

# Competency Driven Approach in Advancing Reforms Agenda : Reinventing India's Public Health Education

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Today public health professionals face new and demanding challenges to improve health of the population and minimize health inequalities. The world suffers from the unappeasable tide of triple burden of disease, the threat of new pandemics, the environmental risks and weak health systems that impose severe burden on health services, systems and society, locally and globally. Disease knows no border; the developed and developing worlds are united by one scourge - the shortage of a public health workforce<sup>[1]</sup>. Recent public health events have emphasized the need to strengthen and develop the public health workforce. National Health Policy – 2017 by Ministry of Health and Family Welfare, Government of India, recognizes the need to revise health professional education keeping in view the changing needs, technology and the newer emerging disease trends<sup>[2]</sup>. Improvements in public health can only be realized through the development of a workforce that understands that “working differently means leading and learning differently”<sup>[3]</sup>. Competency based education (CBE) has witnessed a growing interest over the years in the field of especially for experiential learning and as a means for optimizing the preparation of health professionals<sup>[4,5,6]</sup>.

## What is Competency-based education?

CBE is an institutional process that guides education from focusing on what academics believe graduates need to know (teacher-focused) to what students need to know and be able to do in varying and complex situations (student and/or workplace focused)<sup>[5]</sup>. CBE allows students to progress based on their ability to master a skill or competency at their own pace regardless of environment. It is a student-centered, learning-outcome-based model.

According to the Oxford English dictionary, competence is defined as “being capable” or “ability” in any area. Competency is the ability to perform the activities within an occupation or function to the standard expected in

employment<sup>[6]</sup>. Another definition of competency is 'the ability to apply particular knowledge, skills, attitudes (KSA), and values to the standard of performance required in specified contexts'<sup>[7]</sup>. One of the central themes of the use of competencies in education is the change of focus from what a student is taught and the knowledge they learn, to outcomes, or demonstration of what the learner can actually do. Competencies can also be defined as an observable or measurable performance, KSA related to a particular domain or discipline like public health.

Competencies, relevant to an individual's job responsibilities, roles and capabilities, determine the applied skills and knowledge that enable people to successfully perform their work while learning objectives are specific to a course of instruction. Competencies are a way to verify that a learner has in fact learned what was intended in the learning objectives<sup>[7]</sup>. Learning objectives describe what the learner should attain at the end of a learning period. They should be specific, measurable statements and written in behavioural terms. In short, learning objectives say what the learners need to know and competencies say how we can be certain they know it. Different levels of educational goal levels are depicted through Miller's triangle. There are 4 levels: 'knows' which simply expects the learners to recite the facts, level two is 'knows how' where learners can apply knowledge to situations; third level is 'shows' which require the demonstration of skills and the final level is 'does' which defines performance. For early learners, outcomes at the level of “knows” and “knows how” may be enough, but for advanced learners, educational goals are typically at the levels of “shows” and “does.” In CBE, the critical issue is that the learner reaches the specified level of performance in a competency; how he or she gets to that point (the educational process) is secondary<sup>[4]</sup>.

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## Contextualizing Lancet Commission recommendations

Health systems are becoming increasingly complex and are stretched to deliver services. The Lancet Commission on the Education of Health Professionals for the 21st Century recommends that a third generation of educational reform is now needed that should be systems based to improve the performance of health systems by adapting core professional competencies to specific contexts, while drawing on global knowledge<sup>[8]</sup>. The report emphasises that currently, there is mismatch between professional competencies and patient and population priorities because of fragmentary, outdated, and static curricula producing ill-equipped graduates from underfinanced institutions. Transformative learning has been highlighted as an important educational principle which should underpin health professions' training curricula.

With the changing health scenario, employment and education profiles, along with emerging public health challenges, the role of public health professionals (PHPs) has become more demanding. Public health education (PHE) in India is at crossroads with a cognizant change happening from medical schools to schools of public health offering MPH and other public health courses for creating multi-disciplinary PHPs who can assume wider public health responsibilities at different levels of health system<sup>[9]</sup>. However, India's PHE is struggling on several fronts, one of the major ones being the missing focus on competency driven education and linking curricula to contemporary community needs<sup>[10]</sup>. Still, the traditional model of education is being followed where the approach is of content based curriculum and generally the expectations of the learners are based on what has been taught in the past. It tends to focus on what and how learners are taught and less so on whether or not they can use their learning to solve problems.

