (54%) with a high proportion of Buddhist too (38%). With regards to the educational status, the area-wise analysis showed that more than two-fifth of the respondents completed basic educational level (up to grade 5) in the program areas whereas exactly half of the respondents in the new area completed basic educational level. Very few (1.3%) of the respondents in the new areas completed a bachelor or above, whereas none of the respondents in the program areas completed a bachelor or above. The major source of income in both the program areas (78%) and also in the new areas (69%) was found to be agriculture. The majority of the respondents in both areas lived in a nuclear family. The average family size was found to be 4.4 and 4.9 in the program areas and new areas respectively, which is in line with 4.46 in Solukhumbu and 4.89 for Nepal as a whole. One in ten female respondents (10%) stated that they were pregnant in the program areas but very few (only 5%) of the respondents in the new areas mentioned that they were pregnant.

Table 3.1 Background characteristics of women (in %) surveyed

		Waku	Chheskam	Total program area	Tamakhani	Taksindo	Total new area
Age group	15-19	4.4	4.0	4.2	2.5	5.0	3.8
	20-24	32.7	34.0	33.3	35.0	47.5	41.3
	25-29	38.9	37.0	38.0	30.0	37.5	33.8
	30-34	14.2	10.0	12.2	22.5	10.0	16.3
	35-39	4.4	11.0	7.5	7.5		3.8
	40 or above	5.3	4.0	4.7	2.5		1.3
	Average age	26.8	26.9	26.9	26.9	24.5	25.7
Caste or ethnicity	Adivasi/Janajati	84.1	91.0	87.3	95.0	72.5	83.8
	Brahmin/Chhetri	1.8		.9			
	Dalit	14.2	9.0	11.7	5.0	27.5	16.3
Religion following	Hindu	88.5	9.0	51.2	52.5	55.0	53.8
	Buddhist		6.0	2.8	45.0	30.0	37.5
	Christian	4.4	1.0	2.8	2.5		1.3
	Muslim	.9		.5			
	Kirat	6.2	84.0	42.7		15.0	7.5
Education level	Illiterate	3.5	12.0	7.5	2.5		1.3
	Non-formal education	14.2	30.0	21.6	12.5	15.0	13.8
	Basic Level (grade 1-5)	48.7	42.0	45.5	52.5	47.5	50.0
	Secondary (grade 6-10)	24.8	10.0	17.8	25.0	25.0	25.0

	Higher secondary (grade 11-12)	8.8	6.0	7.5	7.5	10.0	8.8
	Bachelor and above					2.5	1.3
Source of income	Agriculture/housewife	77.9	79.0	78.4	75.0	62.5	68.8
	Business	8.0	5.0	6.6	7.5	7.5	7.5
	Craftsmanship (skilled labor)	5.3	1.0	3.3	2.5	2.5	2.5
	Govt. service	.9	2.0	1.4	2.5	2.5	2.5
	Private service	.9	1.0	.9		2.5	1.3
	NGO/INGO (Project)	6.2	12.0	8.9	12.5	22.5	17.5*
	Others	.9		.5			
Type of family	Nuclear	69.0	77.0	72.8	77.5	72.5	75.0
	Joint	31.0	23.0	27.2	22.5	27.5	25.0
Family size	Up to 4 members	51.3	54.0	52.6	62.5	60.0	61.3
	5-6	30.1	28.0	29.1	22.5	30.0	26.3
	7 or more	18.6	18.0	18.3	15.0	10.0	12.5
	Average family size	5.1	4.8	4.9	4.4	4.4	4.4
Pregnancy status	Yes	10.6	10.0	10.3	2.5	7.5	5.0
	No	89.4	90.0	89.7	97.5	92.5	95.0
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	113	100	213	40	40	80

* High number to be confirmed during the stakeholder meeting.

3.1.2 Distance of residence and health facilities

The study also collected information regarding the distance of residence and the nearest health facilities of the respondents. In this regard, about one-third of the respondents in the program area (31%) mentioned that it takes more than an hour to reach the nearest health facility from their residence. Nearly half of the respondents in Waku (47%) compared to only 13% of respondents in Chheskam mentioned that it took more than an hour to reach the nearest health facility. The average distance was found to be 82 min in Waku whereas it was found to be 37 min in Chheskam. 75% of respondents in Taksindo also mentioned that it takes more than an hour to reach the nearest health facility. Nepal's Sustainable Development Goals (2017) is to have essential healthcare services (EHCS) in the districts available to 90% of the population living within 30 minutes' travel time of facilities by 2030. The 2019 intermediary target was 69.3% and this was not met in Waku or Taksindo. Looking at ways to bring health services closer to the population of both those wards, through regular mobile clinics for example, would therefore be recommended.

Table 3.2 Distance of residence and health facilities (in %)

Distance	Waku	Chheskam	Total program area	Tamakhani	Taksindo	Total new area
Upto 15 min	20.4	32.0	25.8	47.5	7.5	27.5
16-30	10.6	39.0	23.9	27.5	15.0	21.3
31-60 min	22.1	16.0	19.2	15.0	27.5	21.3
More than an hour	46.9	13.0	31.0	10.0	50.0	30.0
Average distance (min)	82.0	37.2	61.0	27.8	74.8	51.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
N	113	100	213	40	40	80

3.1.3 Information about children

The study also explored the information about the children of the respondents. It was found that slightly more than 35% of the respondents had children of age less than 12 months in the program areas whereas 44% of the respondents in the new areas had children of age less than 12 months. Very few respondents in both the program and new areas (9% and 5%) respectively had children of the age group of 48-59 month. All the sampled women stated that they breastfed their child. 87% of the respondents in the program areas breastfed their child within an hour after birth (81% in Waku, 93% in Chheskam) whereas 73% of the respondents from the new areas breastfed their child within an hour of the birth. According to the Department of Health Services (DoHS) Annual Report 2018-2019, the percentage of newborns initiated breastfed within 1 hour of birth in Nepal is 23.5% and in Province 1 is 48.1%. Regarding the duration of breastfeeding, the majority of the respondents breastfed their child for six months in both the program and new areas. A higher percentage of respondents in Chheskam (96%) breastfed their children for six months as compared with Waku (78%), where further awareness on the benefits of breastfeeding might be recommended. The DoHS report noted above shows 33.3% exclusive breastfeeding nationally for six months and 55.5% in Province 1.

Table 3.3 Information about children and infants (in %)

		Waku	Chheskam	Total program area	Tamakhani	Taksindo	Total new area
Age of children	Less than 12 months	35.4	34.0	34.7	27.5	60.0	43.8
	12-23 months	15.9	30.0	22.5	37.5	27.5	32.5
	24-35 months	18.6	16.0	17.4	22.5	5.0	13.8
	36-47 months	15.0	11.0	13.1	2.5	7.5	5.0
	48-59 months	15.0	9.0	12.2	10.0		5.0
Gender of child	Male	54.9	61.0	57.7	52.5	55.0	53.8
	Female	45.1	39.0	42.3	47.5	45.0	46.3
Ever breastfeed	Yes	100.0	100.0	100.0	100.0	100.0	100.0
Initiation of breastfeeding	Within an hour after birth	81.4	93.0	86.9	77.5	67.5	72.5
	After an hour after birth	13.3	6.0	9.9	22.5	32.5	27.5
	Don't know	5.3	1.0	3.3			
Duration of breastfeeding	Less than 6 months	20.9	3.6	12.6	2.9	13.6	7.0
	Six months	78.0	96.4	86.8	94.3	86.4	91.2
	More than 6 months	1.1		.6	2.9		1.8
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	91	83	174	35	22	57

3.1.4 Motivation for breastfeeding and vaccinations

Nearly all respondents in both new and project areas responded that they have received information about breastfeeding, however, as stated above, 87% of women with children less than 5 years old in the project areas and 73% in the new areas were breastfeeding their child within an hour of birth. Respondents were asked who motivated them to breastfeed their children and also to vaccinate them. Almost all of the respondents (98%) in the program area mentioned that the FCHV had motivated them, followed by the nurse (82%) and health post staff (38%). Respondents of the new areas also stated as a majority that the FCHV (88%) motivated them, followed by the

health post staff (56%) and members from the mother's group (35%). To note also that in both Chheskam and Tamakhani the mothers' groups seem to be a solid source of information.

Respondents were also asked about the immunization status of their children. There does not seem to be a difference in terms of information received regarding immunisation between the program and the new areas. However, 60% of the respondents completed immunization of their children in the program areas whereas 43% of the respondents completed vaccinations of their children in the new areas, with Taksindo ranking low with only 30% of children reportedly having completed vaccination. This is lower than the DoHS Annual Report 2018-2019 showing 68% of children fully immunised nationally (71% in Province 1) in 2018-2019 - SDG target for 2019 of 88.6% (100% by 2030). The respondents who mentioned that they had not completed the immunization of their children were asked about the reason for incomplete immunization and 4.8% of the respondents from Chheskam mentioned that the unavailability of all vaccines in the health facility was the major reason. Similarly, 5.6% of the respondents from Tamakhani mentioned the unavailability of vaccines was the major reason. It seems that the main reason of the respondents selecting 'other' when asked why the children had not completed immunisation was due to their children being below the required age. As Taksindo in particular has a low rate of completed vaccination, further information should be sought.

To note in all the tables below that the nurses in Chheskam and Waku are those supported by the project, whereas the nurses identified in Tamakhani and Taksindo are government staff.

Table 3.4 Motivation for breastfeeding and vaccinations

		Waku	Chheskam	Total program area	Tamakhani	Taksindo	Total new area
Information received that encouraged breastfeeding	Yes	100.0	98.0	99.1	100.0	100.0	100.0
	No		2.0	.9			
Source of information*	Relatives	2.7	12.2	7.1	10.0	12.5	11.3
	Mother's group members	23.9	45.9	34.1	55.0	15.0	35.0
	FCHV	98.2	98.0	98.1	90.0	85.0	87.5
	Nurse	70.8	94.9	82.0	47.5	17.5	32.5
	Health post staff	35.4	41.8	38.4	40.0	72.5	56.3
	Others	.9	2.0	1.4			
Immunization status of child (has the child been immunized?)	Yes	99.1	100.0	99.5	100.0	100.0	100.0
	No	.9		.5			
Complete immunization status of child (completed vaccinations: BCG, Polio, DPT, Measles by 15 months)	Yes	62.5	58.0	60.4	55.0	30.0	42.5
	No	37.5	42.0	39.6	45.0	70.0	57.5

Reason for incomplete immunization	All vaccines not available in Health facility		4.8	2.4	5.6		2.2
	Others	100.0	95.2	97.6	94.4	100.0	97.8
Information received promoting immunization	Yes	100.0	100.0	100.0	100.0	97.5	98.8
	No					2.5	1.3
Source of information regarding immunization*	Relatives	6.2	10.0	8.0		5.1	2.5
	Mother's group members	24.8	35.0	29.6	42.5	20.5	31.6
	FCHV	93.8	97.0	95.3	80.0	87.2	83.5
	Nurse	74.3	98.0	85.4	50.0	12.8	31.6
	Health post staff	43.4	45.0	44.1	40.0	76.9	58.2
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	113	100	213	40	39	79

* Multiple responses

3.1.5 Children living with a disability

Very few respondents (0.9%) from the program areas and 1.3% from the new areas mentioned that there was a presence of some kind of disability in their children. According to the National Population and Housing Census 2011, the population with disability in Solukhumbu is 2.46%. Place wise comparison in the program areas showed that only the respondents from Waku stated that there was some kind of disability present in their child and that there was no accessibility to the health post services for their children.

Table 3.5 Children living with a disability

		Waku	Chheskam	Total program area	Tamakhani	Taksindo	Total new area
Presence of disability	Yes	1.8		.9	2.5		1.3
	No	98.2	100.0	99.1	97.5	100.0	98.8
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	113	100	213	40	40	80
Accessibility of health post services to children living with a disability	Yes				100.0		100.0
	No	100.0		100.0			
Total		100.0		100.0	100.0		100.0
	N	2		2	1		1

3.1.6 Child with diarrhea and cough in the last two weeks and care seeking behavior

It was found a high percentage of respondents in Chheskam (90%) had access to the services provided by the health post for their children, whereas only 40% of respondents had access to those services in Waku. In the new areas, 80% of the respondents had access to the services provided by

the health post in Tamakhani compared to only 22.5% in Taksindo. This is in line with results found in 3.1.2.

16% of children under 5 in the program areas and close to 13% in Taksindo were reported by respondents as having diarrhea in the past two weeks. This is higher than Nepal SDG target of 8.8% in 2019 (0% in 2030). 0% of children in Taksindo, only 29% of children in Waku and 59% of children in Chheskam who had diarrhea were treated with zinc and ORS compared to 95% in 2018-19 (90% in Province 1) reported under the DoHS Annual Report 2018-2019. Around 20% of children in both areas had a cough according to respondents in the previous two weeks. To note that according to the same factsheet, 190.3 children under five years old per 1000 had an incidence of pneumonia in 2018-2019. Whilst around 64% of respondents in the program area sought assistance from a government health facility, only 20% of respondents in Taksindo got treatment from the health facility.

