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REVIEW ARTICLE

Community-Oriented/Based Medical Education: A Brief Review of Literature

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Background Community-Oriented/Based Medical Education (COME/CBME) is a progressive approach in medical education that emphasizes the integration of community needs and population health into the training of health professionals. This literature review examines the key concepts, historical background, definitions, and advantages of COME/CBME programs. It highlights the role of COME/CBME in increasing students' understanding of social and environmental factors in health, promoting health-oriented professionals, and addressing healthcare disparities in underserved areas. The characteristics of well-implemented CBME programs are discussed, including clearly defined objectives, organized activities, early integration into the curriculum, and active learning methods. The review also identifies the competencies developed through COME/CBME, such as public health practice, communication skills, cultural sensitivity, community development and advocacy, leadership and management, and research, ethics, and evidence-based practice. Furthermore, a taxonomy of CBME programs is presented, categorizing them based on service orientation, research orientation, and training focus. This review underscores the importance of COME/CBME in preparing healthcare professionals – through socially accountable medical schools – to meet the diverse health needs of communities and contribute to health promotion, disease prevention, and improved healthcare delivery.

Keywords Community-Based Medical Education, Community-Oriented Medical Education, Health promotion, Healthcare delivery.
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INTRODUCTION

Community-oriented/based education is an increasingly popular tool in the medical educator's toolbox[1]. They are amongst the innovative trends and possibilities for reform that the schools of health professions education can pursue[2]. Community-based and rural programs broaden students' exposure to Public Health issues[3-5].

Community-Oriented Medical Education (COME) is a type of training of health personnel that focuses on both population groups and individuals and that considers the health needs of the community concerned[6].

Community-Based Medical Education (CBME) is a means of achieving educational relevance to community needs. It consists 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 involved throughout the educational experience[2,7-11]. Such learning activities include training at primary health care settings (general practice and family medicine clinics), field projects and surveys, family health care programs and site visits to schools, farms, shopping centers and factories that have major impact on the surrounding environment. Site visits and community placements can allow students to observe different aspects of Public Health and help them to contextualize their theoretical learning[1]. CBME is also a method of developing the abilities of the student to

work in teams, develop management and leadership skills, improve the capacity of self-learning and self-evaluation and learn through providing services.

Historical Background

In a meeting of world health leaders in Alma Atta, Kazakhstan in 1978, Primary Health Care (PHC) was considered as the vehicle for improving health care of populations and health care for all to be achieved by the year 2000 was set as a target. To ensure achievement of this goal, one of the strategies was to foster the type of educational program for health care providers that could make them responsive to the needs of populations they serve. Hence, one year later, a number of medical schools which were already into reforming their curriculum towards community needs and were trying to be more socially relevant, created a network – "The Network: Towards Unity for Health (TUFH)". In its founding meeting in Kingston, Jamaica, the terms COME and CBME were officiated[12-14].

Definitions

Community can be defined as "a group of people living in the same place or having a particular characteristic in common" or "the people of a district or country considered collectively, especially in the context of social values and responsibilities; or a society"[15].

Community-based medical education (CBME) and community-oriented medical education (COME) are closely related but not the same as might be perceived by many health professions educators[16]. COME is a type of training for health personnel that focuses on both population groups and individuals and that takes into account the health needs of the community concerned[6]. CBME, on the other hand, is a form of instruction where students learn professional competencies in a community setting to help students build a sense of connection with their communities[17]. The definition developed by the Community Based Learning (CBL) Working Group at Johns Hopkins University states that "it is a pedagogical model that connects classroom-based work with meaningful community involvement and exchange"[18].

Why COME/CBME?

Since the 80th, several researchers have reported the advantages of community oriented and community based medical education. COME programs were found to increase the recognition of the contribution of social and environmental factors to the causality and prevention of illness and an enhanced view of multidisciplinary working[19]. Community-oriented medical education (COME) can produce health-oriented professionals who are equipped with broad skills and able to work for health promotion, disease prevention and cure. Health orientation is one of the most radical features of COME, wherein the curriculum is appropriate to learners' future practice in the community. Community orientation also enables students to become more people focused so that they can work towards people's self-empowerment, change people's attitudes and behaviors and improve their self-awareness and esteem[20].

CBME may solve the problem of inequality in service delivery by producing doctors who are ready to work in the underserved areas, especially rural communities and provide opportunities for students to learn in circumstances related to those in their later professional lives. Moreover, it contributes to the delivery of care and offers opportunities for students to learn and work with other health professionals in primary care units[21].

CBME provides students with competencies (e.g., leadership skills, working in a team and the capability to interact with the community). It keeps the curriculum updated and more responsive to the community needs. In addition, it helps in partnership between the community, the university and government[8].

