Teaching District Concept of BP Koirala Institute of Health Sciences: An Inter-disciplinary Community Based Medical Education and Health Service Delivery Model in Rural Nepal

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ABSTRACT

Community based education trains health professional students to deal with the community health problems. The attitude and skills they gain as planners for health care provision are applicable in both hospital and community settings. B P Koirala Institute of Health Sciences has implemented a model of Community based education which encompasses the health institutions, organisations and the communities of the sixteen districts in eastern Nepal and refers to this concept as the 'Teaching District" concept of B P Koirala Institute of Health Sciences. This paper seeks to describe the concept and its implementation. Almost 20 years have passed since first initiated; and pending a comprehensive evaluation, this concept has gathered a great deal of experience to serve as a model for partnership between academic health sciences institutions with the district health system of Nepal.

KEY WORDS

BPKIHS, community medicine, social accountability of medical schools, teaching district, undergraduate medical education

INTRODUCTION

Community based education (CBE) is grounded in the idea that medical students learn by a combination of traditional coursework and direct service in the community throughout their education. Different models have been introduced around the globe ranging from a complete shift of curriculum delivery into community settings, to the incorporation of community health topics within 'Community Medicine'. Exposure in the community ranges from a month-long rotation every year at the same site, to long-term experiences in a district hospital.[1-3] The unifying theme is a strong focus on the health care needs of the community, producing doctors who will serve the community at all levels of the health care system.[4,5] Through CBE, students, teachers, and community members are actively engaged in the education process.[6] The students learn to solve community health problems and improve the health of their community while at the same time enhancing their learning experience.[7]

CBE at BP Koirala Institute of Health Sciences

In 1993, BP Koirala Institute of Health Sciences (BPKIHS) was established as the second public sector medical school in Nepal, located in a relatively poorly developed township. BPKIHS aims to both train future professionals and serve the community directly, by strengthening the existing district health system. To meet its service, teaching and research goals, BPKIHS has implemented a model of community-based education referred to as the Teaching District concept.[8-10]

CBE is not unique to BPKIHS or Nepal, but it is poorly defined in the literature, which had led to doubts about

its value.[11-15] This paper describes the components of the program from the inception, evolution and implementation of the concept to clearly define the teaching district concept of BPKIHS as a model of community-based education in Nepal.

The narrative summary is a result of published and grey literature, official reports of BPKIHS, and personal communication from founding executive officials. A total of 23 published peer-reviewed articles discussed some aspect of teaching districts of BPKIHS.[10,16-37]

Teaching district concept of BPKIHS

The 'History in the Making', document of BPKIHS refers, the whole district as a teaching and learning infrastructure for the medical students of BPKIHS.[9,10,23,38,39] The district includes the district hospital, primary health center and health post; the community of individuals at the household level and community social organisations; all of which are considered learning environments for the students.[9,10] This is made possible by a partnership of the Institute with the District Health Office.[8]

BPKIHS has declared all 16 districts of eastern Nepal as its teaching districts.[9] 'Nepal has five developmental regions, which are subdivided into 75 districts (Fig. 1). BPKIHS (marked with a star) is located in Sunsari district in the Eastern developmental region.[9] Teaching district activities are currently ongoing in eight districts (Black circles; Jhapa, Illam, Morang, Sunsari, Dhankuta, Saptari, Siraha and Udayapur). The original area included just three districts in 2000, and has expanded to the current eight, with plans to expand to all 16 districts (grey box) of the Eastern developmental region.