Table 3.6 Child with diarrhea and cough in the last two week and care seeking behavior

		Waku	Chheskam	Total program area	Tamakhani	Taksindo	Total new area
Accessibility of health post services to child	Yes	39.8	90.0	63.4	80.0	22.5	51.2
	No	60.2	10.0	36.6	20.0	77.5	48.8
Had diarrhea in past two weeks	Yes	15.0	17.0	16.0		12.5	6.3
	No	85.0	83.0	84.0	100.0	87.5	93.8
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	113	100	213	40	40	80
Actions taken to treat diarrhea	None (no zinc no ORS was given)	35.3	23.5	29.4		100.0	100.0
	ORS only	17.6	11.8	14.7			
	Zinc only	11.8	5.9	8.8			
	Both zinc and ORS	29.4	58.8	44.1			
	Others	5.9		2.9			
Total		100.0	100.0	100.0		100.0	100.0
	N	17	17	34		5	5
Had cough in past two weeks	Yes	20.4	22.0	21.1	12.5	25.0	18.8
	No	79.6	78.0	78.9	87.5	75.0	81.3
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	113	100	213	40	40	80
Source of treatment	Home remedy	21.7	18.2	20.0	20.0	30.0	26.7
	Govt. health facility	65.2	63.6	64.4	80.0	20.0	40.0
	FCHV		13.6	6.7		20.0	13.3
	Pharmacy or medicine seller	4.3		2.2			
	Did nothing	8.7	4.5	6.7		30.0	20.0
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	23	22	45	5	10	15

3.1.7 Information and intake of deworming medicine and Vitamin A

Respondents were asked whether their children had consumed deworming tablets within the past 6 months. The proportion of children consuming deworming tablets was higher in Chheskam (72%) as compared to Waku (65%), high in Tamakhani (75%) but low in Taksindo (35%). When they were asked about the source of information regarding the consumption of deworming tablets, almost all of the respondents stated that they received that information from the FCHVs and to a slightly lesser extent the nurse. A high percentage of children, apart in Taksindo (70%), consumed Vitamin A in the past 6 months with a very high percentage of respondents from Chheskam (98%) stating that they had received information regarding the consumption of Vitamin A compared to 84% in Waku for the program area, and 93% in Tamakhani and 73% in Taksindo. Almost all respondents reported that the main source of information was the FCHV and also to a lesser extent the nurse. Mothers' groups are also a good source of information in both the program and new areas, but more so in Chheskam and Tamakhani, and results are similar across all information provided as shown in table 3.4 and 3.6 also.

Table 3.7 Information and intake of Deworming medicine and Vitamin A

		Waku	Chheskam	Total program area	Tamakhani	Taksindo	Total new area
Consumption of deworming tablet within 6 months	Yes	64.6	72.0	68.1	75.0	35.0	55.0
	No	35.4	28.0	31.9	25.0	65.0	45.0
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	113	100	213	40	40	80
Informations received regarding consumption of deworming tablet	Yes	98.6	98.6	98.6	100.0	100.0	100.0
	No	1.4	1.4	1.4			
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	73	72	145	30	14	44
Source of information about deworming tablet*	Relatives	6.9	14.1	10.5	3.3	7.1	4.5
	Mother's group members	26.4	33.8	30.1	40.0	21.4	34.1
	FCHV	100.0	100.0	100.0	100.0	92.9	97.7
	Nurse	76.4	94.4	85.3	50.0	21.4	40.9
	Health post staff	27.8	28.2	28.0	3.3	64.3	22.7
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	72	71	143	30	14	44
Consumption of vitamin A	Yes	79.6	88.0	83.6	92.5	70.0	81.3
	No	20.4	12.0	16.4	7.5	30.0	18.8
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	113	100	213	40	40	80
Received information regarding importance of vitamin A	Yes	84.1	98.0	90.6	92.5	72.5	82.5
	No	15.9	2.0	9.4	7.5	27.5	17.5

Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	113	100	213	40	40	80
Source of information about Vitamin A*	Relatives	1.1	10.2	5.7	2.7		1.5
	Mother's group members	24.2	32.7	28.5	45.9	24.1	36.4
	FCHV	98.9	100.0	99.5	97.3	100.0	98.5
	Nurse	73.7	88.8	81.3	48.6	20.7	36.4
	Health post staff	18.9	25.5	22.3	5.4	51.7	25.8
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	95	98	193	37	29	66

*** Multiple responses**

3.1.8 Women's decision-making status

This study also explored the information regarding the decision-making power of women regarding their health care. It was found that, in the program area, more than two-fifths (46%) of the respondents made their decision alone and almost two-fifths (37%) of the respondents made their decision jointly along with their husband for their health care. The proportion of women making decisions on their own was found to be higher in Chheskam (55%) as compared to Waku (37%). AF Nepal reports that women are more engaged in professional and social life in Chheskam; the Waku community is more dispersed and the poor road access makes it less privileged. More than half of the respondents (55%) in the new areas made their decision alone and one-third (33%) of the respondents made their decision jointly with their husband, with little disparity between Tamakhani and Taksindo. The majority of the respondents in both the program and new areas made decisions jointly with their husband about their children's health care. Nine in ten respondents from both the program and new areas decided on family planning use jointly with their husband.

Some key informants requested gender based training and the DoHS Annual Report 2018-2019 notes the importance of supporting activities that raise the status of women in society.

Table 3.8 Women's decision-making status

		Waku	Chheskam	Total program area	Tamakhani	Taksindo	Total new area
Decision maker for your health care	Respondent alone	37.2	55.0	45.5	52.5	57.5	55.0
	Husband/partner	23.9	10.0	17.4	17.5	7.5	12.5
	Respondent and husband jointly	38.1	35.0	36.6	30.0	35.0	32.5
	Someone else	.9		.5			
Decision maker for children health care	Respondent alone	17.7	15.0	16.4	5.0	25.0	15.0
	Husband/partner	8.0	8.0	8.0	17.5	7.5	12.5
	Respondent and husband jointly	73.5	77.0	75.1	77.5	67.5	72.5
	Someone else	.9		.5			
Decision maker for family planning use	Respondent alone	6.2	10.0	8.0		5.0	2.5
	Husband/partner	.9	3.0	1.9	5.0	5.0	5.0
	Respondent and husband jointly	92.9	87.0	90.1	95.0	90.0	92.5

Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	113	100	213	40	40	80

3.1.9 Family planning

Information on the use of family planning methods was also explored in this study. 72% of the respondents had used a family planning method in their lives in the program area, with a slightly higher proportion in Waku (74%) compared to Chheskam (69%). A high percentage of respondents in Tamakhani (93%) had used a family planning method compared to only 70% in Taksindo. 71% of respondents used DMPA in the program areas and 74% in the new areas followed by implant (16%) in the program areas and implant (24%) in the new areas (with a marked difference between Tamakhani (29%) and Taksindo (13%). Almost all of the respondents received family planning services from the health post. None of the respondents in Waku or Tamakhani used pills and IUCD as a method of family planning whereas 4% and 12% of the respondents in Chheskam used pills and IUCD respectively, and 6% of respondents in Taksindo used pills as a method of family planning. A large proportion of respondents had received information on family planning (less so in Taksindo) and most of that information was received by the FCHV in both areas and also by the nurse in the program areas and the health post staff in Taksindo.

Table 3.9 Family planning

		Waku	Chheskam	Total program area	Tamakhani	Taksindo	Total new area
Ever used a family planning method	Yes	74.3	69.0	71.8	92.5	70.0	81.3
	No	25.7	31.0	28.2	7.5	30.0	18.8
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	113	100	213	40	40	80
Currently using any family planning method	Yes	66.7	71.0	68.6	91.9	57.1	76.9
	No	26.2	21.7	24.2	8.1	39.3	21.5
	Currently pregnant	7.1	7.2	7.2		3.6	1.5
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	84	69	153	37	28	65
Family planning methods currently using	Condom	3.6	4.1	3.8			
	Pills		4.1	1.9		6.3	2.0
	DMPA (Depo-Provera)	76.8	63.3	70.5	70.6	81.3	74.0
	IUCD		12.2	5.7			
	Implant	16.1	16.3	16.2	29.4	12.5	24.0
	Others	3.6		1.9			
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	56	49	105	34	16	50
Source for family planning services	Hospital	3.6	2.0	2.9	2.9		2.0
	Health post	96.4	98.0	97.1	91.2	100.0	94.0

	Others				5.9		4.0
Total		100.0	100.0	100.0	100.0	100.0	100.0
Received information regarding family planning	Yes	94.7	96.0	95.3	100.0	85.0	92.5
	No	5.3	4.0	4.7		15.0	7.5
Total		100.0	100.0	100.0	100.0	100.0	100.0
Source for family planning information*	Relatives	7.5	9.4	8.4	12.5	14.7	13.5
	Mother's group members	22.4	33.3	27.6	42.5	23.5	33.8
	FCHV	99.1	97.9	98.5	82.5	76.5	79.7
	Nurse	73.8	91.7	82.3	45.0	14.7	31.1
	Health post staff	43.0	39.6	41.4	40.0	82.4	59.5
Total		100.0	100.0	100.0	100.0	100.0	100.0
N		113	100	213	40	40	80

* Multiple responses

3.1.10 Utilization of ANC Services and TD2 vaccine

The findings show that ANC visits were high among the women of both the project and the new areas. 98% of the respondents visited the Health post for ANC in Chheskam compared to 60% in Waku where 40% of respondents visited the hospital for ANC (versus 2% in Chheskam). The majority (81%) of respondents visited the Health post for ANC in Taksindo, whereas in Tamakhani the majority 76% visited the hospital for ANC.

About two-thirds of the respondents had 4 ANC visits in both areas. The proportion of women who had 4 ANC visits was higher in Chheskam (89%) as compared to the Waku (44%) in the program areas and the proportion was higher in Tamakhani (83%) as compared to Taksindo (50%) in the new areas. Note that the SDG Nepal target was to increase the percentage of pregnant women attending a minimum of four antenatal visits to 74.6% in 2019 (90% by 2030) so this is not met in Waku and Taksindo. Nearly all respondents stated that they received information about ANC visits in both the program and new areas. The FCHV was the major source of information for them in both areas while the nurse supported by the project is significantly the second major source of information in Chheskam and Waku areas.

The majority and more than half of respondents received only one dose of TD2 vaccination in the program areas whereas the majority of the respondents in the new areas (75%) received two doses of TD2 vaccination. The DoHS Annual Report 2018-2019 shows 64% of women receiving TD2 and TD2+ (59% in Province 1) in 2018-2019. Nearly all respondents communicated having received information about TD2 in large majority by the FCHV in both program and new areas, but also importantly by the program nurses, especially in Chheskam, in the program areas. The health post in Taksindo and the mothers' groups in Tamakhani seem also a good source of information.

Table 3.10 Utilization of ANC Services and TD2 vaccine

	Waku	Chheskam	Total program area	Tamakhani	Taksindo	Total new area

ANC check-up during pregnancy	Yes	99.1	100.0	99.5	100.0	92.5	96.3
	No	.9		.5		7.5	3.8
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	113	100	213	40	40	80
Place visited for ANC	Hospital	40.2	2.0	22.2	77.5	18.9	49.4
	Health post	59.8	98.0	77.8	22.5	81.1	50.6
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	112	100	212	40	37	77
Frequency of ANC Visits	None	.9		.5		7.5	3.8
	Less than 4	49.6	9.0	30.5	10.0	27.5	18.8
	4 times	44.2	89.0	65.3	82.5	50.0	66.3
	More than 4 times	5.3	2.0	3.8	7.5	15.0	11.3
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	113	100	213	40	40	80
Reason for not visiting for ANC *	I don't know about ANC	100.0		20.0		66.7	66.7
	Remoteness					33.3	33.3
	Others		100.0	80.0			
Total		100.0	100.0	100.0		100.0	100.0
	N	1	4	5		3	3
Received information about ANC	Yes	98.2	100.0	99.1	100.0	95.0	97.5
	No	1.8		.9		5.0	2.5
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	113	100	213	40	40	80
Source for ANC information*	Relatives	9.0	12.0	10.4	12.5	18.4	15.4
	Mother's group members	21.6	36.0	28.4	50.0	18.4	34.6
	FCHV	96.4	99.0	97.6	95.0	78.9	87.2
	Nurse	71.2	90.0	80.1	47.5	21.1	34.6
	Health post staff	39.6	37.0	38.4	47.5	78.9	62.8
	Other		1.0	.5			
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	111	100	211	40	38	78
Took TD2 and TD2+ vaccination	Yes	99.1	100.0	99.5	100.0	90.0	95.0
	No	.9		.5		10.0	5.0
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	113	100	213	40	40	80
Number of TD2 and TD2+ vaccination received	1	58.9	57.0	58.0	22.5	22.2	22.4
	2	41.1	42.0	41.5	77.5	75.0	76.3
	3		1.0	.5		2.8	1.3
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	112	100	212	40	36	76
Received information about TD2 and TD2+ to motivate	Yes	100.0	98.2	99.2	100.0	100.0	100.0
	No		1.8	.8			
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	66	57	123	9	8	17
Source of information about TD2 and TD2+ vaccination*	Relatives		3.6	1.6			
	Mother's group members	6.1	16.1	10.7	33.3	12.5	23.5

	FCHV	81.8	89.3	85.2	55.6	100.0	76.5
	Nurse	66.7	85.7	75.4	55.6	37.5	47.1
	Health post staff	53.0	55.4	54.1	55.6	87.5	70.6
	Private clinic		3.6	1.6		12.5	5.9
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	66	56	122	9	8	17

* Multiple responses

3.1.11 Utilization of Delivery and PNC Services

In Waku, 72% had their delivery at home as there is no birthing center as compared to Chheskam (17%). The proportion of women who had a delivery at home was high in Taksindo (60%), as there is also no birthing center, and small in Tamakhani (5%) as the district hospital is within 1/2 hours distance. In comparison, the DoHS Annual Report 2018-2019 shows 63% of institutional deliveries in 2018-2019 (62% in Province 1). The SDG target of 64.5% institutional deliveries in 2019 (90% by 2030) is therefore not reached in Waku and Taksindo. 20% of the respondents in Waku had their delivery at the hospital versus 6% in Chheskam for the program areas, whilst 90% of respondents in Tamakhani had their delivery at the hospital versus 30% in Taksindo. Around 95% in both Chheskam and Tamakhani communicated receiving information about place of delivery compared to 45% for Waku and 43% in Taksindo. Once again, the FCHV are the main source of information in both the program and new areas, followed by the nurses in Waku and Chheskam. The mothers' groups in Tamakhani seem to be for this also a solid source of information.

