



Ministry of Health & Population



Remote Areas Maternal and Neonatal Health Pilot Project (RAMP)



Completion and Lessons Learned Report

Family Health Division and
Nepal Health Sector Support Programme



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FHD and Nepal Health Sector Support Programme

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EXECUTIVE SUMMARY

Remote Areas Maternal and Neonatal Health Pilot Project: Completion and Lessons Learned Report

A. Background

This report presents lessons learned for improving access to maternal and newborn health services and outcomes in remote areas of Nepal based on the monitoring and evaluation of the Remote Areas Maternal and Newborn Health (MNH) Pilot Project (RAMP). The Family Health Division (FHD) of Nepal's Department of Health Services (DoHS) implemented RAMP in Taplejung District eastern Nepal from June 2014 to September 2015 with technical assistance from the Nepal Health Sector Support Programme (NHSSP).

RAMP was designed in response to the findings of a study on access to MNCH services in remote areas of Nepal. The study which was conducted by the Family Health Division (FHD) and Child Health Division (CHD) with the support from the World Bank and NHSSP found that remoteness is a factor that effects access to and the use of MNCH services both within and between districts. Remote VDCs were found to generally have fewer human resources for health, fewer facilities including birthing centres and long term family planning services, and higher levels of drug stock-outs and expired drugs. The uptake of services was also lower in remote VDCs. The study recommended that a core service delivery and demand-side package of interventions designed to overcome the barriers to access in remote Nepal should be piloted in one district to inform the development of strategies for maternal and newborn health (MNH) in remote areas, and the next health sector programme.

B. Objectives and design

The pilot project's objectives were to demonstrate whether or not a supply side package of health facility level and district-based interventions, tailored to the local context, and with or without demand side interventions, would result in more equitable access to and use of MNH services in focal VDCs in one remote district of Nepal. The project also sought to identify lessons about how supply and demand side MNH interventions can be successfully delivered in remote areas. Taplejung District in eastern Nepal was selected for the pilot project by FHD.

Two intervention packages were designed for implementation in different clusters in the district with one that included supply side interventions and a second that included both demand and supply side interventions. It was decided to compare the two intervention packages with non-intervention areas in the district that were also benefiting from district-wide strengthening activities. Whilst these areas are not matched controls, they offer some insights between the intervention clusters. The underlying assumption was that results from the respective clusters could be compared to identify the most effective of the three packages (three clusters).

- Package 1: District wide interventions
- Package 2: District wide interventions plus health facility supply-side interventions
- Package 3: District wide interventions plus health facility supply-side and community based demand side interventions

Five VDCs were selected in each of the intervention clusters (Package 2 and 3) out of which two had birthing centres. The district health office (DHO) pragmatically undertook the purposive selection of sites for the project; but there are important differences between the intervention and comparison clusters (Package 1) with the Package 1 sites tending to be less remote from the district HQ as well as from the health facilities within VDCs, and economically better-off, which makes comparisons across the packages difficult.

C. Project and Evaluation Limitations

One of the main limitations of the pilot was the short implementation period (15 months). This heightened the difficulties of working in the challenging operational environment. Moreover, the short timeframe was at odds with achieving significant household behaviour change as such change requires changes in social norms and traditional family practices. Fifteen months was also a very short timeframe to sustainably strengthen health services. The design not accounting for the frequent transfer of staff at district and health facility level was another shortcoming.

The NGO HERD undertook an independent outcome evaluation and process monitoring of the pilot project. The evaluation involved a household and facility survey, and qualitative data collection with community stakeholders. While the evaluation was designed to be fit-for-purpose, there were a number of methodological and sampling factors that may have affected results:

- First, the sample of recently delivered women was relatively small in size.
- There are also differences in the demographic characteristics of the baseline and endline samples with the endline having a larger proportion of younger women of reproductive age without children and a larger proportion of women living within 30 minutes of a health facility.
- Moreover, the uneven selection of households across wards (sample clusters) within the VDCs that made up the sample may have skewed findings.
- Finally, the movement of people between VDCs and even districts as they shop for health services means that women and children may live and be mobilised in one VDC but decide to use the health services of another. The evaluation methodology was not however designed to track the location of services used by individuals, and so there is the possibility that women and children from one package area used the services of another package area. Again this means that caution is needed when comparing results across the three packages.

D. Learning from Implementation

The following write-ups summarise the main lessons learned. These lessons are also put in tabular form at Annex 1.

D.1. Improving availability and quality of MNH services in remote areas

The project's in-built process monitoring has provided insights into the challenges and constraints of delivering demand and supply side interventions in remote areas. The project purposefully chose to address bottlenecks in service delivery where progress could be achieved in a relatively short period of time rather than tackling more entrenched and systemic aspects of staffing and procurement.

The supply side model implemented by the project sought to strengthen the management and governance of health facilities, secure the availability of clinical staff, fill critical equipment and supply gaps, and enhance the capacity of clinical staff. This multi-faceted approach was critical to establishing the essential elements of service delivery and accompanying support and management systems. Key lessons from implementation include the following:

Earmarked district funds — Small flexible grants managed by the district can fill key facility level gaps and motivate providers and health facility management and operation committees (HFOMCs). However, experience shows that financial management of such funds outside of the annual workplan and budget (AWPB) requires external support due to current capacity and systems gaps at district health offices for fiduciary risk management.

HFOMC training followed by regular support to them activates these committees, which are often dormant. However, one-off training events are insufficient to activate HFOMCs. Capacity building and support to HFOMCs is essential to create an enabling environment at the health facility and contributes to their improved functioning and the quality of care provided. Recommend to include additional subjects in the National Health Training Centre (NHTC) HFOMC training module are: leveraging VDC and DDC resources and guidance on the use of funds generated by their facilities.

HMIS — Orientation of health staff on the new Health Management Information System (HMIS) formats is important as the level of understanding is low and errors and gaps are common.

Annual contracting of ANMs/SBAs — The district-earmarked fund smoothed the contracting of birthing centre staff at the beginning of the financial year, thus avoiding staffing gaps and the need to train newly hired staff. From this experience, we recommend that the health facilities and the DHO request a flexible grant fund from the district development committee (DDC) to bridge the human resource gaps related to late budget release and single year contracting as an interim solution until two auxiliary nurse-midwives (ANMs) for each birthing centre can be secured as permanent staff.

Clinical placement — In remote areas where the target population is small and staff practice delivering babies infrequently, it is important to regularly update and refresh the ANM/ skilled birth attendant's (SBA's) knowledge, skills and confidence. The project's placement of ANMs/SBAs at the training site or district hospital was well received by these staff and we recommend that this practice be scaled up. Regular placement at district hospital or training site (i.e. for two weeks every two years) will help retain ANM/SBA skills and improve their motivation.

The health facility self-assessment tool that was used to assess availability, readiness and quality of MNH services served as a continuous reminder to staff to improve the services they provided. Displaying their performance in traffic light colours displayed in and outside the health facility also prompted a response from the HFOMC. We recommend scaling up use of this methodology as a means of improving quality and supporting staff motivation.

Infection prevention training — Whole site infection prevention training contributed to significantly improved infection prevention practices at health facilities. As infection prevention is a universal precondition for providing quality services, we recommend that one-day orientations and practical demonstrations be provided to all new clinical staff as they join the public health service. This could be included in the induction training provided to new staff by NHTC.

Frequent staff turnover: Facility level capacity building in remote areas needs to factor in the frequent staff turnover into plans including the training of newly transferred or appointed staff.

Upgrading to BEONC — RAMP has shown that Birthing centres can be successfully upgraded to basic emergency obstetric and newborn care (BEONC) centres and we believe it is time to review the distinction made between birthing centres and BEONC centres and provide staff with the necessary equipment for them to be able to provide all BEONC signal functions after they receive SBA training even if they are not stationed at a designated BEONC facility.

D.2. Social and community mobilisation for behaviour change and enhanced service use

RAMP implemented a modified version of the Department of Health Services' (DoHS's) social mobilisation programme, which is known as the Equity and Access Programme EAP. Experience from Nepal and Asia suggests that social and community mobilisation programmes take three to five years to achieve sustainable behaviour change. RAMP's short implementation period of just over one year seriously affected the implementation and effectiveness of the social mobilisation activities.

Availability of partners and human resources — In remote areas, social mobilisation programmes need to invest in NGO partner capacity building as a prerequisite for implementation. Similarly, capacity building of local staff and the development of community based social mobilisers require time. The capacity, support and monitoring provided to social mobilisers is a critical factor for programme success, and future health social mobilisation programmes need to take this into account by providing a sufficient timeframe and the resources to achieve this.

Functionality of mother's groups and targeting the most vulnerable women — The EAP model and other social mobilisation programmes in Nepal are built on existing women's groups. However, evidence from Nepal shows that the poorest and most vulnerable women often do not attend group meetings. In remote areas, additional groups may need to be formed to overcome the difficulties remoter hamlets face reaching existing groups. Group mobilisation needs to be tailored to the local context and complemented by household visits to the most vulnerable women who do not attend group meetings. This requires additional resources and is more time intensive and costly than only targeting women's groups. We conclude that in remote areas, the targeting of individual households is an essential component of social mobilisation and behaviour change activities, and this needs to be factored into future planning and design.

Participation in meetings — Encouraging poor women with heavy work burdens to attend regular meetings requires considerable motivation building. In very poor remote areas, the provision of snacks as a minimum, and possibly a financial incentive linked to existing entitlement programmes such as the four ANC entitlements, need to be considered. At a practical level the various social mobilisation programmes need to be consistent in the incentives they offer for participation in meetings if they are to attract people.

Communication tools — The opportunity to use mobile phone technology to send messages to targeted women and families needs exploring. Access to mobile phones is increasing and though female literacy levels are low in remote areas, experience from Asia shows that mobile phones can be used to target voice messages and reminders to low literate women and improve linkages between women and service providers.

Emergency transport — It is essential in remote areas to form community groups to take responsibility for emergency transport, and agreements with transport agents to establish communication mechanisms and costs for transporting emergency cases.

Links and coordination: — Forging coordination across social mobilisation programmes is often difficult due to vertical management and funding arrangements. The RAMP project was not very effective in building linkages with other programmes or mobilising district authorities to support this. Focused attention needs to be given to developing linkages and coordination arrangements if they are to materialise. This requires strong government leadership at district level and the centre.

Investment — Social mobilisation is a medium term investment for long-term sustainable behaviour change. The low cost funding of EAP activities in Taplejung was justifiable given the short term nature of the project; but as the government prepares to develop longer term plans for remote areas, the investment envelope for behaviour change and demand generation needs to be results oriented and more realistic to ensure quality implementation.

E. Headline Outcome Results

In the clusters with the package of supply and demand side interventions, there was a significant increase in reported *four ANC visits* (4ANC) made at the recommended times, rising from 25.2% of pregnant women to 47.8% between baseline and endline. Similarly there was a major increase in the *institutional delivery* rate, rising from 24.5% to 61.9%. The comparison cluster (Package 1) saw institutional deliveries rise from 30% to 57.2%.

Women who lived closer to a health facility continued to have higher institutional delivery rates than those that lived further away. In fact the greatest increase in institutional deliveries was found among those women living within 30 minutes of a facility although women living further away made gains too. The lack of accommodation for accompanying family members who travel with a pregnant woman from a remote area to a birthing centre was reported to be an important barrier to institutional delivery for women that live further away, and this needs further attention. More positively, institutional delivery increased among less advantaged women, those that classify themselves as illiterate and Janajati (ethnic group) and Dalit women, and these are important equity achievements.

Improved *newborn care practices* were found in all three packages. Early initiation of breastfeeding was reported by recently delivered women to have increased in the cluster with supply and demand interventions (Package 3) from 62.3% to 85.7%. Delayed bathing was also reported, although the gains here were stronger in the comparison site of Package 1.

F. A Package of Supply and Demand Side Interventions Performed Well

Based on the evaluation findings, comparison of the supply only package of interventions (Package 2) and the supply and demand package (Package 3) shows the latter performed much better than areas that only received supply side support. This endorses the project's theory of change and fits with international evidence.

Comparisons of the two intervention areas with the comparison cluster (Package 1) show that the supply and demand package (Package 3) and the comparison cluster have both performed better than the supply only package (Package 2). This finding is contrary to expectation and to

project monitoring findings, is difficult to explain from process monitoring and we believe is partly the result of methodological and sampling issues in the evaluation.

G. Sustaining supply side gains made in Taplejung District

Intensive efforts have been invested in RAMP and this level of effort will need to be sustained for the services to be continued. As is the case with remote health facilities, district health offices in remote districts tend to have less capable or less motivated staff than non-remote areas. The frequent transfer of DHOs and other supervisors is also the norm. It will therefore probably not be feasible to sustain the RAMP model of facility level capacity enhancement in Taplejung without providing extra support to the DHO and the public health nurse. Assessment of the RAMP focal health facilities between six and eight months post-pilot (i.e. April/May 2016) will help in learning the intensity and duration of support needed to sustain gains at strengthened health facilities to continue providing quality services.

H. Scaling Up and Next Steps

RAMP has demonstrated that a demand and supply side package of interventions (Package 3) is effective in improving the use of MNH services. While adjustments are necessary to the demand side package, especially the length of intervention to maximise effectiveness as a behaviour change model, the need for demand and supply side interventions to improve MNH outcomes in remote areas is clear.

On the supply side, the RAMP model of strengthening birthing centre services in strategic locations alongside demand side community mobilisation was effective in increasing use of MNH services, though this benefitted those living close to the facilities the most. We propose that this model provide the foundation for improving access to and use of MNH services in the rest of Taplejung and other remote districts. Additional support structures to enable better access for families from remoter locations is however necessary. This may include the provision of places for accompanying family to stay near to the birthing centre at the time of delivery. From the health facility birthing centre hubs, services can be gradually expanded to other health facilities as resources and capacity becomes available.

RAMP's experience and that from other programmes in Nepal suggest that support to a remote district is needed for several years to strengthen its health system, generate demand for services and change family behaviour. Given the importance of inter-sectoral coordination and the opportunity for synergy with social mobilisation and governance programmes, the planning of future remote area MNH support needs to be more strongly embedded in district bodies where decision making on the determinants of health including transport, communication systems and education are located. This will also strengthen government ownership.

RAMP has demonstrated that improved MNH outcomes can be achieved in remote areas for a modest investment. The next step is for NHSSP to work with the FHD to identify how the government can build on RAMP's experience, sustain momentum in Taplejung, and inform strategies for improving MNH outcomes in remote districts as part of the Nepal Health Sector Strategy (2015-20).

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LIST OF ACRONYMS

AHW	auxiliary health worker
ANC	antenatal care
ANM	auxiliary nurse-midwife
AWPB	annual workplan and budget
BC	birthing centre
BEONC	basic emergency obstetric and newborn (neonatal) care
BPP	birth preparedness package
CBNCP	Community-Based Newborn Care Programme
DDC	district development committee
DHO	district health office
DoHS	Department of Health Services
EAP	Equity and Access Programme
FCHV	female community health volunteer
FGD	focus group discussion
FHD	Family Health Division
FY	fiscal year
GoN	Government of Nepal
HDC	hospital development committee
HERD	Health Research and Social Development Forum
HFOMC	health facility management and operation committee
HMIS	Health Management Information System
HP	health post
HQ	headquarters
IDI	in-depth interview
IMCI	integrated management of childhood illness
IUCD	intrauterine contraceptive device
LGCDP	Local Governance and Community Development Programme
LTFP	long-term family planning
MNCH	maternal newborn and child health
MNH	maternal and newborn health
MoHP	Ministry of Health and Population
MWRA	married women of reproductive age
Na	not available
NHSP	Nepal Health Sector Programme
NHSSP	Nepal Health Sector Support Programme
NHTC	National Health Training Centre
NPR	Nepali rupees
OPD	outpatient department
ORS	oral rehydration solution
PHCRD	Primary Health Care Revitalisation Division
PHCC	primary health care centres
PMC	project management committee
RAMP	Remote Area MNH Pilot (Project)

SBA	skilled birth attendant
SHP	sub-health post
VDC	village development committee
WRA	women of reproductive age

1 INTRODUCTION

This report presents lessons learned for improving access to maternal and newborn health services and outcomes in remote areas of Nepal based on monitoring and evaluation of the Remote Areas Maternal and Neonatal Health (MNH) Pilot Project, otherwise known as RAMP. The Family Health Division (FHD) of Nepal's Department of Health Services (DoHS) implemented RAMP in Taplejung District from June 2014 to September 2015 with support from the Nepal Health Sector Support Programme (NHSSP). The paper draws on the findings of the 2015 evaluation of RAMP, and evidence from the process and project monitoring, which was integrated into the pilot. It is hoped that lessons learned from RAMP will assist the Government in developing practical MNH strategies and interventions for remote areas as part of the Nepal Health Sector Strategy (2015-20).

