

Postnatal Care Home Visits

A Review of the Current Status of Implementation in Five Countries



Photo Credit: Colin Crowley/Save the Children

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1. INTRODUCTION

This report gives an account of the early development of community-based newborn programs in 5 countries (2 in Asia, 3 in Africa), in which post-natal home visits have featured prominently. Efforts are made to draw lessons applicable to similar efforts elsewhere. This documentation was done as background for a multi-partner consultative meeting held at WHO early in 2012. It is based on a combination of document review and field work (as described in more detail in the methods section below). For each of the countries, there is a description of the policy adoption process and early implementation experience. Actual program performance is explored primarily through use of baseline and endline household surveys in a small number of “early implementation districts”; for most of the countries, such data were available only from a single district. It can be expected that such early implementation experiences would be more robustly supported than would be possible for nation-wide roll-out and that observed performance in such settings would therefore over-estimate what could be achieved sustainably at scale. Nevertheless, even in these early implementation districts certain important performance issues came to light. Notably, the proportion of newborns receiving early post-natal home visits was consistently lower than expected.

At the end of the day, the rationale for any new program initiative is to bring about improved population health outcomes. This, in turn, requires achievement of high effective coverage. In early program experiences, when effective coverage is lower than expected this is an important cue that we need to look closely at our assumptions, our design choices, and the quality of our execution. The current report draws out certain lessons but is only a first step in a process that will need further elaboration. Furthermore, the current report is based on information that was available in late 2011 and early 2012. Since that time, community-based newborn programs have further expanded in these countries and have been introduced elsewhere, and more data is now available on how these programs are performing. Building on the learning captured in this report, supplemented by more recent experience, documentation and data, we are now in an even better position to characterize the contribution that such approaches can make but also what are the requirements for such programs actually to deliver. With such guidance, we are better able to make sound, contextually-appropriate design choices.

2. BACKGROUND

In 2009, UNICEF and WHO issued a joint statement recommending home visits for care of the newborn infant in the first week of life as a complementary strategy to facility-based postnatal care in order to improve newborn survival. This recommendation was based on the findings of several research studies have shown that home visits by appropriately trained workers can reduce neonatal mortality even where health systems are weak. Impact in these studies was achieved by the promotion of simple early newborn practices such as early and exclusive breastfeeding, appropriate cord care, thermal care, and recognition of danger signs and treatment and referral when needed. Ministries of health in a number of countries, with support from development partners, have moved towards the adoption of the WHO/UNICEF joint statement on improving home-based post natal care (PNC).

In preparation for a global review of progress in implementation of home-based PNC, a review of progress was conducted in five countries in which the MOH is supported by Save the Children’s Saving Newborn Lives (SNL) and USAID’s Maternal and Child Health Integrated Program (MCHIP). The purpose of this review was to assess the progress made in adoption and roll-out of programs on the ground, and to document lessons learned.

3. METHODS

Five countries were selected for the review – Bangladesh, Malawi, Nepal, Nigeria and Rwanda. Visits were made to all countries except Nigeria between September 2011 and January 2012. Telephone interviews were conducted with program managers of the Nigeria MCHIP program in December 2011. In each country documents relevant to PNC home visits were reviewed, including policies and strategies, program reports, training and health education

documents, and surveys and monitoring data. Interviews were conducted with MOH staff involved with planning and roll-out of the maternal, newborn and child health program, as well as other local stakeholders and international development partners. Field visits to districts implementing home PNC program activities were conducted. MOH staff involved with implementation at the lower levels including district and sub-district managers, supervisors, facility and community-based health workers were interviewed – as well as community volunteers, community members and mothers of young children. Findings were synthesized as short country summaries, organized into three areas: 1) policy and strategy adoption; 2) community health worker selection and training; and 3) program implementation and coverage.

Findings of country summary reports, except Nigeria, were reviewed for accuracy by MOH managers responsible for MNCH program implementation, as well as local project staff of MCHIP/SNL, and other development partners who had supported implementation of community-based MNCH. Nigeria findings were reviewed by MCHIP country project managers.

This report summarizes findings from all countries.

Key respondents in each country are presented in Annex 1.

Detailed country reports are presented separately.

4. DEVELOPMENT AND POLICIES AND STRATEGIES

Four countries have adopted PNC home visits as a national policy or strategy. Nigeria has not yet adopted a national approach but has developed an Integrated Maternal, Newborn Strategy and Child Health Strategy (IMNCH, 2007), which includes a focus on early PNC contacts. The strategy recommends that States each develop their own approaches to improving early PNC contacts including home visits based on the local system and barriers to access. To date 24 states out of 36 and the Federal Capital Territory (FCT) have begun implementing activities based on the IMNCH. However, progress with implementation is highly variable between and within States. Experience from three northern States – Kano, Zamfara and Katsina was reviewed. In these States implementation of early PNC home visits was supported by the USAID ACCESS and MCHIP projects.

4.1 Content of Policies/Strategies

Table 1 outlines the main features of the PNC home visit policies and strategies by country. Policies and strategy documents that supported adoption of the PNC home visit approach are shown in Box 1. In all countries except Nigeria, the PNC home visit approach has been adopted as a policy or strategy for national use, with CHWs trained and supported to deliver a community maternal newborn package in early implementation districts. In Nigeria the PNC home visits approach is not yet a national policy or strategy and findings are reported from 3 early implementation States.

Nepal and Rwanda began implementation of the PNC home visits approach using community health volunteers with financial incentives – performance based financing schemes have been established. Bangladesh and Malawi have government salaried community health workers available. In 3 States in Nigeria, unpaid volunteers were used to conduct home visits. In all countries visits during pregnancy are included – with Nepal recommending the highest number of pregnancy visits (4). CHWs provide pregnancy counseling and refer women for ANC at health facilities.

All strategies recommend an early PNC visit on the first day after delivery and 3 countries recommend a second visit on day 3. One country (Nepal) recommends 3 visits in the first 7 days; Malawi requires a third home visit on

day 8; in Bangladesh the third visit can take place between days 7 and 14. All policies include screening the health status of mothers and newborns at the same time; and all included the recommended core competencies for PNC.

Table 1: PNC home visit Policy/Strategy by Country, January 2012

	Bangladesh	Malawi	Nepal	Nigeria (3 States)	Rwanda
Cadre providing home visits:	FWAs and HAs – GO salaried	HSAs – GO salaried	FCHV – volunteer with PBF	Female HH Counselors – project supported volunteers	ASM – volunteer with PBF
Home visits to pregnant women	2	3	4	2	2
PNC visit schedule	1, 3, 7-14, 42	1,3, 8	1, 3, 7, 29	1, 2-7, 3m, 6m	1, 5-7, 28
3 visits in first 7 days	No	No	Yes	No	Yes
Screening mothers and newborns at the same time	Yes	Yes	Yes	Yes	Yes
All 7 core competencies included in PNC home visit training*	Yes	Yes	Yes	No	Yes

* Core PNC competencies for workers providing PNC home visits: Promotion of NB care (early/exclusive BF, warmth, hygiene); Promotion of optimal care for mother (nutrition & family planning); Promotion of care-seeking for mother & newborn; Identification of danger signs in mother + referral; Identification of danger signs in newborn + referral; Support for breastfeeding; Care of low birth weight infant (feeding, skin-to-skin contact)

Box 1: PNC home visits - Policies and Strategies supporting national adoption

Bangladesh: National Neonatal Health Strategy and Guidelines (NNHS). As a result of the NNHS, maternal and newborn health interventions, including early PNC home visits, were included in the National Health, Population and Nutrition Sector Development Program 2011-2016 (HPNSDP) – approximately 20% of the health budget has been allocated to maternal, newborn and child health.

Malawi: *Road Map for Accelerating Reduction of Maternal and Newborn Mortality and Morbidity in Malawi* – a guideline document for program implementation that includes PNC home visits. A Community-based Maternal and Newborn care Package (CBMNC) was developed and adopted nationally.

Nepal: National Neonatal Health Strategy. Using the strategy as a starting point, a Community-Based Newborn Care Package (CB-NCP) was developed and adopted, which describes an essential package of newborn interventions and an implementation framework for PNC home visits.

Nigeria: The Integrated Maternal, Newborn Strategy and Child Health Strategy (IMNCH) – 2007. This strategy outlines key interventions along the continuum of care for the mother and child and approaches to improving intervention coverage, including a focus on PNC interventions and early PNC home contacts. The strategy was supplemented by two editions of: *Saving Newborn Lives in Nigeria: Situation Analysis and Action Plan for Newborn Health* (2009 and 2011). These reviews outline action steps for implementation and were developed and supported by a number of development partners. Implementation currently only in some States.