Characteristics of Well Implemented CBME Program

There are several characteristics that indicate that a CBME program is well planned and well implemented [8,16]. Such characteristics can be summarized as follows:

- Has clearly defined objectives.
- Well planned and organized activities.
- Starts from year one of the medical curriculum.
- Distributed across the medical program.
- Focuses on community health needs.
- Considers health care of population groups as well as individuals.
- Uses active learning methods.

Competencies Developed Through COME/CBME

Several competencies can be developed in the medical students through COME/CBME curricula. The following table contains the proposed competencies and the enabling learning outcomes of such competencies[4,22].

Taxonomy of CBME Programs

There have been a few attempts trying to categorize CBE programs in the past, mainly by distinguishing between community-based curricula and conventional approaches.

Magzoub and Schmidt[21] proposed a taxonomy for CBME based on three main categories that distinguish between programs that are primarily service oriented, programs that are research-oriented and programs that are training-focused with further six subclassifications for each one.

Service-oriented programs: focus on service delivery through students and staff ranging from restricted curative services in primary care units to broader community

development services through community mobilization with further subdivision into health intervention programs and community development programs.

Research-oriented programs: students and staff are mainly involved in studying the problems of community health through research aiming at informed decision making and addressing a health care delivery problem with further subdivision into community-based programs and health-facility–based programs.

Training programs: focus on student training in the community setting for example a primary care unit aiming to produce physicians who can work in underserved areas. This category can be further divided into primary-care–oriented programs and community-exposure programs.

Competency	Enabling Learning Outcomes
Public Health Practice	Provide primary health care services to the local community.
	Plan and provide health education programs to special age/gender groups.
	Contribute to community health improvement planning (e.g., providing data to supplement community health assessments, communicating observations from work in the field).
	Identify current trends (e.g., health, fiscal, social, political, environmental) affecting the health of a community.
Communication	Identify the health literacy status of people served.
	Convey data and information to professionals and the public using a variety of approaches (e.g., reports, presentations, e-mail, letters).
	Communicate information to influence behavior and improve health.
Cultural Sensitivity	Describe the concept of diversity as it applies to individuals and populations (e.g., language, culture, values, socioeconomic status, geography, education, race, gender, age, ethnicity, religious affiliation) and its relation to the health.
	Describe the diversity of individuals and populations in a community.
	Describe the value of a diverse community health workforce.
Community Development and Advocacy	Describe factors affecting the health of a community (e.g., equity, income, education, environment)
	Recognize the programs and services provided by governmental and non-governmental organizations to improve the health of a community.
	Recognize relationships that are affecting health in a community (e.g., relationships among health departments, hospitals, community health centers, primary care providers, schools, community-based organizations and other types of organizations).
	Collaborate with community partners to improve health in a community.
	Describe how teams help achieve program and organizational goals within the community.
Leadership and Management	Incorporate ethical standards of practice into all interactions with individuals, organizations and communities.
	Identify internal and external facilitators and barriers that may affect the delivery of health care services within the community.
Research, Ethics and Evidence-Based Practice	Use information technology in accessing, collecting, analyzing, using, maintaining and disseminating data and information.
	Identify quantitative and qualitative data and information that can be used for assessing the health of a community.
	Retrieve evidence (e.g., research findings, case reports, community surveys) from print and electronic sources (e.g., PubMed to support decision making).
	Apply ethical principles in accessing, collecting, analyzing, using, maintaining and disseminating data and information.

Community-Based Learning Activities and Other Supporting Activities

A full range of teaching/learning activities can be based in the community setting outside the physical boundaries of the medical school. Such activities help in the achievement of the learning outcomes of the COME/CBME curricula and development of the intended competencies[23]. Examples of such activities are:

1. Training at primary health care settings (general practice and family medicine clinics).

2. Community diagnosis.
3. Field projects and surveys.
4. Family health care programs.
5. Family visits to specific susceptible groups.
6. Site visits to schools, farms, shopping centers and factories that have major impact on the surrounding environment.

In addition, such activities can be augmented by other supporting school-based activities that can be introduced synchronously and parallel with the community-based learning activities[24]. Examples of such activities are:

1. *Lectures:* Lectures can be used on a very small scale to address the knowledge component of specific community-based educational skills.
2. *Case-based learning (CBL):* CBL is designed to develop problem-solving and critical thinking skills and to catalyze discussion.
3. *Project-Based Learning (PrBL):* In PrBL, students learn through engagement in conducting projects within the community. Such projects may be in the form of a problem to solve (How can we reduce the pollution in a certain locality?), a phenomenon to investigate (Why are influenza epidemics seasonal?), or a decision to make (Should a national assembly vote for changing the health insurance policy?).
4. *Problem-Based Learning (PBL):* In the PBL process, learning is initiated by and structured around complex individual or community problems rooted in situations that the learner is likely to encounter in the real world outside of school, in the community.
5. *Interprofessional Education (IPE):* The desired end-result of IPE in the community settings is to develop an interprofessional, team-based, collaborative approach that improves health outcomes of the community and the quality of care.