74% of the respondents visited health facilities for PNC in Chheskam as compared to Waku 24%. Slightly half of the respondents in Tamakhani (50%) and about two-fifth (38%) of the respondents in Taksindo visited health facilities for PNC. According to DoHS Annual Report 2018-2019, 16% of mothers had three PNC checkups as per protocol nationally (9% in Province 1) in 2018-2019. Furthermore, when asked about the reason for not visiting health facilities for PNC, almost two in three (65%) of the respondents who had not accessed the health centre in Waku and a fifth of the respondents in Chheskam (21%) mentioned that health facilities were far away from their home. A third of those respondents in Waku (34%) and almost two thirds (64%) in Chheskam stated they didn't think PNC visits were necessary. Similarly, more than one-third of the respondents (38%) in the new areas (48% in Taksindo and 25% in Tamakhani) stated that the health facilities were far from home and nearly three-fifth (58%) of them (65% in Tamakhani and 52% in Taksindo) felt that a PNC visit was not necessary.

Out of the whole number of respondents in both the program and new areas, only 5% in Tamakhani communicated accessing PNC on the same day as delivery and on average only 3% on the second day in the program areas. This is far from the SDG Nepal target of 66.5% for 2019 (90% by 2030) for women to receive PNC care within two days of childbirth.

Table 3.11 Utilization of Delivery and PNC Services

		Waku	Chheskam	Total program area	Tamakhani	Taksindo	Total new area
Place of delivery	Hospital	20.4	6.0	13.6	90.0	30.0	60.0
	PHCC	1.8	2.0	1.9		7.5	3.8
	HP	4.4	75.0	37.6		2.5	1.3
	Home	71.7	17.0	46.0	5.0	60.0	32.5
	Others	1.8		.9	5.0		2.5

Received information regarding places for delivery	Yes	45.1	94.0	68.1	95.0	42.5	68.8
	No	54.9	6.0	31.9	5.0	57.5	31.3
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	113	100	213	40	40	80
Sources that provided information about place for delivery*	Relatives	51.0	25.5	34.5	71.1	88.2	76.4
	Mother's group members	7.8	19.1	15.2	39.5	5.9	29.1
	FCHV	62.7	94.7	83.4	65.8	35.3	56.4
	Nurse	62.7	86.2	77.9	47.4	5.9	34.5
	Health post staff	52.9	47.9	49.7	39.5	35.3	38.2
	Hospital		1.1	.7			
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	51	94	145	38	17	55
Visited health facility for PNC	Yes	23.9	74.0	47.4	50.0	37.5	43.8
	No	76.1	26.0	52.6	50.0	62.5	56.3
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	113	100	213	40	40	80
Number of PNC visits	1	88.9	55.4	64.4	85.0	80.0	82.9
	2		35.1	25.7	10.0	20.0	14.3
	3	11.1	9.5	9.9	5.0		2.9
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	27	74	101	20	15	35
Number of days after delivery for PNC	Same day of delivery				5.0		2.9
	Second day	3.7	2.7	3.0			
	Third day	7.4	25.7	20.8	20.0		11.4
	Fourth day	3.7	9.5	7.9		6.7	2.9
	Fifth day	11.1	12.2	11.9			
	Sixth day		2.7	2.0			
	Seventh day	55.6	43.2	46.5	5.0	26.7	14.3
	After a week of delivery	18.5	4.1	7.9	70.0	66.7	68.6
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	27	74	101	20	15	35
Reason for not receiving PNC	Health facility is far	65.1	21.4	54.4	25.0	48.0	37.8
	Family didn't allow to visit HF	1.2	3.6	1.8			
	I didn't think it is necessary	33.7	64.3	41.2	65.0	52.0	57.8
	Other		10.7	2.6	10.0		4.4
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	86	28	114	20	25	45

* Multiple responses

3.1.12 Knowledge on handwashing and hygiene

A high percentage of respondents in both the program and new areas had knowledge on environmental sanitation measures to protect their children from diarrhea, but more so in the program areas than in the new areas. Taksindo would likely benefit from additional awareness on

this. Only two third of the respondents (67%) in the program areas had access to clean water compared to 88% of the respondents in the new areas. The majority of the respondents in both areas received information regarding sanitation and hygiene. However, more awareness could also be provided regarding where to keep animals and measures to take after caring for them, as well as after playing outside. It is to be noted that the nurse in Chheskam is identified as the main source of information, followed by the FCHVs, which are the main source of information in Waku. In Tamakhani, the main source of information is also the FCHV and the health post staff in Taksindo.

Table 3.12 Knowledge on handwashing and hygiene

		Waku	Chheskam	Total program area	Tamakhani	Taksindo	Total new area
Environment sanitation measures to protect children from diarrhea *	Proper disposal of faeces	93.8	95.0	94.4	95.0	85.0	90.0
	Handwashing	96.5	97.0	96.7	90.0	77.5	83.8
	Removal of trash	89.4	93.0	91.1	95.0	75.0	85.0
	Keeping animals out of indoor and play area	35.4	61.0	47.4	42.5	17.5	30.0
	Ensuring clean toilets	85.8	79.0	82.6	87.5	95.0	91.3
	Access to clean water	66.4	68.0	67.1	85.0	90.0	87.5
	Others		1.0	.5	2.5		1.3
Hand washed within 24 hours *	After defecation	88.5	98.0	93.0	90.0	77.5	83.8
	After cleaning the bottom of child	88.5	87.0	87.8	77.5	57.5	67.5
	After caring animals' dung	58.4	73.0	65.3	52.5	55.0	53.8
	Before feeding children	97.3	94.0	95.8	92.5	97.5	95.0
	Before eating	93.8	97.0	95.3	92.5	95.0	93.8
	Before making food	70.8	82.0	76.1	75.0	85.0	80.0
Appropriate time to wash hands of children *	Before meal	96.5	97.0	96.7	97.5	77.5	87.5
	After outdoor play	41.6	62.0	51.2	65.0	45.0	55.0
	After using toilets	95.6	92.0	93.9	90.0	92.5	91.3
	After handling faeces	94.7	97.0	95.8	85.0	62.5	73.8
	After handling livestock	24.8	40.0	31.9	40.0	25.0	32.5
Received information about hygiene and sanitation	Yes	92.9	96.0	94.4	100.0	95.0	97.5
	No	7.1	4.0	5.6		5.0	2.5
	N	113	100	213	40	40	80
Sources from which you	Relatives	8.6	16.7	12.4	2.5	36.8	19.2
	Mother's group members	9.5	30.2	19.4	45.0	18.4	32.1

received information about hygiene*	FCHV	96.2	97.9	97.0	90.0	55.3	73.1
	Nurse	72.4	99.0	85.1	45.0	18.4	32.1
	Health post staff	48.6	55.2	51.7	45.0	71.1	57.7
	Private clinic	1.9	4.2	3.0		5.3	2.6
	Hospital	1.0	1.0	1.0			
	Other Specify		1.0	.5		5.3	2.6
	N	105	96	201	40	38	78

3.1.13 Mothers' groups

Almost all the respondents from the program areas (98%) were members of a mothers' group at the time of the study. Similarly, 91% of the respondents from the new area were members of a mothers' group. Of them, nearly two fifth (38%) of the respondents from the program areas and one third of those in the new areas were members of a mothers' group for 3 years and more. The majority of the respondents from both areas mentioned that FCHV attended sufficient sessions of mothers' group meetings.

A high percentage of women attended 12 mothers' group meetings in both the program and new areas (96% in Chheskam; 100% in Tamakhani; 89% in Taksindo; less in Waku with 72%) and the FCHV attended the meeting most of the time, slightly less in Taksindo. All respondents found the intervention of the FCHVs in the mothers' group useful but in Taksindo (27%) and to some extent in Waku (17%), the mothers would have liked a bit more involvement.

Table 3.13 Mothers' group

		Waku	Chheskam	Total program area	Tamakhani	Taksindo	Total new area
Member of mother group	Yes	100.0	96.0	98.1	92.5	90.0	91.3
	No		4.0	1.9	7.5	10.0	8.8
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	113	100	213	40	40	80
Duration of being member of mother groups	Less than a year	1.8	13.5	7.2		16.7	8.2
	12-23	26.5	25.0	25.8	24.3	13.9	19.2
	24-35	30.1	27.1	28.7	37.8	41.7	39.7
	3 Years or more	41.6	34.4	38.3	37.8	27.8	32.9
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	113	96	209	37	36	73
Number of mother group meetings	5	1.8	1.0	1.4			
	6	2.7	1.0	1.9			
	8	11.5		6.2			
	9					8.3	4.1
	10	11.5	1.0	6.7		2.8	1.4
	11	.9	1.0	1.0			
	12	71.7	95.8	82.8	100.0	88.9	94.5
Total		100.0	100.0	100.0	100.0	100.0	100.0

	N	113	96	209	37	36	73
FCHV attended meeting	Yes	96.5	100.0	98.1	97.3	83.3	90.4
	No	3.5		1.9	2.7	16.7	9.6
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	113	96	209	37	36	73
FCHV attended sufficient sessions of mother group meetings	Yes	83.5	99.0	90.7	100.0	73.3	87.9
	No	16.5	1.0	9.3		26.7	12.1
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	109	96	205	36	30	66
Found interventions of FCHVs useful		100.0	100.0	100.0	100.0	100.0	100.0
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	109	96	205	36	30	66

3.1.14 Perception towards Project Nurse's activities (Waku and Chheskam only)

The project monitored the mothers' group sessions conducted and the involvement of the nurses in those sessions. As part of the evaluation, almost all the respondents from Chheskam stated that the nurse from the health post attended the mothers' group meetings while 7 in 10 respondents from Waku stated that the nurse attended the meetings. The average number of meetings attended by the nurses contracted by the project was reported by people interviewed to be 3.1 in Waku and 7.1 in Chheskam. Slightly over half of the respondents (54%) in Waku stated that the nurse did not attend sufficient sessions of mothers' groups while four fifth (80%) of the respondents from Chheskam stated that the nurse attended sufficient meetings of mothers' groups. 7 in 10 respondents from Waku mentioned that the intervention of the nurse was useful while it was notable that 99% of the respondents from Chheskam mentioned that the intervention of the nurse was useful. The differences between Waku and Chheskam could be due to the nurse in Waku being away since March 2020 because of the COVID pandemic and to the fact that the Chheskam nurse was accompanying the evaluation team.

Table 3.14 Perception towards Project Nurse's activities (Waku and Chheskam only) in %

		Waku	Chheskam	Total program area
Project Nurse attended meeting	Yes	69.9	99.0	83.3
	No	30.1	1.0	16.7
Total		100.0	100.0	100.0
	N	113	96	209
Reported number of meetings attended by project nurse	1	16.5		7.5
	2	31.6	3.2	16.1
	3	16.5	1.1	8.0
	4	17.7	4.2	10.3
	5	8.9	18.9	14.4
	6	2.5	3.2	2.9
	7	1.3	15.8	9.2
	8	2.5	40.0	23.0
	9		6.3	3.4
	10	2.5	5.3	4.0

	12		2.1	1.1
	Average number of meeting	3.1	7.1	5.3
Total		100.0	100.0	100.0
	N	79	95	174
Nurse attended sufficient sessions of mother group meeting	Yes	46.0	80.2	61.7
	No	54.0	19.8	38.3
Total		100.0	100.0	100.0
	N	113	96	209
Found interventions of nurse useful	Yes	71.7	99.0	84.2
	No	28.3	1.0	15.8
Total		100.0	100.0	100.0
	N	113	96	209

3.1.15 Health post service utilization and satisfaction towards services

The study also explores the information regarding the utilization of the health post services and the satisfaction of respondents towards the services. 96% of the respondents from the program areas used the health post services while all the respondents from the new areas used the health post services. All the respondents in Chheskam, Tamakhani and Taksindo who had utilized the services from the health post were either satisfied or very satisfied. However, in Waku, while 67.5% of respondents were either satisfied or very satisfied, 10.1% were neither satisfied nor dissatisfied and 21.1% were dissatisfied and 0.9% very dissatisfied. Reasons brought forward by dissatisfied or very dissatisfied respondents were that: the necessary equipment was not available (100%); the services were of poor quality (75%); there was a lack of hygiene (67%); they had to pay (58%); a female would have been preferred (25%) and because of the behaviour of the health service provider (21%). The majority of respondents however communicated feeling safe when using the services of the health centres.

Table 3.15 Health post service utilization and satisfaction towards services

		Waku	Chheskam	Total program area	Tamakhani	Taksindo	Total new area
Using services of health post	Yes	96.5	96.0	96.2	100.0	100.0	100.0
	No	3.5	4.0	3.8			
Last time of health service from health post used (month ago)	0	45.9	52.1	48.8	85.0	62.5	73.8
	1	28.4	40.6	34.1	10.0	32.5	21.3
	2	12.8	5.2	9.3		5.0	2.5
	3	5.5		2.9	2.5		1.3
	4	4.6	1.0	2.9	2.5		1.3
	5	.9		.5			
	6		1.0	.5			
	8	.9		.5			
	10	.9		.5			
Satisfaction with health services of health post	Very satisfied	6.4	72.9	37.6	50.0	15.0	32.5
	Satisfied	61.5	27.1	45.4	50.0	85.0	67.5
	Neither satisfied nor dissatisfied	10.1		5.4			

	Dissatisfied	21.1		11.2			
	Very dissatisfied	.9		.5			
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	109	96	205	40	40	80
Reason for dissatisfaction *	Behaviour of health service provider	20.8		20.8			
	I would have preferred a female	25.0		25.0			
	Had to pay money	58.3		58.3			
	Had to wait for a long time/Medicine not available	12.5		12.5			
	Necessary equipment not available	100.0		100.0			
	Poor quality of services	75.0		75.0			
	Lack of hygiene	66.7		66.7			
	Other	8.3		8.3			
Total		100.0		100.0			
	N	24		24			
Feel safe while using health post services	Yes	97.3	100.0	98.6	100.0	100.0	100.0
	No	2.7		1.4			
Total		100.0	100.0	100.0	100.0	100.0	100.0
	N	113	100	213	40	40	80

3.2 FINDINGS FROM STUDENTS

The project included providing health and hygiene education at schools in Chheskam and Waku differentiated by grade. The nurses supported by the project delivered those trainings. There were different topics taught for different grades of students. For Grade 1 – 5, there were 3 topics: personal hygiene, oral hygiene and hand washing. For Grades 6 – 10, there were five topics: Handwashing, menstrual hygiene, Adolescence, Diarrhoea, Girls trafficking and communicable disease.