### Why do we need core competencies?

Core competencies improve the health of the public by making the workforce more effective, by encouraging service delivery that is evidence based, population-focused, ethical, equitable, and standardized and creation of a more unified workforce through shared understanding of key concepts and practices of public health and public health goals<sup>[11]</sup>.

For public health professionals (PHPs), core competencies assist by providing guidelines for the basic KSA required, supporting their recruitment, development and retention, providing a rational ground for curriculum development, training and professional development tools and improving consistency in job descriptions and performance assessment<sup>[11]</sup>.

Core competencies can be critical to public health organizations as well. They aid to identify the KSA required across an organization or program to accomplish public health functions; help determine the right numbers and mix

of public health workers; for staff development and training needs; provide a rationale for securing funds to support workforce development; develop job descriptions, interview questions, and frameworks for evaluation and quality assurance; facilitate collaboration, shared goals and interdisciplinary work<sup>[8,11]</sup>.

## Competency Models in Public Health

During past several decades, there has been a growing interest, in competency-based systems in various areas of education, training and professional development, especially in higher education globally. CBE and assessment initiatives have been completed in a number of health care and health management professions viz. hospitals, nursing, pharmacy, graduate medical education, healthcare executives etc<sup>[12]</sup>. Additionally, several competency specification endeavours have been undertaken in public health. The Council on Linkages between Academia and Public Health Practice completed development of a competency model in 2001<sup>[13,14]</sup>, and the Association of Schools of Public Health (ASPH) initiated competency modelling activities in 2003<sup>[12]</sup>.

Currently, formal educational programs for PHPs are highly fragmented in terms of institutional offering and quite varied in terms of the outcomes and qualifications expected of graduates<sup>[15]</sup>. As programs have adopted competencies, many have struggled and continue to struggle with actual implementation and curricular redesign<sup>[16]</sup>. Accredited schools of public health in particular, are the appropriate venues for global health education because of their population-based lens on health. This approach recognizes that global health and public health represent an integrated front with bringing a long tradition of scientifically- validated programs, policies, and services, to take over the world's most urgent health needs.

Association of Schools and Programs of Public Health (ASPPH) The Council on Education for Public Health (CEPH) differentiates CBE from traditional education by claiming that competencies "clearly define what the student will do to demonstrate learning for a workforce-related need," as opposed to merely achieving institutional instructional goals<sup>[16]</sup>.

ASPPH, officially launched on August 1, 2013, represents schools and programs of PH accredited by CEPH. ASPPH is the successor to the Association of Schools of Public Health (ASPH), which represented the 50 CEPH-accredited public health schools and eight associate members. The ASPPH's competency model is designed to provide a framework for the abilities expected of master's-level students in global health programs that will prepare them for successful performance in the global public health workforce. This model includes seven domains and 38 competencies, and is recommended for use by graduate-level educators and their students in meeting the needs for expertise in working with partners to solve the pressing public health problems<sup>[15]</sup>.

The Global Health Competency Model constructs on the competencies established in the MPH Core Competency

Model, which consists of five discipline-specific domains (Biostatistics, Environmental Health Sciences, Epidemiology, Health Policy and Management, and Social and Behavioural Science) and seven interdisciplinary/cross-cutting domains (Communications and Informatics, Diversity and Culture, Leadership, Public Health Biology, Professionalism, Program Planning, and Systems Thinking), all 12 domains of which are considered cornerstone to the study of graduate public health<sup>[12]</sup>. It was developed specifically for global health programs at schools of public health, but it is also applicable to the broader public health curriculum within schools of public health that incorporate a global perspective into all programs.

### **Association of Schools of Public Health in the European Region (ASPHER)**

The ASPHER is the key independent European organisation dedicated to strengthening public health by improving education and training of PHPs for both practice and research<sup>[17]</sup>. ASPHER started its European Public Health Core Competences Programme in 2006, involving first about 100 European public health researchers and teachers and, later, ministries of health and public health practitioners, in the discussion of the selection and definition of competences, their practical implementation at systems level as well as for individual career planning, and the establishment of an organisational structure, a council, to ensure the future development of the lists<sup>[18]</sup>.