Rwanda: A community-based maternal and newborn package was developed and adopted for national implementation by the Division of Maternal and Child Health – through a community health desk with staff allocated full-time to supporting community-based activities.

In two countries, policies recommend additional PNC home visits for low birth weight babies: Bangladesh (days 14 and 28), and Rwanda (one additional visit in the first 7 days and day 14). In Nepal and Rwanda the policy includes a requirement that the CHW accompany the mother to the health facility at the time of delivery. In Nepal, a policy to allow FCHVs to give the first dose of co-trimoxazole to newborns with suspected infection, and then refer, was also included in the PNC home care package.

Lessons learned: content of Policies/Strategies in 5 countries

- All policies and strategies use CHWs to visit women along the continuum of care between pregnancy, delivery and the post natal period. The prescribed number of pregnancy contacts ranges between 2 and 4. CHWs refer mothers for ANC at health facilities. In Nepal and Rwanda, the policy recommendation is that CHWs accompany mothers to facilities for delivery.
- All policies and strategies recommend the first PNC contact within 24 hours of delivery; and 3 countries a second visit on day 3. One country (Nepal) recommends 3 visits in the first 7 days; Malawi requires a third home visit on day 8; in Bangladesh the third visit can take place between days 7 and 14.
- All policies and strategies recommend screening of the mother and newborn at the same time.
- All policies and strategies include core PNC competencies.
- Policies in Bangladesh and Rwanda include 2 additional home visits for babies classified as LBW.

4.2 Process of Policy/Strategy adoption

In the four countries that have adopted a national policy or strategy on PNC home visits, the process involved several common elements. Successful adoption generally required the involvement of senior policy makers and technical staff. Process steps included in adoption are summarized in table 2. The main elements that contributed to adoption of the approach include:

Availability of local research data on community-based newborn care. Data are important in the early phases of adoption, both for convincing policy-makers and for helping plan the content of the policy. Local data are particularly persuasive – they also mean that there is a cadre of local researchers who are familiar with the issue. A number of other mechanisms have been used to provide data to support adoption, including study tours between countries (for example to SEARCH, or between SC/SNL country programs) – which allow direct field experience. In addition, participation in regional or international review meetings or conferences, and workshops that present data from a variety of settings have been useful. Once implementation is underway, operational research is useful for informing how best to implement in the local setting (for example the SC/SNL study in Faridpur Bangladesh that used comparison and control districts to look at the feasibility of introducing a community MNH package using the local government system.)

Formation of a national technical working group or coordinating body. All countries formed a group to plan and coordinate implementation. Groups were usually chaired by managers of maternal or child health divisions. High level endorsement was required in order to have the group recognized. Groups included program managers from both maternal and child health, clinical staff and development partners. National working groups have had four key functions:

- 1) Development of a minimum package of interventions. This required review of technical standards on community maternal and newborn care – and a process to decide on the package. In Bangladesh and Nepal, technical sub-committees were formed to work on elements of the strategy, including training, logistics and monitoring and evaluation. Working groups reported back to the main group and a consensus was reached. Representation from development partners and clinical staff was essential to ensure that technical quality was high, that the best quality data were used and that experiences from other countries were reviewed.
- 2) The development of a single set of national guidelines. By involving all stakeholders the government helped ensure that the same standards and guidelines are used throughout the country.
- 3) Development and coordination of implementation plans. Early implementation has required support from development partners. Working groups have been essential for mobilizing technical and financial resources. Because all key stakeholders sit on working groups, decisions are made together, there is consensus on materials and guidelines; and implementation costs and responsibilities have been shared.

High level endorsement. Decisions made by working groups generally were more likely to be approved by MOH directors – approval has ensured that policy and strategy decisions are recognized by staff at all levels of the health system.

Table 2: Process of PNC home visits policy/strategy development, 4 Countries, December 2011

Country	Evidence base – local data available?	Technical working group or coordinating group established?	Consensus building and advocacy (all stakeholders)?	Resources required to develop policy/strategy?	Supporting policies adopted?
Bangladesh	Yes	National core committee for NN health	Yes	Yes – support from several partners	Yes
Malawi	Yes	National task force for CBMNC	Yes	Yes, provided by SC/SNL, USAID, UNICEF	Yes
Nepal	Yes	TWG for CB-NCP	Yes	Yes, USAID, SC/SNL, UNICEF, CARE, PLAN	Yes
Rwanda	No	TWG for community-based maternal and newborn health. MCH division.	Yes	Yes, WHO, UNICEF, USAID/ACCESS	Yes

Consensus building and advocacy. Consensus building was important in all countries. The formation of a technical working group was a part of this process. Better links between maternal and reproductive health and child health divisions in ministries was generally needed – since early newborn care is a responsibility of both. Collaboration between these divisions had often been limited in the past. Ministry of health units separate from those implementing the technical programs were important in Nepal – the National Health Training Centre (NHTC) and the National Health Information, Education and Communication Center (NHIECC) were involved in development of relevant sections of the PNC strategy. In order to ensure wider acceptance a number of approaches were used, including: workshops to review guidelines or strategies; the dissemination of research papers and program reports on the PNC home visit approach; and involvement of professional societies (pediatrics and obstetrics) in the

technical working group. In Rwanda the process of adoption of early PNC home visits began with a Regional African Workshop on community MN care supported by WHO and UNICEF – a number of countries participated and were able to share experiences.

Resources for development of policy/strategy. Some resources were required and were usually provided by development partners. Costs included meetings and workshops, printing and copying of materials and travel costs for site visits. Commitment of resources helped facilitate the process of adoption.

Supporting policies. In all countries there were a number of policies that supported the early PNC home visits approach. These policies contributed to uptake by countries. Examples include; the introduction of performance-based incentives for CHW home visits – in Rwanda and Nepal; and an expansion in the number of CHWs (HSAs) from 4,900 to 10,500 in Malawi, through the MOH six-year Emergency Human Resource Programme (EHRP).

Lesson learned: Process of policy adoption

- A technical working group/coordinating body with representation from MOH maternal and child health staff, clinicians, and development partners, was critical to ensuring adoption of community-based PNC. Coordination between stakeholders helped build consensus and ensure technical quality.
- Definition of a minimum package of interventions was an important first step.
- Local data on community-based newborn care helped facilitate adoption – although no countries had data available on all elements of the community package.
- Consensus building using a number of mechanisms was important to ensure that the community based PNC policy was adopted. Better coordination between maternal and child health divisions of ministries of health is important.
- The development process had some costs that were assumed by development partners.
- Supporting policies helped facilitate adoption of PNC home visits – including increased availability of CHWs, and the adoption of CHW incentive schemes.



Nigeria, photo by Pep Bonet Noor/Save the Children

5. SELECTION AND TRAINING OF COMMUNITY HEALTH WORKERS

5.1 Characteristics of CHWs

In areas where the PNC home visits approach is being implemented, community-based health workers are used. (categories of CHW are shown in Box 2). In Malawi and Bangladesh the CHWs are government employees. Bangladesh also has a wide network of NGO-supported CHWs – the Shasthya Shebika(SS) used by BRAC is the most widespread. SSs are volunteers who receive performance based incentives, and a small commission on sales of medicines. In Nepal and Rwanda, volunteers receive performance-based incentives for completion of certain tasks during pregnancy, childbirth and in the postnatal period. In Nepal tasks required to receive PBF incentives include PNC home visits at days 1, 3 and 7, while in Rwanda PNC home visits are not included in the PBF incentive scheme. Nigeria used volunteers who were specially recruited for the project and received no incentive payments, but were supported with equipment and supplies and monthly meetings with supervisors. Characteristics of CHWs by country are shown in Table 3.

Community health workers are selected by the communities they serve, with the exception of HSAs in Malawi who are selected by District Health Teams. CHWs are expected to live in these communities. Local selection means that they are generally well accepted and respected in communities, and are motivated and willing to work.