1.1 Background

Nepal has achieved significant improvements in health status over the past two decades and there has been a steady decline in maternal, newborn, infant and under-five mortality. However, disparities persist along economic, socio-cultural and geographic lines in terms of both health outcomes and health service use. For several maternal, newborn and child health (MNCH) outcomes, there is a large equity gap between geographical locations. For example:

- Under-five and newborn mortality are almost 1.5 times higher in rural areas than in urban areas, and are 1.5 times higher in mountain than in hill and Tarai districts. And the stagnation of newborn mortality decline is most obvious in the hill and mountain districts of Nepal (1996, 2001, 2006 and 2011 Nepal Demographic and Health Surveys).
- A recent study on maternal mortality and morbidity in eight districts of Nepal found a higher mortality ratio in two mountain districts compared to the hill and Tarai districts (Suvedi et al. 2009).

During the mid-term review of the Second Nepal Health Sector Programme (NHSP-2) and the joint annual reviews (JARs) of progress in Nepal's health sector in 2012 and 2013, the Government of Nepal (GoN) said that equity gaps were limiting progress towards achieving NHSP-2's targets. The government therefore recommended that targeted interventions be made to reach unreached populations, including for communities in geographically remote locations (HEART, 2013: 54; GoN 2012: 5 no. x; GoN 2013: 2; Shrestha et al., 2012: 6). The Nepal Health Sector Strategy (2015-2020) continues the Government's commitment to the most equitable utilisation of health services and reaching remote populations.

1.2 Analysis of Access to and use of MNCH Services in Remote Areas

In 2013, Nepal's Family Health Division (FHD) and Child Health Division (CHD), with the support of the World Bank and the Nepal Health Sector Support Programme (NHSSP) conducted a study on access to MNCH services in remote areas of Nepal (Regmi et al., 2013). The purpose was to make recommendations for reducing demand-side barriers, improving service coverage and improving health seeking behaviour.

A review of policies and programmes revealed that, although Nepal has been successful in reaching its citizens with MNCH services such as family planning, antenatal care, and immunisation, (Regmi et al., 2013), these initiatives have not targeted areas where the need is higher and access is poorer. Most attention has gone to achieving population-based targets, with much less on reaching the most

disadvantaged people who face greater geographical, social and economic barriers to accessing health services.

The study found that remoteness is a factor that effects access to and the use of MNCH services both within and between districts. For example, compared to less remote village development committees (VDCs), remote VDCs (defined as VDCs that lie more than eight hours travel distance from their district headquarters) were found to generally have fewer human resources for health, fewer facilities including birthing centres and long term family planning (LTFP) services, and higher levels of drug stock-outs and expired drugs. The uptake of services was also lower in remote VDCs.

The increasing financial costs for patients related to the distance/time of travel were considered to be the main barrier for reaching maternal health care services, especially for the management of complicated deliveries. Socio-cultural preferences for traditional healers and home deliveries were found to reinforce the barriers of challenging journeys and the costs of travelling to distant facilities. The limited availability of MNH services and providers also increased the distance women have to travel for reaching MNH services. Child health care services, though available in most places, were found to be poorer quality in remote areas.

The study concluded that both demand and supply-side barriers need addressing in ways tailored to local contexts to improve access to health services in remote areas. Strengthening district health management in remote districts should support the improved availability, quality and responsiveness of health services.

In addition to the on-going national level health system strengthening efforts there is therefore a need for tailored inputs for remote districts, especially for strengthening planning and management. The midterm review of NHSP-2 also recommended strengthening the district level provision and management of health service provision (HEART, 2013: 54). The provision of a flexible fund (earmarked MNH funds) to enable district level health service managers to direct additional resources and solve local problems, especially in the more remote VDCs within their districts, was also recommended.

In conclusion the study recommended that a core service delivery and demand-side package of interventions designed to overcome the barriers to access in remote Nepal should be piloted in one district to inform the development of strategies for MNH in remote areas, and the preparation of the next sector programme.

1.3 Remote Areas Pilot Project in Taplejung District

Building on the recommendations of the remote areas study (2013), the DoHS Director General approved the remote areas pilot project in July 2014 and a Technical Advisory Group under the leadership of FHD was created. The project was designed to test various approaches to increasing equitable access to MNH services and improving MNH outcomes. Nepal has a proven track record in reducing maternal and neonatal mortality and has developed several innovative MNH service delivery approaches. The pilot sought to build on the country's experience of what works in Nepal. It therefore applied proven interventions, tailored them to the context and strengthened the management systems to support them. The pilot *did not* develop any new service delivery, demand generation or management strengthening strategies.

2 OBJECTIVES AND DESIGN OF THE PILOT PROJECT

2.1 Objectives of the Pilot Project

The project's objectives were to:

- a) Demonstrate whether or not a supply side package of health facility level and district-based interventions, tailored to the local context, and with or without demand side interventions, would result in more equitable access to and use of MNH services in focal VDCs in one remote district of Nepal.
- b) Identify lessons about how supply and demand side interventions can be successfully delivered to improve equitable access to and the use of MNH services in remote VDCs.
- c) To establish if costs and outcomes justify scaling up the piloted intervention to other VDCs and districts.

The focus of the pilot project was therefore to demonstrate an effective package of interventions for improving MNH in remote areas.

Research questions: The project aimed to answer the following questions:

1. How can essential MNH services be made available and how can demand-side interventions for MNH be delivered in remote areas?
2. Can supply-side interventions alone increase the use of, and access to, MNH services?
3. Can demand-side interventions complement supply-side interventions to work together to promote greater accessibility and use of MNH services and accountability in providing them?
4. What are the unit costs associated with reaching remote communities, and is scale-up justifiable from a cost perspective?

2.2 Project Design

Based on the objectives of the project, two intervention packages were designed for implementation in different clusters (groups of VDCs) in Taplejung district, one that included supply side interventions and a second that included demand and supply side activities. Ideally, these two intervention areas would have been compared to a control site. However, due to the difficulty in finding a control site it was decided to compare the two intervention packages with non-intervention areas in the district that were also benefiting from district-wide strengthening activities. The underlying assumption was that results from the respective clusters could be compared to identify the most effective of the three packages.

- Package 1: District wide interventions
- Package 2: District wide interventions plus health facility level supply-side interventions
- Package 3: District wide interventions plus health facility level supply-side and community based demand side interventions (see Figure 2.1).

Figure 2.1: The three types of intervention packages (Taplejung, 2014–2015)

Package 1*	Package 2	Package 3
		Demand side interventions: Equity and Access Programme (EAP) interventions <ul style="list-style-type: none"> • Behaviour change communication • Emergency fund and transport arrangements • Stakeholder mobilisation and advocacy.
	Supply side health facility interventions: <ul style="list-style-type: none"> • District level earmarked MNH fund for human resources, equipment, supplies. • ANM skill enhancement • HFOMC strengthening. 	Supply side health facility interventions: <ul style="list-style-type: none"> • District level earmarked MNH fund for human resources, equipment, supplies. • ANM skill enhancement • HFOMC strengthening.
District wide interventions: <ul style="list-style-type: none"> • District wide coordination for resource mobilisation and drugs distribution • District hospital services • Obstetric first aid to paramedics • FCHV based interventions** 	District wide interventions: <ul style="list-style-type: none"> • District wide coordination for resource mobilisation and drugs distribution • District hospital services • Obstetric first aid to paramedics • FCHV based interventions** 	District wide interventions: <ul style="list-style-type: none"> • District wide coordination for resource mobilisation and drugs distribution • District hospital services • Obstetric first aid to paramedics • FCHV based interventions**

* To be monitored in two clusters.

** These were based on the annual workplan and budgets (AWPBs) of FHD and CHD (Note that the BPP, CBNCP and IMCI programmes were being implemented in Taplejung district at the same time as RAMP)

2.3 Results Framework

The pilot project’s theory of change was that increasing family knowledge and the social acceptability of healthy MNH practices as well as the availability and quality of MNH services and their improved management and governance will lead to increased and more equitable use of MNH services (see Figure 2.2). The key outputs and outcomes of the project are presented in Table 2.1 and drove the monitoring and evaluation frameworks.

Figure 2.2: Theory of change for the Remote Areas MNH Pilot Project, RAMP (2014-2015)

Source: Figure 4 of NHSSP 2014b

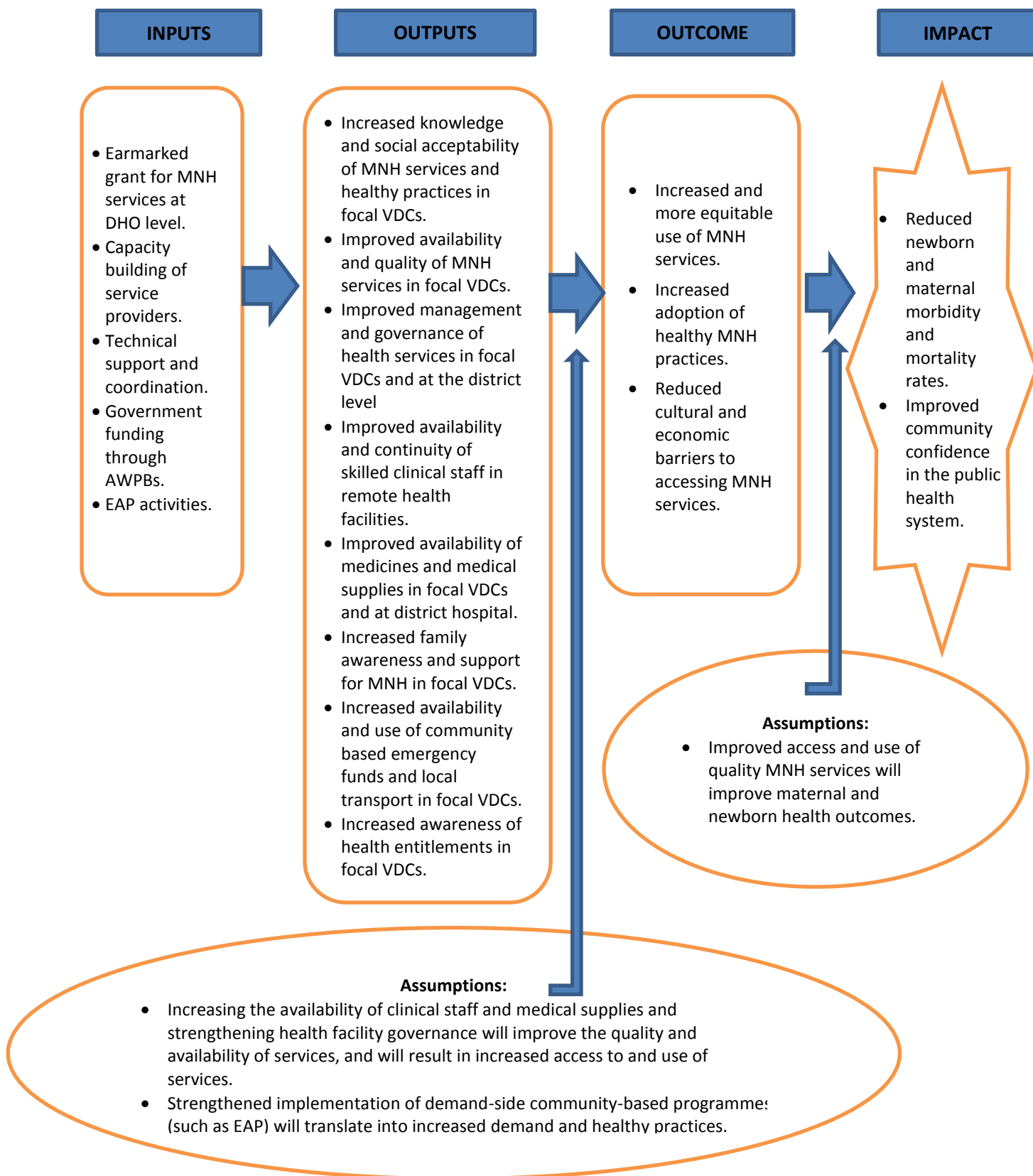


Table 2.1: Intended outcomes and outputs of the pilot project

	Output and outcome statements
Outcome 1	Increased and more equitable use of MNH services
<i>Secondary outcome 1</i>	Increased and more equitable use of child health and outpatient department (OPD) services
Outcome 2	Increased adoption of healthy maternal and newborn health practices
Outcome 3	Reduced cultural and economic barriers to accessing maternal and newborn health care services
Output 1	Increased knowledge and social acceptability of MNH services and healthy practices.
Output 2	Improved availability and quality of MNH services in focal VDCs.
Output 3	Improved management and governance of health services in the focal VDCs and at the district level.

2.4 Selection of Implementation Sites

The supply and demand side interventions were implemented at the district hospital and in four clusters of VDCs and their health facilities. Each cluster had one hub facility in one VDC and one or two peripheral facilities in one or two VDCs (see Table 2.2). The hub facilities provided services to neighbouring VDCs within the cluster and sometimes beyond according to demand for services. Two clusters (Four VDCs) that only received the district wide interventions were selected for monitoring purposes only. All the hub facilities provided birthing centre services. See the map at Annex 1 for the location of the VDCs according to the three packages.

Table 2.2: RAMP's health facilities (packages 1, 2 and 3)

Clusters	Hub health facilities (VDC and health posts)	Peripheral health facilities (VDC and SHPs)
Pilot intervention clusters		
1	Change VDC (Nesung HP) health post (Package 2)	Change VDC (Sabuwa SHP)
2	Sablakhu VDC health post (Package 2)	Limbudin VDC SHP and Ankhop VDC SHP
3	Linkhim VDC (Sinwa HP) health post (Package 3)	Khejenim VDC SHP and Tapethok VDC SHP
4	Thinglabu VDC health post (Package 3)	Santhakra VDC (Oklabung SHP)
District wide intervention only (Package 1) clusters		
5	Sinam VDC health post	Thubedin VDC SHP
6	Thukhima VDC (Mashring) health post	Lingtep VDC SHP

The district health office selected the health facilities and VDCs based on agreed selection criteria. The purposive selection of sites for each package was undertaken pragmatically but contains important weaknesses. The following are example weaknesses:

- Sinam and Thubedin (Package 1) were selected and thought to be comparable to the Change, Sablakhu, Limbudin and Angkhop (Package 2) sites; but in fact the populations in Package 1 were of a higher socioeconomic status and have easier and faster access to health facilities than those in Package 2.
- Thukhima and Lingtep (Package 1) were selected because they had similar characteristics with Linkhim, Tapethok and Khejenim (Package 3); but in fact the populations of Package

1 have easier access to the referral hospital and the respective health facilities within the VDCs.

- The unfortunate death of the health worker at Thukhima (Package 1) in 2012/13 led to much lower performance of the facility before RAMP's implementation (at the baseline survey) when it slipped from being one of the best performing facilities in the district to one of the lower performing ones. Its performance improved during RAMP implementation.
- The selection of VDCs was based on their populations and not the real catchment populations of people within and outside the VDC who use the facility. Understanding the real catchment population is important for strategically locating birthing centres, and there is a risk that other centres could have better played this role.

3 EVALUATION METHODOLOGY AND LIMITATIONS OF THE PILOT

3.1 Study Design

An independent evaluation was commissioned by NHSSP and undertaken by HERD (HERD 2015¹). The evaluation was designed as a pre-post study against the results framework and to test the research questions underpinning the pilot. The evaluation included the collection of baseline and endline data through the following three instruments:

- A quantitative household survey of married women of reproductive age (MWRA) including a subset of women who had delivered a child within the last year (RDW) (Table 3.1).
- A survey of the 13 focal health facilities at baseline and then again at endline (at endline the number of facilities was 14).
- The collection of qualitative data through focus group discussions and in-depth interviews with community people including MWRA, women who delivered a child in the past year, mothers-in-law and community leaders.

Table 3.1: Household survey sample

	Households	MWRA	RDW
Baseline survey	969	845	179
Endline survey	990	836	150

3.2 Process Monitoring

Given the short timeframe of the pilot project, and the risk that traditional evaluation techniques may not capture the lessons to be learned from supply side and community mobilisation interventions, systematic process monitoring was undertaken. This was undertaken by the same third party agency responsible for evaluation, HERD. In addition, NHSSP undertook quarterly monitoring of the pilot with FHD, which involved the district health office in monitoring and problem solving.

