

## Role of community health nurse in earthquake affected areas

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### Abstract

The role of Community Health Nurses (CHNs) outside the traditional hospital setting is meant to provide and promote the health care needs of the community. Such nurses can play a substantial role in the community setting including emergencies like disasters. This became evident after the earthquake of October 8, 2005 in Pakistan.

The objective was to address the issues, faced by primary healthcare providers working in earthquake-affected areas focusing on participatory approach. The experience of the interventions done by CHN by a guided frame work (assessment, planning, implementation and evaluation components) is described.

Issues identified by CHN included: lack of training of health care providers, lack of collaboration, communication between the medical and management staff due to poor infrastructure of the healthcare facilities.

The interventions were carried out, utilizing existing resources. Efforts were directed to build capacity of health care providers at grass root level to fill in gaps of health care delivery system for sustainable change.

Overall, working in the earthquake affected areas is challenging. Health leadership should foresee role of CHN in emergencies where quality healthcare interventions are essential.

**Keywords:** Earthquake affected areas, Disaster Management, Community Empowerment and Roles of Community Health Nurse.

### Introduction

Earthquake disasters are an increasing global health concern. More than 500,000 earthquakes are reported each year.<sup>1</sup> Although the vast majority of these are quite low in intensity. Approximately 3000 are perceptible by human populations, of which 7 to 11 result in significant loss of life.<sup>2</sup> An earthquake struck Pakistan on October 8, 2005. The loss of life reported by the Government of Pakistan was above 73,000 with 150,000 severely injured and 2.5 million people left homeless; 509 healthcare facilities were also destroyed.<sup>3</sup> Trauma, related illnesses, loss of infrastructure and lack of health facilities resulted in an inactive healthcare system. The earthquake caused severe damage to life and property in a

number of districts of Khyber PukhtunKhwa and Azad Jammu Kashmir, Pakistan.<sup>4</sup>

The goal of the project was to address the health care needs of the community in earthquack affected areas by empowering primary health care providers through enhancing their competencies in health care delivery facilitated by Community Health Nurses (CHN). The experience of the interventions done by CHN by a guided frame work (assessment, planning, implementation and evaluation components) is described.

### Methods and Results:

The defined interventions that CHN had taken collaboratively, was guided by a framework of planning cycle<sup>5</sup> (Figure), a tool to take holistic approach in earth quake affected areas.

This framework includes 4 phases; Assessment, Planning, Implementation, and Evaluation. The frame work provides specific directions to work with health care providers for community health promotion in a more systematic manner which is elucidated below.

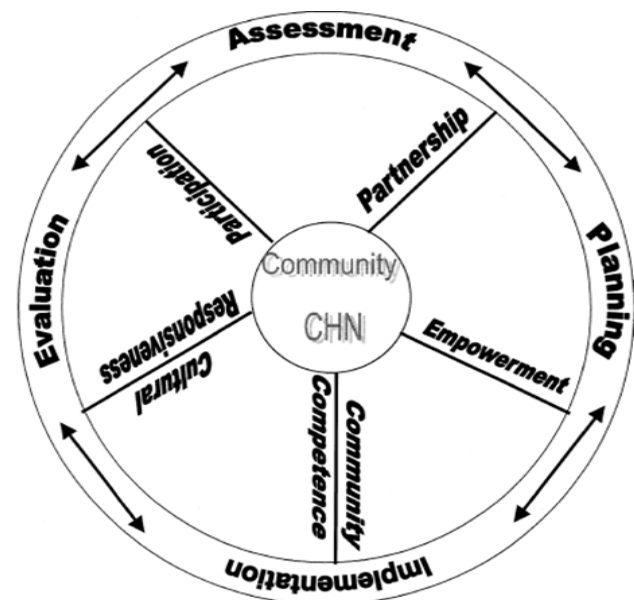


Figure: A nursing model of community organisation for change.