Table 3: Characteristics of community health workers or volunteers implementing PNC home visits, 5 Countries, January 2012

Country	Population served	Gender	Educational level	Duration of basic training received	Duration of community MN package training received	Supported by government salary, monetary incentives or other types of incentives?
Bangladesh Government FWAs/HAs	200-1000 + HH	Female (married)	Graduated secondary	6 weeks	5 days	GO salaried employee
Bangladesh non-government Shasthya Shebika	150 HH	Female (married)	Able to read and write	18 days	Monthly refresher	Volunteer PBF -Incentive payments Margins on sale of drugs
Malawi HSAs	200-300+ HH	Mixed: mostly male	Graduated secondary	12 weeks	9 days (+6 days comm. mob training)	GO salaried employee
Nigeria Female Household Counselors (FHCs) (3 States)	100-200 HH	Female (married)	Preferably literate	None	5 days	Volunteer In kind incentives – monthly meetings (stipend for travel and food)
Nepal FCHV	100-150 HH	Female (married)	literate preferred	~19 days	7 days	Volunteer PBF – incentive payments
Rwanda ASM	50-150 HH	Female	Primary and able to read and write	None	6 days	Volunteer - PBF incentive payments



Photo Credit: Jeff Holt, Save the Children, Polio Vaccine, Bangladesh

Box 2: Categories of CHW conducting home visits, by country

Bangladesh – government	Female Welfare Assistants (FWAs), Health Assistants (HAs)
Bangladesh – non-government	Shathya Shabikas (SS)
Malawi	Health Surveillance Assistants (HSAs)
Nigeria (3 States)	Female Household Counselors (FHCs)
Nepal	Female Community Health Volunteers (FCHVs)
Rwanda	Animatrice de Santé Maternelle (ASM)

The government salaried CHWs in Bangladesh and Malawi receive more basic training than volunteer workers – 6 and 12 weeks respectively. Responsibilities for these workers tend to be broader than for volunteers, requiring more technical training. The main problem reported by these workers is that there are inadequate numbers available, which makes their catchment population too large – they are often unable to visit HH in their areas. In Malawi, many also reported that they are not able to live in the communities they served, which made home visits more difficult.

The volunteer CHWs in Bangladesh, Nigeria, Nepal and Rwanda all receive little or no basic training – and 5-7 days training in the MNCH package. They tend to be allocated to much smaller catchment populations, and find reaching all the houses in their area much easier. Communities and staff report that even less literate volunteers are generally able to master basic home visit and counseling tasks. Illiterate volunteers had difficulties completing community registers, however, and in areas where less literate CHWs are common, registers needed to be adapted. In Nepal registers use pictures instead of text to help with understanding for less literate workers. Performance-based incentive schemes have been used for volunteers in Bangladesh, Nepal and Rwanda. Incentives are given for some, but not all, contacts along the continuum of care, with only Bangladesh and Nepal including PNC home visit contacts in the required tasks for incentives. If CHWs report completing the required number of contacts, then they receive a cash incentive; and a proportion of the full amount if they miss contacts. Performance-based financing is run through the government system in both Rwanda and Nepal; funds provided by a central government allocation. Health facility staff use standard forms to record CHW contacts each month, using community registers. Performance –based incentives for volunteers in Bangladesh are run by the BRAC NGO – which has its own systems and funding sources.

Lessons learned: characteristics of CHW

- CHWs are both government salaried and volunteers. Volunteers are nationally recognized in Nepal and Rwanda, and in available in 3 project supported States in Nigeria.
- Government salaried CHWs have more basic training and serve larger catchment populations. Roles and responsibilities for salaried CHWs tend to be broader than for volunteers.
- Volunteer CHWs have less basic training and serve smaller catchment populations.
- CHWs and volunteers should live in communities, be respected and available for home visits. Ideally they should be literate, female and married. It is critical that CHWs live in the communities they serve in order to conduct home visits and reach mothers and newborns early.
- Performance based incentive schemes are in place for volunteers in 3 countries. In Nepal and Rwanda funds are from central government allocations.

5.2 Tasks of CHWs

Tasks are summarized in Table 4. A community register system has been introduced in all countries. CHWs in early implementation areas are generally able to use community registers. Supervisors report that they are particularly useful as a job aid – to ensure that CHWs make all contacts along the continuum of care. At review meetings with facility supervisors, they are used to review whether visits have been conducted and to plan for the next month. In areas with incentive schemes in place (Bangladesh – non-government, Nepal and Rwanda), registers are used to calculate the proportion of women who received key contacts. The most frequent problem encountered with registers is that they are too long and complicated. Illiterate CHWs sometimes have difficulty completing registers properly. In all countries except Bangladesh, a new MN register, which tracks pregnant women along the continuum of care was introduced to support implementation. This required the printing and supply of registers in the longer term – and added an additional burden on CHWs. In Bangladesh-government implementation areas the routine FWA register has been used – forms have been added to track PNC visits 1, 2 and 3.

CHW volunteers in Bangladesh non-government, Nepal and Rwanda are expected to accompany mothers to facilities for delivery. In Bangladesh government and Malawi, government salaried CHWs are not expected to accompany mothers to facilities – in part because this is difficult because of their lower household coverage. The policy to accompany mothers to facilities has potential implications for facility delivery rates and the place where early PNC is provided.

Table 4: Tasks of CHWs and volunteers implementing PNC home visits, 5 Countries, December 2011

Country	Use registers for recording and tracking pregnant women?	Accompany to facility for facility birth?	Treat and refer sick newborns with first dose of antibiotic?	Conduct health promotion and behavior change activities on MNH?	Conduct community mobilization on MNH?	Other responsibilities as well as PNC home visits?
Bangladesh Government FWAs/HAs	Yes	No	No	Yes	Yes in some project areas but not widespread	Yes – FP, simple curative care, distribution of micronutrients
Bangladesh Shathya Shebika	Yes	Yes	No	Yes	No	Yes – FP, management of diarrhea and pneumonia
Malawi HSA	Yes	No	No	Yes	Yes – community core groups	Yes – CCM, malaria, TB etc
Nigeria CC	Yes	No	No	Yes	Yes	No
Nepal FCHV	Yes	Yes	Yes	Yes	No	Yes – case-mgt of ARI + Diarrhea, FP, nutrition
Rwanda ASM	Yes	Yes	No	Yes	No – but have developed guidelines	No

Only Nepal has included assessment and treatment of sick newborns in the essential MN package. Introduction of this intervention required an additional recording form to ensure that the first dose of co-trimoxazole was given correctly and that the newborn was referred immediately and followed up at home. Co-trimoxazole was procured and distributed as part of the essential package of medicines. Most countries do not have a policy in place allowing antibiotic treatment of newborns by CHWs.

All CHWs conduct behavior change and health promotion activities. These are usually done using one-on-one household counseling using counseling cards or flip charts. Group meetings with mothers groups and other community bodies are also often included. CHWs report that pictorial job aids work well and are easily understood by women and families. Supervisors report that CHWs are able to understand and master the key messages and convey them effectively using the local language.

Community mobilization has been used in some early implementation areas of Bangladesh, Malawi and Nigeria to engage communities and involve them directly in planning and decision-making. Rwanda had developed guidelines on community mobilization, but has not yet begun implementation.

CHWs in all countries except Nigeria and Rwanda have other program responsibilities in addition to the maternal and newborn package. These include community IMCI, family planning, and nutrition. Each program area has separate training packages, and sometimes separate community registers. In these areas CHWs report that training activities take them away from communities, and that they are sometimes over-burdened. Separate training packages are often duplicative – for example some c-IMCI interventions overlap with those in nutrition. In Malawi

HSAs are expected to spend 2-3 days a week providing primary health care services at facilities, and on other days are doing immunization outreach clinics – and on these days cannot do home visits. Health staff and CHWs in many areas requested more integrated or combined approaches to training that reduced time away from their communities and made their responsibilities easier to understand.

Lessons learned: Tasks of CHWs

- Community registers have been used widely. They are reported to be useful job-aids and are used for facility-based planning with health workers. In some areas CHWs report that registers are too long and complicated; and that they have multiple registers for different program areas.
- CHWs are required to accompany mothers to facilities for delivery in Bangladesh-non government, Nepal and Rwanda. This approach has potential implications on facility delivery rates and the place where early PNC is provided.
- All CHWs conduct health education and health promotion activities on key MN messages. On-on-one counseling is the most frequently used approach, using simple counseling cards.
- Community mobilization approaches have not yet been used widely. Where they have been used they can be effective in improving knowledge and practices. There are concerns about the time and resources required for this approach.
- CHWs in many countries have multiple program responsibilities, each with separate training packages. Increased responsibilities can limit their ability to provide home visits. Better integration of training of CHWs is needed.

5.3 Training in the MN package

All countries have developed a MN training package that teaches the schedule of home visits, and tasks at each visit. Core maternal and newborn competencies are included in guidelines used in all countries. Training packages are practice-based and pictorial. Job aids and counseling cards have usually been distributed during training, so that they can be used for practice. Trainers and trainees report that enough practical experience is included, and that the duration of training is adequate. Training has used a cascade model, with a cadre of master trainers being established at the central level, who are then responsible for training district trainers. District supervisors and facility-based health workers are trained initially – these staff are responsible for training CHWs. In most early implementation areas, training has been funded and supported by development partners – who have ensured that standards of training quality have been met –including an adequate number of trained facilitators, sufficient materials, and before and after assessments of knowledge. Follow-up after training has rarely been conducted. In areas where monthly meetings with facility supervisors are conducted, refresher training is sometimes conducted. Pre-service training for government staff in Malawi or Bangladesh (HSAs and FWAs/HAs) has not yet been updated to include the community MN package.

