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Review Article

Community Based Medical Education: An Approach and Challenges towards Deep Learning

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Abstract

The goal of medical education is to produce such graduates who is an educated, human person, who demonstrate a capacity for continuing self-education, who shows evidence of having sufficient knowledge & understanding, skills and attitudes to take some responsibility, the standard of medical education must be relate to the level of performance and expertise of the country. Medical education must be relevant to the needs of the society in which it exists. The health needs are changing rapidly in many societies, so the medical education policy must be responsive to the changing needs. Community Based Medical Education (CBME) is now recognized as an important addition to the methods available in medical education in the community because the skills of the graduates are needed in the community more than tertiary hospital. Unfortunately medical education as it is practical in most of educational institution for the health professions is quite skewed forward the live of individuals in tertiary care whose problems represents only the tip of the ice berg of the prevailing community. Community Based Education CBE) is closely related to but not the same as Community Oriented Medical Education (COME). The distinction between community oriented & community based education is not very clear. Community oriented medical education is a type of training of health personnel that focuses on both population groups and individuals and that takes into account the health needs of the community concerned. It refers to the objectives of the school and their relevance to community health needs. Those objectives are reflected in the content of the curriculum. This means that the subject studied by the students has direct relevance with regard to the priority health problems of the society for which these students are trained. Community based education on the other hand, refers to learning activities that take place in a particulars setting the community setting. This review article is an attempt to explore the idea of CBE types & approaches, its principles, importance & advantages including its implementation challenges, difficulties & constraints. The paper will also explore the matter of CBE planning considerations as well as criteria's for site selection in addition to student's assessment procedures in particular. Several problems creating in approaches & classifying CBE has also been explored adequately.

Keywords: Community Based Medical Education (CBME), Community Oriented Medical Education (COME),

Introduction

There is an increasing concern now a days, all over the world to produce medical graduates with up to date Knowledge and skills to meet increasing need of the Community. The new concepts essential for the promotion of health and the treatment of disease have been incorporated into medical school curricular, problem based learning and other more effective means of teaching have been widely adopted and medical education has extended further beyond the academic cloisters into the community with its social realities. In addition, medical education must become more reality based in keeping with the changing economic, Cultural, political and environmental context in which medicine is practiced. Medical education must not only function within the context, but must play an active role in fostering the improvement of health care systems and settings[1]. Teaching learning occasions are varied, and not only in terms of where they occurred, but also in terms of the process used. Teaching methods varied with the nature of the task as well. Price points non-threatening and supportive atmosphere is generally regarded as important for effective learning.[2] Medical education based predominantly in hospital environments and with increasing specialization and a rapid turnover of patients who represent a narrow spectrum of health problems is being re-examined in the light of contemporary realities. Significant reorientation is needed in medical education to allow students to understand people in their social contexts in a more holistic way, rather than seeing them merely as parts of biological machines.[3] The education of tomorrow's doctors requires teachers, students & health professionals across the full spectrum of care to understand health as a product of a complex network in which it is not possible to tell whether one event is more important than another. It is no longer appropriate to regard the role of the community in medical education as an add on to a curriculum, dominated by biology & technology, with establishment and students steeped in a hierarchy of disciplines where biology rules to the exclusion of other social, political, economic & psychological factors that play important roles in the determination of health. By concentrating on smaller and

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smaller fragments, modern medicine often loses sight of the patient as a human being and reducing health to mechanical functioning is no longer able to deal with the phenomenon of healing.[4] In general, the concepts of healing and health are paid insufficient attention in most medical schools.

Health professions must be responsive to the needs of the populations they serve and improve health care system through education. Several governments have issued specific guidelines for changes in medical education to prepare graduates for work in health systems, to address the health needs of families and communities and to help in improving access to health services in places and under conditions that promote general wellbeing. These guidelines require students to demonstrate abilities, perspectives and resourcefulness consistent with continuing education and an orientation and capacity to promote health. They also require more attention to be paid to building links between educational institutions and the health sector. Community based medical education (CBME) is a strategy that will helps to achieve this.