Requirements for COME/CBME Curricula[25]

- Revision of program objectives.
- Preparation of community-based learning activities.
- Preparation of community-based postings.
- Faculty development.

Challenges of Implementing COME/CBME Curricula

The biggest challenges of implementing CBME curricula can be summarized in two main points. First, the high degree of variability of learning experiences at different community sites with different preceptors; the time required to travel to community sites; and dealing with negative attitudes resulted from community and primary care work being seen as second-rate medicine by others, while at the same time some community physicians felt that university-based physicians were not 'out there in the real world. Second, the necessity to generalize successful aspects of CBME experiences including recruitment, retention, support (financial and other) and faculty development in medical education. This needs both leaders in medical schools and communities to recognize the full extent of their social contract with society[17,19].

Student Assessment in CBME Curricula

Since the aim of CBME is to enable graduates to respond to community health needs; its assessment was faced by challenges in assessing individual members' contribution to group work and the need for test standardization in diverse field conditions. Faculty of Medicine, Gezira University, Sudan has implemented and improved a comprehensive assessment program that measures various competencies in the context of community settings, which includes a supervisory checklist, peer assessment, community feedback, reports from students, short essay questions and multiple-choice questions. There are some limitations include lack of time and logistic support, tutors are not motivated and supported by their universities, contributors from Ministry of Health are not expert as academic staff in students' assessment, lastly, students are trying to get higher scores more than achieving the goals of community medicine[23,26].

The Eastern Mediterranean Region (EMR) as a Case

In the 22 countries of the EMR, there are about 407 medical schools, 267 out of them are public (governmental) medical schools, where employing a COME/CBME curricula is a great chance.

The common characteristic among almost all those medical schools is that they have the community health facilities (i.e., primary health care centers) that are needed for conduction of community-based learning activities. In addition, many of the EMR countries already have a number of CBME medical schools (e.g., Faculty of Medicine, Suez Canal University in Egypt, Gezira University Medical School in Sudan and College of Physicians and Surgeons in Pakistan) that can copy their experience to other medical schools.

The Faculty of Medicine, Suez Canal University (FOM-SCU), Egypt as an Example from the EMR

The FOM-SCU was established in 1978 as a problem-based and community-oriented/based medical school. Since its inception, the FOM-SCU uses two types of facilities to implement primary health care centers visits as an important community-based learning activity (CBLA). Such facilities are:

- PHC Centers (PHCC) of the MOH. Before sending the students for training at those Centers, the FOM-SCU arranges with the relevant MOH directorate and the directors of such Centers to be ready for receiving students.

The intended goals, learning outcomes and detailed activities to be conducted there are clearly communicated and discussed with the Centers. In addition, the students don't go alone but accompanied by teaching staff from the FOM-SCU who is completely aware of the goals, learning outcomes and activities of PHC Centers training visits.

- Family Health Centers (FHC), which are part of the Family Medicine Department of the FOM-SCU. Such centers are completely run by teaching staff from FOM-SCU to provide primary healthcare services to the community and training services to the FOM-SCU students. By nature, such FHCs are always ready (in terms of staff and equipment).

Other CBLAs (e.g., community diagnosis, community-based projects, house visits and visits to places that influence the community health like factories, water purification utilities, sewerage treatment plants...etc) are not left as opportunistic endeavors. They are arranged by the FOM-SCU and the local PHCC or FHC[23,27].

Relationship of Community-Oriented/Based Medical Schools to their Societies

The reported levels of relationship of medical schools to society are social responsibility, social responsiveness and social accountability[28]. Community-based activities carried out by community-oriented medical schools are the means for achieving such relationship, especially in regard to the highest level – social accountability. Social Accountability is defined by the WHO[29] as "The obligation of the medical schools to direct their education, research and service activities toward addressing the priority health concerns of the community, region and/or nation they have a mandate to serve. Priority health concerns are to be jointly identified by governments, health care organizations, health professionals and the public". The definition implies that medical schools are entrusted with a crucial responsibility to align their educational, research and service endeavors with the specific health needs and challenges identified by the community, region, or nation they are dedicated to serving. This necessitates being community-oriented and having enough community-based activities which serve as a bridge, facilitating a deeper integration and understanding of societal health needs within the medical education curriculum, research initiatives and service engagements[30]. When medical schools have an impact on their communities, they can then be regarded as socially accountable.

CONCLUSION

Community-based/oriented medical education is an important educational strategy that carries great opportunities for contextual learning and its implementation helps the medical schools to start its journey towards complying with social accountability principles. Medical schools that are not community-based/oriented can benefit from those with long and extensive experience in that field. Medical curricula need to be revisited for the possibility of inclusion of community-based learning activities and for introducing the concepts of social accountability, the highest level of relationship with society.

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There are no conflicts of interest.

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