3.3 Limitations of the Pilot

The project has faced several challenges related to the very essence of delivering services in remote areas, not least the lack of and frequent changes of human resources and the physical challenges of mobility and access. Implementation challenges are discussed in more detail in Chapter 4. One of the main limitations of the pilot has been the short implementation period, which heightened the difficulties of working in a challenging operational environment and the weaknesses of the health system. Moreover, the short timeframe was at odds with achieving significant household behaviour change as this requires changes in social norms and traditional family practices. While progress in health service strengthening could laudably be made in a 15-month window, it was arguably over-ambitious to expect to achieve improvements in MNH practices at community level in this timeframe. This tension means that comparison of results across the three packages of interventions has to be interpreted with care.

¹ HERD 2015, the final evaluation report of RAMP, is an attachment to this report.

3.4 Limitations of the Evaluation

The evaluation was designed to be fit-for-purpose given the challenges of the pilot and resources deployed. The context specific nature of remote area districts and VDCs meant that it was not possible to find a control site, and the sites where the three different packages were implemented have important differences which hinder comparison of their respective results.

The relatively small size of the sample of recently delivered women hinders reliable measurement of some MNH indicators such as caesarean sections. There are also differences in the demographic characteristics of the baseline and endline samples — the endline has a larger proportion of younger women of reproductive age with no parity than the baseline, and a larger proportion of women living within 30 minutes of a health facility. Moreover, the uneven selection of households across wards within a VDC that made up the sample may have skewed findings. Finally, the movement of people between VDCs and even districts as they shop for health services means that women and children may live and be mobilised in one VDC but decide to use the health services of another. The evaluation methodology was not however designed to track the location of services used by individuals, and so there is the possibility that women and children from one package area used the services of another. Again this means that caution is needed when comparing results across the three packages.

4 KEY PROJECT ACTIVITIES, OUTPUTS AND LESSONS FROM IMPLEMENTATION

This chapter presents the key supply and demand side interventions implemented in Package 2 and 3 and lessons from implementation. After presenting key activities we draw on the HERD evaluation and process monitoring documentation to reflect on the extent to which activities led to achievement of project outputs.

The project carried out three types of activities to improve the district-wide provision of MNH care:

- Support to the district health office by embedding the project's district coordinator in the DHO and supporting the DHO's implementation, monitoring and review of district wide activities.
- Obstetric first aid (OFA) training for 40 paramedical health workers from health facilities across the district to equip them with knowledge for managing obstetric complications in the absence of ANMs/SBAs at their facilities.
- District hospital strengthening by supporting the formation a hospital quality improvement committee, the carrying out of quality of care self-assessments, the production of action plans and reviews of progress on implementing the plans.

4.1 Improved Management and Governance of Health Services

4.1.1 Project management at district level and an earmarked fund for MNH service strengthening

The project strengthened district management of MNH services and its responsiveness to facility level needs by (a) establishing a district Project Management Committee (PMC) under the leadership of DHO and (b) creating an earmarked fund under the control of the PMC for improving the availability and quality of MNH services at the focal facilities.

The objectives of the earmarked fund were to:

- improve the availability of clinical staff that delivers core MNH services;
- improve the availability of essential equipment to provide birthing centre/BEONC services; and
- provide flexibility to health facility operation and management committees (HFOMC) so they can address priorities for quality improvement identified at the facility level.

Management of the earmarked fund was intended to be the responsibility of the PMC. Guidelines were developed which set out a process whereby the PMC met monthly to review requests for funding identified by the HFOMC and through project monitoring, and allocated and managed the funds accordingly. In practice the PMC did not directly manage the use of the earmarked fund because the DHO and staff were reluctant to directly manage funding that was not part of their AWPB allocated fund. It was argued that strict government financial rules and regulations, the threat of Commission for the Investigation of the Abuse of Authority (CIAA) investigation and the need to respond to auditor questions, could delay project implementation. Therefore while the PMC decided on the use of the earmarked fund, detailed financial management including

purchasing equipment and supplies and disbursement of funds to HFOMC was the responsibility of NHSSP's district coordinator.

The perceived risks of being accused of malfeasance and reluctance of the DHO to manage funding outside their AWPBs has implications for how external development partner (EDP) earmarked funding to districts can be managed. The experience of RAMP was to shift financial management responsibility outside of government, and while this had practical benefits it did not strengthen the health system nor prepare district managers for financial management of such a model. It may also have reduced the DHO's ownership of the project.

4.1.2 Strengthening HFOMCs

The HFOMC strengthening process was based on the National Health Training Centre's (NHTC's) training manual that involves three days training followed by a review meeting six months after initial training. The training includes:

- roles and responsibilities of HFOMC members;
- undertaking self-assessments of the performance of health facilities and HFOMCs;
- envisioning and planning health facility improvements; and
- preparing action plans.

All ten facilities developed an action plan as part of the HFOMC training. However, little improvement was evident in the following two months, after which regular follow up calls and visits by RAMP personnel prompted the HFOMCs to start to meet regularly and work towards implementing their action plans. One-off training and review after six months would not have been adequate for strengthening or activating inactive HFOMCs. RAMP's experience is that regular follow-up and support is necessary for them to become active and responsive. One area that HFOMC members felt needs improving in the training curriculum was how to access local VDC and DDC funds.

Process monitoring and the Mid-Term Review (NHSSP 2015) found HFOMCs taking greater responsibility for the management of their health facilities. This contributed to the improved availability and presence of health workers at their duty stations, physical improvements at the health facilities, more regular monthly meeting of the HFOMCs, and increased mobilisation of local resources for the health facilities from the VDC fund². However, the capacity enhancement was limited by the partial participation of important members such as chairpersons, and the turnover of health facility in-charge (HFI). During the 15-month project implementation period, seven out of 10 health facility in-charges changed.

The availability of earmarked funds to support the implementation of the action plans was very necessary for strengthening the HFOMCs as it gave them the resources to start implementing their action plans especially for more challenging tasks. One of the findings from RAMP is the reluctance of HFOMCs to use local income such as Aama Programme income for improving services. This is related to the perception that the government (DHO) is fully responsible for providing health services to its citizens. The lack of authority HFOMCs have over health workers

² See Table 4.5 of HERD 2015

feeds into this attitude and sense of disempowerment to improve health facility governance and service delivery.

4.1.3 HMIS monitoring data

Inconsistency in HMIS reports over the last three years made the use of the HMIS for monitoring RAMP difficult. The new HMIS registers, forms and reporting procedure were introduced during the project implementation year (FY 2014/15); but facility staff were still struggling to complete their maternity registers, especially for recording treatment provided and obstetric complications. The DHO/NHSSP monitored institutional deliveries in FY 2013/14 and 2014/15 from the maternity registers and it was thus possible to compare performance on institutional deliveries. However, the evaluation found difficulties in comparing 'four ANC based on protocol' and EOC met need from the registers.

On-site coaching failed to improve HMIS recording and this affected project evaluation. A proper orientation on HMIS is still necessary and the need is likely to remain for the next few years until staff are fully acquainted with the new HMIS tools.

4.1.4 Achievements against output 3: Improved management and governance of health services in the focal VDCs and at the district level

Measuring the performance of management and governance strengthening activities is more complex and less easily quantifiable than measuring service utilisation. While the results framework includes four quantitative indicators (see a–d below), the process monitoring data supplements this to provide a more rounded assessment of performance.

a. % of HFOMCs/HDCs meeting regularly (monthly) — The evaluation found no major difference in the frequency of meetings between the baseline and endline although this was not the perception of health staff and HFOMC members. Contrary to the evaluation, process monitoring and the Mid Term Review found that the regularity of meetings in Package 2 and Package 3 significantly improved after the HFOMC training was conducted and regular follow-up was provided from the project. The main subjects discussed at the HFOMC meetings were infrastructure development and maintenance, the expansion of MNH services, financial management issues, staff recruitment and management, and logistical management for MNH services. There was less of a focus on running MNH camps to reach remote settlements of VDCs.

“The current committee has improved by more than seventy five percent when compared with the previous one. For instance, monthly meetings are being held regularly. The previous committee used to hold occasional meetings in the period of one or two years only if needed to address emergency issues; but meetings are being conducted every month now. We have achieved various accomplishments due to regular holding monthly meetings, such as, receiving five ropanis of land from local donors for the health post and the discouragement of staff absenteeism. Previously staff used to open this health facility on their wishes - they would open it if they wanted if not, it would remain closed. Some staff used to stay at home and would say that they were in the district headquarters.” (HFOMC member, Package 2 facility)

b. % of health facilities that have undertaken social audits as per MoHP guidelines in last FY —

Social audits had only been carried out in a few Taplejung VDCs including four of RAMP's VDCs and no comparison of the quality of the audit process is available. The HFOMC training resulted in all ten Package 2 and 3 facilities developing action plans and increased governance related decision-making and action by the HFOMCs. Decisions ranged from reporting absent staff to the DHO, withholding benefits from absent staff and investing the saved funds into the emergency fund, and mobilising resources from their VDCs to increase outreach clinics to distant wards.

c. Allocation of resources based on needs (human resources, equipment, fund) — The evaluation found that all facilities spent the greatest proportion of funding on staff costs. Interestingly Packages 2 and 3 had lower spends on medicines, supplies and equipment than Package 1 and this may be because of the extra funding that the project was providing for these items. The evaluation did not assess whether or not the allocation of resources was efficient given the volume of services delivered.

d. Increased local resource allocation for MNH — The evaluation found increased local resource allocations from the VDC in Packages 1 and 3 but not in Package 2.

In summary — The results framework indicators only partially capture the achievements of the governance and management strengthening activities and provide a less favourable picture of achievement compared to the monitoring findings. Feedback from process and project monitoring suggests that the project's activities have made a significant contribution to activating HFOMCs as management bodies and mobilising local resources for facility development. Moreover, these activities have provided a critical enabling environment for health workers to improve the availability and quality of the care they provide.

4.2 Improved Availability and Quality of MNH services

The pilot project focused on service strengthening activities that could make a difference within the short life of the project. The more challenging systemic issues related to staffing and procurement were not addressed.

4.2.1 Ensuring availability of two ANM/SBA in a health facility providing delivery services

FHD's allocated auxiliary nurse-midwife (ANM) budget was adequate for recruiting additional ANMs needed at all the birthing centres in Taplejung district. However, late release of the budget and no provision for multi-year contracting generally resulted in a gap in ANMs/skilled birth attendant (SBAs) at the beginning of a financial year. By using earmarked funds to support the HFOMC, the project was able to close this gap. The HFOMC and earmarked fund contributed 50% each of four months' salary of ANMs. This retained capable staff and continued the provision of delivery services, a much more efficient move than recruiting new staff once the budget was available and then providing them training and capacity enhancement.

A gradual increase in the number of institutional deliveries was observed in the birthing centres where the presence of two ANM was ensured in Package 2 and 3 sites (Table 4.2). This was not the case where two ANMs were not guaranteed in Package 1.

Table 4.2: Average number of deliveries at focal birthing centres (HMIS)

	No. of birthing centres	2013/14		2014/15	
		First 6 months	Second 6 months	First 6 months	Second 6 months
Package 1*	2	7	11	4	16.5
Package 2	2	12	17.5	22	26.5
Package 3	2	4	8.6	10	18

* The murder of one health facility staff at the end of FY 2012/13 had interrupted service provision at that facility.

The benefits to closing contract staffing gaps at the beginning of the financial year are extremely high, and the additional budget required is modest given that facilities can contribute from their Aama income. We recommend that the health facilities/birthing centres and the DHO request a flexible grant fund from the DDC to bridge the human resource gaps related to late budget release and single year contracting as an interim solution until two ANMs can be secured from permanent staff.

4.2.2 Support to fill equipment and supply gaps

The health facility needs assessments undertaken by the project identified serious shortages of equipment, supplies, and drugs for MNH services at the pilot health facilities. The project helped fill these equipment and supply gaps by providing items from the earmarked fund; materials were also provided during infection prevention training.

The project's procurement of materials was not without its own delays. Direct procurement by NHSSP meant that supplies and equipment were purchased in Kathmandu rather than in Taplejung and this slowed down the process especially following the April/May earthquakes and the unrest in the Tarai. In fact the second batch of equipment was delayed until October 2015 after the project had closed due to the non-availability of baby warmers in the market.

4.2.3 Health facility staff capacity building

Three different types of activities were implemented for enhancing staff capacity — the training of staff, on-going self-assessment using quality improvement tools, and on-site coaching.

Training

Whole site infection prevention training was provided to all staff and one member of each HFOMC while implant training and medical abortion training was provided to ANMs/SBAs. These training programmes helped improve infection prevention practices and the expansion of services including the availability of BEONC services and the provision of long-acting reversible contraception (LARC).

Placement at SBA training site and district hospital

In remote areas where the target population is small and staff infrequently deliver babies, it is important to regularly update and refresh ANMs'/SBAs' knowledge, skills and confidence. The project's placement of ANMs/SBAs at the SBA training site and district hospital was appreciated by such staff and we recommend that this practice is scaled-up. These staff appreciate these activities as they have enabled them to provide services they were previously unable or did not

have the confidence to provide, such as vacuum deliveries and newborn resuscitation. Regular placement at the district hospital or training sites (i.e. two weeks every two years) will help ANMs/SBAs retain their skills and improve their motivation. This is critical given that they are the backbone of MNH services in remote areas.

Self-assessment tool

The health facility self-assessment tool that was used to assess availability, readiness and quality of MNH services served as a continuous reminder to staff to improve the services they provided. The display of facilities' performance in traffic light colours in and outside facilities to denote the quality of care also prompted a response from the HFOMCs. We recommend scaling up the use of this methodology as a means of improving quality and supporting staff motivation.

On-site coaching

While training on focused issues (infection prevention, family planning methods, etc.) is necessary for staff to gain and update their knowledge and skills, regular follow-up and on-site coaching is necessary for the implementation of newly acquired knowledge and skills by health staff, especially staff who in the past have not had the chance to use skills acquired after trainings. NHSSP quality improvement officer regular visits at three to four month intervals to facilities and coaching have resulted in sustained improvement in practices, particularly in infection prevention practices.

Contribution of HFOMC strengthening

While capacity building has contributed to improved availability and quality of care in all birthing centres this would not have been possible without the support of HFOMCs to create an enabling environment for staff and service provision. The provision of equipment, supplies and drugs and improvements in the physical environment has been essential for improving service delivery.

Infection prevention training

The infection prevention training demonstrated good practices and helped to transform related knowledge and skills. The endline evaluation showed a pronounced improvement in infection prevention practices at intervention health facilities. However, the process monitoring identified some weaknesses in infection prevention practices at some facilities as new staff had not received project training and pre-service training had not prepared them sufficiently for practicing proper infection prevention. As infection prevention is a universal precondition for providing quality health services, we recommend that one-day orientation and practical demonstrations be provided to all new staff as they join the public health service. This could be included in the induction training provided by NHTC to all new staff.

Staff turnover

RAMP's planned capacity building activities did not consider the frequent turnover of staff in remote areas. Both HFOMC and whole site infection prevention trainings were planned as one-time training events with follow-up activities. However, during the project implementation period seven new health facility in-charges were appointed to the ten Package 2 and 3 facilities (newly appointed or transferred from somewhere else) making it difficult for them to understand RAMP plus catch up with training undertaken before they joined. In future we propose that facility level

capacity building should factor frequent staff turnover into plans, especially in remote areas where staff turnover is more frequent than in less remote places, and provide training for newly transferred and appointed staff.