More recently, CBME has come to be seen by some as a means of providing aspects of the curriculum for an expanded intake of medical students.[5,6] Other perceptions of CBME include the exposure of students to practices in the community, with the intention of encouraging more graduates to locate their own practices.[7,8] There are many highly knowledgeable and advanced specialist working in hospitals, with superb medical technology, to solve complex individual problems but at the same time it is clear that the most prevalent health problems of population can't be dealt with in a tertiary hospital settings. Dynamic collaboration between educators, researchers, specialist and generalists is necessary to help communities and individuals to identify their priority health needs, and to implement feasible, affordable and sustainable interventions. Medical schools of most countries in South Asia follow a traditional curriculum, which divided into three phase's pre, para and clinical years. In the clinical years students are exposed to patients and taught clinical skills. Recently there have been some attempts to introduce innovations in the medical curriculum. These factors stimulated educationist in the region to look into exiting curriculum& introduce changes were to the introduction of the concept of PHC and general dissatisfaction with doctors & health care system. The historic international conference on PHC held in Alma Ata in 1978, while affirming the principal of health for all by the year 2000 AD, declared that PHC approach was means of achieving the objective health for all (HFA) by the year 2000 AD. To achieve the goal in the deployment of appropriate trained health personals of right quality and in right numbers with in health care system & this has been considered by many to be difficult, while the contribution of training of doctors continue traditional way. General dissatisfaction with the prevailing medical practices in the world- the main reason is medical curriculum. Criticism against medical education system that it is- discipline oriented, teacher centered and conducted mainly in tertiary hospital. Too much stress on memorization of facts & little stress on problem solving or self-directed learning necessary for the practice of medicine.[9] Clinical teaching lays under stress on "diseases" rather than on the problem oriented approach and relies having on the use of inpatients while student get little exposure of out patients problems in peripheral clinics or community. The students learn to elicit physical finding rather than to elaborate medical histories through listening to patients. Finally education systems put to much stress on university examinations and students always seem to be working towards passing examinations.

This imbalance in education results in production of medical graduates who have good knowledge of the advanced stages of disease & their management at the tertiary level but are ill equipped to work as primary care physicians.[10] There is increased demand from public that medical education should be oriented to actual community needs and should stress the preventive & community aspects of medicine. In response to this, a movement has been started in medical education to make it community oriented. According to Hamad et al the aim of community oriented medical education is to produce community oriented doctors who are able and willing to solve problems in primary, secondary and tertiary level.[11]

An important policy of World Health Organization is to foster the type of educational programme for health personnel that will make them responsive to the needs of the population they serve, in order to achieve the goal of health for all. Such training is most effective if it is carried out in close relation to the actual community in which the health personnel care later to work or to one of the same type. It should be based largely in community or in any of variety of health service settings. This concept is called community based education. The students should learn in an environment closely resembling that in which they are to work after graduation and that they should be more than passive receivers of information provided by teachers in lecture halls are both sound educational principles. For the majority their future work will not be in lecture halls or tertiary care medical care centers. Regrettably, current curricula require most students in health and health related fields to spend most of their time in such settings.

Community based education is therefore, not an end it self but a means of ensuring that health personal are responsive to the health needs of the people and of improving health care systems through the education of health personnel in both developing & industrialized countries. The overriding importance of broader concept of community orientation should be never overlooked; it is a comprehensive approach for ensuring that health personnel can competently perform the tasks relevant to the health needs of population. Community oriented education was described as education that focuses on both population groups and individual persons which takes into account the health needs of the community concerned.[12] As many programmes that focus on lightly on the population and the needs as well as consideration of some of the other

characteristics of community orientation. These characteristics include whether the aims, objectives and basic principles on which the educational activities with in which it is located, the extent to which the programme adopts a comprehensive rather than a mainly curative approach to health promotion and whether programme activities indicate to the goal of health for all.

Community Based Education (CBE)

It refers to medical education which situates the learners training in a community setting. It exposes students to patients who are managing their illness with in their own family, social and community contexts. Primary care physician and other health care providers accept learners into their practice, professional community and local community, where they take on the role of delivering much of the curriculum and creating perception of learners.

Community based education is a means of achieving educational relevance to community needs and consequently of implementing a community oriented educational programme. It consists of learning activities that use the community extensively as a learning environment, in which not only students but also teachers, members of the community and representatives of other sectors are actively engaged throughout the educational experience. Depending on how the population in a country is distributed, the learning environment may be an urban community. Even though at present most of the people in developing countries live in rural areas. Indeed community based education can be conducted whenever people lives be it in rural, suburban or urban area and whenever it can be organized.[13] In CBME placements students are introduced to individual patient and the community in which these patients live. Many CBME programs have developed in areas of workforce need such as rural locations and low socioeconomic outer urban areas.[14,15] Students are recognized as potential future workforce members and are welcome into their area.[16] Patients are mostly very accepting of having a student involved in their care. This process enables students to develop a relationship with patients and contribute their care.[17]