3.2.1 Grade 1-5

The study explored information regarding the personal hygiene of the students. Almost all of the students (96%) in both Waku and Chheskam mentioned that they bathe once a week. All of the respondents in Waku and 68% of the respondents in Chheskam stated that they change their clothes once a week. 60% of the respondents in Chheskam and 65% of the respondents in Waku cut their nails whenever they grow long. 27% of the respondents in Waku and only 8% of the respondents in Chheskam do not clean their eyes. 80% of students mentioned that they received an educational class on personal hygiene. Almost all of them (98%) mentioned that sufficient time was spent to cover the topic and all of them found the class useful.

Table 1 Personal hygiene (grade 1-5)

		Chheskam	Waku	Total
Bathing frequency	Daily	4.0	0	2.0
	Once in a week	96.0	96.2	96.1
	Twice a week		3.8	2.0
Frequency of changing cloth	Once in a week	68.0	100.0	84.3
	Twice a week	32.0		15.7
Schedule for cutting nails	Once in week	16.0	23.1	19.6
	Once in fifteen days	24.0	11.5	17.6
	Whenever they are long	60.0	65.4	62.7
Cleaning eyes	Yes	92.0	73.1	82.4
	No	8.0	26.9	17.6
Education class on personal hygiene	Yes	84.0	76.9	80.4
	No	16.0	23.1	19.6
Total		100.0	100.0	100.0
	N	25	26	51
Spent sufficient time to cover topic	Yes	100.0	95.0	97.6
	No		5.0	2.4
Found class useful	Yes	100.0	100.0	100.0
Total		100.0	100.0	100.0
	N	21	20	41

Table 2 Oral Health (grade 1-5)

Students were asked a few questions regarding oral hygiene. All of the respondents in Chheskam mentioned that they brush their teeth after waking up in the morning and 85% of the respondents in Waku brush their teeth after waking up. Very few (16%) of the respondents in Chheskam and none of the respondents in Waku brush their teeth before going to bed. 16% of the respondents in Chheskam and 4% of the respondents in Waku brush their teeth after having sweets. 40% of the respondents in Waku and 69% of the respondents in Chheskam used only a brush for brushing their teeth. Almost all the students (98%) agreed that brushing teeth regularly helps us to prevent teeth problems. The proportion of students attending orientation class on oral hygiene was found to be comparatively higher in Chheskam (96%) than in Waku (73%). 92% of the respondents in Chheskam and 65% in Waku mentioned that sufficient time was spent to cover the topic and all of them found the orientation class useful.

		Chheskam	Waku	Total
Brushing teeth after waking up in the morning	Yes	100.0	84.6	92.2
	No		15.4	7.8
Brushing teeth before going to the bed	Yes	16.0		7.8
	No	84.0	100.0	92.2
Brushing teeth after having sweets	Yes	16.0	3.8	9.8
	No	84.0	96.2	90.2
Material use to brush teeth	Toothpaste	60.0	15.4	37.3
	Only brush	40.0	69.2	54.9
	Other specify		15.4	7.8
Brushing teeth regularly prevents teeth problems	Yes	100.0	96.2	98.0
	No		3.8	2.0
Orientation class on oral hygiene	Yes	96.0	73.1	84.3
	No	4.0	26.9	15.7
Spent sufficient time to cover oral hygiene topic	Yes	92.0	65.4	78.4
	No	8.0	34.6	21.6
Total		100.0	100.0	100.0
	N	25	26	51

Found class on oral hygiene useful	Yes	100.0	100.0	100.0
Total		100.0	100.0	100.0
	N	23	17	40

Table 3 Handwashing (grade 1-5)

When asked when was the time for handwashing, the majority of students commented that it was before and after eating. Only around 60% reported that it was after using the toilet. However, all the students in both Waku and Chheskam mentioned that they wash their hands before eating and after using the toilet. All the respondents in Chheskam and 77% of respondents in Waku use soap and water for washing hands. All of the students from Chheskam and 81% of the students in Chheskam mentioned that they attended an orientation class. Almost all of the respondents from Chheskam and 81% of respondents from Waku stated that sufficient time was spent covering the topic and 97% of the students found the class useful.

		Chheskam	Waku	Total
When it is time for handwashing *	Before eating	100.0	96.2	98.0
	After eating	96.0	88.5	92.2
	After using toilet	60.0	57.7	58.8
	After touching dust	48.0	38.5	43.1
	After playing	52.0	23.1	37.3
Washing hands before eating	Yes	100.0	100.0	100.0
Washing hands after using toilet	Yes	100.0	100.0	100.0
Material used to wash hands	Soap and water	100.0	76.9	88.2
	Only water		23.1	11.8
Provided orientation class about hand hygiene	Yes	100.0	80.8	90.2
	No		19.2	9.8
Spent sufficient time to cover hand hygiene topic	Yes	96.0	81.0	89.1
	No	4.0	19.0	10.9
Found class on hygiene useful	Yes	96.0	100.0	97.8
	No	4.0		2.2
Total		100.0	100.0	100.0
	N	25	21	46

* Multiple responses

3.2.2 Handwashing (grade 6-10)

The majority of the respondents (94%) had heard about the seven steps of handwashing. 64% of the respondents in Chheskam and 75% of the respondents in Waku mentioned practicing the seven steps. 72% of students in Chheskam and 93% in Waku stated that there was an availability of soap in their school after using the toilet. 96% of students attended an orientation class about hand hygiene and the same percentage mentioned that sufficient time was given to cover the topic. All of the students interviewed found the class useful.

Table Handwashing (grade 6-10)

		Chheskam	Waku	Total
Heard about 7 steps of handwashing	Yes	96.0	92.9	94.3
	No	4.0	7.1	5.7
Practice the seven steps of hand washing	Yes	64.0	75.0	69.8
	No	36.0	25.0	30.2
Appropriate time to wash hand*	Before eating	100.0	100.0	100.0

	After eating	100.0	96.4	98.1
	After using toilet	100.0	96.4	98.1
	After touching dust	64.0	89.3	77.4
	After playing	56.0	60.7	58.5
	Before feeding child	4.0		1.9
	All of the above	16.0	10.7	13.2
Material Used to wash your hand	Yes	100.0	100.0	100.0
Availability of soap in school for hand washing after using toilet	Yes	72.0	92.9	83.0
	No	28.0	7.1	17.0
Total		100.0	100.0	100.0
	N	25	28	53
If not, what do you use to wash your hand	Yes	100.0	100.0	100.0
Total		100.0	100.0	100.0
	N	7	2	9
Provision of Orientation/education about hand hygiene in class	Yes	96.0	96.4	96.2
	No	4.0	3.6	3.8
Spends Sufficient time taken to complete the class	Yes	95.8	96.3	96.1
	No	4.2	3.7	3.9
Is Class/intervention useful	Yes	100.0	100.0	100.0
Total		100.0	100.0	100.0
	N	24	27	51

* Multiple responses

3.2.3 Diarrhea (grade 6-10)

93% of the respondents had heard about diarrhea. The majority of students mentioned contaminated food and water as the cause of diarrhea. Stomach ache and frequent loose stool were mostly mentioned as the sign/symptom of diarrhea. Only 22% of students stated consumption of ORS as an effective treatment method. 40% of the respondents in Chheskam and 71% in Waku don't know how to prepare ORS. 19% of students interviewed suffered from diarrhea in the last 6 months. Of them, 80% visited the health post in Chheskam and 60% in Waku for treatment. Only 48% in Chheskam and 68% in Waku attended an orientation class on the topic. 83% of the respondents attending class in Chheskam and 95% in Waku stated that sufficient time was given to cover the topic and all of them found the class useful.

Table 2 Diarrhea (grade 6-10)

		Chheskam	Waku	Total
Ever heard about diarrhea	Yes	92.0	92.9	92.5
	No	8.0	7.1	7.5
Total		100.0	100.0	100.0
	N	25	28	53
Causes of diarrhea*	Worms	30.4	53.8	42.9
	Contaminated food and water	87.0	96.2	91.8
	Undigested food	26.1	80.8	55.1
	Environmental changes	21.7	19.2	20.4
	Don't know	13.0	3.8	8.2
Total		100.0	100.0	100.0
	N	23	26	49
Signs/symptoms of diarrhea*	Frequent loose stool	91.3	96.2	93.9
	Stomach ache	100.0	96.2	98.0
	Dehydration	8.7	15.4	12.2
	Nausea/Vomiting	13.0	23.1	18.4
	All of the above	4.3	3.8	4.1

Total		100.0	100.0	100.0
	N	23	26	49
Effective treatment for diarrhea	Consuming Oral Rehydration therapy (ORS)	26.1	19.2	22.4
	Sugar, salt and water	17.4	15.4	16.3
	Seeking medical help	56.5	65.4	61.2
Total		100.0	100.0	100.0
	N	23	26	49
Know the method of preparing ORS	Yes	60.0	28.6	43.4
	No	40.0	71.4	56.6
Total		100.0	100.0	100.0
	N	25	28	53
Time within which ORS can be consumed	12 hours	6.7	12.5	8.7
	24 hours	60.0	62.5	60.9
	Don't know	33.3	25.0	30.4
Total		100.0	100.0	100.0
	N	15	8	23
Suffered from diarrhea in the last 6 months	Yes	20.0	17.9	18.9
	No	80.0	82.1	81.1
Total		100.0	100.0	100.0
	N	25	28	53
What did you do?'	Visited health post	80.0	60.0	70.0
	Consumed ORS	20.0		10.0
	Took sugar, salt and water		40.0	20.0
Total		100.0	100.0	100.0
	N	5	5	10
Provision of Orientation/education about diarrhea in class'	Yes	48.0	67.9	58.5
	No	52.0	32.1	41.5
Total		100.0	100.0	100.0
	N	25	28	53
Spends Sufficient time taken to cover the topic	Yes	83.3	94.7	90.3
	No	16.7	5.3	9.7
Total		100.0	100.0	100.0
	N	12	19	31
Is class/intervention useful	Yes	100.0	100.0	100.0
Total		100.0	100.0	100.0
	N	12	19	31

* Multiple responses

3.2.4 Communicable disease (grade 6-10)

All of the respondents agreed that communicable diseases can be transmitted from one person to another one. 40% of the respondents in Chheskam and only 14% of the respondents in Waku mentioned that communicable diseases can be cured. 52% of the respondents in Chheskam and 75% of the respondents in Waku attended an orientation class. All of the respondents in Waku and 84% of the respondents in Chheskam mentioned that sufficient time was spent on covering the topic and all of those attending found the class useful.

Table 3 Communicable disease (grade 6-10)

		Chheskam	Waku	Total
Transmission of communicable disease from one person to another person		100.0	100.0	100.0
Communicable disease *	TB	88.0	75.0	81.1
	HIV	84.0	89.3	86.8

	COVID-19	80.0	92.9	86.8
	Others	28.0	53.6	41.5
Communicable diseases curable	Yes	40.0	14.3	26.4
	No	60.0	85.7	73.6
Provision of Orientation/education about communicable diseases in class	Yes	52.0	75.0	64.2
	No	48.0	25.0	35.8
Total		100.0	100.0	100.0
	N	25	28	53
Spends sufficient time covering the topic	Yes	84.6	100.0	94.1
	No	15.4		5.9
Total		100.0	100.0	100.0
	N	13	21	34
Is Class/intervention useful	Yes	100.0	100.0	100.0
Total		100.0	100.0	100.0
	N	13	21	34

* Multiple responses

3.2.5 Girls trafficking (grade 6-10)

82% of respondents in Waku had heard about girls trafficking as compared to 64% in Chheskam. The majority of the respondents (95%) learned about girls trafficking from their teachers and 85% of students mentioned that the age group of 15-19 years is the most vulnerable. Only 6% of the respondents in Chheskam and 78% in Waku attended education class on girls trafficking. Among the students attending orientation class, 95% stated that sufficient time was taken to cover the topic and all of them found the class useful.