## **A- Assessment Phase:**

To gain insight about basic health care needs, comprehensive information was gathered through focus group discussions and in-depth interviews. At this point, a task group was also developed. This task group, with the technical facilitation of CHN, identified a number of issues. These issues were analyzed critically and categorized under themes, which included 1) Capacity Building of Health Care Providers(HCP), 2) Collaboration between Health and Management Staff and, 3) Development of Standards and Operating Procedures (SOPs). Details of major issues under each theme are as follows:

### **1) Capacity Building of Healthcare provider (HCP):**

a. Lack of updated knowledge about the medication administration, particularly I/M injections and infection control protocol by nurses, lady health visitors,(LHVs) and community health workers (CHWs).

b. Lack of continuing education programmes (CEP) for HCP.

c. Unawareness about safety measures guidelines among HCP.

### **2) Collaboration between Health and Management Staff:**

a. Lack of collaboration and communication between (Non governmental organization) NGOs and government health staff, especially at the CHWs' and lady health workers' (LHWS) level.

b. Inadequate documentation particularly Health Management Information Systems.

c. Mediocre water and sanitation facilities.

### **3) Development of Standards and Operating Procedures (SOPs):**

a. Physical infrastructure of the health facilities were not properly equipped and designed, particularly operation rooms and labour rooms.

b. Lack of supplies, such as equipments to maintain sterilization and infection control.

## **B - Planning Phase:**

In selected rural health centers, the task groups have been coordinated and initiated the planning process with the technical assistance of CHN. This was an essential part of ensuring the sustainability of the programme.

During the planning process, the task group developed the action plan, with the support of CHN, for the

required interventions according to the identified needs.

## **C- Implementation and Intervention Phase:**

The following interventions were implemented, based on the identified needs and issues:

### **a) Hands on Skills for Administration of Basic Medicines:**

To entertain the curative aspect of patient health, proper medication administration plays a pivotal role. Hence a training session was conducted by CHN for all the relevant healthcare providers who were involved in medication administration, particularly intramuscular injections (I/M) by using basic standards of clinical nursing practice. The five rights, techniques and sites of medication were taught using simulation. Demonstration of I/M injections was utilized as a strategy. Follow ups with these health care providers were done in the real patient care setting to provide supportive supervision. The onsite visits were conducted after training and according to the reports of onsite visits; the health care providers were utilizing the appropriate medication techniques with proper administration skills under minimal supervision.

### **b) Training of Community Health Workers (CHWs):**

Based on the identified needs, adopted a structured training module of CHWs, which was prepared by an NGO working in the earthquake areas, The goal of this training was to promote the community health, utilizing health promoting strategies, in a community setting. The CHWs had been selected preferably from local earthquake areas for maintaining the sustainability of the project. In addition, certain soft skills such as communications, interpersonal skills, positive attitude and presentation skills were also integrated.

The health workers were continuously monitored during home visits of assigned families. These monitoring visits served as a guiding tool for facilitators to modify the training and to refine their skills and competencies. These processes provided mechanisms for re-visiting the training standards of health care workers working in earthquake areas.

### **c) Training Session on Cold Chain Maintenance:**

The Vaccines were provided through the Government EPI programme, targeting seven preventable diseases. A session was conducted by CHN with vaccinators, LHVs and other relevant staff, utilizing the World Health Organization (WHO) guidelines for cold chain maintenance.

Documentation for recording the cold chain was explained and reinforced. Adhoc and planned visits for immunization revealed that ongoing feedback and supportive supervision is needed to ensure sustainability.

#### **d) Workshop on Infection Control:**

A full day workshop was conducted for the entire healthcare team by using WHO standard protocols for infection control. The objective was to introduce infection control standards, guidelines, and protocols for health care providers, to promote a healthy and safe environment. At this point, responsibilities to promote and sustain this initiative were delegated to individual members of the task force. An Infection control officer was also assigned at the selected rural health centers to monitor the proper implementation of these standards. Follow up visits revealed that the concerned staff was practicing the infection protocol with some reinforcement measures.