Community based learning activity is one that takes place within or in any of a variety of health services setting at the primary or secondary care level. Learning activities conducted in specialized tertiary care hospital can't be considered as community based activities. Community based learning activities include:

a. Assignment to a family whose health care is observed over a period of time.
b. Work in an urban, suburban or rural community designed to enable the students to gain understanding of the relationship of the health sector to other sectors engaged in community development and of the social systems including the dominance of special interest and elite groups, over the poorer sections of the community.
c. Participation in a community survey or community diagnosis and action plan or in a community programme such as immunization, health education of the public nutrition or child care.
d. Supervised work at a primary care facility such as health centre, dispensary and rural hospital.
e. General practice based learning students are placed in general practitioner chambers.
f. Teaching by specialist in a sitting outside the hospital.

Learning activities conducted in large scale, specialized medical care facilities, such as hospitals providing tertiary care, can not be considered as community based activities.[13] It is a powerful means of improving health services. Evidence exist that the use of health services facilities, particularly rural and urban health units, for educational purposes leads to their improvement.[13]

Community Based Medical Education (CBME) that is based outside a tertiary or large secondary level hospital. Community oriented medical education, on the other hand describes curricula that are based on addressing the health needs of the local community & preparing graduates to work in that community. Moving medical education from tertiary centers into community involves institutional change and requires proactive leadership and significant resources.[18] Community based medical education is essential contemporary medical curriculum and is argued to be especially appropriate for students who study in rural and improvised urban areas.[19]

CBME consist of learning activities that utilize the community extensively as a learning environment in which not only students, but also teachers, members of the community and representatives of other sectors are actively involves throughout the educational experience.[20] Common settings for CBME include: general practice/ family medicine clinic, village and community health centre, rural hospital, family planning clinic, specialist & consulting clinic, patients home, schools, factories, farms and shopping centers etc.[18]

Remote and rural communities provide a reach learning environment in which students can rapidly acquire competencies and confidence in primary care in a generalist setting.[21] An effective CME program matches the context of the local health service and community. Its implementation reflects the local capacity for learning opportunities, facilities, collaboration of all participants and capitalizes on local creativity in teaching. Blending learning approaches as much as technology and local culture allow is central to achieving student learning outcomes and professional development of local medical teachers. CBME harness the rich learning environment of communities such that students rapidly achieve competence and confidence in a primary care/generalist setting. Longer programs with an integrated 'generalist' approach based in the immersion learning paradigm appear successful in returning graduates to rural practice and a carrier track with a quality life style.[21]

In planning a CBME program consider the location, duration, number of students required, training resources available, style of learning, provision of staff and student support, available finances.[21] Community experiences hopefully enhance students understanding of the principles of community based care focusing on prevention, culture collaboration, community care and promoting self-care.[22] Medical school that provide rural educational placements and communities that host those placements, must give serious consideration to the structure and supports required to ensure both quality and enjoyment of rural placements.[23]

During their training in their community, students may be learning about the socioeconomic aspects of illness and the health services in the community. They may be acquiring clinical skills as a result of their contacts with patients. They may be learning about the approach adapted by the practicing health personnel in dealing with patient problems they encounter. They may be learning more about the frequency and types of problems encounter outside hospital settings. The teaching learning in the community will help the students to be motivated and prepare themselves to work in rural areas in future.

Regional context of Community based learning programs in medical education

Christian Medical College (CMC), Vellore, India

- Phase-1: Three weeks, preclinical-conduct surveys
- Phase-2: Two weeks, first clinical year focus on principals of epidemiology, health administration & health planning. Combination of lectures, classroom activities and field exercises.
- Phase-3: Three weeks clinical year, assess health status of the community and then plan, implement and finally evaluate a program.
- Phase-4: Three months, interns community attachment. Prepare them to be basic doctors.[24]

Institute of Medicine (IOM), Tribhuban University

- First, phase- One month field attachment for community diagnosis and health action.
- Second phase- Monthly home visits to five patients having selected medical problems.
- Third phase- Three weeks field placements at district, zonal and regional levels.

