



Nepal Family Health Program II

Technical Brief # 4

(Revised February 2012)

www.nfhp.org.np

Innovations in Community-Based Integrated Management of Childhood Illnesses



Female Community Health Volunteer counting respiratory rate using a timer.

BACKGROUND

Nepal has made several important modifications to the original Integrated Management of Childhood Illnesses (IMCI) package developed by WHO. These include innovations in five important areas (see box, right). JSI/NFHP has been leading these innovations since the early 1990s, from the inception of these ideas to advocacy, policy changes, implementation and assessment after innovations (see also Technical Brief #3: Overview of CB IMCI).

Community-Based Pneumonia Treatment

Nepal's model for IMCI is gaining international recognition because of its very strong community component. The JSI/NFHP child health team has been at the forefront of this initiative since 1992 with involvement in the initial policy-making and advocacy, as well as supporting the government and other partners implement community-based pneumonia treatment through the CB-IMCI program.

To initiate community-based pneumonia and diarrhoea treatment, a short but intensive 5 to 7 day CB-IMCI training is given to Community Health Workers (CHWs). The CHWs include Village Health Workers (VHWs), who are mostly, but not always, male, Maternal and Child Health Workers (MCHWs) who are exclusively female, and Female Community Health Volunteers (FCHVs). After such training, CHWs can determine if a child has pneumonia, using an ARI sound timer to count the respiratory rate. Giving the responsibility for pneumonia treatment to

CHWs - including community volunteers such as FCHVs - on such a large national scale, is unique to Nepal. To make this possible, JSI/NFHP was heavily involved in designing appropriate materials for training illiterate and semi-literate community health volunteers such as FCHVs to give them the skills to assess and treat children for pneumonia and diarrhoea. These CB-IMCI training materials enable FCHVs to play a critical role in reducing childhood morbidity and mortality in Nepal.

Caretakers in the community are clearly informed that CHWs are trained and capable of diagnosing and treating sick children with certain common childhood illnesses such as pneumonia and diarrhea, and can refer sick children with measles, malaria, and malnutrition and sick neonates showing signs of possible severe bacterial infections (PSBI). This awareness process begins with a Mothers' Group orientation in each community, which is integrated within the initial CB-IMCI training. Caretakers bring their neonates and sick children to CHWs, who assess them for

Nepal's Innovations in IMCI

- A strong community level component in the IMCI program in which peripheral health workers and especially FCHVs are trained to recognize and treat pneumonia in children less than 5 years old.
- Assessment of sick neonates by community health workers and health facility workers with treatment of sick neonates, within certain limits, at the HF level.
- Use of zinc in the treatment of diarrhea along with the ORS.
- Without compromising quality, the number of training days was reduced so that training costs are lower and health workers have fewer days away from their health facilities. Also, the development of a "transferred in" health worker training package helps train new health staff.
- The CB-IMCI Program Management Package and Monitoring System emphasizes the health worker's supportive supervisory responsibilities. A monitoring system that allows compilation of CB-IMCI service data into the GoN's regular health management information system, from the FCHV-level up to the central level was established.
- The GON and partners are in the process of revising the CB-IMCI health facility and community level protocol to align them with CB-NCP and malaria and nutrition programs.

danger signs, based on the WHO algorithm for IMCI. They treat pneumonia in children (2 months to 5 years) with Cotrimoxazole-Pediatric tablets (Cotrim-P) and refer cases with danger signs or severe pneumonia and PSBI in young infants under two months of age to the health facility (HF). Similarly, they manage diarrheal de-hydration in children with oral rehydration solution (ORS) and Zinc tablets. They follow-up these children and document the progress.

Community-based pneumonia treatment, as part of CB-IMCI, has resulted in an increase in the percentage of expected pneumonia and diarrhoeal cases treated. Approximately 60% of expected pneumonia and diarrhoeal cases received treatment by CHWs.