Table 4 Girls trafficking (grade 6-10)

		Chheskam	Waku	Total
Ever heard about girls trafficking	Yes	64.0	82.1	73.6
	No	36.0	17.9	26.4
Total		100.0	100.0	100.0
	N	25	28	53
Medium through you heard about girls trafficking*	Family members	25.0	26.1	25.6
	Teachers	100.0	91.3	94.9
	Neighbors	6.3	8.7	7.7
	Friends	18.8	52.2	38.5
	Social media	56.3	26.1	38.5
	Health post nurse	12.5	60.9	41.0
Total		100.0	100.0	100.0
	N	16	23	39
Causes of girls trafficking*	Poverty	43.8	87.0	69.2
	Lack of awareness	18.8	47.8	35.9
	Illiteracy	31.3	73.9	56.4
	Interest on big money	43.8	78.3	64.1
	Other	18.8	8.7	12.8
Total		100.0	100.0	100.0
	N	16	23	39
Most vulnerable age group for girls trafficking	15-19 years	81.3	87.0	84.6
	20-24 years	18.8	13.0	15.4
Total		100.0	100.0	100.0
	N	16	23	39

Provision of orientation/education about girls trafficking in class'	Yes	6.3	78.3	48.7
	No	93.8	21.7	51.3
Total		100.0	100.0	100.0
	N	16	23	39
Spends sufficient time to cover the topic	Yes	100.0	94.4	94.7
	No		5.6	5.3
Total		100.0	100.0	100.0
	N	1	18	19
Is Class/intervention useful	Yes	100.0	100.0	100.0
Total		100.0	100.0	100.0
	N	1	18	19

* Multiple responses

3.2.6 Adolescence (grade 6-10)

Almost all of the respondents (96%) mentioned that the age group of 10-19 is considered as the adolescence period. They were also asked about the physical changes observed during adolescence and all of them stated change in body shape and height, 94% noted the start of the menstrual cycle, 87% referred to hoarse voice and 43% (with a higher percentage in Waku) highlighted emotional changes. 94% of the respondents observed physical change in themselves; 77% observed emotional changes in themselves. 85% of the respondents attended education regarding adolescence. 93% of them mentioned that sufficient time was spent to cover the topic and all of them found the educational class very useful.

Table 5 Adolescence (grade 6-10)

		Chheskam	Waku	Total
Age group considered as adolescents	10-15 years		3.6	1.9
	10-19 years	96.0	96.4	96.2
	Don't know	4.0		1.9
Physical changes observed during the adolescent period*	Change in body shape and height	100.0	100.0	100.0
	Starting of menstrual cycle	92.0	96.4	94.3
	Hoarse voice among boys	84.0	89.3	86.8
	Emotional changes	32.0	53.6	43.4
Observed any physical changes in yourself'	Yes	96.0	92.9	94.3
	No	4.0	7.1	5.7
Observed any emotional changes in yourself	Yes	72.0	82.1	77.4
	No	28.0	17.9	22.6
Observed any other changes in your life'	Yes	4.0	10.7	7.5
	No	96.0	89.3	92.5
Provision of orientation/education about adolescence period in your class	Yes	80.0	89.3	84.9
	No	20.0	10.7	15.1
Total		100.0	100.0	100.0
	N	25	28	53
Spend Sufficient time to cover the topic	Yes	90.0	96.0	93.3
	No	10.0	4.0	6.7
Total		100.0	100.0	100.0
	N	20	25	45
Is class/intervention useful'		100.0	100.0	100.0
Total		100.0	100.0	100.0
	N	20	25	45

* Multiple responses

3.2.7 Drug abuse (grade 6-10)

28% of the respondents in Chheskam and 82% of the respondents in Waku attended orientation class about drug abuse. Of them, 24% of the respondents in Chheskam and 75% of the respondents in Waku thought that sufficient time was spent covering the topic and 28% and 82% respectively found the class useful.

Table 6 Drug abuse (grade 6-10)

		Chheskam	Waku	Total
Provision of orientation/education about drug abuse in class	Yes	28.0	82.1	56.6
	No	72.0	17.9	43.4
Spends Sufficient time to cover the topic	Yes	24.0	75.0	50.9
	No	76.0	25.0	49.1
Is class/intervention useful'	Yes	28.0	82.1	56.6
	No	72.0	17.9	43.4
Total		100.0	100.0	100.0
	N	25	28	53

* Multiple responses

3.2.8 Menstrual hygiene

Respondents were asked a few questions on menstrual hygiene. In regards to the cause of menstruation, 31% of girls in Chheskam and 53% in Waku and 17% of boys only in Chheskam and 39% in Waku stated that it is a natural process. Over 50% of boys and girls in Chheskam and over 50% of boys in Waku didn't have any idea regarding the cause of menstruation. 51% of respondents mentioned the age group of 10-12 as the normal age of menstruation. 68% of female respondents have had menstruation. 58% of them had menstruation for the first time at the age of thirteen. 63% used cloth during their periods. 62% of the female respondents in Chheskam and 93% in Waku attended orientation classes on menstrual hygiene (note that 92% of students respondents had attended such a class in Chheskam). Over 80% of respondents in Chheskam and all respondents in Waku who attended an orientation class mentioned that sufficient time was spent covering the topic and all of them found that the classes were useful.

Table 7 Menstrual hygiene (grade 6-10)

		Chheskam		Waku		
		Male	Female	Male	Female	Total
Cause of menstruation	Natural process in female life	16.7	30.8	38.5	53.3	35.8
	Release of dirty blood from the body	25.0	15.4		20.0	15.1
	Internal bleeding due to illness			7.7		1.9
	Don't know	58.3	53.8	53.8	26.7	47.2
Normal age of menstruation among adolescent girls	Less than 10 years				6.7	1.9
	10-12 years	41.7	23.1	61.5	73.3	50.9
	13-15 years	41.7	76.9	30.8	20.0	41.5

	More than 15 years	8.3				1.9
	Don't know	8.3		7.7		3.8
Total		100.0	100.0	100.0	100.0	100.0
	N	12	13	13	15	53
Ever had menstruation	Yes		61.5		73.3	67.9
	No		38.5		26.7	32.1
Total			100.0		100.0	100.0
	N		13		15	28
Age at first menstruation	12		25.0		18.2	21.1
	13		62.5		54.5	57.9
	14				27.3	15.8
	16		12.5			5.3
Material used during menstruation	Cloth		62.5		63.6	63.2
	Homemade reusable pad		12.5		36.4	26.3
	Sanitary pad		25.0			10.5
Method used to wash cloth/reusable pad	Yes		100.0		100.0	100.0
Place for drying the reusable pad/ cloth	Outside under the sun		87.5		100.0	94.7
	Outside by covering it with other clothes		12.5			5.3
Duration to change pad in a day	Twice in a day		75.0		36.4	52.6
	Thrice in a day				45.5	26.3
	More than once in a day		25.0		18.2	21.1
Duration to bath during menstrual period	Everyday		50.0		27.3	36.8
	Every other day		50.0		72.7	63.2
Provision of orientation/education about menstrual hygiene in class	Yes	91.7	61.5	53.8	93.3	75.5
	No	8.3	38.5	46.2	6.7	24.5
Total		100.0	100.0	100.0	100.0	100.0
	N	12	13	13	15	53
Spends Sufficient time to cover the topic'	Yes	81.8	87.5	100.0	100.0	92.5
	No	18.2	12.5			7.5
Total		100.0	100.0	100.0	100.0	100.0
Is class/intervention useful	Yes	100.0	100.0	100.0	100.0	100.0
N		11	8	7	14	40
Total		100.0	100.0	100.0	100.0	100.0

* Multiple responses

3.3 SUMMARY OF QUANTITATIVE FINDINGS AND PRELIMINARY ORIENTATIONS

Background characteristics of women surveyed

- Age group similar in all areas, slightly higher % of 20-24 in new areas
- Majority Adivasi/Janajati
- Majority Hindu in Waku, Tamakhani and Taksindo; majority Kirat in Chheskam and high % Buddhist in Tamakhani and Taksindo also
- Higher level of education in Tamakhani and Taksindo
- Main source of income is agriculture with 23% employed in NGO/INGO in Taksindo
- Around ⅔ families are nuclear
- 53% in program areas / 61% in new areas family up to 4 members

- 10% women pregnant in program areas vs 2.5% in Tamakhani and 7.5% in Taksindo

Distance to health facility and access

- Health facility is over 30 minutes for 69% respondents in Waku and 75% in Taksindo and more than an hour for 47% in Waku and 50% Taksindo
- 90% of respondents had access to the services provided by the health post for their children in Chheskam, whereas only 40% in Waku. In the new areas, the percentages are 80% in Tamakhani compared to only 22.5% in Taksindo.
    - **Satellite clinics to be considered for Waku and Taksindo.**

Breastfeeding and immunisation

- Nearly all respondents received information on breastfeeding.
- All respondents breastfed their children - within an hour of birth: 82% in Waku; 93% in Chheskam; 78% in Tamakhani; 68% in Taksindo. DoHS Annual Report 2018-2019: 23.5% in Nepal and 48.1% in Province 1.
- Majority breastfed their children for six months but 21% in Waku and 14% in Taksindo less than 6 months. DoHS report: 33.3% exclusive breastfeeding for six months nationally and 55.5% in Province I.
    - **Continue awareness re breastfeeding in Taksindo and Waku**

- Nearly all respondents had received information on immunisation.
- 60% of the respondents completed immunization of their children in the program areas; 43% in the new areas (Taksindo only 30%). DoHS Annual Report 2018-2019: 68% of children fully immunised (71% in Province 1) in 2018-2019 - SDG target for 2019 of 88.6% (100% by 2030).
- The main reasons for not completing immunisation was 'other'; the study team reported that it was because the children were too young (but to be checked in Taksindo).
    - **Provide mobile clinic for immunisation, particularly in Taksindo**

Children living with a disability

- 2 respondents in Waku and 1 in Tamakhani reported having a child with a disability. Waku health post was reported as not accessible.
    - **Ensure facilities are disability friendly in Waku**
    - **Implement mobile clinics for improved access to health services for all.**

Diarrhea and cough, knowledge on handwashing and hygiene and communicable diseases

- A high percentage of respondents in both the program and new areas had knowledge on environmental sanitation measures to protect their children from diarrhea, but Taksindo would likely benefit from additional awareness on this.
- 67% of people in the program areas had access to clean water compared to 88% in the new areas.
- 16% of children under 5 in the program areas and close to 13% in Taksindo were reported having diarrhea in the past two weeks, higher than Nepal SDG target of 8.8% in 2019. Of the

students interviewed in Waku and Chheskam, 19% reported having suffered from diarrhea in the last 6 months.

- None of the children in Taksindo, only 29% of children in Waku and 59% of children in Chheskam who had diarrhea were treated with zinc and ORS compared to, in 2018-2019, 95% of children under 5 nationally as per DoHS Annual Report 2018-2019 (and 90% in Province 1).
- Only 48% in Chheskam and 68% in Waku attended an orientation class on the topic of diarrhea prevention.
- 16% of the students in Chheskam and none in Waku brush their teeth before going to bed.
- 64% of the respondents in Chheskam and 75% of the respondents in Waku mentioned practicing the seven steps of handwashing.

- 52% of the students in Chheskam and 75% of the respondents in Waku attended an orientation class on communicable diseases.
- Around 20% of children in both areas had a cough according to respondents in the previous two weeks.
    - **Increase hygiene awareness in Taksindo re diarrhea prevention and provide further education in schools (particularly in Chheskam) of program areas.**
    - **Provide further education particularly in Chheskam on communicable diseases in program areas.**
    - **Increase awareness in all areas re how to keep animals and measures to take after caring for them, as well as after playing outside.**
    - **Increase awareness re diarrhea treatment in Waku, Chheskam and Taksindo and breastfeeding in Taksindo and Waku**
    - **Mobile clinic for provision of diarrhea treatment in Taksindo and Waku, as well as for immunisation**
    - **Increase education on oral health at school in Chheskam and Waku and on handwashing in Chheskam in particular (not assessed in new areas).**
    - **Promotion of breastfeeding (see above)**
    - **Advocacy for supply of clean water in Waku**
    - **Increase awareness re air pollution**
    - **Capacity strengthening of health post management committee to ensure availability of ORS and zinc tablets**

Intake of Deworming medicine and Vitamin A

- 72% of children in Chheskam, 65% in Waku, 75% in Tamakhani but only 35% in Taksindo consumed deworming tablets in the last 6 months
    - **Mobile clinic for provision of deworming medicine in Taksindo**

- The majority of the children from both the program and new areas consumed Vitamin A in the past 6 months with a very high percentage of respondents from Chheskam (98%).

Women's decision-making status

- 46% of the respondents made their decision alone (55% Chheskam and 37% Waku, 55% average Tamakhani and Taksindo) and 37% of the respondents made their decision jointly along with their husband for their health care.
- The majority of the respondents in both the program and new areas made decisions jointly with their husband about their children's health care.
- Nine in ten respondents from both the program and new areas decided on family planning use jointly with their husband.
- Some key informants requested gender based training and the DoHS Annual Report 2018-2019 noted the importance of supporting activities that raise the status of women in society.

Family planning

- 72% had used a family planning method in their lives in the program area, 93% in Tamakhani and 70% in Taksindo.
- More than two-thirds of respondents used DMPA in both the program areas and the new areas followed by implants.