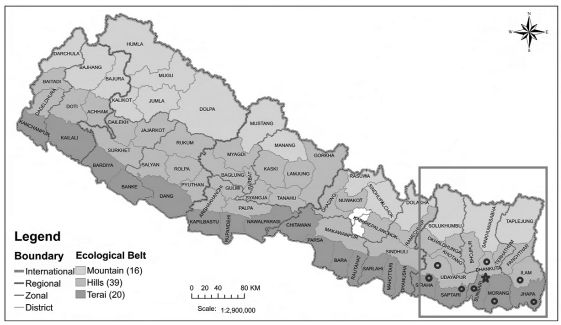

Figure 1. Map of Nepal showing 5 regions and 75 districts along with teaching districts (blue circles).[40]

The BPKIHS Teaching District version of community-based education starts on the first day of MBBS orientation and continues through the completion of the internship. The district-based components are Community Diagnosis Program (CDP), Family Health Exercise (FHE), Field Program (FIP), Learning in Field (LIF), Epidemiological Skills for Health Management (EPIDMAN), Management Skills for Health Services (HEALTHMAN) and Community Oriented Compulsory Residential Rotatory Internship Program (COCRRIP) (Table 1). During the entire medical schooling, the students are posted for one year outside the tertiary hospital of BPKIHS at the district health facilities or the 'teaching district hospitals'. The postings are spread across the four-and-a-half years as a student and one year of internship.[16,20] At the teaching district hospitals, the interns undergo formative assessment through feedback from peers, clinical staff, patients, teachers, self-evaluation and a logbook evaluation.[41] Medical students spend about 20 percent of their total medical study duration outside the teaching hospitals in the teaching districts.[20,42]

The components of teaching district concept are described below (table 1).

Table 1. Community visits during the teaching and learning programs for medical students in the teaching districts of BPKIHS.[43]

Programs	Year					Internship
	1st	2nd	3rd	4th	5th	
Orientation to MBBS Program	□					
Multidisciplinary Community Diagnosis Program (M-CDP)	□					
(Family Health Exercise (FHE)	□	□	□	□	□	□
Field Posting (FIP)		□				
Learning in Field (LIF)			□	□	□	
Epidemiological Skills for Health Management (EPIDMAN)			□			
Management Skills for Health Services (HEALTHMAN)				□		
Community Oriented Compulsory Residential Rotatory Internship Program (COCRRIP)						□

The orientation of the MBBS program: On a one-day visit to a rural village, pairs of medical students are introduced to five families, which they will continue to follow for five and half years, until the completion of their internship. Learning is under the Family Health Exercise (FHE) program.[43]

Multidisciplinary Community Diagnosis Program (M-CDP): During the first year, groups of multidisciplinary students (medical, dental, nursing and public health) are posted for two weeks in a rural village of a teaching district. CDP aims to demonstrate the importance of teamwork in health care to understand the comprehensive health needs of the rural people. The methods used include meeting with village leaders, social mapping, house-to-house surveys (including all households), focus group discussions, health education, health exhibitions, health camps and report presentation.[20,43] The output of CDP is a health profile of the village. The villagers benefit through a multi-disciplinary health camp providing curative and preventive services at the end of the posting.[16]

Family Health Exercise (FHE): FHE follows on the introduction during MBBS orientation to the five families per pair of medical students. Going forward, the students make 12 day visits to the families throughout the MBBS course until the completion of the internship.[43] This allows the students to observe the changes in the family over more than 5 years. The family members can also witness the transformation from naive medical students to graduate doctors.[43]

Field Posting (FIP): Second year students make visits to community-based health and social organisations once every fortnight for six months. For example, when they are taken to an orphanage, the students learn about how the health and social needs of the orphans are linked with the government or civil systems and about the expectations of such organisations from health care professionals. The experience helps the students appreciate the role played by local and social organisations in the health system.[20,43]

Learning in Field (LIF): Learning in Field starts in the third year and continues through the fifth and final year.[16,20] Students spend one day per week in the District Hospital, guided by clinical consultants and community physicians, to learn about case management within the hospital. They also attend patients, alongside the clinical consultants and community physicians, at the hospital outpatient clinic.