Residential field site training program in Bangladesh

- Integral part of the 2012 curriculum for the 3rd year students.
- Students are placed in Upazila health complex.
- Total duration of the program in Upazila health complex for two weeks.
- One week for community medicine.
- One week for primary health care.
- The program is organized by community medicine department.[25]

Three main categories of CBE program

a. Service oriented programs:

These programs focus on service delivery through their students and staff. The service may range from restricted curative service in primary units to broader community development services through community mobilization. In most of the programs reviewed, services based on prior assessment of needs and resources. Almost all programs in this category can be found in developing countries. There are two sub categories of service oriented programs and these are health intervention programs and community development programs.

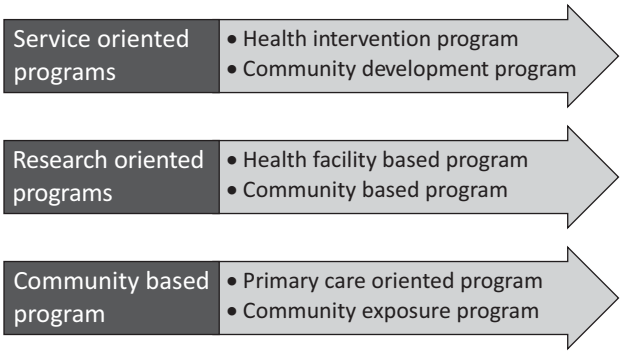
b. Research oriented programs:

In this category, students and staffs are mainly involved in studying the problems of community health. The research aims at informed decision making, addressing, for instance a health care delivery problems. Many of these programs are established in developed countries. The research oriented CBE programs can be sub divided into community based programs and health facility based programs.

c. Training focused programs:

These programs focus on student training in the community setting, but if it a primary care unit, a defined community or a working environment. The main challenge for such programs is to produce physicians who are able to work in underserved areas. These programs can be found in both developing and developed countries. This category also can be further divided into primary care oriented programs and community-exposure programs.

Taxonomy of Community Based Medical Education (CBME)



Importance of community based learning

a. It gives the students a sense of social responsibility by enabling them to obtain clear understanding of the needs of a local community.

b. Enables students to relate theoretical knowledge to practical training and makes them better prepared for life and their future integration into the working environment.

c. Helps to keep the educational process up to date by continuously confronting the students with real community problems.

d. Helps students to acquire competency in areas relevant to community health needs, while utilizing only the health service facilities that are available.

Principles of community based medical education program

To be effective a community based educational programme must fulfill certain conditions and concern to certain guiding principles as followings:

a. The students activities should relate to planned educational goals & objectives, both students and the teachers must have a clear understanding of the purposes of the activities and the expected results.

b. The activities should be introduced very early in the educational experience.

c. They must continue throughout the educational programmer.

d. They must be viewed not as peripheral or causal experience but as a standard, integral and continuing part of the educational process.

e. The students work during training must be "real work" that is related to their educational needs and also forming part of the requirements for obtaining a degree.

There is a marked difference between the objectives of a community based educational programme and those of traditional field work. The students are fully exposed to and cultural environment and thus come to understand the important elements of community life and the relationship of these elements to health related factors & activities. The programme must be clear of clear benefit to both the student and community. This implies that the community must be involved in the educational programme.[13]

Reasons in favour of Community Based Medical Education (CBME)

a. CBE may contribute to the solutions of the problem of inequity in service delivery by producing doctors, who are willing and able to work in the underserved areas, particularly rural communities. [26-30]

b. CBE can enhance learning in much same way that problem based learning does. It provides opportunities for students to learn in situation similar to those in their later professional lives & elaborate on previously acquired knowledge.[31]

c. Many community based programmes make health services available to the community, in this way they are contributing to the delivery of the care.

d. CBE equip students with competencies that they would never otherwise eg- leadership skills, the ability to work in a team and the capability to interact with the community.

e. CBE offers students an opportunity to learn and work with other health professionals in, for instance, primary care unit.[32]

f. CBE may help in strengthening the school in many areas, politically, financially and morally. [33,34]

g. By using for education the health problems that are highest priority, CBE keeps the curriculum updated since the priorities of health problems constantly change. Consequently the curriculum is responsive to the needs of the community.[35]

Steps to be followed for starting a CBE program

- Belief in the philosophy of community based education.
- Work with a committee.
- Identify required competencies.
- Identify the target population of your school and its priority health problems.
- Select appropriate educational settings.
- Devise your educational objectives clearly, prepare the students assessment scheme.
- Share the organization and evolution the program suggested these steps based on experience in planning Community Based Learning(CBL) training program in Suez Canal University.[36]