4.2.4 Achievement against output 2: Improved availability and quality of MNH services

A selection of the results framework indicators for output 2 are given below.

a. % of health facility with birthing centre/BEONC services with all signal functions — RAMP expanded the availability of delivery services and BEONC in the Package 2 and 3 VDCs. All four of the four designated birthing centres at health post level were successfully upgraded to BEONC level and provided all seven signal functions (RAMP's plan was to upgrade two birthing centres to BEONC centres). The traditional division between a BEONC centre where seven signal functions can be provided and a birthing centre where normal delivery service is provided has been blurred with the introduction of SBAs in Nepal. SBAs are trained to provide all seven signal functions, but the majority of them are stationed at health posts where only birthing centre services are provided. RAMP has shown that birthing centres can be successfully upgraded to BEONC centres and we believe it is time to review the distinction made between birthing centres and BEONC centres and provide staff with the necessary equipment for them to be able to provide all BEONC signal functions after they receive SBA training even if they are not stationed at a designated BEONC centre.

b. % of HPs/primary health care centres (PHCCs) with long term family planning methods (IUCD and/or implants) — Provision of all five family planning methods at a health facility with a birthing centre was one of the targets of NHSP 2. RAMP was able to train and equip three out of the four birthing centres in Packages 2 and 3 to provide implants and IUCDs (RAMP's plan was for four sites. Neither of these long term family planning methods were available in Package 1.

c. % of HPs/PHCCs with safe abortion services (medical abortion): The project experienced delays in starting medical abortion services due to certification and site listing mistakes resulting from high turnover of programme staff and the change in advisors' work focus in the aftermath of the May/June earthquakes. Only the two birthing centres in Package 2 were providing safe abortion services by the end of the project.

d. Stock outs: No reduction of stock-outs was found between the baseline and endline. RAMP focuses only on emergency obstetric medications and thus it was not intended to impact the overall availability of drugs at its the health facilities. The availability of emergency obstetrics medications improved.

e. % health facilities with infection prevention practice rated as good: The evaluation as well as both project and process monitoring found considerable improvement in the use of infection prevention measures by all the peripheral health facilities, but more so by the Package 2 and 3 facilities (Table 4.3).

Table 4.3: Fulfilment of infection prevention measures by health facilities (HERD 2015)

	Package 1		Package 2		Package 3	
	Baseline	Endline	Baseline	Endline	Baseline	Endline
Availability and practices of separate use of bins for bio-medical waste:						
Puncture proof bin for disposing of needles/sharps available and used correctly	1	3	2	5	0	5
Bin for disposing infectious waste (blood, tissue, fluid stained, etc.) items (red bucket) available and used correctly	0	1	0	5	0	4
Bins for disposing of non-infectious items (blue bucket) available and used correctly	1	1	0	5	0	4
Bins for organic waste (waste food, vegetables, etc.) (green bucket) available and used correctly	0	1	0	3	0	4
Total health facilities assessed (N)	4	4	4	5	5	5
Cleanliness of delivery room:						
Clean floor around bed	5	1	2	2	2	4
Clean surface of delivery table	5	1	2	2	2	4
Clean hinges of delivery table	5	1	2	2	1	4
Cleaning equipment, disinfectants readily available in delivery room	0	1	1	2	0	4
Total health facility providing delivery services (N)	2	2	2	2	3	4

In summary: The project has significantly improved the availability and quality of MNH services in Package 2 and 3 facilities. The limitations of the programmes advisor being occupied with earthquake related work and the high rate of programme staff turnover affected the implementation of some activities including medical abortions. The project has demonstrated how infection prevention practices can be improved in a relatively short period of time, as well as how the contracting of staffing can be managed to avoid contract breaks despite the absence of a framework for multi-year contracting.

The project filled immediate equipment and supply gaps through parallel procurement, but was not designed or positioned to influence more systemic procurement or human resource issues, and thus stock outs and overall staffing levels, two of the most challenging constraints to service delivery in remote areas, remained unchanged from baseline to endline.

Concerning the effectiveness of the family planning interventions, lessons should be learned from the approach taken by the NHSSP supported reaching the unreached family planning pilot project in Ramechhap district where visiting providers are providing services and mentoring government service providers on long-term family planning methods.

4.3 Community Based Demand Side Interventions

The project implemented an adapted version of the government's Equity and Access Programme (EAP) to strengthen community and VDC-level demand for health services in the Package 3 VDCs. EAP aimed to increase family awareness and support for MNH, increase availability and use of

community based emergency funds and local transport arrangements, and increase awareness of health entitlements in focal VDCs. At the community level the main focus was on mobilising women through healthy mother's groups, and raising awareness among community level stakeholders including mothers-in-law, husbands, local leaders and students. This was supported by district level activities to mobilise decision-makers and raise political commitment towards MNH and promote coordination with other social mobilisation programmes.

4.3.1 The EAP model

The EAP model is built on a 'tried and tested' package of inputs that work together to empower women and create an enabling environment for social change through the following activities:

- a) Building women's organisational structures and capacity by forming and strengthening women's and mothers' groups and networks.
- b) Increasing women's and their family's knowledge and confidence to identify and take action against maternal and newborn health problems, and the services and associated incentives provided by the government.
- c) Developing localised behaviour change communications to help mobilise communities.
- d) Supporting women and their communities to mobilise local resources in preparation for health emergencies, such as through community emergency funds, and establish community led transport mechanisms for increasing access to health care.
- e) Orientating health service providers and managers on rights-based development and strengthening their interpersonal communication skills to deliver non-discriminatory services and respond to their catchment communities.
- f) Building the capacity of local organisations including health facility operation and management committees, and NGO implementing partners, to enable and help sustain the programme and underlying social change.
- g) Strengthening linkages between communities and their local health service providers, HFMOCs, and local governments to place demands for health resources and seek greater responsiveness.
- h) Fostering local change agents and forging coalitions for change at district level and below, including district development committees (DDCs), reproductive health coordination committees (RHCCs), village development committees (VDCs), political parties, NGOs, community based organisations (CBOs), female community health volunteers (FCHVs) and women's groups.

Women's groups and women's empowerment are at the core of the EAP model. Through membership of women's groups and participation in reflective and action-oriented discussions, women gain access to health information in a supportive environment. Through this participatory process, facilitated by trained local women, the confidence and the capacity of women group members is built to identify their health problems, share information among family and peers, develop local solutions, and support each other to overcome barriers to care.

The strength of the model is the multiple layers of the social mobilisation and empowerment process. Women's empowerment is complemented by the mobilisation of men, older women,

and social leaders, and the establishment of community mechanisms such as transport solutions to respond to health emergencies, and the sharing of responsibility in the community that this entails. This sense of community purpose and solidarity is then linked to institutional structures to leverage local resources. The provision of resources to the women's initiatives, such as VDC contributions to emergency funds, and the profiling of MNH by local leaders, in turn reinforces women's empowerment as women and men see the effectiveness of women's voice and demands.

4.3.2 EAP activities in RAMP

Experience from EAP and other social and community mobilisation programmes in Asia suggest that such programmes take three to five years to achieve sustainable behaviour change (Prost 2013).

Given RAMP's 15-month implementation window, EAP was modified to concentrate on the following key activity areas:

- Orientation of local VDC stakeholders, social mapping of target VDCs to identify the most disadvantaged and remote communities and the development of VDC action plans to guide implementation. The VDC planning workshops involved 286 persons across the five VDCs.
- Awareness raising and mobilisation activities through:
 - A module of 11+4 facilitated meetings/sessions to raise MNH awareness among members of FCHV-led healthy mothers' groups (*swastyā aama samuha*), LGCDP community awareness centres and Poverty Alleviation Fund community organisations. 12-14 groups per VDC participated in the monthly MNH awareness sessions, covering an average of 200 women per VDC. 13 mothers' groups per VDC were given seed funds for an emergency fund and 12 groups received a stretcher for emergency transport.
 - Home visits to 115 newly married couples, and over 550 pregnant and recently delivered women.
 - Interactions with and between stakeholders (FCHVs, teachers, students, husbands, pregnant women, mothers-in-law, and local political, social, and club members) and for traditional healers and students (see Annex 2 for list of activities completed).
 - Mobilisation of district level stakeholders including the Reproductive Health Coordination Committee (RHCC) and coordination with key social mobilisation programmes in the district such as the Local Governance and Community Development Programme, Poverty Alleviation Fund, and the Suaahara nutrition project.

4.3.3 Implementation constraints, quality and lessons learned

EAP was contracted out to the local NGO, Nepal Women Entrepreneurs Association (NWEA). The capacity building of social mobilisers, one per VDC, began in June 2014 and implementation of activities began in August 2014³.

³ Note that implementation was delayed as formal approval for contracting the NGO took longer than expected.

Timeframe and impact on the style of mobilisation

The greatest constraint faced by the modified EAP was the short implementation window. Social and community mobilisation are based on a process of engagement and confidence building to empower women and mobilise local stakeholders to generate solidarity and support. The short project period and the challenges of finding experienced partners and human resources in remote areas resulted in the project pursuing less of a participatory and reflective mobilisation process with women's groups as at the core of EAP, and more of information-sharing. This was a pragmatic response to the operational constraints. We recommend that future MNH demand side interventions in remote areas are designed based on established good practice in Nepal and Asia. That means social mobilisation through participatory approaches for a minimum three to five year period.

Availability of partners and human resources

It is rare to find experienced and organisationally mature NGO partners in remote areas, and therefore, as was the case in Taplejung, social mobilisation programmes such as EAP need to invest in NGO partner capacity building as a prerequisite for implementation. Considering the non-availability of capable social mobilisers in remote areas, project design needs to incorporate intensive organisational and technical capacity building of NGOs implementing partners and run the regular on-site coaching of social mobilisers.

The capacity of the hired social mobilisers was low, and there was scope for improving the quality of the supervision and support they received from the NGO partner. The capacity, support and monitoring provided to social mobilisers is a critical factor for programmes' success, and future health social mobilisation programmes need to take this into account by providing sufficient timeframes and resources to achieve this.

Functionality of mother's groups and targeting the most vulnerable women

The EAP model was designed to use existing women's groups where possible, strengthen them if necessary, and create new groups if essential. However, evidence from Nepal shows that the poorest and most vulnerable women often do not attend group meetings. In the case of Taplejung, the focus was placed on using FCHV-led healthy mother's groups as the foundation. LGCDP community awareness centre (CAC) groups were also used but as there is only one CAC per VDC, coverage is limited. The implementing NGO was not expected to create new groups given the short timeframe and the presence of various other social mobilisation programmes in the district.

As is common across Nepal, the functionality of the healthy mother's groups and attendance of FCHVs was mixed in the pilot VDCs. Process monitoring found that the EAP activities increased the involvement of FCHVs in healthy mothers' group meetings and that home visits undertaken by social mobilisers increased attendance at mothers' group meetings of more vulnerable women. An external social mobiliser can help activate weak mother's groups and increase the reach of MNH services. While the use of mother's groups is a practical approach it needs to be complemented by targeted interaction towards the most vulnerable women who do not attend such meetings. This requires additional resources and is more time intensive and costly than only targeting women's groups. We conclude that in remote areas, the targeting of individual

households is an essential component of social mobilisation and behaviour change activities, and this need to be emphasised in the future planning and design of interventions.

Participation in meetings

Encouraging poor women to attend regular meetings in remote areas requires considerable motivation building. The provision of seed money for an emergency fund and a stretcher to enable transportation of emergency cases help mobilise attendance. However, in the current climate where other social mobilisation programmes such as the USAID's Suaahara project offer more incentives to attend meetings, EAP needs to rethink its position on how to attract participants. In very poor remote areas, the provision of snacks is a minimum, and financial incentives possibly linked to existing entitlement programmes such as the 4ANC entitlements, need to be considered.

Communication tools and approaches

The opportunities to use mobile phone technology to send messages to targeted women and families needs exploring. Access to mobile phones is increasing and although female literacy levels are low in remote areas, experience from Asia shows that mobile phones can be used to target voice messages and reminders to low literate women and improve linkages between women and service providers.

Household visits, interactions between husbands and wives, and between mothers-in-law and daughters-in-law were reported to be the most effective interpersonal mobilisation approaches. Street drama was found to be particularly effective in mobilising large numbers of people.

Emergency transport

It is essential in remote areas to have community groups that take responsibility for transport for emergency health cases, and agreements with transport agents to establish communication mechanisms and costs for transporting emergency cases. However, only limited progress was made during the pilot project on this front except for the establishment of group-based emergency transport funds. The programme was not able to undertake the necessary district level mobilisation with the DDC, the chief district officer (CDO), the local development officer (LDO) and other stakeholders for improving transport and access as the project was occupied with its VDC level activities. Experience from DoHS's earlier EAP activities show that transport arrangements are an important way to mobilise local men and the wider community behind MNH and we believe this needs more focused attention in future remote area programming.

Linkages and coordination

Forging coordination across social mobilisation programmes is often difficult due to vertical management and funding arrangements. The project was not very effective in building linkages with other programmes or mobilising district authorities to support this. On reflection greater effort is needed during planning and implementation to develop linkages and coordination arrangements. This requires strong government leadership at district level and the centre.

Investment

Social mobilisation is a medium-term investment for long-term sustainable behaviour change. The low cost funding of EAP activities in Taplejung were justifiable given the short term nature of the

project; but as the government prepares to develop longer term plans for remote areas, the investment envelope for behaviour change and demand generation needs to be results-oriented and more realistic to ensure quality implementation.

4.3.4 Achievement of output 1: Increased knowledge and social acceptability of MNH services and healthy practices

EAP activities in Taplejung under Package 3 were aimed at increasing knowledge of MNH services and healthy practices, and fostering family and community support for them. The project’s theory was that these activities would result in greater knowledge and social acceptance of MNH practices in the Package 3 areas compared to others, though the limitations of the pilot put this in question. As we show below, results from the HERD evaluation do not support the hypothesis. Instead they show an inconsistent picture of changes in women’s knowledge of healthy MNH practices and mother-in-law support for them across the three packages.

a. Awareness of pregnancy related danger signs: Figure 4.1 shows the percentage of women aware of at least three danger signs during pregnancy. The increase in awareness between the baseline and endline surveys was significantly greater in Package 3.

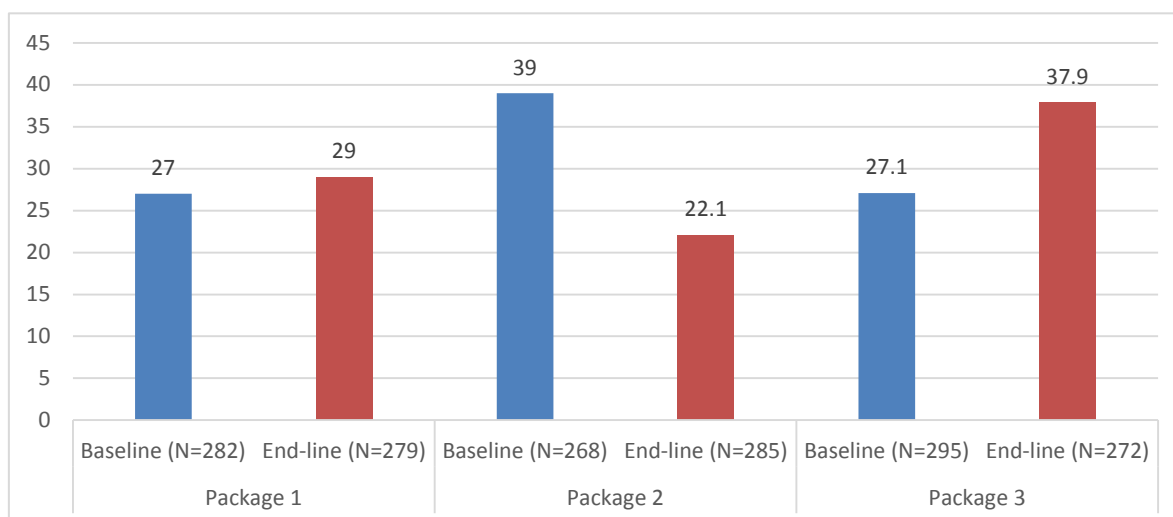


Figure 4.1: Awareness of three pregnancy related danger signs among MWRA (HERD 2015)

b. Awareness of neonatal danger signs: The evaluation reported a major drop in levels of knowledge of neonatal danger signs among recently delivered women in Packages 1 and 2 (Figure 4.2). Such a drop in knowledge is unlikely in a one year period and points to possible methodological issues with the baseline and endline surveys. The key finding is that knowledge of neonatal danger signs in remote areas is very low even where EAP has been implemented, and much greater effort is needed to address this.