ANC and TD2

- 89% of women had 4 ANC visits in Chheskam compared to 44% in Waku; 83% in Tamakhani compared to 50% in Taksindo. DoHS Annual Report 2018-2019: 56% nationally in 2018-2019 and 61% in Province 1 (SDG Nepal target = 74.6% in 2019 - 90% by 2030)
    - **Increase awareness of importance of 4 ANC visits in Waku and Taksindo**
    - **Ensure service available at health post/mobile clinic**

- 58% of respondents received only one dose of TD2 vaccination in the program areas compared to 22% in the new areas; 42% in the program areas received two doses of TD2 vaccination and 75% in the new areas. The DoHS Annual Report 2018-2019 shows 64% of women receiving TD2 and TD2+ nationally (59% in Province 1) in 2018-2019.
    - **Increase awareness of importance of TD2**
    - **Ensure service available at health post/mobile clinic**

Delivery and PNC

- 72% of women delivered at home in Waku vs 17% in Chheskam; 60% in Taksindo vs 5% in Tamakhani. DoHS Annual Report 2018-2019: 63% of institutional deliveries nationally in 2018-2019 (SDG target = 64.5% in 2019, 90% by 2030).
- Around 95% in both Chheskam and Tamakhani communicated receiving information about place of delivery compared to 45% for Waku and 43% in Taksindo.
    - **Increase awareness of institutional delivery in Waku and Taksindo**
    - **Ensure completion of health post and birthing centre in Waku and effective management**
    - **Ensure staff and equipment available at health posts in Waku, Taksindo and Chheskam**
    - **Provide mobile ultrasound screening for pregnant women and ensure they come to the health post for delivery in Waku and Taksindo**

- 74% of the respondents visited health facilities for PNC in Chheskam as compared to Waku 24%; 50% in Tamakhani and 38% in Taksindo. DoHS Annual Report 2018-2019, 16% of mothers had three PNC checkups as per protocol nationally (9% in Province 1) in 2018-2019.
- Of the people who did not visited for PNC, 65% in Waku communicated that the reason was the distance to health facility; 21% in Chheskam; 48% in Taksindo and 25% in Tamakhani. 34% in Waku, 64% in Chheskam, 65% in Tamakhani and 52% in Taksindo felt that PNC visits were not necessary.
- Only 5% in Tamakhani communicated accessing PNC on the same day as delivery and on average only 3% on the second day in the program areas. SDG Nepal 66.5% target for 2019 (90% by 2030) for women to receive PNC care within two days of childbirth.
    - **Provide mobile service for PNC in Waku and Taksindo**
    - **Increase awareness of importance of PNC and timeliness in all areas**

Mothers' groups

- 98% of respondents were members of a mothers' group in program areas compared to 91% in new areas and most respondents communicated that FCHV attended sufficient sessions.
- 27% in Taksindo and 17% in Waku wished for more involvement of the FCHV.
    - **High participation of women in mothers' group meetings so important group for awareness/education**
    - **Review engagement and participation of FCHV in Taksindo and Waku mothers' groups**
    - **Review mobilisation and frequency of mothers' group meetings in Waku as only 72% attendance in 12 meetings (96% in Chheskam, 100% in Tamakhani, 89% in Taksindo)**

Perception towards Nurse's activities (Waku and Chheskam only)

- 99% of respondents from Chheskam stated that the nurse attended the meeting compared to 70% in Waku (likely due to absence because of COVID pandemic and possibly impact of Chheskam's nurse accompanying the study team).
- Average number of meetings attended by the nurses = 3.1 in Waku and 7.1 in Chheskam.
- 46% of respondents in Waku stated that the nurse attended sufficient sessions of mothers' groups vs 80% in Chheskam.
- 72% of respondents in Waku mentioned that the intervention of the nurse was useful; 99% in Chheskam.
    - **Ensure sufficient involvement of health post staff in mothers' group meetings**
    - **Greater planning to ensure all mothers' group visited**

Health post service utilization and satisfaction towards services

- 96% of the respondents from the program areas and 100% from new areas used the health post services.
- All the respondents in Chheskam, Tamakhani and Taksindo were either satisfied or very satisfied.
- In Waku, 10% were neither satisfied nor dissatisfied and 21% were dissatisfied. Reasons for dissatisfaction: the necessary equipment was not available (100%); the services were of poor

quality (75%); there was a lack of hygiene (67%); they had to pay (58%); a female would have been preferred (25%) and because of the behaviour of the health provider (21%).

- Majority of respondents however communicated feeling safe when using the services of the health centres.
    - **Develop and implement capacity strengthening plan for Health Post Management Committee in Waku**
    - **Conduct assessment of Health Post Management Committee in Taksindo**
    - **Develop and implement capacity strengthening plan for health post staff in Waku**
    - **Review performance report process of health post staff in Waku**
    - **Identify and address staffing gaps in in Waku**

Source of information

- Source of information regarding breastfeeding and immunisation is in majority of FCHVs. The nurses supported by the project seem also to have played a critical role (more so in Chheskam than in Waku) and to a lesser extent the government staff nurse in Tamakhani. The mothers' group seem also to play a key role in Tamakhani but not so much in Taksindo where reliance is greater on health post staff.
    - **Review engagement of mothers' groups in Taksindo**

Girls trafficking

- Only 6% of the respondents in Chheskam and 78% in Waku attended education class on girls trafficking.
    - **Provide further education in Chheskam schools on girls trafficking**

Drug abuse

- 28% of the respondents in Chheskam and 82% of the respondents in Waku attended orientation class about drug abuse.
    - **Provide further education in Chheskam schools on drug abuse**

Adolescence and menstrual hygiene

- 85% of the respondents attended education regarding adolescence
- 31% of girls in Chheskam and 53% in Waku and 17% of boys only in Chheskam and 39% in Waku stated that menstruation is a natural process. Over 50% of boys and girls in Chheskam and over 50% of boys in Waku didn't have any idea regarding the cause of menstruation.
- 62% of the female respondents in Chheskam and 93% in Waku attended orientation classes on menstrual hygiene.
    - **Provide further education in Chheskam schools in particular but also Waku schools on menstrual hygiene**

3.4 QUALITATIVE FINDINGS

Focus group discussions and key informant interviews were done as a part of the qualitative study. Various aspects such as the general situation of health in the communities, the nurse intervention, the services provided by the health posts and the status of maternal and child health were explored in the interviews. The following was completed:

- 8 KII and 10 FGD in Chheskam
- 5 KII and 12 FGD in Waku
- 5 KII and 5 FGD in Taksindo
- 6 KII and 4 FGD in Tamakhani

Total = 24 KII and 31 FGD (original plan was 25 KII and 22 FGD)

3.4.1 General Health situation

Most of the participants in KIs mentioned that, despite improvements in maternal and child health compared to the past years, the overall health status of people in Waku and Chheskam was not so satisfactory. There were still many problems related to health and health care services. Many people still visit traditional healers as their first priority when they get ill. The most prevalent health problems were uterine prolapse, respiratory problems, dental problems, diarrhea and dysentery. Some KIs also mentioned that malnutrition, gastritis and anemia were some additional problems. The underlying factors for these problems were low literacy, lack of awareness, inaccessible health care services and insufficient equipment, medicines and resources in the health post. The situation was more unsatisfactory in Waku due to the unavailability of a birthing center and scattered settlement. The health coordinator of Waku explained, *"People of this municipality have poor health status because they are far from the health facilities."*

The situation was exacerbated by the difficult topography of the region. In this regard, the HP incharge of Waku mentioned, *"The topography of this area is difficult, due to which there is unavailability of transportation facilities which cause difficulty in seeking health care services."*

One of the areas to be improved is the lack of disabled friendly health services. An interviewee with disability in Chheskam mentioned, *"I am satisfied with the services that I received from the health post, but it's difficult for the persons with disabilities to seek the health care services due to lack of disable friendly health services."*

Most of the FGD participants mentioned that the most common sources of information for health-related messages were the health posts, FCHVs and mothers' groups. Likewise, some other sources of information were TV, radio, social media and I/NGOs.

3.4.2 Services by the nurses and the Health Post

All of the KIs and FGD participants mentioned that they highly benefited from the services provided by the nurses recruited by the AHF/AFN and that they filled a gap in the number of staff available. The main services provided by the nurses as stated by HI in charge of Waku were

⇒ Motivating and encouraging FCHVS to perform their work more effectively

⇒ Conducting and facilitating meeting with mothers' groups

⇒ Encouraging and educating the mothers about the child health and nutrition

⇒ Providing awareness to the pregnant and lactating women about pregnancy related complications

⇒ Providing OPD services

⇒ Facilitating mothers' group meetings

The health post in charge of Chheskam also stated similar services such as counseling, services and awareness on family planning, nutrition during different stages (pregnancy, lactation), immunization and awareness to school students and also provision of OPD services from the health post. Difficulty in coordination without the nurse was noted in Chheskam by two FCHVs.

They elaborated that the nurse participated and provided orientation in the mothers' groups meetings and the knowledge on health issues was fruitful and helped to change the health behavior of the community people. *A FCHV of Chheskam also added, "We are satisfied with the services provided by nurse Puja because changes have been observed among women through the awareness training on danger signs during pregnancy and care for the mother and child."* FCHVs in Chheskam also asked for training on gender equality and safe abortion.

FGD participants from Chheskam mentioned that the quality of the health services of the health post had improved as compared to past days. However, some community people of Waku were not so satisfied with the services provided by the health post. In a focus group discussion they mentioned, *"Health post only provides treatment of minor illness but it is not able to treat complicated health problems and health post doesn't have sufficient health workers and medicines."*

The positive changes in health services observed after the program implementation included increased utilization of the ANC/PNC services, delivery services, implementation of immunization from satellite clinics, implementation of regular meetings and improved reporting by FCHVs.

3.4.3 Women and Child Health

Most of the KI mentioned that positive changes have been observed in women and child health as a result of the N4N project in 3 years. In this regard, the HP in charge of Chheskam added, *"Behavioral changes have been observed among women. Utilization of the ANC/PNC services, and institutional delivery have increased."*

In the similar manner, changes have also been observed in the perception of maternal and child health. Women have improved health care seeking behavior as they are more aware about the risks and complications during pregnancy, have improved knowledge on nutrition during pregnancy and lactation. The other changes were an increase in birth spacing and improved hygiene and sanitation.

The awareness program through the nurses and health related information were thought to be the main reasons for the improvement in health seeking behaviour of the community, as well as the birthing centre in Chheskam built in 2017.

Despite the improvement, many problems still exist in the community that need to be addressed. The most prevalent problems relating to maternal health and child health were child marriage, teenage pregnancy, uterine prolapse, and lack of knowledge on sexual and reproductive health.

It is also to be noted that the data gathered from the health posts in program areas does not show overall an increase in ANC and the increase in institutional deliveries in Chheskam could also be attributed to the building of the birthing centre. Reliability of data and practice of calculating data based on government projections is however an issue that will need to be further reviewed as part of the new project phase.

3.4.4 Mothers' groups meetings

FGD participants stated that the participation of mothers in mothers' groups meetings was good. But some mothers couldn't attend the meetings because of their household chores, agricultural work and lack of support from family members. Similarly, the difficult geography was also another factor hindering women's participation.

The participants also further added that it was challenging for mothers with disability to attend the meeting because of lack of family support, difficult geography, existing discrimination and lack of financial independence. The existing discrimination and superstitious beliefs in community were also the reasons hindering the participation. It would be recommended that disability inclusion awareness be provided and ensure women with disability can participate.The participants of Chheskam further elaborated about the mothers' groups sessions, "*We are fully satisfied with her sessions in mothers' group meetings. She is very humble and sincere in her work. We got the opportunity to learn so many things on maternal and child health from her in topics like hygiene and sanitation, maternal and child health, nutrition etc."*

3.4.5 School Health Program

Findings from the interviews suggest that the school health program which consisted in conducting sessions/classes on various health topics in schools was fruitful in both Waku and Chheskam. Students in FGD mentioned that they had sufficient classes from the nurse on topics such as personal hygiene, oral hygiene, hand washing etc. In a group discussion, students in Chheskam expressed their satisfaction with the classes by saying, *"Mega nurse have taught us about hand washing techniques and steps with demonstration. We are satisfied with her teaching. We have learnt all the seven steps of hand washing."*

The level of knowledge of students on various aspects was found to be improved. A group of students from grade (6-10) explained, *"Her class on adolescent health was useful as it helped us to realize that changes during adolescence is normal. We also knew that we should share our problems with elders and they can provide us proper counselling."*

3.4.6 Support for HFOMC

HFOMC members also received support from AF Nepal. Capacity building training on management of the health facility was provided to the members which helped them to have sufficient information about their roles and responsibilities. The HFMOC member in Chheskam reported improved knowledge on proper utilization of available resources for better health facility management. The HFOMC member in Waku communicated that the training helped them conduct the meetings regularly.

3.5 FINDINGS AGAINST DAC INDICATORS

3.5.1 Context:

PESTEL analysis was done to find out various factors influencing the outcomes of the project.

Political Factors:

Due to the federal government system with decentralisation of power to local government, AF Nepal was able to have frequent and effective communication with local government representatives which made all the processes much easier. The co-ordination and communication procedures were not only easier but also more fruitful as the partner NGO (PNGO) had direct contact with ward level stakeholders. Ward level stakeholders were more familiar and had a clear picture on local scenarios, needs and the ongoing activities which helped to plan and run the project smoothly.

Likewise, the objectives of the project were in line with governments' priorities. As a result, the motivation and contribution of the local government was also increased.

Economic and Social Factors:

Social factors like poverty and illiteracy affected project implementation and outcomes. Initially, it was difficult to gather mothers in the group meetings as they were ignorant about the importance of attending health related sessions to address their existing health related problems. Likewise, due to poor economic conditions, it was also difficult for mothers to leave the household chores or agricultural activities and attend the meetings easily as they were concerned about the opportunity cost. The gradual increase in transportation facilities in the district during the later phase of the project helped with implementation. Moreover, the active involvement of local people including mothers' groups and FCHVs was also helpful for proper project implementation.

Environmental:

The disturbance of transportation during the rainy season and remoteness were a hindrance for the smooth implementation of the project activities. Access to health services in Waku was difficult due to scattered settlements. It was reported that sometimes targeted activities could not be accomplished on time due to unfavorable weather conditions. The project was well implemented despite the unfavorable topography and geographical barriers.

Technological:

There were certain technological factors favoring effective implementation of the project. The use of internet technology and electronic devices and its growing familiarity among community people had increased their access to health-related information and services.