The knowledge and skills of FCHVs, who treat the majority of acute respiratory infection (ARI) cases through this community-based program, are very encouraging, as reflected by the NFHP monitoring data presented below for the period July 2010 to June 2011. Since FCHVs see more ARI cases than HFs, this program has helped to bring services closer to the children's homes.

Figure 1. Monitoring Data - 2010/11

Indicators	Percentage
Percentage of FCHVs who know two respiratory cut off rates for ARI	96
Percentage of FCHVs who know four or more ARI danger signs	99
Percentage of FCHVs who know Cotrim-P doses for two age groups	92
Percentage of pneumonia cases given the correct dose of Cotrim-P for their age AND who also received a third-day follow-up visit from the FCHV	96
Percentage of FCHVs with knowledge of three or four home rules of diarrhoea	80
FCHVs knowledge on dosage of zinc	86

Community Based Neonatal Care Program

Neonatal mortality in Nepal has decreased over the years, but not at the same pace as child and infant mortality. Recognizing this gap, the National Neonatal Health Strategy (NNHS) was developed by the Ministry of Health and Population (MOHP) and partners and endorsed in 2004. Before 2004, CB-IMCI dealt only with sick newborns from 1 week to 2 months-old at the HF level. Following endorsement of the NNHS, the IMCI protocol was revised to include assessment and management of sick neonates from the first day of life.

After the changes in 2004, the NFHP took a lead in modifying the training of FCHVs which enabled them to:

- Recognize all relevant danger signs in newborns less than 2 months old and make referral, if necessary, to HFs. These danger signs are included in the 'job aid' which the FCHVs use every time they assess a sick neonates or young infants under 2 months old.
- Counsel mothers of newborns on five essential newborn care messages. These messages are included in the FCHV CB-IMCI training booklet on child health, which FCHVs are encouraged to refer to, even after training.
- In 2008, the Government of Nepal (GoN) and partners developed the Community-based Newborn Care Package (CB-NCP), incorporating seven different components. CB-NCP was piloted in 10 districts in 2009/10. Positive results from the pilot led the GON to scale-up the intervention gradually throughout the country as a priority program. It is now being implemented in 35 districts, including four NFHP-supported districts (Mahottari, Salyan, Dailekh and Jumla). The program is currently in the process of being assessed.

Diarrhea Treatment with Zinc

Following WHO/UNICEF recommendations for changes in diarrhea management practices,¹ the CB-IMCI protocol in Nepal was changed to include use of zinc in the treatment of diarrhea along with ORS. Use of zinc, together with ORS helps children get better faster, reduces the episodes and severity of diarrhea, improves intestinal absorption of fluids and reduces future episodes of diarrhea. UNICEF and WHO also state that the treatment with zinc, in addition to ORS, can reduce child mortality.

Nepal was one of the first countries to introduce zinc through the public sector and has expanded its use to all 75 districts. This program is being implemented with financial support from the GON and partners, particularly USAID/NFHP and UNICEF. NFHP was at the forefront of this initiative, supporting the GON to introduce a revised protocol for treatment of diarrhea with zinc and in piloting its introduction through the public sector.

Zinc was first introduced in two districts, through the government public health system, with financial support from USAID and technical support from NFHP. In Parbat, zinc was introduced as part of the CB-IMCI training package when the district began implementing the CB-IMCI program. In Rautahat, however, an orientation on use of zinc to treat diarrhea was carried out through cascade training

(where senior staff, after receiving training themselves, are responsible for conducting training for lower levels) from district level supervisors to HF staff and to FCHVs at the community level. These two modalities were used to scale up this intervention throughout the country.

Zinc expansion was completed throughout the country though the CB-IMCI program in 2010 and the program variables have been incorporated into the GoN's health management information system. However, the program needs to increase the use of zinc and ORS in the treatment of under-5 diarrhoeal cases: the Nepal Demographic Health Survey 2011 shows only a 6.2% coverage.