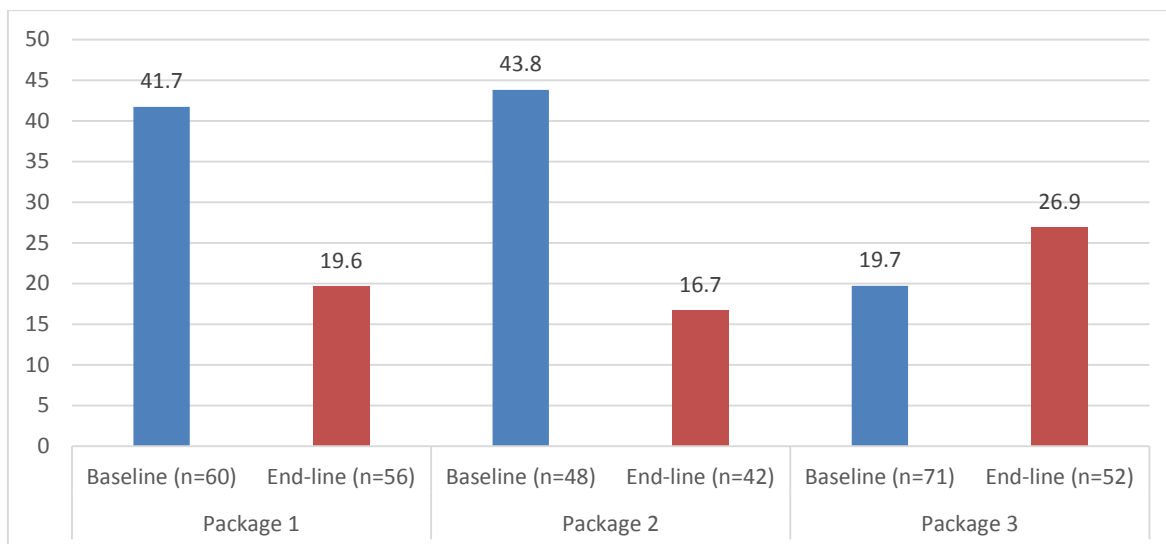


Figure 4.2: Knowledge of neonatal danger signs among RDW (HERD 2015) (Note: these results have not been weighted for cluster effect)

c. *Knowledge of newborn care:* Knowledge among MWRA of the importance of initiating breastfeeding within an hour of birth increased between baseline and endline for packages 2 and 3, while knowledge of delaying bathing until after 24 hours after birth declined.

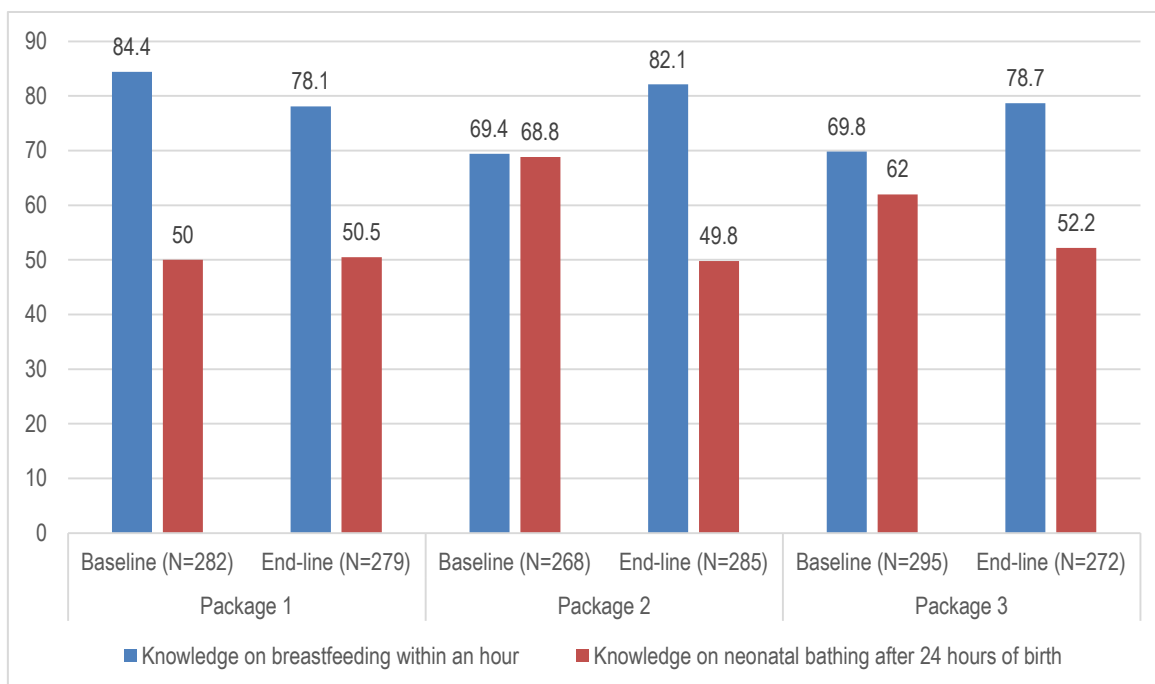


Figure 4.3: Knowledge of newborn care practices among RDW (HERD 2015)

d. *Mother-in-law support for healthy MNH practices:* Mothers-in-law play a significant role in defining appropriate MNH behaviour for their families, and improving the use of MNH services in Nepal. EAP includes interactions between mothers and daughters-in-law for this purpose. However, evaluation data presents no consistent pattern of changes in reported encouragement from mothers-in-law vis-a-vis ANC, delivery and newborn bathing across the three packages (Table 4.5). Process monitoring reported that mother-in-law to daughter-in-law interactions were

one of the most effective strategies of the EAP package along with household visits and husband–wife interactions.

Table 4.5: Mother in law encouragement for MNH practices and service use (weighted for clustering)

	Package 1		Package 2		Package 3	
	Baseline (n=60) %	Endline (n=56) %	Baseline (n=48) %	Endline (n=42) %	Baseline (n=71) %	Endline (n=52) %
Mother-in-law encouraged 4 ANC visits	17.6	14.6	34.1	19.5	11.2	13.6
Mother-in-law encouraged to deliver at health facility	20.2	25.0	25.3	43.1	24.1	17.1
Mother-in-law encouraged neonatal bathing only after 24 hours	23.4	37.2	37.9	32.7	31.0	22.8

In contrast to the quantitative findings that suggest little change in the views of mothers in law in the Package 3 areas where EAP were implemented, focus group discussions presented a more positive picture:

“My daughter-in-law didn’t go to the health facility despite asking her to go several times. She had experienced pain during her previous pregnancy after taking iron tablets so she didn’t agree to visit the health facility again...she says ‘I won’t go mummy, I will rather die here.’” Mother-in-law of recently delivered women in Package 3.

“I help my daughter-in-law by relieving her from household works to go for ANC check-up... and encourage her to visit the health facility without feeling shy.” FGD, Mothers-in-law, Package 3.

“We need to bathe newborns after 24 hours of delivery. People used to bathe newborns immediately, but now they are cleaned with a cloth and wrapped in a rag and are placed on the mother’s chest.” FGD, mothers-in-law, Package 3.

“It was different when we delivered our babies... I delivered my three children out of five while working in the field, but times have changed and so six months ago I suggested that my daughter-in-law deliver her baby in Sinwa (referring to Limkhim HP).” FGD, mothers-in-law, Package 3.

Table 4.6: Knowledge of health care entitlements (HERD 2015)

	Package 1		Package 2		Package 3	
	Baseline (N=282) %	Endline (N=279) %	Baseline (N=268) %	Endline (N=285) %	Baseline (N=295) %	Endline (N=272) %
Heard of transportation incentive	81.9	90.3	92.2	93.3	84.7	83.5
Heard of 4ANC incentive payments	44.3	38.4	26.9	57.5	33.6	70.2
Aware of incentive amount for 4ANC visit as per protocol	23.0	18.6	13.1	18.2	19.3	34.9
Aware of amount for transport incentive for delivery	69.1	67.0	78.4	74.4	78.6	69.1

e. Knowledge of health care entitlements: The HERD evaluation found no consistent pattern in changes in knowledge levels across the three packages (Table 4.6).

In summary: The findings make it difficult to conclude if any of the three packages have performed better than others and does not endorse the hypothesis that Package 3, which includes both demand and supply side interventions, has been more effective in increasing MNH knowledge and social acceptance of MNH good practices. However, given the limitations of the pilot and the evaluation methodology this does not negate the importance of community mobilisation for generating demand for MNH services or changing family behaviours. The weight of international evidence that demonstrates the effectiveness of social and community mobilisation for improving MNH outcomes suggests that the timeframe of the pilot was probably too short to foster behaviour change and this is reflected in the results.

5 ACHIEVEMENT OF OUTCOMES

RAMP had four outcome areas. This section of the report reviews progress against key indicators for each outcome. See full report (HERD 2015) for the evaluation findings.

5.1 Increased and More Equitable Use of MNH Services

The remote areas study (Regmi et al. 2013) found that facilities further from the district headquarters generally have fewer human resources for health, fewer facilities including birthing centres and LTFP services, and higher levels of drug stock-outs and expired drugs. The uptake of services in remote VDCs is also lower. Women living further from a facility are also less likely to have an institutional delivery.

The pilot project sought to address equity in two ways. First by demonstrating how remote VDCs in Taplejung can improve the availability of MNH services, and second, how women who live in more remote wards and hamlets can increase their use of MNH services. The project addressed equity through its supply side strengthening and demand side work, prioritising remoter VDCs for service strengthening, and targeting the most vulnerable women in those VDCs through EAP activities.

a. % of pregnant women attending four ANC visits as per protocol — Most pregnant women in Nepal and in Taplejung make at least one ANC visit during pregnancy, but the take-up of four ANC visits as per the national protocol, considered an important indicator for ANC quality of care, was much lower. Comparing baseline and endline household survey data the reported increase in four ANC among recently delivered women was highest in Package 3 (Figure 5.1). This is particularly noteworthy given that women in Package 3 on average reside further from the health facility compared to Package 1 and 2 women.

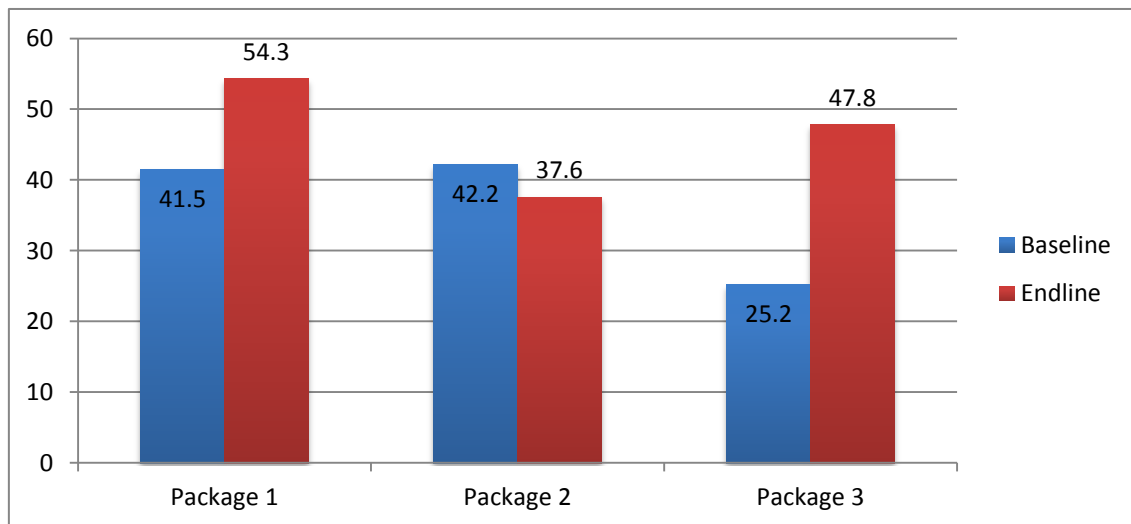


Figure 5.1: Percentage of pregnant women receiving 4ANC as per protocol (HERD 2015) (weighted for cluster effect)

Interviews and focus group discussions with community people suggest that while demand for ANC is increasing, this is often hindered by poor availability of services and the absence of health workers:

“It is not good here. Doctor and sister were not in the health facility when I visited twice. They say that staff are in the district for the training so I had to go to another health facility (referring to health facility of neighbouring VDC).” RDW IDI, Package 2

b. % of pregnant women receiving iron folic acid (IFA) — The taking of IFA is one measure of the quality of ANC provided. All the packages showed an increase in complete intake of the recommended course of IFA from baseline to the endline. The highest increment was found in Package 2 where complete IFA intake increased from 28% at the baseline to 60% at the endline; an improvement of 32 percentage points (Figure 5.2). Package 3 saw an increase of 28% points and Package 1 an increase of 7% points. The very good performance in Package 2 in IFA coverage but poor four ANC coverage cannot be explained by project or process monitoring.

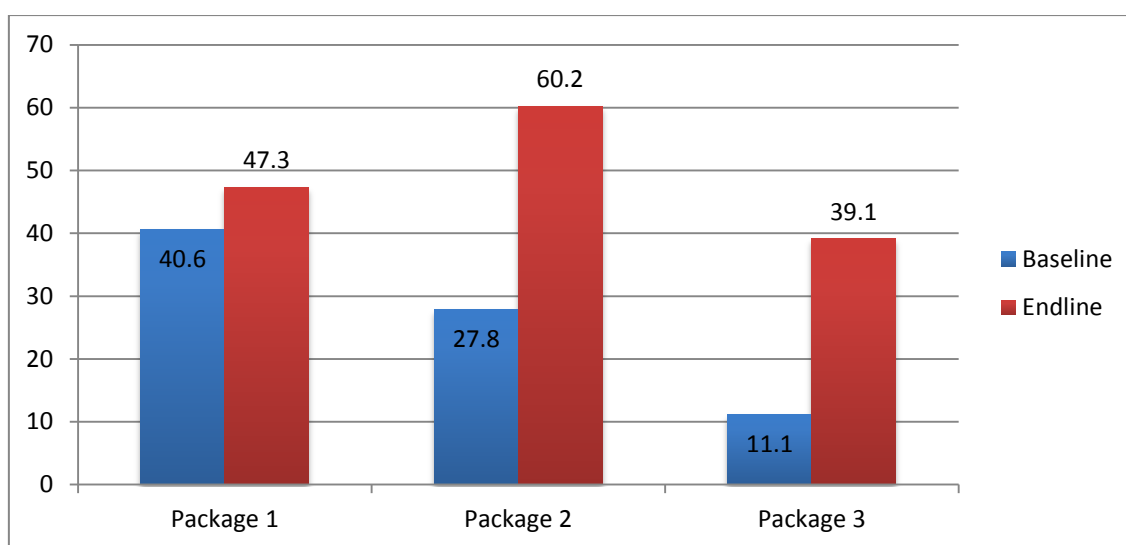


Figure 5.2: Percentage of recently delivered women that consumed the full IFA intake (HERD 2015) (weighted for cluster effect)

When asked the reasons for not consuming IFA, the proportion of women that reported to be unaware of the importance of IFA dropped significantly across all three packages (see Table 5.1). Lack of awareness went from being the first or second reason for non-consumption to the fourth reason in all three packages. At endline the top three reasons for non-consumption were side-effects, forgot to take, and ran out of supplies.

Table 5.1: Reasons for non-consumption of IFA by RDW (%) (HERD 2015)

	Package 1		Package 2		Package 3	
	Baseline n=37	Endline n= 29	Baseline n=36	Endline n=15	Baseline n=64	Endline n=31
Unaware	40.5	13.8	33.3	6.7	26.6	9.7
Ran out of supplies	24.3	24.1	27.8	20	17.2	16.1
Side-effects	16.2	34.5	2.8	20	28.1	29
Forgot to take	8.1	20.7	13.9	20	7.8	19.4

c. % of institutional deliveries — Figure 5.3 shows the trend in institutional deliveries by package. The largest increase was in Package 3 where institutional delivery more than doubled. The large increase in institutional deliveries in Package 1 is partly explained by the fact that Mashring health facility tragically lost a member of staff before the baseline study, which halted the availability of

delivery services there and pushed down the average institutional delivery rate for package 1. Mashring HP was one of the best performing health facilities in the district before that unfortunate event. The sharp increase between baseline and endline is therefore in part due to the resumption of delivery services once the health workers post were refilled.