3.5.2 Relevance:

This project was designed and implemented on the basis of findings obtained from the need assessment. The assessment helped to find out the opinions, and perceptions of community people and various problems in the health sector prevalent in Waku and Chheskam. The assessment helped to find out the opinions, perceptions of community people and various problems in the health sector prevalent in the community. The identified problems were prioritized with active participation of the formal and informal leaders, health personnel, local women and men. After the prioritization process, areas that AHF and AF Nepal could support at the time were addressed through the project. It can therefore be inferred that the project addressed the needs of the community people to a greater extent. One of the major focuses of the project was maternal and child health which was in-line with the community needs. Similarly, the project also lines up with AHF's mission and identified geographic focus i.e. to improve the quality of life of the people most in need in remote areas of the Himalaya, as Solukhumbu is a remote district in the Himalayan region and health one of the strategic focus of AHF. The mission of AF Nepal is also to empower local communities to develop resilience through improved health outcomes.

Similarly, the project was also relevant in the national context because the objectives of the project were consistent with the government priorities and programs such as the 'Safe motherhood program'. Likewise, the activities of the project contributed to attainment of SDG 3 'Good health and well-being' through better maternal and child health.

Furthermore, the relevance of the project in the present context can be inferred from the findings obtained from the quantitative data where practice of home delivery is still existing in noticeable proportion in Waku and practice of complete ANC visits need to be improved. This indicates that there are still needs for support in infrastructure (birthing centre - which is currently being built in Waku) as well as services.

3.5.3 Coherence:

The project was also coherent with other interventions in the area. 'Aama Surakshya Karyakram' (Safe motherhood Program) is one of the most important Maternal and Child health programs of the Nepal Government and the activities of the project were also in line with this safe motherhood program. Similarly, there were organizations like One Heart Worldwide (OHW) and Suaahara which were also directly or indirectly contributing to maternal and child health promotion. OHW mainly focuses on building health infrastructures and Suaahara works for promoting nutrition of mother and the child. Hence, the project was compatible with other working partners in the same area and was likely impacted by them in some way, which is outside of the scope of this study to assess.

3.5.4 Efficiency:

The factors determining the efficiency of the project are time, cost and resources.

Time: The project initiation could not be done as per predetermined plan. The project was lately started due to time consuming staff's hiring process and other barriers related to remote location of the implementation area. Although most of the activities of the project were completed on time as per information received from key informants (nurses), some of the activities planned to be carried

out in the later part of the final year of of the project were not accomplished due to the impact of COVID-19 and were rescheduled as part of the extension/evaluation phase.

Cost: Overall, the project was completed on minimal costs. During the initial phase of the project, the management cost was covered by the implementing partner itself. The original budget was revised up during implementation including to better capture project management costs.

Though it was initially planned to employ local staff nurses, due to the unavailability of available local staff, nurses were hired from Kathmandu which raised the project cost.

Resources: The nurses involved in the project were competent and friendly enough to enable proper implementation of the project. They had good coordination and communication skills.

On the other hand, turnover of staff due to remote location of the area was an important challenge during the implementation phase. At the program initiation phase, the idea was to hire local staff from the region but, due to the unavailability of trained nurses in the region, the nurses were hired from Kathmandu. The nurse in Waku left after working for a month and the nurse in Chheskam left after 10 months, requiring recruitment of new staff.

Overall, the nurses employed by the project reported that all the tasks were completed successfully through teamwork and proper coordination.

3.5.5 Effectiveness:

The major positive changes brought by the project are described below:

Improved health seeking behaviour of women and children: Key informants mentioned that women's health seeking behavior has improved as a result of the project. They had increased awareness on the benefits and importance of consuming nutritious food during pregnancy and using health care services for better health of both mother and the child. Whilst this does not correlate with health post data gathered during the project (see under impact for issues with this and with calculation of results against indicators), the information collected during the evaluation show that women started visiting health posts more frequently for ANC, delivery and PNC.

> *"The project contributed to increasing institutional delivery as people are now aware about the importance of visiting health facilities to utilize the health services for better health." - HP Incharge, Chheskam*

"Behavioural changes have been observed among the people. Utilization of the ANC/PNC services, increase in institutional delivery, increased immunization coverage has proved the changes among the community people." - HP incharge, Waku.

It is to be noted, as above, that in addition to ANC/PNC, immunization coverage qualitative results gathered during the evaluation differ from those collected during the project. Immunisation coverage is reported to have decreased in Nepal[5].

[5] https://www.nhssp.org.np/Resources/HPP/Health_Sector_Progress_Report_2018.pdf

Smooth and effective health service delivery: Findings suggest that the nurses recruited by AHF/AFN helped a lot to provide health services to the community people, just as regular staff of the health post. They provided health services to the needy people alone, even during absence of other health post's staff. Their involvement in service delivery was very fruitful.

Increased capability of FCHVs: The competence of FCHVs was improved after being trained by the nurses and they were able to organize mothers' group meetings easily. FCHVs articulated the benefits they received from the training provided by the nurses.

> *"I received training from nurse Puja three times. Now, I have more information about the Maternal and Child Health. These training sessions helped me to conduct the mothers' group meetings in my community." -FCHV, Chheskam*

> *"I have taken training 4 times from Nurses for Nepal. We are satisfied with the training. This type of training helps us to increase knowledge and awareness which can be discussed during mothers group meetings."-FCHV, Waku*

Capacity Enhancement of HFOMC: The project also carried out orientation to HFOMC members for health facility management which proved to be effective.

> *"After the program conducted by AF Nepal, we are able to work more actively as we are clearer about our roles and responsibilities." - HFOMC member, Waku*

> *"Training helped to solve the problems that arise during the management, on using the available resources and to fulfill the roles and responsibilities." - HFOMC member, Chheskam*

Development of hygienic behavior among students

The school health program of the project was fruitful enough to increase the knowledge and practice of students on hygiene and sanitation, handwashing techniques, adolescent sexual and reproductive health and other social issues. Teachers report that the personnel hygiene of students have improved.

> *"The class by Megha nurse on hand washing was useful as hand washing helps to prevent us from different diseases such as common cold, diarrhea and other communicable diseases. We now thoroughly wash our hands with soap and water before eating food and after using toilets." -FGD participants, Waku, Grade (6-10)*

> *"Megha nurse gave sufficient classes on health and personnel hygiene. We are completely satisfied with her class. Her class was useful to us as maintaining hygiene and sanitation helps us to prevent from different diseases." -FGD participants, Waku, Grade (1-5)*

> *"After taking the classes from Puja nurse, students learnt about hand-washing technique, brushing technique, menstrual hygiene and other hygienic behavior. She has conducted classes for sufficient duration and students are fully satisfied with her class. Her class was easy to understand and effective for students." -Teacher, Chheskam*

Increased knowledge on social issues and safe behavior among students:

Students also mentioned their improved knowledge on various social issues and practice of safe behavior accordingly.

> "*From the classes taken by Megha nurse on girl trafficking, we learnt that we should share about the girls trafficking with others, be aware when we go to new places for employment, be alert while talking with new people etc. We have applied the things she taught us in our behavior too.*" -Students, Waku

Story 1

A mother equipped with the right knowledge

Ramkumari Kulung (name changed) is a 42 years old woman who lives in Mahakulung ward number 3. She was born in an agricultural family. Her husband is a hardworking farmer. As per the culture of Kulung community, she got married at a young age. She was pregnant at 18 and gave birth to a preterm baby. Her baby died within a few days. She and her family suffered a lot because of the death of their first child. She gave birth to a baby girl at the age of 24 after 6 years. And after the birth of this girl, she gave birth to three daughters and one son. Her husband then went to India for employment. After ten years of foreign employment, her husband returned home. Although they didn't want any children, they weren't using any family planning methods because of the existing stigma about family planning methods and lack of proper information. Ramkumari got pregnant again and she didn't go for an antenatal checkup for six months.

When nurse Puja from N4N knew about the pregnancy of Ramkumari and that she wasn't doing any antenatal checkups, the nurse visited her at home and gave her proper counseling and made her realize the importance of regular antenatal checkups. Ramkumari also joined the mothers' group and got an opportunity to get more information about maternal health, the importance of maintaining hygiene and of ANC/PNC checkups. After that, she did regular antenatal checkups and took iron tablets. Ramkumari also encouraged other mothers in the community to be a member of the mothers' group. She also shared her knowledge with other mothers in the community. She then gave birth to a daughter and had regular PNC checkups. It's been two months since her delivery. She now has adequate information about family planning methods. She and her husband are now regularly using family planning methods.

Story 2

Barriers while accessing services

Prem Maya Rai (name changed), mother of 6 children (4 daughters and 2 sons) whose main occupation is agriculture, got married at the young age of 15 and gave birth to her first child at age 16. Due to several factors such as illiteracy, lack of awareness and lack of family support, she had her first delivery at home; she didn't have ANC/PNC visits. She didn't use the family planning services, so there is no birth spacing between the children. She didn't visit the health post for ANC/PNC checkup when she gave birth to her first 5 children.

When nurse Megha provided knowledge on the importance of ANC/PNC services, immunization, family planning, cleanliness and hygiene, she started utilizing each of the services. Nurse Megha encouraged both Dil Kumari and her husband to go to ANC/PNC visits before and after giving birth to her 6th child. ***Despite having knowledge, due to lack of transportation, distantly located health facility (3 hours), and poor financial status, she had a home delivery.***

3.5.6 Impact:

Behaviour Change: The most important impact made by the project is change in not only knowledge but also practice and behavior of women to seek the necessary health care services, and adopt healthy behaviours. Women were reported to have seeked increased health check-ups during pregnancy, to have consumed nutritious food and respondents also mentioned an increase in institutional delivery. Likewise, students were also found to practice healthy and hygienic behavior like steps of handwashing, brushing habits etc.

> *"The class by Megha nurse on hand washing was useful as hand washing helps to prevent us from different diseases such as common cold, diarrhea and other communicable diseases. We now thoroughly wash our hands with soap and water before eating food and after using toilets." -FGD participants, Waku*

It is to be noted however that there is discrepancy between the qualitative information gathered during the evaluation study and the indicators selected and data from the health post gathered as part of the project, where identification of changes of behaviour is more problematic. Quality of health post data has been raised as an issue by different stakeholders, as well as problems due to indicators' denominators being calculated based on government targets (in the absence of accurate data) which are reported to be too ambitious. Future projects will need to include training on data collection and look at ways to better measure progress.

Empowerment: The active involvement of women in mothers' groups and different health sessions also made them empowered and helped them to make right decisions about their health. Likewise, the orientation by the program to FCHVs also empowered them to independently conduct and lead

mothers' group meetings. FCHVs themselves have articulated their increased confidence and capability to conduct the sessions after the training received.

3.5.7 Safeguarding:

The project worked with women and children including pregnant and lactating women. Project ensured gender inclusion, equal participation from all socio-economic groups in project activities. The project team read and signed to AHF and AF Nepal's child safeguarding policies. The implementers (nurses) also complied with those policies during project implementation. Both the project team and research team also submitted a Police Clearance Certificate to AF Nepal and AHF.

3.5.8 Sustainability:

Local Ownership

The project was implemented in close coordination with the Local level government (Palika), Health facility and FCHVs, which resulted in their ownership towards the program. Besides that, project interventions were aligned with government plans and priorities which has also supported building ownership towards the program among the stakeholders.

On the other hand, one major step towards sustainability i.e. official hand-over of the project to the local level was still incomplete as it was only planned at the later phase of the project.

Partnering

The project was carried out in partnership with the local NGO Action for Nepal, the Rural municipality, FCHVs and the health facility. The project intervention also supported the capacity development of the HFOMC.

Transformed Relationship

The extended relationship of mothers' groups with the FCHVs through regular mothers' groups meetings and with the health workers have contributed towards a better relationship between the service seekers and providers.

Household and Family Resilience

Regular mother's group meetings and monitoring by the nurses through this project resulted in mothers getting increased skills on maternal and child care.

> *"Because of training given by Puja nurse, there are positive changes in behaviors and attitudes related to child and maternal health and care which will be persistent in upcoming years too. We are committed to educate and pass this knowledge to the next generation."* -FGD participants, Chheskam

3.6 CHALLENGES

The following challenges faced during program implementation impacted the outcome of the project.

- ⇒ Unfavorable topography and geographical barriers
- ⇒ Staff turnover and unavailability of trained nurses locally which resulted in recruitment of nurses from Kathmandu and outside the valley.
- ⇒ Difficulty to gather mothers for meetings during the initial stage of the project and some mothers not participating due to lack of family support, household chores and agricultural work or discrimination (women with disability)
- ⇒ Inaccessibility of health services in Waku due to scattered settlement
- ⇒ Traditional beliefs leading community to often chose traditional healers before health post staff
- ⇒ Lack of clarity of initial design, M&E framework and implementation plan
- ⇒ Issue with accuracy of data to measure progress
- ⇒ COVID-19 which impacted the ability to complete the program activities on time.

3.7 STRENGTHS

The strengths of the community for smooth project implementation in the future are:

- ⇒ Good participation of the stakeholders and community.
- ⇒ Good coordination and support from the local level government.
- ⇒ Active involvement of FCHVs.
- ⇒ Willingness of community to provide human resources and material for community development
- ⇒ Full utilization of the health budget allocated by the local government and no freeze as it often happens in other government supported projects. .

3.8 LESSONS LEARNT AND RECOMMENDATIONS

Promising practices:

- ⇒ The mothers' groups were found to be an effective platform to provide knowledge to mothers. The regular meetings and discussions among the members of mothers' groups were a strong motivating factor for the mothers to not only practice healthy behaviours.
- ⇒ Building capacity of FCHVs was found to be an effective way to carry out health sessions to mothers' groups as it is also a long-term way to increase knowledge and change the health care seeking behavior of mothers.

Recommendations:

1. **Improving governance, facilities and human resources**

   1.1 Strengthening health service facilities

Staffing, equipment and medicines remain an issue. Qualitative information also showed that respondents had dissatisfaction with the quality of health services in Waku, due to problems such as shortage of equipment and medicines and obviously the absence of a birthing center. Respondents recommended for health management committees to be more active and for health workers 'to be more responsible towards their duties'.