Advantages of CBME

Advantages as described by the students included accessed to a wider variety of patients; more opportunity to develop and practice clinical skills, more continuity of care with patients, added relevance to learning, more experience with the determinants of health and impact of social, economic and political events on the heath of people, more enjoyable educational experiences and the teachers who are more likely to model positive teaching attitudes, show interest in students and provide feedback. Community based learning is perceived by students as being particularly appropriate for learning about psychosocial issues, patient autonomy and communication skills.[37] As far as learning in hospital based setting was concerned students indicated that the

advantages included seeing more complex health problems having access to high technology, seeing a wide range of procedures, learning about different specialists and learning about acute and emergency problems.[38] Community based medical education students performed as well as or better than their colleagues on traditional courses with respect to clinical skills, abilities and attitudes and qualified through the same examination at the same time as their traditionally educated peers.[39-41]

Student's assessment in CBME program

- No standard assessment instrument for CBE programme.
- It depends on educational objectives of the programme.
- It must be planned from the onset of the programme.
- It must be done at actual place of performance.
- It can be done either during or at the end of the community attachment.

Criteria for considering in planning a CBE program

1. Location
2. Duration of program
3. Number of students
4. Learning resources available
5. Style of learning
6. Provision of staff and student support
7. Available finances
8. Remote & rural communities provide a rich learning environment.

Criteria of sites selection for Community Based Learning (CBL) activities

- The site should be offer the possibility for demonstrating the principles of comprehensive health care (promotive, preventive, curative & rehabilitative care) with emphasis on primary health care.
- The site should offer a comprehensive insight into health and ill health and the influence on health of socio-economic, cultural, psychological & physical environmental factors.
- Library and documentation facilities– reliable information on health status and health care should be available at the site.
- There should be sufficient numbers of motivated staff who are willing and able to teach students.
- There should be enough space for meeting and accommodation for students.
- Transport should be available when needed.

Constrains of CBE program

1. Cost-expensive
2. Security-not always safe
3. Lack of accommodation facilities
4. Inappropriate travel facilities
5. Teacher's problem–GPS have less training to teach medical students. Senior hospital teachers have no direct contact with the community. Negative attitudes of the hospital based teachers towards teaching students in community.
6. Time constrain
7. Logistics- more resourced required.
8. Co-ordination between teaching hospital and community is difficult.

The challenges and difficulties of CBME

Some significant challenges for students, teachers and practitioners in community based learning include: a high degree of variability of learning experiences at different community sites and with different preceptors, the time required to travel to community sites and dealing with negative attitudes. The latter resulted from community and primary care work being seen as second rate medicine by some tertiary care specialists, while at the same time some community physicians felt that academic, university based physicians were not out there in the real world.[42] Other challenges included recruitment, support (financial and other) and faculty development in medical education.[42] The biggest challenge is to generalize successful aspects of CBME experiences. This will require leaders in medical schools and communities to recognize the full extent of their social contact with society. CBME can be integrated successfully with components of the curriculum such as skills, doctor-patients-society, professionalism, epidemiology & public health. There are enough community based practitioners willing to mentor students and a successful link between them and hospital based health practitioners will be beneficial for all concerned.

Problems creating in approaches & classifying CBE program

Classification of the types of CBE program is important for the following reasons. First, one of the criticisms voiced against community oriented & community based education is that these types of leaning do not have scientific basis.[11] Having a taxonomy that describes all CBE programs may encourage the development of a more systematic approach to the study of CBE. Secondly, this approach to classification may help in developing guideline for the implementation of CBE programs. When discussing the problem of implementing CBE program, Nooman stress the need for comparative studies how

different programs faces problems of implementation and the importance of exchanges of experience.[43]

First, for obvious reasons, the types of implementation of various programs by different community based health profession institution are quite diverse. The second problem is related to data availability regarding programs. In recent years, some descriptive studies of CBE programs have been published. Unfortunately some of these articles lack important descriptive information e.g. their organization, content and how they are evaluated. However even a standard questionnaire study faces problems with the interpretation of answers to questions and the definition of terms.[44-45]

Conclusion

Many hospital based teachers have negative attitude towards teaching students in the community. Some observed community based teaching as threat to their traditional well established power bases. Hospital teachers should be invited to observe or monitor what is happening in CBE programme, so that they become involved. Joint teaching initiatives should be encouraged. Integration of hospital and community service will allowed students to follow patient through the spectrum of care.

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