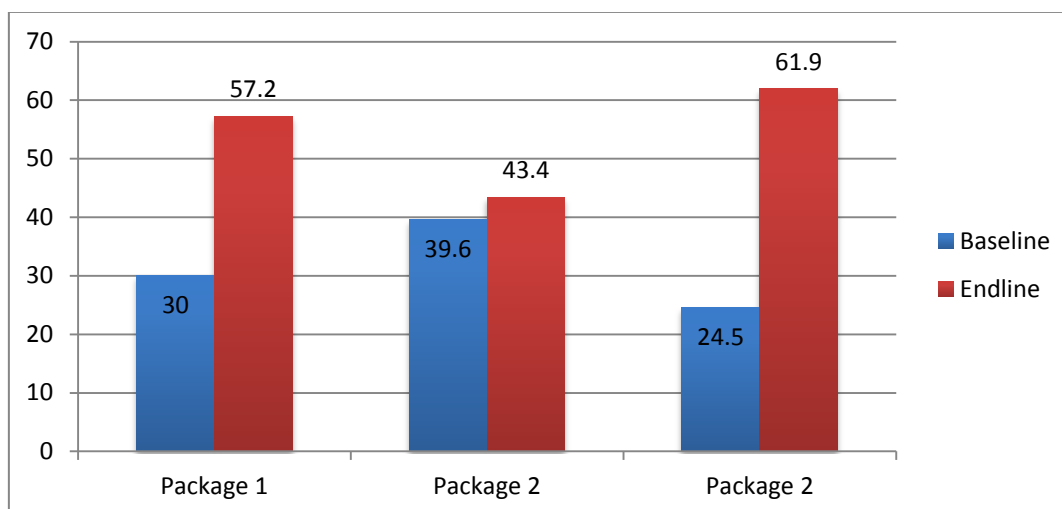


Figure 5.3: Percentage of institutional deliveries (HERD 2015) (weighted for cluster effect)

Table 5.2 shows institutional delivery at baseline and endline disaggregated by education, caste/ethnicity and distance to the nearest health facility. The most striking change is the increased institutional delivery rate of illiterate women, Janajatis (ethnic groups) and Dalits in all three packages with the greatest gains made in Package 3. For example, in Package 3 the proportion of illiterate women having an institutional delivery increased from zero to 66.7%, the proportion of Janajati women increased from 21.1% to 56.8% and the proportion of Dalit women increased from zero to 60%, although some sample numbers were small.

Table 1.2: Institutional delivery disaggregated by education, caste/ethnicity and distance to the nearest health facility (HERD 2015) (unweighted)

Characteristics	Package 1 Delivered in health facility				Package 2 Delivered in health facility				Package 3 Delivered in health facility			
	Baseline		Endline		Baseline		Endline		Baseline		Endline	
	%	Total (N)	%	Total (N)	%	Total (N)	%	Total (N)	%	Total (N)	%	Total (N)
Women's education												
Illiterate	7.1	14	50.0	8	25.0	4	33.3	3	0	6	66.7	9
Literate	34.7	46	58.3	48	41.3	46	51.3	39	23	65	58.1	43
Caste/ethnicity												
Janajati	36.2	47	60.5	38	48.4	31	53.8	26	21.2	66	56.8	44
Brahmin/Chettri	0	5	50.0	12	41.7	12	54.5	11	33.3	3	100.0	3
Dalit	0	8	50.0	6	0	5	20.0	5	0	2	60.0	5
Distance/time to reach nearest government health facility												
Within 30 mins	61.5	13	64.7	17	44.4	9	50.0	2	33.3	15	92.9	14
30-60 mins	18.8	32	56.7	30	31.8	22	65.0	20	38.5	13	50.0	18
More than 1 hr	20	15	44.4	9	52.9	17	35.0	20	13.9	43	45.0	20
Total (N)		60	57.1	56		48	50.0	42		71	59.6	52

The likelihood of an institutional delivery continues to be higher for those women that live closer to a health facility. In Package 3, over 90% of women living within 30 minutes of a facility had an institutional delivery. In addition, Package 1 and 3 both showed an increased institutional delivery rate among women living more than one hour from the facility; for Package 3 this increased from 13.9% to 45% while for Package 1 it increased from 20% to 44%, though clearly a large gap remains compared to rates for women living close by.

In-depth interviews with the communities found that lack of accommodation for patients' companions near to birthing centres discouraged uptake with this being a serious barrier for families that live far from facilities. The provision of accommodation for accompanying families at strategically located birthing centres has merit in remote areas and deserves further attention.

HMIS data suggests that institutional delivery has increased at all the birthing centres from 2013/13 to 2014/15 (2070/71 to 2071/72) except Sinam Health Post in Package 1 (Table 5.3). Institutional delivery rates are not available for all of the VDCs so it is difficult to compare rates for VDCs with and without a birthing centre.

Qualitative data found that women sometimes choose to deliver at facilities outside of their catchment area even if they have a birthing centre in their VDC, and so the association between institutional delivery rates and the presence of a birthing centre is not as straightforward as assumed, and is most likely affected by the perceived and actual presence of health staff, quality of care and established family communication links and preferences for specific health facilities. This complicates locating strategic birthing centres and calls for analysis of real catchment populations rather than just theoretical ones in deciding where to locate them. The household survey found that the institutional delivery rate for women from non-birthing centre VDCs was almost the same as that of women from VDCs with birthing centres (data not presented in HERD 2015).

Table 5.3: Institutional delivery rate (by VDC) (Source: HMIS)

	Health facility	Institutional delivery rate 2070/71	Institutional delivery rate 2071/72
Package 1	Sinam HP (BC)	40	26
	Thumbedin SHP (no BC)	-	-
	Thukhima VDC Mashring HP (BC)	18	61
	Lingtep SHP (no BC)	-	-
Package 2	Change HP (BC)	44	67
	Sabuwa SHP (no BC)	-	-
	Sablakhu HP (BC)	43	79
	Limbudin SHP (no BC)	-	-
	Ankhop SHP (no BC)	-	-
Package 3	Linkhim VDC Sinwa HP (BC)	24	76
	Khejenim SHP (no BC)	-	-
	Tapethok SHP (new BC)	0	34
	Thinglabu HP (BC)	30	37
	Santhakra VDC Oklabung SHP (BC)	14	33

d. *Contraceptive prevalence* — The evaluation found that use of modern contraception had increased in Package 1 (from 21.6% to 33.7%) and Package 3 (from 30.8% to 41.2%) (Table 5.4). Use declined in Package 2 from 40% to 26% for which we have no explanation. Interestingly HMIS data also records a decline in contraceptive prevalence in Package 2 VDCs from 30% to 26% between 2013/14 to 2014/15. In contrast to the evaluation results, HMIS estimates the aggregate contraceptive prevalence as 22.9% for Package 1 VDCs and 26.6% for Package 3 in 2014/15.

Table 5.4: Contraceptive prevalence (HERD 2015)

	Package 1		Package 2		Package 3	
	Baseline (N=282) %	Endline (N=279) %	Baseline (N=268) %	Endline (N=285) %	Baseline (N=295) %	Endline (N=272) %
Use of any family planning method	21.6	33.7	41.4	27.0	31.5	41.5
Use of modern contraceptives	21.6	31.5	40.3	26.3	30.8	41.2
Family planning methods used:	(n=61) %	(n=96) %	(n=111) %	(n=77) %	(n=93) %	(n=113) %
Injectable	63.9	45.8	64	66.2	69.9	61.1
Oral pills	18.0	17.7	15.3	10.4	5.4	10.6
Implants (Norplant)	8.2	6.3	0	5.2	3.2	7.1
Male sterilization	6.6	13.5	6.3	1.3	5.4	8.8
Condom	1.6	5.2	6.3	7.8	4.3	2.7
IUCD	0	3.1	5.4	6.5	9.7	8.8
Withdrawal	0	2.1	2.7	0	0	0.9
Rhythm	0	1.0	0	2.6	2.2	0.0
Breastfeeding	0	5.2	0	0	0	0.0
Female sterilization	1.6	2.1	0	0	0	0.0

The injectable method (Depo) was the most common family planning method used across all packages at both the baseline and endline surveys. Training of health staff in Package 2 and 3 to provide implants and IUCDs does not appear to have translated into increased use to any major extent. In-depth interviews reported that lack of equipment and supplies for both implants and IUCDs and community concerns about IUCD, affected take up.

“Implant service has increased, but community people have misconceptions about IUCDs. There is one problem in implant service. Implants are provided in a limited number only...it is called jaddle, a rod. Only ten rods per year are supplied by the district, whereas, ten service users come here each month to use it. Due to the absence of these rods, I have stopped administering them after eleven users.” Key informant, Package 2.

In summary — The evaluation findings show that Package 3 has performed well in terms of the increased use of MNH services especially given its more remote context than Package 1. Package 2 has not performed well with several indicators lower (4ANC, contraceptive use) at endline than baseline. In fact, Package 1, which only received district-wide strengthening, achieved higher gains in MNH service use than Package 2 though it needs to be remembered that the VDCs in the former are more accessible and better-off than the Package 2 and 3 VDCs, and the poor performance of Package 1 at the baseline was largely due to the murder of a health worker at one

facility. Comparison is therefore difficult to make. Comparison of the VDCs that only received supply-side strengthening (Package 2) with those that had both supply and demand strengthening (Package 3) suggests that the latter performed much better. Although this outcome fits with RAMP’s theory of change, looking at the contributing factors towards increased service use, namely increased knowledge of services and social acceptability of healthy MNH practices, we see that Package 3 did not perform more strongly than the others.

In terms of equity, the major increase in institutional deliveries was found among those women living within 30 minutes of a facility, although women living further away made gains too. In addition, institutional delivery increased among less advantaged women, an important equity achievement.

5.2 Increased and More Equitable Use of Child Health and OPD Services

Though the project activities were targeted to MNH, they were expected to stimulate increased use of child and outpatient department (OPD) services.

a. % of children immunised against measles — There is a very high rate of measles immunisation in Taplejung and at endline all three packages continued to have over 90% coverage.

b. % of children under 5 with diarrhoea treated with zinc and ORS — Incidence of diarrhoea was found to be reduced at the endline compared to the baseline in all the packages (Table 5.5). Of those children who suffered from diarrhoea, in Package 3 only 29% were treated with both zinc and oral rehydration solution (ORS) which was lower than the baseline (47%). In the other packages the proportion of children treated with zinc and ORS increased at the endline, although the very small number of cases means that caution is needed in interpreting this data. In Package 1 and 3, the most common reason for not giving ORS and zinc was that women believed that the child would recover on their own (60% and 33% respectively), while in Package 2 the most common reason was preference for home remedy (63%) over ORS and zinc.

Table 5.5: Under-5 children with diarrhoea treated with zinc and ORS (HERD 2015)

	Package 1		Package 2		Package 3	
	Baseline (n=30) %	Endline (n=9) %	Baseline (n=20) %	Endline (n=4) %	Baseline (n=45) %	Endline (n=17) %
Given ORS	70	55.6	60	75	68.9	64.7
Given zinc tablet	36.7	44.4	40	50.0	46.7	35.3
Children <5 with diarrhoea treated with zinc and ORC	36.7	44.4	40	50.0	46.7	29.4

c. % of children under 5 with pneumonia who received antibiotics: Between the baseline and endline survey the proportion of under-five year children who had pneumonia related symptoms two weeks prior to the survey declined in Packages 2 and 3, and was stagnant in Package 1 (Figure 5.4). Provision of antibiotics to children under 5 with pneumonia increased in Packages 2 and 3 but not in Package 1.

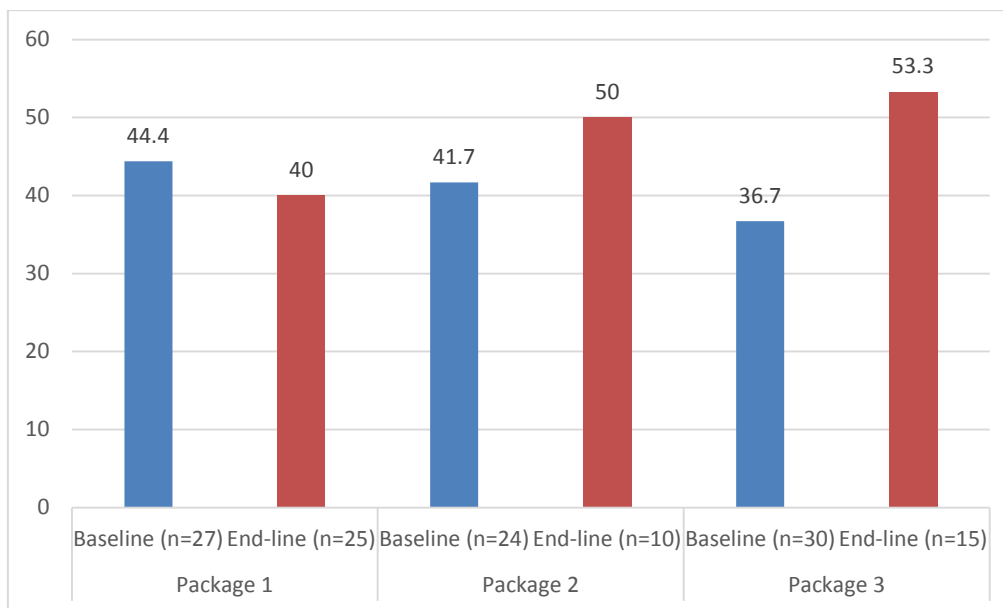


Figure 5.4: Provision of antibiotics to children under 5 with pneumonia

d. Use of OPD services — Out of the total married women of reproductive age interviewed, use of the closest government health facility was 53% in Package 1, 44% in Package 2 and 50% in Package 3. There was a decline in use from the baseline in Package 2 and 3, and use was stagnant in Package 1.

In summary — The evaluation presents a mixed picture of changes in use of child health services. For treatment of diarrhoea, Packages 1 and 2 seemed to have improved from baseline while for treatment of pneumonia, Packages 2 and 3 have improved. The small number of cases makes it difficult to interpret trends or compare across packages and no conclusion is drawn on whether one package or another had a greater effect on child health care.

5.3 Increased Adoption of Healthy Maternal and Newborn Health Practices

We look at two newborn health practices to gauge the level of behaviour change.

a. % of neonates breastfed within one hour of birth — The evaluation found an increase in breastfeeding within an hour of birth reported by recently delivered women in all three packages (Figure 5.5). The largest gain was made in Package 3 with early initiation of breastfeeding increasing from 62.3% to 85.7%. Changes in breastfeeding behaviour were larger than reported knowledge of the importance of early breastfeeding among married women of reproductive age and this likely reflects the fact that a higher proportion of older women were included in the latter.

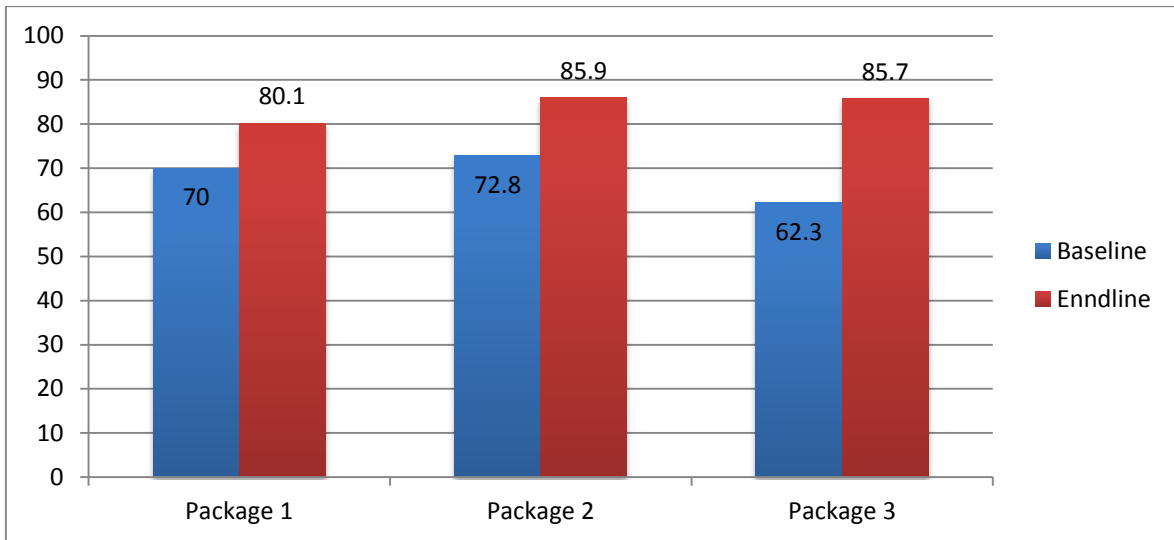


Figure 5.5: Percentage of neonates breastfed within an hour of birth (HERD 2015) (weighted for clustering)

b. % of newborns who had delayed bathing (after 24 hours) — In contrast to early breastfeeding, changes in delayed bathing reported by recently delivered women were less consistent across the pilot areas (Figure 5.6). There was an increase in delayed bathing in Package 1 (increase of 23% points) and Package 3 (increase of 12.2% points) but a slight decline in Package 2 (2% points). These shifts are not in line with the reported knowledge of delayed bathing among married women of reproductive age and most likely reflects the inclusion of higher proportion of older women were included in the latter.