Epidemiological Skills for Health Management (EPIDMAN): During the third year, teams of 10 students are assigned to a supervisor, spending two weeks with a community in the teaching district to design and implement research on public health problems and health service delivery. The group works as a team to sharpen research skills. The students then apply their research skills in another month of research posting under the supervision of the department of their choice either in community-based or a hospital-based research projects.[20,43]

Management Skills for Health Services (HEALTHMAN): During the fourth year, the students are posted close to the district health system for two weeks. During this residential posting, the students deliver services while gaining a deeper understanding of the health system.[20,42]

Community Oriented Compulsory Residential Rotatory Internship Program (COCRRIP): During the one-year internship, six months are spent at the district hospital, primary health centers and health posts.[20,43] During the internship at the districts, the medical interns rotate in clinical departments of the district hospitals and primary health centers providing service and sharpening their clinical skills under the practitioners of the district. The remaining six months are spent in the tertiary teaching hospital of BPKIHS. The interns are supervised by a clinical consultant who also provides specialist clinical services.[16,41]

Teaching district concept as a way of education and service delivery

The Teaching District model provides medical students with the experience of learning medicine while providing services to the rural population in the facilities that make up the health care system. The rural population benefits from medical services provided by supervised students and interns at the district hospital. The hospital is expected to benefit from the self-motivated, trained health care professionals who strengthen the service delivery and build the capacity of the existing workers of the hospital.

As of 2000, BPKIHS had implemented this concept in three districts working with three district hospitals, 16 primary health centres, 24 health posts, and 136 sub-health posts. In 2014, BPKIHS expanded the program to eight districts,[44] with plans to extend to all sixteen districts in the coming years.[9,10]

The concept plays the dual role of educating physicians and strengthening the district health system of Nepal.[22,24,39,45] The community and the available health care facilities are considered valuable resources for the academic health care institution and all facilities are expected to benefit from the students and interns and the specialists who supervise them. The teaching district concept takes BPKIHS into partnership with the district health system to become a socially accountable medical institution.[46-48] The conceptual framework illustrating the partnership between the stakeholders for strengthening the district health system is depicted in Figure 2. This is in line with the Global Consensus for Social Accountability of Medical Schools.[49]

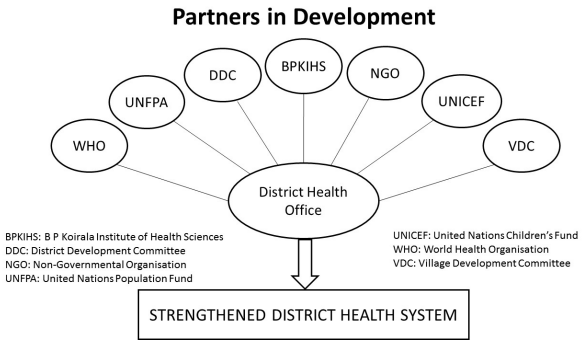

Figure 2. Partners in Development - conceptual framework for strengthening the district health system along with the stakeholders of teaching district model of BPKIHS.

There are ongoing discussions in the government of Nepal about the need of taking up a similar model in other medical schools of Nepal.[39] While this is a welcome action, we would encourage a full and comprehensive evaluation of the BPKIHS model in preparation for this development. Some aspects have been studied, e.g., faculties of BPKIHS have reported on their satisfaction with the teaching district concept.[47] The stakeholders take the teaching district concept as a way to improve the health status of people, students to learn from the community and the health system to strengthen its services.[50] However, the impact of the program on the health of the community and other

broad outcomes to learn from strengths and weaknesses of the program and difficulties of implementation is yet to be evaluated.

CONCLUSION

The BPKIHS Teaching District model is a form of community-based education, using the community resources for better learning opportunities for students and employing an academic center's resources for improving community health as close to home as possible, guided by the primary health care principle.

The BPKIHS model has been implemented for nearly 20 years. However, better understanding of its impact is needed to both improve the program at BPKIHS and to enable other medical teaching institutions to decide whether or not to emulate it. We recommend a comprehensive independent assessment be conducted, evaluating a range of outcomes, including impact on community health and the health care system, and the employment choices of health professionals graduated from the program. The paper would be useful for initiating discussions among medical educators in Nepal and other countries regarding reform of medical education.

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