Lessons learned; Training of CHWs

- An adequate number of trained facilitators is essential to ensure high quality training. District trainers are particularly important, since they oversee local sub-district training.
- Quality standards for training are useful for ensuring that quality is maintained – particularly as the MN package is rolled out more widely. A strategy is needed to ensure that quality standards are followed regularly as a component of routine training.
- Follow-up after training is useful but difficult to sustain; alternative methods of updating reviewing CHW knowledge and skills – for example at regular meetings with facility supervisors have been used.
- A training plan – outlining who will be trained and when is essential for planning.
- Training packages from other countries that have already developed, adapted and tested the approach were useful for countries beginning development – for example Malawi training materials were used to inform the development of the approach in Rwanda.

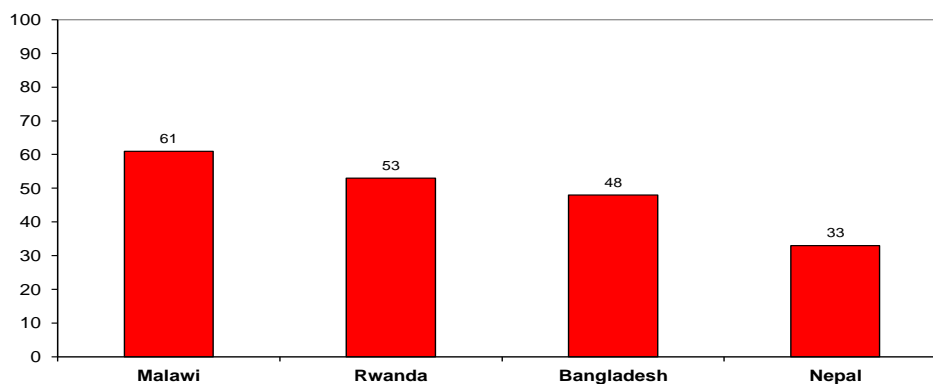
6. Implementation and coverage

6.1 Status of Implementation

In the four countries that had adopted PNC home visits as a national approach, implementation was planned and coordinated with development partners. Implementation has been district based. Early implementation districts were selected and partners allocated to support implementation in these districts. A coordinating body has been established in all countries to oversee implementation. A number of criteria were used to select early implementation districts including public health need, presence of motivated district staff, a relatively functional primary health care system with staff in place.

The proportion of districts that have begun implementation by country is shown in Figure 1. Districts are considered to be implementing if they have trained district supervisors and begun training of CHWs. Within districts, the proportion of CHWs that have received training in home-based PNC (health worker training coverage) is variable. All countries have tracked health worker training coverage by district and used these data to develop a training plan.

Figure 1: Districts implementing Community-based Maternal and Newborn Packages, 4 countries, January 2012



Models of implementation of the community-based maternal and newborn package have differed both within and between countries. These models range from use of the routine government system with minimal partner inputs to implementation through systems that run parallel to those of the government. Each model has different resource requirements, and has implications for longer term sustainability – the more external resources required, and the further away from what is possible through the routine government system, then the more difficult it becomes for these activities to be sustained in the longer term.

Approaches to implementation are summarized in Table 5. In Nepal, Malawi and Rwanda the national MN package is implemented in early implementation districts using national standards. In Bangladesh the DGFP has only recently finalized a national community-based MN package. Projects in different districts are using slightly different guidelines and methods – and are testing different approaches; the resource inputs required are different for each. Project activities – even when working through the government system – tend to be time limited. It is hoped that lessons learned from projects will be used to inform development and implementation of the national approach nationally, using nationally endorsed guidelines.

Implementation packages for PNC home visits – national level -4 countries

Bangladesh	Community-based maternal and newborn package –DGFP. (Training about to begin)
Malawi	Community-based Maternal and Newborn Care package (CBMNC)
Nepal	Community-based Newborn Care Package (CB-NCP)
Rwanda	Community maternal and newborn health program (HB-MNHCP)

Table 5: Implementation of Community-Based MNC packages, 5 countries, January 2012

Intensity of resource inputs	Program/project	# Districts	Implementing partners	Estimated duration
Government + Routine GO system supplemented to pay training costs, planning and coordination. Logistics, equipment and supplies shared with the local system	Bangladesh	2	DGFP and DGHS, SC, Jhpiego, Local NGOs (Shimantik, FIVDB)	2009-13
	Nepal National CB-NCP program	25	CHD./FHD DHS SC/SNL UNICEF CARE PLAN One Heart USAID	2008 – ongoing
Government ++ Routine GO system with provision of logistics support, training, local project support staff	Malawi National CBMNC program	17	MCH-MOH SC/SNL ACCESS/MCHIP UNICEF UNFPA PMNCH	2007 – ongoing
	Rwanda National HB-MNHCP program	6	MCH –MOH MCHIP UNICEF	2008 –ongoing
Government +++ Routine GO system with provision of logistics support, training, local project support staff, ± incentives for CHWs, ± new cadres of staff	Bangladesh Maternal Newborn and Child survival Project (MNCS)	8	DFHS – IMCI unit, UNICEF, ICDDRB and local NGOs	2008 – 2013
	Bangladesh Maternal and Neonatal Health Initiative (MNHI)	11	MOH Reproductive health unit and UN partners (UNFPA, UNICEF, WHO)	2007 – 2016
	Nigeria 3 States -CMNH ACCESS/MCHIP	29 LGAs in 3 States	MOH – MCH ACCESS/MCHIP Jhpiego, SC	2006-2011
	Bangladesh Improving Maternal, Neonatal and Child Survival Project (IMNCS)	10	DGHS - Reproductive health unit, BRAC, UNICEF	2008 -2013

6.2 Data from Early Implementation Districts

Household survey data from SC/SNL-supported early implementation districts in Bangladesh, Malawi and Nepal were reviewed. In Nepal and Malawi, data were collected from areas in which the national MN package was implemented through the routine government system with variable intensities of project support – the models used are summarized in Table 5. In Bangladesh, data were collected from districts that were part of an operations research study in which a MN package was tested in both an intervention and control district – implementation was conducted through the routine government system with moderate levels of project support (++). This model is not presented on Table 5 since implementation ended at the completion of the study – data from the study were used to inform the development of the national MN package and approaches to implementation. In implementation areas of all three countries, inputs included all training costs, some essential equipment and supply costs, and technical support for conducting supervision and monitoring. Household surveys were conducted before implementation and after a period of implementation. The time between the start of full implementation to endline data collection was 14 months in Bangladesh (April 2009-June 2010), 12 months in Malawi (June 2010-June 2011), and 17 months in Nepal (January 2010-June 2011). Home visits may have started earlier in some areas, depending when training was conducted. Approximately 100 CHWs in Bangladesh, 600 in Malawi, and 850 in Nepal were trained in intervention areas. Survey questions were generally similar to those used in DHS, although Bangladesh and Malawi included additional questions to probe about home visits and responses to these questions were used to calculate the indicators. Changes in intervention coverage along the continuum of care are shown in Figures 3, 4 and 5. These Figures show the proportion of mothers and newborns that had a postnatal contact within 2 days of delivery at either facility or home. The proportion of women receiving home visits by timing of visits is shown in Figure 6.

Principal findings from before and after household surveys are:

- An increase in facility deliveries and deliveries by skilled birth attendants was noted in all settings (though not necessarily attributable to the PNC home visit program).
- The trend in coverage of PNC contacts within 2 days is upwards in all countries. This trend is likely due to increases in facility deliveries as well as the implementation of the community-based programs. In Nepal and Bangladesh coverage was very high. In Malawi coverage remained relatively low after full implementation and despite high levels of facility delivery. More work is needed to understand if women are able to accurately report receipt of postnatal care.
- The proportion of newborns receiving postnatal care was lower than the proportion of women receiving postnatal care in Malawi, indicating there may have been missed opportunities to provide care to the newborn at the same time as the mother. It appears to be less of a problem in Bangladesh and Nepal. However, it is difficult to interpret these data as mothers who delivered at facilities in Malawi may not have known their baby received postnatal care, especially if the baby was checked in another room.
- Data on home visits during pregnancy and the PNC period show that CHWs are able to reach a higher proportion of women during pregnancy than after birth (Figure 6). While Bangladesh and Nepal both achieved moderate coverage of early postnatal visits (about half of women interviewed reported a home visit within 3 days after birth), many women who receive a pregnancy visit do not go on to receive a postnatal visit. In addition, if a contact occurred within the first week after birth, it usually occurred during the first 3 days, especially in Bangladesh and Nepal. In Malawi, a very low proportion of women were visited early – this may reflect the low population coverage of HSAs and the fact that they often live out of communities

(approximately 50% of CHWs did not live in the community they served). Data on birth notification indicate that when CHWs are notified of the birth early, they are much more likely to visit the house early.