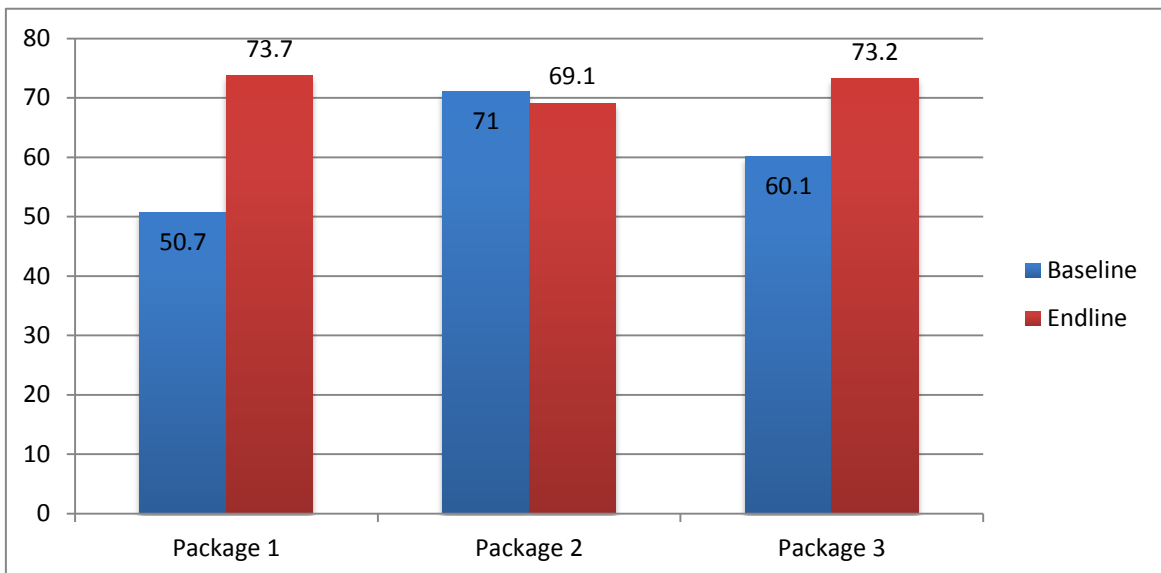


Figure 5.6: Percentage of respondents practising delayed bathing of newborns (HERD 2015)

In summary: The evaluation found evidence of increased adoption of healthy newborn practices. Package 3 has made significant improvements given its more remote context than Package 1. However, it is not possible to conclude that one package outperformed the others in terms of improving newborn health care.

5.4 Reduced Cultural and Economic Barriers to Accessing Maternal and Newborn Health Care Services

Regmi et al. (2013) found that many women’s heavy work burdens throughout pregnancy and lack of decision making power put them at risk and reduced their access to MNH services. The project sought to address these barriers in Package 3 through the Equity and Access Programme by mobilising and raising the awareness of women, mothers-in-law, husbands and local stakeholders to promote MNH. The project theory is that Package 3 would perform better on this outcome than the other two.

a. % of WRA that report their families give permission for pregnant women to leave their domestic and productive work to attend ANC services: Overwhelmingly respondents reported that women receive special care and attention during pregnancy, and that more than eight out of ten times receive permission from their families to attend ANC (Table 5.6). Among women who have delivered in the past year, the proportion that received permission increased for all packages but particularly Package 1.

Table 5.6: Family permission for pregnant women to avail of ANC, and family care of their pregnant women (HERD 2015)

	Package 1		Package 2		Package 3	
	Baseline (N=282) %	Endline (N=279) %	Baseline (N=268) %	Endline (N=285) %	Baseline (N=295) %	Endline (N=272) %
Families provide special care (extra rest, nutritious diet, increase food intake) to pregnant women	90.4	82.4	66.8	86.3	84.1	82.0
Families’ permission for pregnant women to leave their domestic and productive work to attend ANC services	58.9	88.2	72.8	72.3	71.5	77.2
Women who delivered in last 1 year	(n=60)	(n =56)	(n=48)	(n=42)	(n=71)	(n=52)
Families provide special care (extra rest, nutritious diet, increase food intake) to pregnant women (RDW)	91.70	92.90	81.30	92.90	90.10	94.20
Families permission for pregnant women to leave their domestic and productive work to attend ANC services (RDW)	68.30	91.10	83.30	85.70	73.20	88.50

b. % of recently delivered women that received (i) 4ANC or (ii) Aama benefits: The evaluation found that the percentage of recently delivered women that were informed about 4ANC incentives by a health provider increased in each package area and especially in Package 3 where this more than doubled (Table 5.7). However, receipt of 4ANC incentives by women was much lower in all sites than the reported number of women that received four ANC visits.

The % of RDW that were informed of Aama transport incentives during delivery was much higher than information on the 4ANC incentive. Receipt of Aama benefits doubled for Package 3 but for all areas was well below the reported use of institutional delivery (see Figure 5.7).

Table 5.7: Receipt of 4ANC and Aama transport incentives (HERD 2015)

Recently delivered women	Package 1		Package 2		Package 3	
	Baseline (n=60) %	Endline (n=56) %	Baseline (n=48) %	Endline (n=42) %	Baseline (n=71) %	Endline (n=52) %
Received 4ANC incentive (weighted)	4.4	16.0	11.2	11.8	6.0	28.9
Received Aama benefit (transport incentive) (weighted)	20.7	32.5	31.2	27.7	21.0	40.2
RDW with ANC visit	(n=47) %	(n=51) %	(n=43) %	(n=42) %	(n=59) %	(n=50) %
Informed about 4ANC incentives by health care provider	46.8	52.9	27.9	47.6	30.5	68
RDW with institutional delivery	(n=17) %	(n=32) %	(n=20) %	(n=21) %	(n=15) %	(n=31) %
Informed about transport incentives during delivery	70.6	90.6	100	76.2	80	74.2

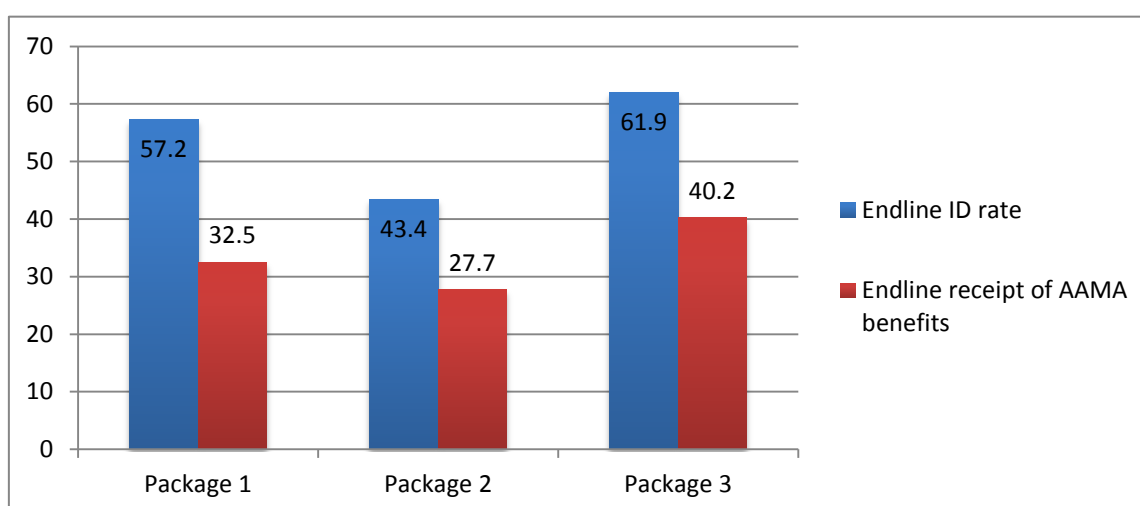


Figure 5.7: Percentage of respondents reported institutional delivery and receipt of Aama transport incentive

Package 3 performed better at matching use of services with receipt of benefits. It is not possible to explain why this was the case but it could be related to the presence of the EAP social mobilisers and the performance of the HFOMCs. Notably the HFOMCs at Khejenim SHP and Tapethok SHP in Package 3 were active in addressing governance issues such as reporting staff absenteeism to the district health officer and withholding the benefits of absent staff and diverting this to the emergency fund. It is possible that these actions increased the accountability of health workers and that this influenced the provision of entitlements.

In summary — The evaluation shows a reduction in cultural and financial barriers to MNH services and Package 3 and Package 1 have performed better in this regard. The lower gap between reported use of 4ANC and institutional delivery and receipt of respective incentives in Package 3 potentially points to improved governance and demand for entitlements in these clusters.

6 Conclusion and Recommendations

6.1 A Package of Supply and Demand Side Interventions Performed Well

The project's intention was to test whether a supply only or a supply and demand side package of interventions could lead to more equitable access to and use of MNH services and healthy practices. Two intervention packages were implemented for 15 months in different clusters of VDCs in Taplejung district. It was not possible to find a control site and so a comparison third package was monitored which received district wide strengthening activities that were taking place across the district. However, the comparison cluster is less remote and economically better off than the intervention clusters, and this and the short implementation period of the project need to be considered when comparing results from the respective packages.

Based on the evaluation findings (HERD 2015), comparison of the supply only package of interventions (Package 2) and the supply and demand package (Package 3) shows the latter performed much better than areas that only received supply side support. This endorses the theory of change and fits with international evidence.

Comparisons of the two intervention areas with the comparison cluster (Package 1) show that the supply and demand package (Package 3) and the comparison cluster have both performed better than the supply only package (Package 2). This finding is contrary to expectation and the district's HMIS institutional delivery report, is difficult to explain from process and project monitoring reports, and we believe is partly the result of methodological and sampling issues.

6.2 Headline Outcome Results

In the clusters with the package of supply and demand side interventions, there was a significant increase in reported 4 ANC visits, rising from 25.2% of pregnant women to 47.8% between baseline and endline. Similarly there was a major increase in the *institutional delivery* rate, rising from 24.5% to 61.9%. The comparison cluster saw institutional delivery rise from 30% to 57.2%.

Women who live closer to a health facility continued to have higher institutional delivery rates than those that lived further away. In fact the greatest increase in institutional deliveries was found among those women living within 30 minutes of a facility, although women living further away made gains too. The lack of accommodation for accompanying family members who travel with a pregnant woman from a remote area to a birthing centre was reported to be an important barrier to institutional delivery for women that live further away, and this needs further attention. More positively, institutional delivery increased among less advantaged women, those that classify themselves as illiterate and Janajati and Dalit women, and these are important equity achievements.

Improvements in *newborn care practices* were found in all three packages. Early initiation of breastfeeding was reported by recently delivered women to have increased in the cluster with supply and demand interventions (Package 3) from 62.3% to 85.7%. Delayed bathing was also reported, although the gains here were stronger in the comparison site of Package 1.

6.3 Learning from Implementation

6.3.1 Improving availability and quality of MNH services in remote areas

The project's in-built process monitoring provided insight into the challenges and constraints of delivering demand and supply side interventions in remote areas. The project purposefully chose to address bottlenecks in service delivery where progress could be achieved in a relatively short period of time rather than tackling the more entrenched and systemic aspects of staffing and procurement.

The supply side model implemented by the project sought to strengthen management and governance of health facilities, secure the availability of clinical staff, fill critical equipment and supply gaps, and enhance the capacity of clinical staff. This multi-faceted approach was critical to establishing the essential elements of service delivery and accompanying support and management systems. Key lessons from implementation include the following:

- 1) *Earmarked district funds* — Small flexible grants managed by the district health office can fill key facility level gaps and motivate providers and HFOMCs. However, experience shows that financial management of such funds outside of the AWPB requires external support due to the risks perceived by the district health office in managing such grants.
- 2) *HFOMC training* followed by regular support activates HFOMCs (which are often dormant), although one-off training is insufficient. Capacity building and support to HFOMCs is essential to create an enabling environment at health facilities and contributes to their improved functioning and improved quality of care. Additional recommended subjects to include in NHTC's HFOMC training module are leveraging VDC and DDC resources, and guidance on use of funds generated by facilities.
- 3) *HMIS* — Orientation of health staff on the new HMIS formats is important as the level of understanding is low and errors and gaps are common.
- 4) *Annual contracting of ANM/SBAs* — The district-earmarked fund smoothed contracting of birthing centre staff at the beginning of the financial year, thus avoiding staffing gaps and the need to train newly hired staff. From this experience, we recommend that health facilities and the DHO request a flexible grant fund from their DDC to bridge the human resource gaps related to late budget release and single year contracting as an interim solution until two ANMs can be secured for each birthing centre from permanent staff.
- 5) *Clinical placement* — In remote areas where the target population is small and staff practice delivering babies only infrequently, it is important to update and refresh ANMs'/SBAs' knowledge, skills and confidence at regular intervals. The project's placement of ANMs/SBAs at the district hospital and SBA training site was well received by these staff and we recommend that this practice be scaled up. Regular placement at district hospital or a training site (i.e. for two weeks every two years) will help retain ANM/SBA skills and improve their motivation.
- 6) *The health facility self-assessment tool* that was used to assess availability, readiness and quality of MNH services served as a continuous reminder to staff to improve the services they provide. Displaying their performance in traffic light colours displayed in and outside their health facility also prompted a response from HFOMCs. We recommend scaling up the use of this methodology as a means of improving quality and supporting staff motivation.

- 7) *Infection prevention training* — Whole site infection prevention training contributed to significantly improved practices. As infection prevention is a universal precondition for providing quality services, we recommend that one-day orientation and practical demonstrations be provided to all new clinical staff as they join the public health service. This could be included in the induction training provided to new staff by NHTC.
- 8) *Frequent staff turnover*: Facility level capacity building in remote areas needs to factor in frequent staff turnover into plans including training of newly transferred or appointed staff.
- 9) *Upgrading to BEONC* — RAMP has shown that birthing centres can be successfully upgraded to BEONC centres and we believe it is time to review the distinction made between birthing centres and BEONC centres and provide staff with the necessary equipment for them to be able to provide all BEONC signal functions after they receive SBA training even if they are not stationed at a designated BEONC centre.

6.3.2 Sustaining supply side gains made in Taplejung District

Intensive effort has been invested in RAMP and this level of effort will need to be sustained for the services to be continued. In general, remote district health offices like remote health facilities tend to have less capable or less motivated staff than non-remote areas. Frequent transfer of the district health officer and other supervisors is also the norm. We conclude that it will not be feasible to establish and sustain the RAMP model of facility level capacity enhancement without providing extra support to the DHO and the public health nurse. Assessment of the RAMP focal health facilities 6-8 months post-pilot (around April/May 2016) will help in learning the intensity and duration of support needed to sustain gains at strengthened health facilities to continue providing quality services.

6.3.3 Social and community mobilisation for behaviour change and enhanced service use

Experiences from Nepal and Asia more widely suggest that social and community mobilisation programmes take 3-5 years to achieve sustainable behaviour change. RAMP's short implementation period seriously affected the effectiveness and methodologies of the Equity and Access Programme interventions and future programmes should be designed for a minimum of 3-5 years.

- 1) *Availability of partners and human resources* — In remote areas, social mobilisation programmes need to invest in NGO partner capacity building as a prerequisite for implementation. Similarly, building the capacity of local staff and the development of community based social mobilisers requires time. The capacity, support and monitoring provided to social mobilisers is a critical factor for programme success, and future health social mobilisation programmes need to take this into account by providing sufficient timeframes and resources to achieve this.
- 2) *Functionality of mother's groups and targeting the most vulnerable women* — The EAP model and other social mobilisation programmes in Nepal are built on existing women's groups. Evidence from Nepal shows that the poorest and most vulnerable women often do not attend group meetings. In remote areas, additional groups may need to be formed to overcome the difficulties remoter hamlets face in reaching existing groups. Group mobilisation needs to be tailored to the local context and complemented by household visits to the most vulnerable women who do not attend group meetings. This requires additional resources, is more time

intensive and costly than only targeting women's groups. We conclude that in remote areas, targeting of individual households is an essential component of social mobilisation and behaviour change activities, and this needs to be factored into future planning and design.