Zinc Implementation in District of Parbat (2006)

- 98% of FCHVs interviewed (n=49) for the survey had zinc in stock (one FCHV without zinc had not attended the training on zinc).
- All FCHVs who had received training on zinc (n=48) had the 'zinc job aid' with them at the time of the survey.
- 98% of FCHVs who had received training on zinc (n=47) did not have a stock out, reflecting good logistics support.
- Accurate recollections of the benefit of zinc taught during the training, were i) to cure diarrhea (93.8%), ii) to prevent diarrhea in the future (58.3%), iii) to keep the child healthy (60.4%) and iv) to make the baby strong (16.7%).
- FCHV knowledge on the duration and dose of zinc for the two age groups, 2-6 months and 6 months - 5 years, was 100 percent accurate among the FCHVs (n=48) who had received training.
- 48% of FCHVs (n=23) who had been trained in the use of zinc, provided zinc to children with diarrhea in the month prior to the survey.

Other Training Innovations

The duration of CB-IMCI training has been modified several times over the years without compromising quality (it has been reduced from 11 to 7 days). JSI/NFHP advocated for these changes which were subsequently endorsed by the Child Health Division. The number of training days were reduced in order to lower costs and to reduce duration of absences of health workers from their posts. Analysis of data collected after training, revealed that there was no difference in the knowledge and skill among health workers who were trained for 11 as opposed to 7 days.²

The CB-IMCI program in Nepal also uses a shorter 3-day orientation for health workers who are 'transferred in' and for new recruits. The GON and partners are now also incorporating the CB-IMCI curriculum in pre-service training.

Management Package & Monitoring System

The CB-IMCI program in Nepal added a 2-day Program Management Package which emphasizes health worker's supportive supervisory responsibilities. This management package is not a part of the original WHO-developed IMCI package and NFHP was integral to developing the training package that the government endorsed. The management package emphasizes logistics support, having health workers check for and provide adequate program commodities during their supervisory visits to CHWs and especially FCHVs. This management package also teaches health workers to develop the skills needed to conduct FCHV training, orientations for VDC/HFOMC/traditional healers, review meetings, during which CHWs discuss achievements and challenges running the program and help develop creative solutions to address issues.

The CB-IMCI program in Nepal has also developed a monitoring system, which is quite unique and is not a part of the WHO training package in IMCI. NFHP helped the government design the recording, reporting system used as a key information resource by the CHD. This monitoring system has made the compilation of CB-IMCI service data possible, from community health volunteers, HFs, district health offices and the HMIS section of Management Division – an example of sustaining the program through the government system.

In addition, NFHP has a separate monitoring system that, among other things, collects and evaluates information on NFHP-supported programs including CB-IMCI. Conducting technical support visits (TSVs - see Technical Brief #18: Technical Support Visits) within the program districts is an integral part of the monitoring system used by NFHP. Often, when NFHP staff in the district conduct TSVs, they also support the District Public Health Office counterparts to conduct joint supervisory visits. These TSVs have provided opportunities to ensure the quality of care provided in communities and health facilities and ensure adequate documentation of program activities and achievements at all levels, with particular focus on the community level.

REFERENCES

1. WHO/UNICEF Joint Statement 2004. Clinical Management of Acute Diarrhea
2. CB-IMCI Strategic Review 2006/07
3. CB-IMCI desk review report, 2009



USAID
FROM THE AMERICAN PEOPLE

The program/research described in this article was supported under the Nepal Family Health Program II which is made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of NFHP II and do not necessarily reflect those of USAID or The United States Government.

NFHP II is implemented by JSI Research and Training Institute, Inc., in partnership with Engender Health, Jhpiego, Save the Children, World Education, Inc., Nepal Technical Assistance Group, Nepal Fertility Care Center, Management Support Services Private Ltd., Nepal Red Cross Society, United Mission to Nepal, BBC Media Action, Digital Broadcast Initiative Equal Access Nepal, Family Planning Association of Nepal and Center for Development and Population Activities.