- Community register data from implementing countries also show that implementation increases the number of sick mothers and newborns referred for referral care. Quality of referral care has therefore become important – and strategies to ensure that referred women and newborns reach facilities.

Figure 3: Coverage of Maternal and Newborn Interventions, Madhukhali Upazilla, Bangladesh, 2008 and 2010

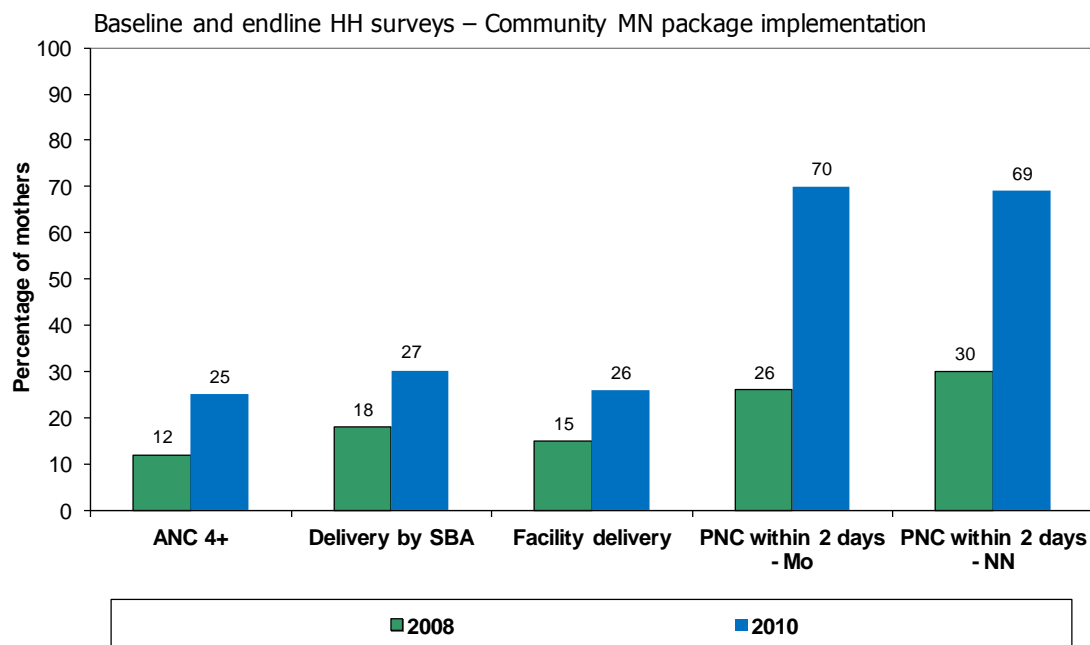


Figure 4: Coverage of Maternal and Newborn Interventions, Bardiya District Nepal, 2008 and 2010

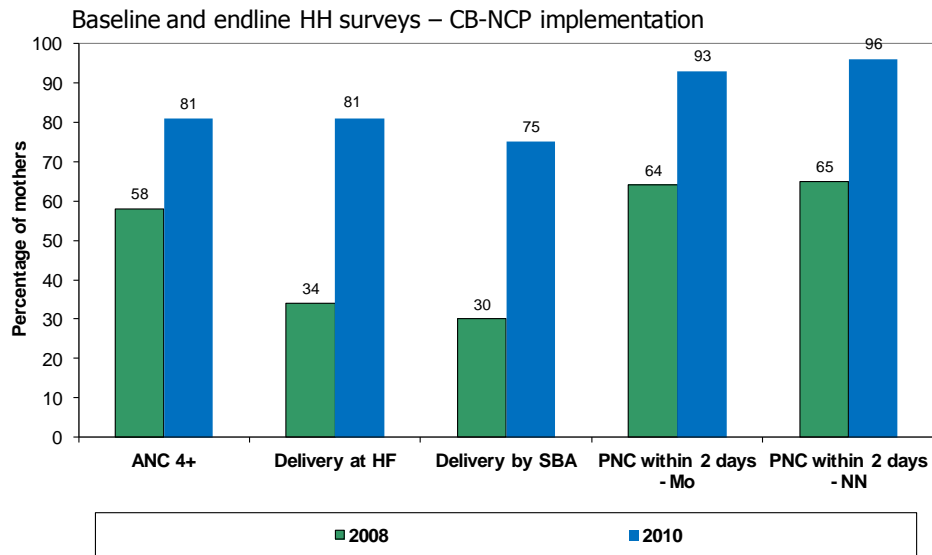


Figure 5: Coverage of Maternal and Newborn Interventions, 3 Districts, Malawi, 2008 and 2011

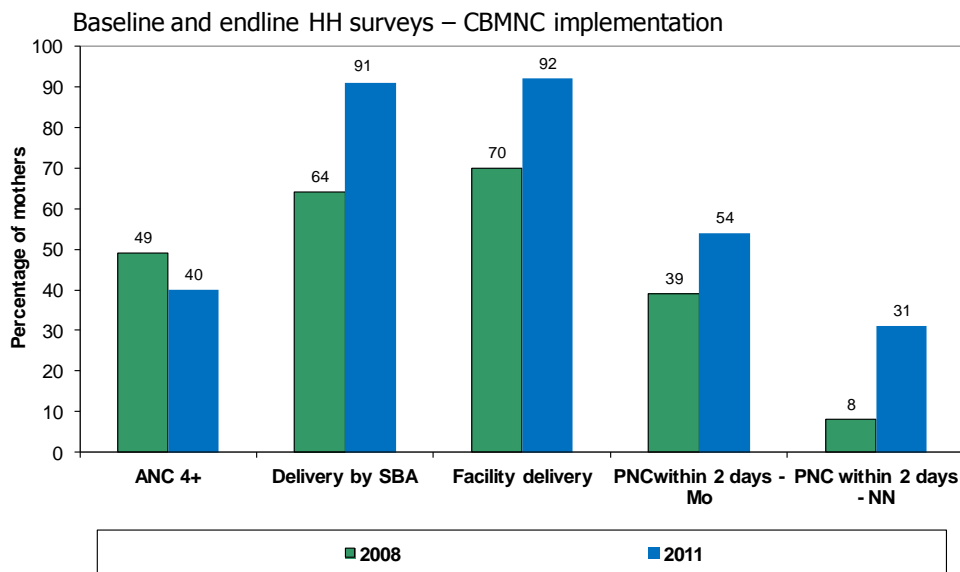
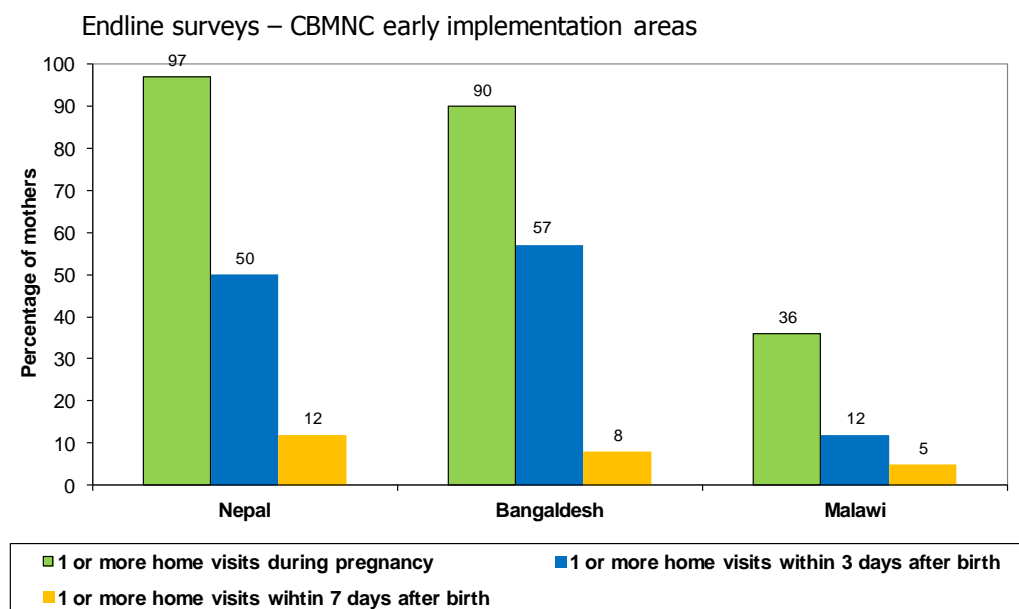