- 3) *Participation in meetings* — Encouraging poor women with heavy work burdens to attend regular meetings requires considerable motivation building. In very poor remote areas, the provision of snacks as a minimum, and possibly a financial incentive linked to existing entitlement programmes such as the four ANC entitlements, need to be considered. At a practical level the various social mobilisation programmes need to be consistent in the incentives they offer for participation in meetings if they are to attract people.
- 4) *Communication tools* — Opportunities to use mobile phone technology to send messages to targeted women and families needs exploring. Access to mobile phones is increasing and though female literacy levels are low in remote areas, experience from Asia shows that mobile phones can be used to target voice messages and reminders to low literate women and improve linkages between women and service providers.
- 5) *Emergency transport* — In remote areas the formation of community groups to take responsibility for emergency transport, and agreements with transport agents to establish communication mechanisms and costs for transporting emergency cases is essential.
- 6) *Links and coordination:* — Forging coordination across social mobilisation programmes is often difficult due to vertical management and funding arrangements. The project was not very effective in building linkages with other programmes or mobilising district authorities to support this. Focused attention needs to be given to developing linkages and coordination arrangements if they are to materialise. This requires strong government leadership at district level and the centre.
- 7) *Investment* — Social mobilisation is a medium term investment for long term sustainable behaviour change. The low cost funding of EAP activities in Taplejung were justifiable given the short term nature of the project, but as the government prepares to develop longer term plans for remote areas, the investment envelope for behaviour change and demand generation needs to be results oriented and more realistic to ensure quality implementation.

6.4 Scaling Up and Next Steps

RAMP has demonstrated that a demand and supply side package of interventions (Package 3) is effective in improving use of MNH services. While adjustments are necessary to the demand side package, especially the length of intervention to maximise effectiveness as a behaviour change model, the need for both demand and supply side interventions to improve MNH outcomes in remote areas is clear.

On the supply side, the RAMP model of strengthening birthing centre services in strategic locations alongside demand side community mobilisation was effective in increasing the use of MNH services though this benefitted those living close to the facility the most. We propose that this model provide the foundation for improving access to and use of MNH services in the rest of Taplejung and other remote districts. Additional support structures to enable better access for families from remoter locations is however necessary. This may include places for accompanying family to stay near to the birthing centre at the time of delivery. From the health facility birthing centre hubs, services can be gradually expanded as resources and capacity become available.

RAMP's experience and that of other programmes in Nepal suggest that support to a remote district is needed for several years to strengthen the health systems, generate demand for services and change family behaviour. Given the importance of inter-sectoral coordination and the opportunity for synergy with social mobilisation and governance programmes, the planning of future remote areas MNH support needs to be more strongly embedded in district bodies where decision making on the determinants of health including transport, communication systems and education are located. This will also strengthen government ownership.

RAMP has demonstrated that improved MNH outcomes can be achieved in remote areas with a modest investment. The next step is for NHSSP to work with the FHD-led Technical Working Group to identify how the government can build on RAMP's experience, sustain momentum in Taplejung, and inform strategies for improving MNH outcomes in remote districts as part of the Nepal Health Sector Programme.

REFERENCES

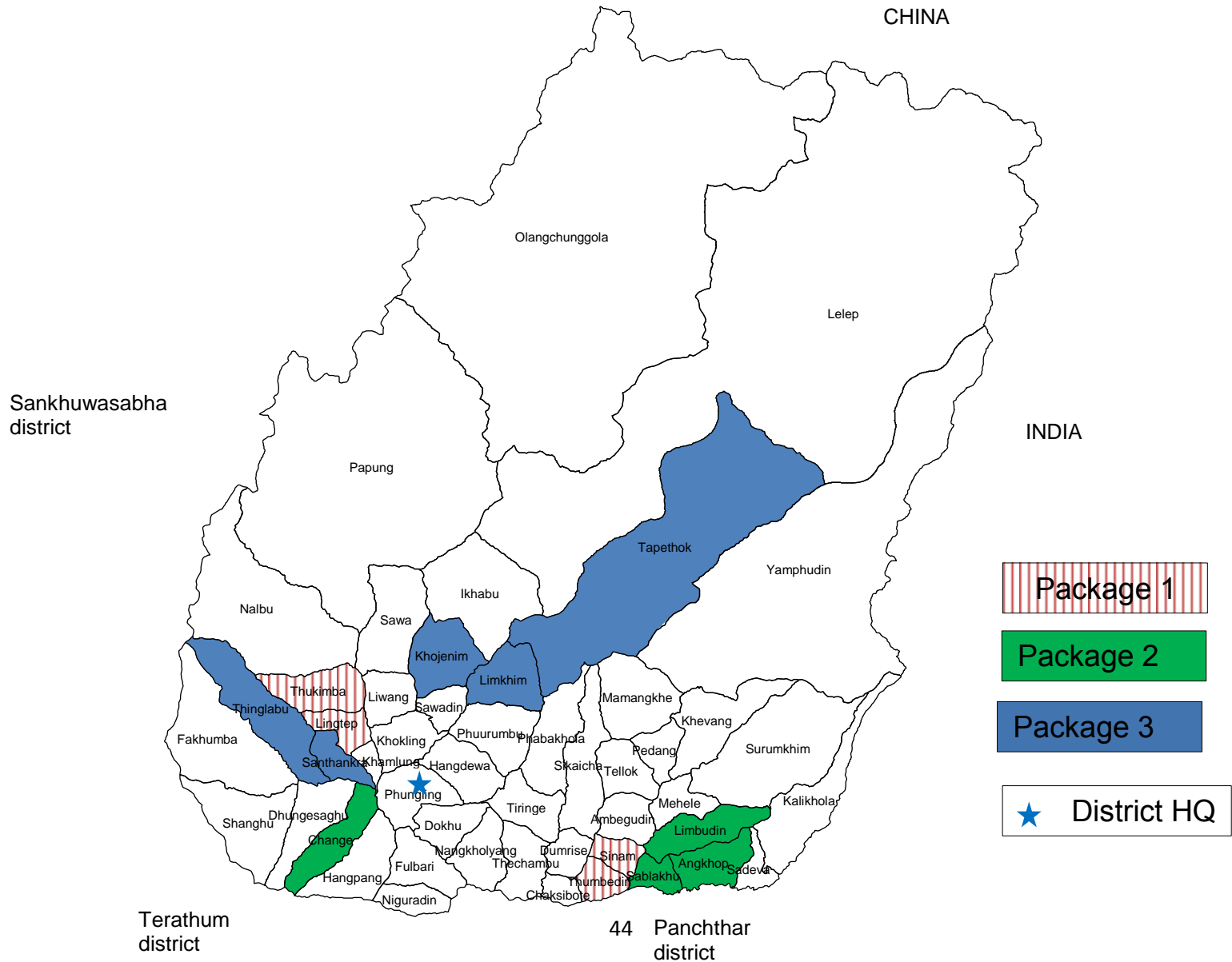
- GoN (2012). 2012 Aide Memoire between the Government of Nepal and External Development Partners in the Health Sector: Kathmandu: Ministry of Health and Population.
- GoN (2013) 2013 Aide Memoire between the Government of Nepal and External Development Partners in the Health Sector: Kathmandu: Ministry of Health and Population.
- HEART (2013). Nepal Health Sector Programme-II (NHSP-II) Mid-term Review (February 2013). Kathmandu: Health and Education Advice and Resource Team.
- HERD (2015). An Evaluation Study, 2014/15: Remote Areas Maternal and Neonatal Health Pilot Project, Taplejung. Kathmandu: Health Research and Social Development Forum
- Howard-Grabman L (2007). 'Demystifying Community Mobilisation: An Effective Strategy to Improve Maternal and Newborn Health.' Annex 1. ACCESS and USAID.
- NHSSP (2014a). Remote Areas Maternal and Newborn Health Pilot Project (RAMP): Proposal (to DFID). April 2014. Kathmandu: Nepal Health Sector Support Programme.
- NHSSP (2014b). Remote Areas Maternal and Newborn Health Pilot (RAMP) Design Document. June 2014. Kathmandu: Nepal Health Sector Support Programme.
- NHSSP (2014c). RAMP Equity and Access Pilot Programme Taplejung Guidelines (in Nepali) (July 2014 final version). Kathmandu: Family Health Division.
- NHSSP (2014d). Remote Area EAP Pilot Taplejung: First Review Workshop Report (November 2014). Kathmandu: Nepal Health Sector Support Programme.
- NHSSP (2015). Remote Areas Maternal and Newborn Health (MNH) Pilot (RAMP): Mid-term Review of Progress and Preliminary Lessons Learned (March 2015). Kathmandu: Nepal Health Sector Support Programme (NHSSP)
- Prost, A., et al. (2013): Women's groups practising participatory learning and action to improve maternal and newborn health in low-resource settings: a systematic review and meta-analysis, *The Lancet* 381:9879, 1736-1746. Available at [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(13\)60685-6/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(13)60685-6/fulltext) (Accessed 18 December 2015).
- Regmi K, S Upreti, M Dar lang, HN Subedi, DP Prasai, KB Dahal, C Jha, S Aryal, S Rajbhandari, R Phillipson, S Keeling, A Dembo Rath and D Thomas (2013). A Study on Access to Maternal, Neonatal, and Child Health Services in Remote Areas of Nepal: consolidated report of findings. Kathmandu: Family Health Division and Nepal Health Sector Support Programme.
- Shrestha A, Khariwada R, Shrestha R, Sharma D, Subedi HN, Ghimire S, Thomas D (2012) *Strategic Review of the Equity and Access Programme (EAP)*. Kathmandu: Primary Health Care Revitalisation Division.
- Suvedi, BK, A Pradhan, S Barnett, M Puri, S Rai Chitrakar, P Poudel, S Sharma and L Hulton. (2009). *Nepal Maternal Mortality and Morbidity Study 2008/2009: Summary of Preliminary Findings*. Kathmandu: Family Health Division, Ministry of Health.

Annex 1: Summary of Lessons Learned from RAMP (2014/15)

Intervention type	Main lessons learned and recommendations
SUPPLY-SIDE: Improving availability and quality of MNH services in remote areas	<p>1. Small flexible grants managed by the district health office can fill key facility level gaps. Recommendation: health facilities and the DHO request a flexible grant fund from their DDC in the interim until staffing of two ANMs can be secured for each birthing centre.</p>
	<p>2. Placement of ANMs/SBAs at the district hospital retains skills and is motivational. Recommendation: scale- up regular placement of ANMs/SBAs at district hospital for two weeks every two years.</p>
	<p>3. Birthing centres can be successfully upgraded to BEONC centres. Recommendation: Review the distinction made between birthing centres and BEONC centres and provide staff with the necessary equipment for them to be able to provide all BEONC signal functions after they receive SBA training even if they are not stationed at a designated BEONC centre</p>
	<p>4. Capacity building and support to HFOMCs is essential to create an enabling environment at health facilities for improved functioning and quality of care. Recommendation: Include additional subjects in NHTC's HFOMC training module - leveraging VDC and DDC resources; and guidance on use of funds generated by facilities.</p>
	<p>5. Displaying facility performance in traffic light colours inside and outside facilities serves as a continuous reminder to staff to improve services and prompts response from HFOMCs. Recommendation: scale-up use of the health facility self-assessment tool as a means of improving quality and supporting staff motivation.</p>
	<p>6. Whole site infection prevention training contributes to significantly improved practices. Recommendation: one-day orientation and practical demonstration of infection prevention measures be provided to all new clinical staff joining the public health service, eg. in induction by NHTC.</p>
	<p>7. Orientation of health staff on the new HMIS formats is important as the level of understanding is low and errors and gaps are common. Recommendation: Ensure inclusion of staff in remote areas in HMIS orientation.</p>
	<p>8. Sustaining the RAMP model of facility level capacity enhancement requires extra support to the DHO and the public health nurse. Recommendation: Assessment of the RAMP focal health facilities 6-8 months post-pilot (around April/May 2016) to inform the intensity and duration of support needed to sustain observed gains.</p>
DEMAND-SIDE: Social and community mobilisation for behaviour change and enhanced service use	<p>1. Capacity, support and monitoring provided to social mobilisers is a critical factor for programme success. Recommendation: future health social mobilisation programmes need to provide adequate time and resources to support community mobilisers.</p>
	<p>2. Targeting individual households is an essential component of social mobilisation and behaviour change activities in remote and poor areas. Recommendation: Household visits needs to be factored into future planning and design of remote area community mobilisation and additional budget allocated.</p>

Intervention type	Main lessons learned and recommendations
	<p>3. Encouraging poor women with heavy work burdens to attend regular meetings requires considerable motivation building. Recommendation: provision of snacks as a minimum, and possibly a financial incentive linked to existing entitlement programmes such as the four ANC entitlements, should be considered.</p>
	<p>4. Access to mobile phones is increasing. Recommendation: Opportunities to use mobile phone technology to send messages to targeted women and families, needs exploring.</p>
	<p>5. Formation of community groups to take responsibility for emergency transport, and agreements with transport agents to establish communication mechanisms and costs for transporting emergency cases is essential. Recommendation: Include relationship building between community groups and transport agents in to future models; and assess need for additional transport subsidies (beyond Aama).</p>
	<p>6. Forging coordination across social mobilisation programmes is often difficult due to vertical management and funding arrangements. Recommendation: Focused attention needs to be given to developing linkages and coordination arrangements, which requires strong government leadership at district level and the centre.</p>
	<p>7. Recommendation: for longer term plans for remote areas, the investment envelope for behaviour change and demand generation needs to be results oriented and more realistic to ensure quality implementation.</p>

Annex 2: Map Showing RAMP Intervention and Comparison VDCs



Annex 3: EAP Social Mobilisation Activities

Activities	Activities planned & Progress		VDCs wise participants in awareness raising activities															Participants			
			Khejenim VDC			Tapethok VDC			Lingkhim VDC			Santhakra VDCX			Thinglabu VDC			Progress			Planned
	Planned	Progress	M	F	Tot	M	F	Tot	M	F	Tot	M	F	Tot	M	F	Tot	M	F	Tot	
Program Induction workshop & social mapping	5	5	32	24	56	25	34	59	18	40	58	21	33	54	22	37	59	118	156	274	250
Secondary & lower secondary teachers' orientations	5	5	8	3	11	6	5	11	13	4	17	10	4	14	7	4	11	44	26	70	75
Secondary & lower secondary students' orientations	5	5	7	18	25	2	18	20	10	30	40	12	18	30	9	11	20	40	89	129	100
Interaction programme with local social orgs, youth clubs, political parties, other stakeholders	5	5	23	15	38	32	24	56	20	11	31	17	13	30	26	20	46	118	87	205	200
Interactions between service providers and consumers/rights holders	15	15	50	36	86	32	49	81	27	43	70	51	37	88	57	51	108	217	230	447	375
Interactions between pregnant women and their mother in law	15	15	0	149	149	0	103	103	0	99	99	0	77	77	0	101	101	0	452	452	450
Interactions between pregnant women and husbands	15	15	69	78	147	40	49	89	48	58	106	41	54	95	41	75	116	239	301	540	450
Extra activities for students mobilization	50	50	270	390	660	221	354	575	277	316	593	281	373	654	265	362	627	1314	1703	3017	
Quarterly meetings of social mobilisers with FCHVs	15	15	0	50	50	0	43	43	0	53	53	0	51	51	0	51	51	0	197	197	225
Orientation programmes to traditional healers (dhami-jakris)	5	5	26	0	26	23	0	23	27	0	27	21	0	21	24	0	24	121	21	142	100
Interaction program with adolescents & youths	5	5	16	19	35	8	21	29	15	20	35	13	17	30	14	26	40	66	99	165	150
Interactions with newly married couples	5	5	10	15	25	4	4	8	12	19	31	11	7	18	15	14	29	52	63	115	150
Coordination of local social mobilizers	15	15	10	8	18	21	5	26	7	9	16	12	6	18	12	4	16	62	38	100	90
Street dramas for MNH message dissemination	15	16	99	139	238	45	50	95	92	112	204	116	131	247	208	83	291	560	500	1060	.
Health day celebrations for message delivery	10	10	32	65	97	17	48	65	25	65	90	58	30	88	22	54	76	-	.	-	-

Activities	Activities planned & Progress		VDCs wise participants in awareness raising activities															Participants			
			Khejenim VDC			Tapethok VDC			Lingkhim VDC			Santhakra VDCX			Thinglabu VDC			Progress			Planned
	Planned	Progress	M	F	Tot	M	F	Tot	M	F	Tot	M	F	Tot	M	F	Tot	M	F	Tot	
Interactions with recently delivered women	5	5	0	30	30	0	27	27	0	25	25	0	26	26	0	26	26	0	134	134	125
Meetings with local organization and ward citizen forums	5	5	9	16	25	14	13	27	11	21	32	15	11	26	7	21	28	56	82	138	125
Programme implementation action learning sharing meeting with local VDC level stakeholders	5	5	12	15	27	15	13	28	7	19	26	5	21	26	3	22	25	42	90	132	125
Total	200	201	673	1070	1646	505	812	1300	584	944	1553	684	909	1505	710	908	1618	3156	4418	7574	2990

Acronyms: M = male, F = female, tot = total