#### **e) Training of Housekeeping Staff:**

A need based training session was conducted for housekeeping staff to discuss their safety issues, including needle-stick injury and process of reporting the incident. A registered nurse and a health technician were assigned as supervisors to ensure the sustainability of the system.

#### **f) Executing Vaccination Day:**

It was observed that majority of the staff vulnerable to deadly infectious diseases and eventually the patients, to whom they were providing care, were exposed to blood and body secretions of patients. Therefore, for the safety of the health care professionals and patients, a day was dedicated at one of the selected rural health center to vaccinate staff against Hepatitis 'B'. All health care providers were vaccinated and the schedule for the next dose was also shared with them.

#### **g) Continuing Education Program (CEP):**

Continuous Education is indispensable for healthcare professionals to keep them abreast with updated knowledge and to enhance quality care. Thus, key areas of CEP were identified by CHN through discussion with the team. Some of these were hepatitis, skin problems, respiratory infections in children, and mental health problems such as anxiety and depression. The sessions were planned and delivered to health care providers based on the monthly calendar. The health care providers appreciated for this initiative as being significant for their professional development.

#### **h) Community based Health Education Sessions:**

A module on 'Hygiene and Health' was also developed

based on the need assessment. It was translated into Urdu for its wider use by the community. Urdu and English versions of the module were provided to each center for the delivery of health education sessions to the community. Care providers used this for imparting health education particularly women.

#### **i) Re-organization of Antenatal, Postnatal and Labour Room Set up:**

The physical layout of the labour room in the rural health facilities was established. The entire health team was actively involved in planning and organizing the set up for providing care to these women. The Labour room and ultrasonography set up were re-established. Physical space for antenatal and postnatal care was also allocated separately, so that subsequent need based care could be provided with privacy and confidentiality.

#### **D- Evaluation Phase:**

A short term evaluation was also carried out by the health care providers, using the observation techniques and informal discussions. Our anecdotal evidences showed that systems of cold chain and monitoring, CEP for health care providers, and community health promotion were executed successfully in coordination with the government and NGOs working in the earthquake areas. In addition, long-term evaluation was proposed and the task force was made responsible for carrying out these processes in future. Terms of references for the designated staff were also developed to formalize the system.

#### **Discussion**

Integration of key public health concepts, such as sustainability, community mobilization, community empowerment, and active community participation are essential in such interventional projects. However, the kind of community participation, i.e. in decision-making, planning, and in internalizing the importance of such initiatives, should be reflected upon by the public health leadership and key stakeholders prior to designing such programmes. As a result of the interventions, few pertinent lessons were learned while working in the earthquake affected areas.

There should be a well-defined role of CHN in the health care delivery system. This role would ensure effective rehabilitation and community health promotion in earthquake affected areas, particularly from the nursing perspective.

People from the grass root level community should be involved in the planning phase for the proper allocation of resources in earth quake affected areas. Thus, community participation and sustainability should be ensured from the beginning of the project.

Hence, a proper exit strategy should be planned at the

time of initiating the project by involving the entire team.

In addition, to enhance quality of care, ongoing feedback and supportive supervision should be given to health care providers by government and working NGOs.

For health care providers' mental health and well being, debriefing sessions must be arranged. Overall, qualitative and quantitative studies need to be conducted to assess the impact of services and future implications.

### **Conclusion**

Working in the earthquake affected areas instilled a sense of empowerment in the team. It also promoted the dire need of CHN in the health system to work proactively. However, much of the efforts have been directed towards capacity building of HCP in this project. Empowering the HCP was the main focus; with the notion of filling the gaps

in health care delivery at the community level. It is assumed that involving them for promoting health in such situation, eventually will lead to sustainable outcome and improve the practices.

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