Figure 6: Home Visits from Community Health Workers, 3 Countries, 2010 and 2011



Summary of lessons learned: implementation of the PNC home visits approach using community-based maternal and newborn care packages

In all settings the PNC home visits approach was implemented by training community health workers in a maternal and newborn care package which included home visits to pregnant women as well as PNC home visits. Principal findings from early implementation districts include:

- Utilization of facility-based delivery care has increased in all implementation areas, although this cannot necessarily be attributed to these program inputs as other initiatives were underway in some of these settings. Quality of delivery care has become increasingly important. Staff report that facilities in many areas lack capacity, staff, equipment, and that skills of staff need to be improved.
- Care-seeking for sick mothers and newborns is increasing in implementation areas, based on community register data. Quality and accessibility of referral care has therefore become increasingly important.
- Mothers who deliver at facilities are more likely to report receiving early postnatal care. However, a high proportion of mothers delivered by a skilled attendant in Malawi and Bangladesh do not report receiving early PNC – and mothers and newborns are often not screened at the same time in Malawi.
- In all early implementation areas, despite relatively intensive program inputs, the proportion of women receiving early home visits after delivery never exceeded 60%. PNC home visits remain a challenge in most settings due to a number of factors including limited geographic coverage of CHWs, multiple other competing responsibilities, and limited mechanisms for notifying CHWs when a birth has taken place.

6.3 Program activity areas: implementation of community maternal and newborn care

Program activities have focused in 7 areas:

- 1) Supporting community home visits
- 2) Planning and coordination
- 3) Referral
- 4) Supervision and monitoring
- 5) Essential equipment and supplies
- 6) Health communication
- 7) Financing

6.3.1 Supporting community home visits

Three approaches appear to be useful to facilitate community home visits:

Birth notification

Data from Bangladesh show that early birth notification by families increases the likelihood of an early home visit. In SC/MCHIP and BRAC areas birth notification has been facilitated by using cell-phones. Cell phone use is very high in Bangladesh and most families have access to a cell phone. Mothers' cards given to the mother include a space for writing the cell phone number of the CHW. In addition, health education posters are given to families, which are hung on the wall – these also include a space for recording the cell phone number. In Nepal and Rwanda, notification is usually done by word of mouth – this is relatively easy when the CHW lives in the community. Nevertheless in many settings, the need for early birth notification is not emphasized in CHW training, nor is it included in health education materials.

Local micro-planning and coordination of CHWs

All early implementation districts where there has been roll-out of community MN packages have included a (partner-supported) process for regularly meeting with CHWs in order to review their community registers, summarize data from the registers and solve problems. This process is essential for supporting CHWs and helping to ensure that home visits are made. By reviewing community registers, supervisors can review whether all pregnant women have been visited according to the schedule; and plan for upcoming visits. Mistakes or errors in recording can be addressed and problems can be discussed. In some countries, these visits are used as an opportunity to provide simple training. CHWs are given essential equipment and supplies. In Bangladesh monthly visits are conducted between facility supervisors and CHWs from different NGOs – this allows home visits to be coordinated between CHWs to ensure that all women are reached.

In most settings CHW meetings are scheduled monthly. They are conducted by facility-based supervisors (often with the presence of partner field staff) – and usually involve all CHWs from the catchment population of the facility. In those countries where regular meetings between CHWs and supervisors are conducted, community MN package training does not emphasize how to review data and plan activities at monthly planning meetings – and this area could be improved in the future. Lessons learned from the MaMoni project in Bangladesh, which is using this approach, will be useful.

Use of mothers cards

Mothers cards, which show all the key contacts between pregnancy, delivery and the postnatal period, are useful for women and families to track their own progress – and can help create demand. In Bangladesh, these have been used by both SC/SNL and MCHIP implementation areas, and are reported to have facilitated contacts between families and CHWs. Space on the card is provided for the cell phone number of the CHW. The card also includes messages on maternal and newborn danger signs.

Lessons learned: Supporting community home visits

- A process for improving birth notification should be included in training and health education for CHWs
- Monthly meetings between CHWs and facility supervisors are essential for supporting home visits, supplying CHWs, coordinating CHWs and solving problems. Training for facility supervisors should include simple guidelines on this process.
- Mothers cards can help support demand for key pregnancy, delivery and PNC contacts.

6.3.2 Planning and coordination

Implementation of the community-based MN package has required improved planning and coordination. A number of systems supports have facilitated implementation – and are presented in Table 6.

An implementation coordinating body has been important for ensuring that resources are allocated where they are needed, and to share experiences with implementation between partners. In some countries this body is the same as the technical working group, and in others a different group has been used. In Bangladesh a formal coordinating group has not been formed – implementation is coordinated with the program managers of health and family planning sections. In Rwanda a community health committee that meets quarterly is managing implementation of the CBMNC package. This group includes representatives of the MOH and development partners. It coordinates activities of all partners, mobilizes resources and develops guidelines and materials. Recommendations of this group are submitted to the MCH technical working group and then to senior management. Once endorsed by the senior management committee, then action can be taken on the ground.

Resource sharing between partners. This was reported as important for helping build sustainable government support for implementation. In most implementation areas, the MOH has provided staff and all recurrent costs of supporting staff. Costs of essential equipment and supplies have usually be shared. In the longer term, it is hoped that these recurrent costs are included in national and district budgets; annual district budget allocation in several countries tend to be inadequate to support all activities.

Dedicated staff to support implementation – at national and district levels. Staff should be full-time government employees. At the national level, this has so far only been possible in Rwanda. Rwanda had a pre-existing community support structure - which includes a staffed community health desk at the national level, and community supervisors at district and health facility levels – these staff have taken over implementation of the CBMNC package. In other countries responsibility has been allocated to existing MCH staff who have other responsibilities – and cannot always be available to support implementation. At the district level, staff have been allocated for implementation of the community package in 3 countries – but only in Rwanda are these staff focused exclusively on support of community-based activities. In Nepal a CB-NCP secretariat was established in the Child

Health Division to oversee implementation and manage monitoring data – staff in this office are funded by SC/SNL and are not MOH employees. In the longer term the intention is to transfer responsibility for the secretariat to the government, and to phase out donor support. The effectiveness of this approach in building and sustaining local capacity is not yet clear.

Annual district plans include activities for implementation of community MN package in all countries; in Bangladesh, in which planning is centralized, operational plans have incorporated activities in this area. In most countries there is a gap between the plan and activities that can be conducted on the ground – usually due to late release of funds and/or inadequate funds.

A scale up plan is important for guiding the process of implementation. All countries have moved towards outlining a timetable for expansion of the approach, for which partners will provide support and possible timing. It is important that scale-up plans include strategies to measure and track the distribution and training status of CHWs, the quality of care provided, actual population coverage for key elements of the package and mechanisms for ensuring sustainability of the approach.

Lessons learned: planning and coordination

- An implementation coordinating body that includes all involved development partners is essential for ensuring that resources are allocated where they are needed – and for ensuring that national technical standards are used.
- Resource sharing between the government and partners can help incorporate recurrent costs into the routine system.
- Dedicated staff, allocated full time to supporting implementation, can ensure that program roll-out occurs.
- Activities to support implementation of the package should be included in district plans as early as possible – to shift costs to the routine budget.