- ***Advocacy and obtaining commitment at local government level for provision of all sanctioned staff, for monitoring regularity of staff attendance at health posts, and also for timely provision of adequate essential equipment and medicines (including Oral Rehydration Solution (ORS) and zinc tablets).***
- ***Capacity strengthening of management committees can help provide quality health services for the long term. Assessment of capacity of health post management in Taksindo should be undertaken and capacity strengthening plans developed for Waku and Taksindo.***

1.2 Addressing staffing shortage and capacity

Availability of staff in health posts in both Waku and Chheskam remains a critical issue. With decentralisation, health post staff have been asked to go back to their region of origin, leaving gaps. As per government, in each health post there should be a total six staff including one Health Assistant(HA), two Auxiliary Nurse Midwife (ANM), two Assistant Health Worker (AHW) and one office helper. In both Chheskam and Waku currently there are only 4 staff - two ANM, one AHW and one office helper. In addition, the capacity of staff is varied with some having only limited training. Some respondents noted the heavy reliance of the nurses supported by the project in both Waku and Chheskam to provide services such as ANC/PNC, despite them being employed only for a specific time period. There is a risk that those services might be discontinued if sufficient staff are not available. Sustainability is a key consideration to be discussed.

Current staff availability:

		Status in Health center			
Post	**Government allocation**	Tamakhani	Taksindo	Chheskam	Waku
Health Assistant (HA)	1	x	1	x	x
Auxiliary Nurse Midwife(ANM)	2	3	2	2	2
Assistant Health Worker (AHW)	2	1	1	1	1
Office Helper	1	1	1	1	1

Total	6	5	5	4	4

- ***Assessment of capacity of health post staff should be undertaken in Waku and Taksindo and capacity strengthening plans developed.***
- ***Performance process should be reviewed/implemented in Waku.***
- ***Identify and address staffing gaps in Waku and Chheskam in close liaison with local government and other stakeholders and maximise sustainability.***

"We aren't satisfied with the services of health post as health workers are usually absent and there is often shortage of medicines in the health post. Health workers aren't responsible towards their duties. We also feel language barriers with health workers". (FGD, teachers, Waku)

"There are sufficient staff at the health post currently without the nurse. However, most of the services are provided by nurse such as ANC/PNC checkup, delivery, distribution of iron tablets. And we couldn't receive these services in all time from other staff". (FGD, Community Members, Chheskam)

"We are not fully satisfied with the services as the government health workers do not spend much time in the health post and, usually, the health post staff, except the nurse, are in home leave". (FGD, Community Members, Chheskam)

1.3 Ensure adequate equipment

Health facilities are lacking essential equipment particularly relating to maternal health, such as ultrasound screening. ***Ensure such equipment is available at health posts in Waku, Taksindo and Chheskam.***

2. Improving access to services and information

2.1 Increased access to services in remote areas

Both quantitative and qualitative findings showed that the maternal health service utilization in Waku is not satisfactory; nearly three-fourths had home delivery, only half had completed four or more ANC visits and only about a fourth had PNC visits. The main underlying reason for this was the inaccessible (in terms of distance) health facility and this was similar in Taksindo.

- ***Hence, interventions should be carried out in such a way that it will ensure the accessibility of health services to the majority of the people. For instance, increased frequency and timely conduction of out-reach clinics (ORC), satellite clinics so that mobile medical teams provide services in hard to reach areas. Interventions should***

specifically ensure that ANC/PNC (including delivery of TD2) services are available at health posts and through mobile clinics.

- ***Mobile clinics should be undertaken for provision of***
- ***immunisation, particularly in Taksindo;***
- ***diarrhea treatment in Taksindo and Waku;***
- ***deworming medicine in Taksindo;***
- ***mobile ultrasound screening for pregnant women and ensure they come to the health post for delivery in Waku and Taksindo***

It is to be noted that AHF and AF Nepal, with the support of the local government and One Heart Worldwide are building a health centre in Waku with a birthing suite. It will be important to

- ***ensure completion of the health post and birthing centre in Waku and effective management including staffing allocation.***

2.2 Addressing child marriage, early pregnancy and adolescent health

The major maternal and child health problems in the present context were child marriage, early pregnancy and lack of sufficient knowledge on adolescent sexual and reproductive health issues.

- ***Hence, upcoming interventions should focus on addressing these issues. For instance, adolescent friendly health services in the health posts, separating certain class hours to include topics such as early marriage and pregnancy at secondary level (this would also fall under 3. Increasing awareness and advocacy).***
- ***Provide further education on menstrual health in schools of program areas, particularly in Chheskam.***

2.3 Promoting engagement of mothers and FCHV in mothers' groups

Some mothers couldn't attend the meetings because of their household chores and agricultural work. Similarly, the difficult geography was also another factor hindering women's participation. Participation of attendance in mothers' group meetings was less in Waku at 72% than in other locations and respondents noted that FCHV's participation could be increased in Taksindo and Waku. Some respondents also noted that whilst Chimeki Aama Samuha (women saving groups) had 100% attendance, some mothers' groups only had around 60% attendance. Future projects should liaise with those saving groups to identify the best way to promote health awareness.

- **Strengthen engagement of mothers' groups in Taksindo.**
- **Promote greater participation of FCHV and health post staff into mothers' group activities in Taksindo and Waku.**
- **Strengthen planning process to ensure all mothers' groups visited.**

- **Liaise with mothers to identify best time for meetings and promote engagement; assess whether additional mothers' groups are needed in remote areas.**
- **Mobilise further mothers' groups in Waku.**
- **Liaise with Chimeki Aama Samuha and identify the best way to deliver health awareness.**

"There are insufficient mothers group in community as all mothers from each tole[6] aren't included. So, mothers group in each tole should be formed". (Waku community FGD)

2.4 Implement camps for treatment of uterine prolapse

A number of respondents in Chheskam and Waku noted the need for camp for treatment of uterine prolapse.

- **Implement camps for treatment of uterine prolapse**

3. Increasing awareness and advocacy

3.1 Addressing entrenched traditional beliefs

Qualitative findings showed that traditional beliefs and practices related to health care lead many people to still seek traditional healers, 'Dhami/Jhankri', when they are ill.

- ***Hence, conducting health education programs to cover the wider group of community people/men, social leaders and traditional practitioners in order to address traditional misconceptions is one important scope in future.***

"There are people who still visit the traditional healer (Dhami/Jhankri) for their treatment as first priority after feeling sick and visit the health post later, when they don't recover from treatment provided by a traditional healer." -ANM, Waku Health Post

"We visit health posts when we fall ill. We also visit "Dhami/Jhankri to combat the effects of ghosts or any supernatural power." -Students, Waku

3.2 Addressing child marriage, early pregnancy and adolescent health (as per 2.2)

"Health education programs to prevent child marriage and early pregnancy is necessary". FGD teachers, Waku

[6] an area, neighborhood or locality

3.3 Involving men and support groups in orientations and awareness programs

Although the participation of women in mother's groups was good, there were some women who could not attend the meetings because of lack of family support. ***Hence, men and other family members should also be included in the orientations or health education programs to create an enabling environment for women's participation.***

> *"One of the areas to be improved in the program is men should also be involved in maternal and child health programs to obtain more support for women from their husband and family members."* -Mother's group, Waku

3.4 Increase awareness and advocacy for maternal and child health

Respondents seem to have received information on a wide range of areas. They diverge however on the sustainability of the interventions:

> *"All these changes will be continuing in future as mothers are educated and mothers' groups also provided regular health information regarding maternal/child health and nutrition to mothers". FGD, mothers' group, Waku.*
>
> but also
>
> *"All these changes won't be sustainable as we haven't got enough training and not all mothers have adequate knowledge and information regarding maternal/child health and nutrition". (2nd group FGD, mothers' group, Waku).*

From the study results, it may be useful to strengthen awareness on some specific areas as noted below

- ***Increase awareness regarding:***
  - ***breastfeeding in Taksindo and Waku***
  - ***diarrhea prevention/hygiene in Taksindo and in schools in program areas (particularly in Chheskam)***
  - ***how to take appropriate hygiene practices whilst taking care of animals, as well as after playing outside in all areas***
  - ***diarrhea treatment in Waku, Chheskam and Taksindo.***
  - ***communicable diseases in program areas, particularly in Chheskam.***
  - ***oral health in schools of Waku and Chheskam***
  - ***air pollution in all areas***
  - ***importance of 4 ANC visits in Waku and Taksindo***
  - ***importance of Tetanus Diphteria Vaccine (TD2) for pregnant women in all areas***
  - ***institutional delivery in Waku and Taksindo***
  - ***PNC and timeliness in all areas***
  - ***improved child feeding practice***
  - ***impact of child marriage and early pregnancy.***
  - ***drug abuse in Chheskam* schools**

- ***Advocate for supply of clean water in Waku***

3.5 Review methods of awareness delivery

Note that some respondents highlighted the use of drama as a good way to raise awareness.

- ***Liaise with key stakeholders to identify the best way of delivery.***

4. Ensure disability inclusion

4.1 ***Promote participation of persons with disabilities***

Women with disabilities are reported as not having been participating to mothers' group meetings, due notably to existing discrimination and superstitious beliefs.

- ***Disability inclusion awareness and education should be included.***
- ***Women with disabilities should be encouraged to attend mothers' groups and involvement of family members for this is important.***

4.2 Ensure services are accessible for persons with disabilities and some respondents raised the issue of access to the health post for children or adults with disabilities.

- ***Enhanced infrastructure (Waku in particular) to allow access for persons with disabilities.***
- ***Implement mobile clinics for improved access to health services for all.***

5. Strengthen project management and sustainability

5.1 Develop clearer project documentation

The initial project design was not very clear and did not have a M&E framework and activity plan. Whilst M&E and activity plans were developed later on, the new project design should have these documents ready at the onset.

- There should be a clearer design of the project, as well as M&E plans including a baseline so that the changes/improvements can be tracked better and project management made easier.

5.2 Development of clear sustainability plans

The project did not have clear sustainability plans.

- ***Clear plans for sustainability should be formed and implemented so that people continue to get benefits for a long period of time and not only during the project implementation period.***

5.3 Address data issues

The project relied on health post data and accuracy and analysis was problematic.

- ***Ensure clear indicators of measurement and means of evidence are identified.***
- ***Implement efficient and effective data gathering methods.***
- ***Train relevant stakeholders in data management.***

CHAPTER 4: CONCLUSION

Conclusion

On the basis of their qualitative findings, the study team from CREHSS believes that the project brought remarkable changes in maternal and child health seeking behavior status in Waku and Chheskam. Women have improved health care seeking behavior as a result of increased awareness and knowledge on maternal and child health issues and due to improvement of services following the recruitment of the nurses (including building of a birthing centre outside project support). Women report feeling 'more safe' as they are provided with necessary information on maternal and child health and (...) as competent health workers and equipment are available in the health post. As a result, institutional delivery has increased in the community'. (FGD, Chheskam mothers' group). Students also have improved knowledge and practice on handwashing, personal hygiene, and menstrual hygiene, particularly in Waku. Training provided to the FCHV and the health post management committees have been beneficial and the use of mothers' groups to raise awareness on maternal and child health is a critical component of the success of the education part of the project. The nurses themselves have provided essential health services and filled the staffing gap of those remote communities.

Despite these improvements, many problems were identified during the evaluation study in the community that still need to be addressed mainly in Waku and Taksindo (study indicators gathered do not seem to justify planning a program in Tamakhani and only specific interventions might continue to be supported in Chheskam). The most prevalent problems relating to maternal health and child health identified through FGD and key informants are child marriage, teenage pregnancy, uterine prolapse, and limited knowledge of sexual and reproductive health. In Waku, respondents also raised the issue of birth spacing, home delivery, hygiene and sanitation for children. A high number of respondents communicated having received a wide range of information on maternal and child health, but awareness and education remain to be provided in specific areas and topics relating to hygiene, ANC/PNC and child healthcare in Waku and Taksindo in particular. There is also a need for advocacy for the availability of clean water in Waku. Traditional beliefs and misconceptions are still existent both relating to health seeking behaviour and inclusion of persons with disabilities and need addressing. Use of drama and liaison with organisations working with people living with a disability would be recommended, as well as involving men in health education. Further health education is required in schools in program areas, particularly in Chheskam. A more targeted and regular education program would be recommended.

However, awareness and education are likely not to result in significant changes of behaviour if services are not improved prior or alongside awareness/education programs. Limited access to facilities for remote areas, issues with staff availability and capacity, and limited equipment and medicine continue to have a significant impact on health improvement indicators especially in Waku and Taksindo. The study highlights that the remoteness and lack of proper transportation for some of the Waku and Taksindo population are great barriers for the utilization of health services by women. The average distance to the nearest health facility was found to be 82 minutes in Waku and 75 minutes in Taksindo. 72% of respondents in Waku and 60% in Taksindo had home delivery as they do not have a birthing center in their own area (building construction in process at the time of writing in Waku and plans for birthing centre are underway in Taksindo) and because of remoteness, and only 44% in Waku and 50% in Taksindo had completed four ANC visits. Therefore, developing mobile clinics to access remote areas is critical to improve the health of mother and child. This will

require adequate human resources which are currently scarce and need strengthening due to limited trained health professionals available and willing to work in remote areas. Staffing issues, medicines and equipment remain problematic and working closely with health post management committees and local government to better plan, manage and advocate for those critical resources are essential. Capacity strengthening of those local governance structures should be a key first step in future program engagement. In addition, the possibility of joint advocacy with other international and local organisations doing similar work and facing similar issues and liaison with national government and health institutions to support solutions to the insufficient number of qualified personnel in remote health posts should be considered.

STUDY TEAM AND PRELIMINARY ANALYSIS AND RECOMMENDATIONS

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