Table 6: Program supports for implementation, 4 Countries, January 2012

	Bangladesh	Malawi	Nepal	Rwanda
Implementation coordinating body	No	CBMNC National Task Force – later integrated into Safe Motherhood steering committee	CB-NCP partners coordination body chaired by MOH-CHD and FHD	Community health committee – under the MCH working group
Resource sharing between GO and partners	Several project areas where MN package is being implemented by a number of partners	Equipment and supplies shared between UNICEF, SNL and GO	Staff and logistics and supply costs shared	Equipment and supplies shared between GO and partners
Dedicated staff at the central level for MN package implementation	No dedicated staff	No dedicated staff	No MOH dedicated staff. CB-NCP secretariat in the DCH is staffed by SC/SNL	MCH unit – Community Health Desk
Dedicated staff at the district level	No – responsibility taken by District Health Supervisors	DHOs and DHMTs have allocated staff for MN health – but other responsibilities	IMCI focal persons have taken responsibility for CB-NCP	Dedicated community health supervisors at district and facility levels
Annual district plans include activities and budget for MN package implementation	Central operational plans include early PNC	Yes	Yes	Included in community health supervisor plans
MOH has scale-up plan	National training plan for FWAs and HAs in new MN package developed	Yes	Yes	Yes

6.3.3 Care-seeking

Community register and household survey data, suggest that implementation of the community MN care package has increased referrals to facilities for both deliveries, management of pregnancy and delivery complications and management of sick newborns. Household survey data also show increased knowledge about danger signs for care-seeking for both the mother and the newborn. Increased pressure has therefore been placed on referral sites to better provide delivery, essential newborn care and EmONC. In many areas there are a number of barriers to care-seeking including geographic barriers, lack of transportation, lack of money, and cultural factors such as a reluctance to allow newborns to receive injections and a preference for traditional healers and methods. A number of approaches have been used to improve referral care, including:

- Mobilization of local community groups. CHWs work with mothers groups and the community to identify strategies for care-seeking – such as a community fund for paying the costs of transportation.
- Improved counseling on danger signs for care-seeking and birth preparedness during ANC. Improved knowledge is an important first step towards improving care-seeking. In many project areas, posters of danger signs in pregnancy and for sick newborns are given to families before the delivery and put up in the house.

- Use of cell phones. In Bangladesh, referral has been strengthened by giving families the cell phone numbers of CHWs.
- Use of staff dedicated to management of mothers and newborns at referral facilities. In BRAC areas, program organizers, employed by the NGO, are allocated to the upazilla health complex and hospitals; they can be called by CHWs when they have a referral. The organizers ensure that referred women and newborns are seen in a timely fashion.
- Use of referral slips. In Rwanda, referral slips are carried by CHWs. Mothers and newborns identified by ASMs as having suspected danger signs are given referral slips – these are given to facility health workers and are intended to help facilitate the acceptance of referral by mothers, and management by facility staff.
- Local ambulances. In Nepal, Rwanda and Malawi some districts have community ambulances are available for referral – although their reach remains relatively limited.
- SMS alert system. An SMS alert system has been developed and piloted by the MOH and UNICEF in the Musanze district of Rwanda. Using this approach, ASMs enter data into mobile phones on new pregnancies identified, ANC visits made, complications of pregnancy, delivery at home or at facilities, and maternal and newborn deaths. The system allows ASMs to notify district and health centre staff of women and newborns needing referral - efforts can then be made to ensure that these cases reach facilities.
- Improved quality of hospital care. Common problems in districts include lack of space and beds for delivery, and lack of some essential medicines and supplies. Staff are often not applying standards; and there are often inadequate numbers of skilled birth attendants. In many countries there are limited data available on the quality of delivery, ENC and PNC, and management of sick mothers and newborns. More data are needed, in order to identify gaps and develop approaches to addressing them. These data can be collected by formal health facility assessments or surveys; they can also be collected by supervisors and staff conducting more regular reviews of facilities using direct observation of practices and facility infrastructure and supports.

Lessons learned: care-seeking

- In many areas, rates of care-seeking for delivery and management of sick mothers and newborns have increased following implementation of community MN care.
- Quality of delivery and EmONC needs to be reviewed, and approaches to addressing gaps developed. Substantial inputs into improving the quality of care for mothers and newborns are needed.
- A number of approaches have been used to improve referral practices, including improved counseling during ANC, use of cell phones to contact CHWs, local community transportation funds, and SMS rapid alert systems.

6.3.4 Supervision and monitoring

Supervision

All early implementation areas have trained supervisors in the MN package. Supervisory checklists and visit schedules have been developed, and supervisors trained. Existing district and facility-based supervisors have been used. Supervision has worked when supported by development partners. Supervision has rarely been functional

when external support is not provided – due to a lack of available staff, vehicles, fuel and per diems. Linkages between program areas – to share resources for supervisory visits – is not widespread. Overall, staff report that monthly meetings between CHWs and supervisors at the facility level – at which CHWs come to a central meeting point - is the most useful and sustainable approach.

Monitoring

A community-based maternal and newborn health reporting system using CHW registers has been implemented in all of the countries reported here. CHWs use household registers to complete recording forms and submit them to first-level health facilities. Reporting is usually done monthly – when CHWs visit facilities and meet with supervisors. Health facility staff complete summary forms and submit them to the district. District staff enters forms and sends reports to the national level. Community-based surveillance systems are at varying stages of implementation. Main findings are:

- CHWs and lower level staff are able to compile register data in all countries. A validation study in Nepal found that CHWs accurately report antenatal counseling, facility delivery and post-delivery practices – however CHWs over-reported PNC home visits (which is the basis for calculating their incentive). This raises the question of validity of register data for the measure of PNC in this setting. Community registers are reported by CHWs and supervisors in all countries to be useful as a job aid for CHWs to help ensure they make all required contacts.
- District level staff have difficulty compiling forms monthly. It is done most effectively in Rwanda where dedicated community health supervisors are in place at district hospitals. In other countries, district staff have required external partner support to complete forms.
- Community surveillance systems are currently running parallel to the routine HMIS. However, data are being managed within the MOH – with support from partners (Malawi and Nepal) and without partner support (Bangladesh and Rwanda). Malawi data are managed by a CBMNC monitoring and evaluation coordinator funded by SC in the RHU; and in Nepal there is a CB-NCP secretariat in the child health division. In Bangladesh, community data from the MNCS project are managed by the central HMIS department; and in Rwanda by the community health desk. Data are usually entered directly into a database at the district level, and sent to the national level electronically.
- In some areas there have been problems supplying registers and forms to CHWs and other health workers.
- Number and complexity of forms is a problem for staff at facility and district levels. In Malawi and Nepal, surveillance forms were simplified after initial implementation – but they remain a burden on staff. Partner support has been required to facilitate data entry.
- Data are most frequently used at the facility level to review community based visits with CHWs – at this level they are used to identify pregnant women for follow-up and expected deliveries, and to review the quality of register data. Data have not yet been used widely for planning at any other level. Data are usually reported as numbers and not proportions – and so changes in coverage cannot be easily tracked

Routine HMIS

The routine facility-based data collection system currently collects data on early PNC contacts in Nepal (PNC contacts at days 1, 3 and 7) and Rwanda (PNC contact with an ASM within 3 day – from community registers). In

Bangladesh, the current indicator is PNC within 6 weeks of delivery. The HMIS recording form in Malawi has been revised to include early PNC contacts, but this system is not yet being used.

Tracking roll-out

Two approaches have been used for tracking roll-out in early implementation areas. The first is the proportion of community health workers who have been trained in the community MN package (training coverage) by district. This has been conducted in all countries, and has proved useful for developing local training plans – district staff compile data and send it to the national coordinating body. Training coverage in all partner-supported early implementation districts has generally been high for all categories of health worker. A national data-base of training coverage has been established in all countries, and used for following progress. The second approach that has proved useful in Bangladesh is community health worker mapping. The number of community health workers, by category and district, were determined by submitting questionnaires to both government and NGO staff. Mapping numbers of CHWs allows the number of CHWs per population to be determined, and districts with low coverage to be mapped. This has proved to be useful as an approach to highlighting gaps, and advocating for staff training and reallocation.

Lessons learned: supervision and monitoring

- Supervisors for community MN care have been allocated in all countries and supervisory checklists developed. In general supervisory visits do not take place regularly due to logistical barriers and in most settings are not possible without donor support. Monthly meetings between CHWs and facility staff are reported to be useful for tracking progress and planning.
- Community registers can be a useful job aide for CHWs. In most settings they are able to complete registers and summary forms.
- The community-based reporting system currently runs parallel to the HMIS. In areas where it is functioning, partner support is required. There are concerns that this system may not be sustainable when partner support is withdrawn.
- Collecting and compiling register data at all levels of the health system add a substantial burden on staff.
- Community register data are often not yet used at higher levels for planning and decision-making.
- Using community register monitoring data as a basis for payment of incentives, if there is not robust provision for validation of these data, may undermine data validity.
- The HMIS needs to be revised to include early PNC contacts in both Bangladesh and Malawi.
- Tracking training coverage is a useful for tracking implementation and planning training. Community health worker mapping can be useful for identifying staff gaps and developing approaches for closing these gaps.

6.3.5 Essential equipment and supplies

All CHWs are provided with a minimum package of equipment and supplies that varies slightly between countries, but usually includes: weighing scales (for determining whether babies are low birth weight), thermometer (for identifying fever in the mother or newborn), counseling cards or flip chart, training manual, community registers, and a carry bag. In Malawi HSAs are sometimes supplied with bicycles. CHWs may also have supplies of vitamin A, mebendazole, and iron/folate. In Nepal, FCHVs carry co-trimoxazole for the treatment of sepsis, and bag-and-mask.

Costs of equipment and supplies have generally been shared between partners. For example, in Rwanda costs of the kit are divided between the MOH (CHW manual, forms and register), UNICEF (timer, thermometer, weighing equipment), and MCHIP (boots, umbrella and bag). Stock outs are not reported to be an important problem – although no data on stock-outs were available to the review. It should be noted that in most countries, procurement of the more expensive items, particularly equipment, is still managed and funded by partners. In these areas ordering of equipment is generally done by district managers, directly to project staff. It remains unclear whether equipment and supplies will continue to be procured and distributed without donor support.

Lesson learned: equipment and supplies

- Equipment and supply kits are essential to enable CHWs to conduct home visit tasks according to standards.
- How equipment and supply kits will be procured, supplied and funded in the long term still needs to be determined. Currently all most of the costs are covered by development partners – including supply and distribution to districts.

6.3.6 Health communication

The primary focus of health communication activities has been one-on-one counseling by CHWs, using job aids. In addition, community groups and leaders, such as village development committees, mothers groups and traditional healers have been given orientation on maternal and newborn health behaviors. Use of local groups has helped reinforce key messages to caretakers and families. In some countries, national and district-level mass media approaches were also developed – including radio and television programs which incorporated newborn messages. There was general agreement that involving mothers groups and other community leaders was important for generating support and awareness. In addition, involvement of husbands and mothers – often important decision makers – has been found to be useful. Household visits by CHWs are reported as being the most important approach to changing behaviors. Their presence in communities supports early newborn practices. CHWs report that counseling materials are adequate and understood. Use of cell phones in many settings has improved communication between families and CHWs – and assisted with birth notification and referral.

Community mobilization has been used in Bangladesh, Malawi and Nigeria implementation areas to engage communities and involve them directly in planning and decision-making. Rwanda had developed guidelines on community mobilization, but has not yet begun implementation. The approach most often used is the SC “community action cycle” which forms community Core Groups that are in charge of local activities to support improved MN knowledge and practices. The approach has been in ACCESS supported districts of Malawi and in MCHIP districts in Bangladesh. In Malawi, HSAs are given an additional 7 days training in community mobilization. In all countries where it has been used, project supported supervisors have supported the process. Local staff and CHWs report that introduction and support of this approach is resource intensive, but that improved community engagement can improve community commitment to support community home visits. . More data are needed on the relative costs and effectiveness of this approach in improving early PNC contacts.

Lessons learned: health communication

- One-on-one counseling by CHWs during home visits is reported to be relatively easily mastered by CHWs and to be well accepted by caretakers and other stakeholders. Pictorial counseling materials and job aids are reported to be generally understandable and useful for counseling.
- Involvement of local community groups and decision-makers is reported to be important to provide support to CHWs and to disseminate messages.
- Cell phones have been used in Bangladesh and Rwanda to improve links between CHWs and families – including early notification of births.
- Community mobilization strategies – using a process to engage communities around maternal and newborn health issues - have been used in early implementation areas with donor support – and are reported to be useful for engaging community support for home visits for CHWs. More data on the relative cost and effectiveness of this approach are needed.

6.3.7 Financing

Support for implementation of community MN packages has been shared between government and partners. Different models have been used (Table 5) – with some requiring intensive partner support, and some much less. In all implementation areas, partners have contributed costs of training, equipment and supplies, and technical support and management – often involving full-time project staff who participate in supervision, data collection and management and training. However, ministries of health in all implementing countries have provided resources in several areas including: recurrent staff costs, infrastructure and facilities; some costs of equipment and supplies; and costs of routine supervision. The principal issues for further expansion of the approach include:

- Costing of roll-out. Early implementation projects were costed in Nepal and Malawi and were not in other countries. None of the projects reviewed included a costing component up-front, to assist with a costing analysis. Costing is complicated by the fact that a number of activities are shared between the government and partners. Nevertheless, costing data are essential for determining the most cost effective – and sustainable approach. Retrospective costing activities are underway in some partner supported projects; data are not yet available.
- Plan for transferring recurrent costs from partners to the MOH. Most countries have not yet developed a strategy – and a time frame - for transferring costs. This requires input and support from higher level MOH policy makers – through technical working groups. In de-centralized systems routine district budget allocations to the program need to be secured. In some settings, resources may be available from local organizations. In some districts in Nepal, for example, managers report that additional funds may be available from Village Development Committees – who are responsible for community development.
- Performance-based incentive schemes for CHWs. These are being used in Rwanda and Nepal; and in Bangladesh for BRAC supported staff in non-government areas. All funds for the incentive schemes come from a national government allocation, and are not supported directly by development partners. Incentive payments are made on the basis of self-report of completion of a specified number of visits to the mother and newborn. Incentive claim forms are completed at monthly meetings, using community registers. Reported concerns with the incentive program include:

- Incentives may reduce CHW commitment to other program areas, such as c-IMCI and family planning, for which incentives are not received.
- Misreporting. In some areas mis-reporting has been reported to be a problem (contacts with the mother and baby are reported – although they have not been conducted). Facility staff are responsible for reviewing CHWs registers and cross-checking that visits have been made. In areas visited, facility staff report that they periodically do cross-checks using facility registers, although it is not possible to do this for all cases. It is recognized that misreporting by CHWs is a potential problem, and that supervisors need to periodically validate data.
- Sustainability. The incentive program in Nepal and Rwanda is funded by government central funds – and not by partner projects. It is believed that this makes the system more likely to be sustainable in the longer term. In Nepal, central non-earmarked basket funds used to fund the PBF originate with development partners, and so remain dependent on outside resource inputs. The potential sustainability of central funds used to support the PBF needs careful consideration in all areas where it is used. It is also important to determine whether systems needed to manage and disburse funds are effective and sustainable in the longer term.
- Regular review is needed. Regular evaluations of performance are required in order to determine how effectively the PBF systems are working. This might include reviewing: CHW performance tasks which are required to receive incentive payments (it is important to ensure that all key tasks including PNC home visits are required tasks); whether or not misreporting by CHWs is a problem; and systems for managing and disbursing funds from central to peripheral levels.

Lessons learned: financing

- Costs of implementation have been shared by governments and partners. Partner inputs are highly variable.
- Implementation in most areas has not yet been costed; this is essential for determining cost effectiveness and the best model for further implementation.
- Plans for transferring routine implementation costs from partners to the government are needed – including a timeline for the transfer.
- There are concerns about the long term sustainability of performance based financing for CHWs and its effect on CHW practices. An in-depth review of the PBF system in these countries is needed.

7 Conclusions

1. National policies and strategies for early PNC home visits have been implemented in four of five countries reviewed using a community-based package of maternal and newborn interventions. There is strong MOH ownership and coordination.
2. Community-based maternal and newborn health packages have been implemented by both government employed CHWs and volunteers. Performance-based incentive approaches to supporting community volunteers have been used widely.
3. Four of five countries have developed national implementation plans and a system for coordinating activities with development partners. Implementation has begun in early implementation districts. Costs of implementation have been shared with development partners and development partners continue to be required to support implementation costs.
4. In early implementation areas upward trends are noted in facility-based deliveries, deliveries with a skilled provider and early PNC contacts for the mother and newborn – although the relative impact of community approaches on performance in each of these areas cannot be quantified. Improvements in early PNC home visits in implementation areas have so far been modest. An increasing proportion of deliveries by skilled providers has contributed more to improvements in early PNC contacts, than home visits by CHWs.
5. It remains a challenge to get CHWs to make household visits in most countries for a number of reasons. Early home visits – on the first day after delivery – remain the most difficult to achieve. A number of strategies to improve early household contacts have been used. The feasibility of achieving 3 PNC home visits in the first week of life needs to be further investigated.
6. Quality of facility-based care is an increasingly important preoccupation of program managers in countries implementing community MN packages. An increase in demand for facility deliveries and referral care for sick mothers and newborns, has placed increasing pressure on facilities. More data are needed on quality of care, gaps and approaches to addressing these gaps.
7. Community-based surveillance using CHW registers has been introduced in all implementation areas, but these systems are not fully operational. More experience is needed to determine whether or not this approach is sustainable in the longer term – or whether it only has value for tracking progress in early implementation areas.
8. Long term sustainability will require an increasing shift of human, material and financial resources to government systems required to train and support CHWs. So far this has generally only been possible in most countries with the support of development partners.
9. Operations research will be essential for establishing the most effective strategies for implementing community-based MN packages on the ground. Implementing countries should test and document approaches used locally. Cost effectiveness analyses of programs in early implementation areas are needed. .