### **Public Health Agency of Canada**

In their report—Building the Public Health Workforce for the 21st Century—the Federal/Provincial/Territorial Joint Task Group on Public Health Human Resources proposed a pan-Canadian framework to strengthen public health capacity. Identifying core competencies was one of the foundational building blocks in that framework. These include: population health assessment; health surveillance; disease and injury prevention; health promotion and health protection<sup>[11]</sup>.

### **Council of Academic Public Health Institutions Australia (CAPHIA)**

CAPHIA represents public health in universities that offer undergraduate and postgraduate programs and research and community service activity in public health throughout Australia. It aims to maintain high quality academic standards in the education and development of public health practitioners and researchers, to lead and represent PHE in the tertiary sector and to be a respected voice and advocate for the development of PHPs and researchers within Australia<sup>[19]</sup>. It also endorsed the Foundation Competencies for MPH Graduates in Australia in late 2009 and how they safeguard Australian MPH teaching programs in a highly competitive international arena. Other efforts have also been undertaken for framing competency frameworks. The Faculty of Public Health Medicine introduced an exam based on a competency framework, while the Australian Epidemiology Association has debated credentialing, and

the Australian Health Promotion Association has been developing its own competency framework<sup>[20]</sup>. In March 2009, the Department of Human Services (Victoria) published a report on competencies and the health sector and setting standards across the health workforce and education principles.

### **India**

Although medical colleges are the traditional hub for creating PHPs within India, several gaps exist in the public health training across undergraduate medical programs. In 2009, a national consultation on public health workforce organized by the MoHFW, government of India, and WHO country office in New Delhi sought to review and share current status of public health workforce development in India to make PHE and training more relevant to India's needs<sup>[21]</sup>. During this consultation, necessity of a competency based public health curriculum for undergraduate medical education in India was outlined. The activities included a secondary review of literature, and iterative discussions across two rounds of workshops. The activities began with a literature search for both India & global to understand the rationales and origins of competency frameworks in education and public health in particular and to perform a situation analysis. Subsequently, a group of public health experts was identified in health systems. These identified experts were given the task of formulating competencies for public health training programmes in UG medical curricula in India. This expert group interacted over a period of three months through face-to-face meetings and online media. The group was expected to list the public health functions of in-service doctors with an MBBS qualification and design competency statements for core competencies required for performing specific public health functions. Experts worked in small groups which focused on specific sub questions of the larger study and the work format adopted by the group, enabled experts to develop recommendations based on a consensus reached among them. A list of functions and topic areas for MBBS graduates in the public health domain was identified to be incorporated in MBBS syllabi. On the basis of the Miller's triangle, 16 core competencies to be achieved by MBBS doctors were identified and agreed upon. The study identified Communication, Leadership, Equity, Ethics, Problem solving & Systems thinking, Conflict resolution as cross-cutting competencies. Since the study represented a larger shift towards discussions on competencies and their integration into curricula with the identification of a framework, a solid foundation had been laid for development of competency based public health curricula in the country<sup>[21]</sup>. This consultation highlighted the importance of state medical council to take leadership to identify and modify PH functions and initiate work on the development of competency frameworks under the guidance of a central expert committee at the national level.

## Competency driven education: The next steps

Although conventional form of education assesses learners' knowledge and progress, CBE places a much higher value on learners' performance of tasks and activities representative of the competencies<sup>[4]</sup>. These assessments are more than just paper-and-pencil tests of knowledge; they emphasize behavioural measures that depend on integrating knowledge and skills derived from an aggregate of educational experiences and parts of the curriculum.

Producing more health professionals alone will not be sufficient; what a population needs is a health workforce with the right competencies to respond to its evolving needs. According to the WHO report on 'Transforming and Scaling up Health Professionals' Education and Training strengthen health professionals', we need to strengthen health professionals' competencies by revising and updating curricula on a regular basis<sup>[22]</sup>. It has also deliberated on - which competencies should students acquire?

The curriculum forms the heart of all educational models. It is the genesis of the curriculum that differentiates traditional models from CBE. And here disconnect seems apparent. There is a need for standardizing competency-based framework to guide the public health programs offered by institutions in India and South East Asia.

It would not be appropriate simply to adopt a list of competencies from any other part of the world. It's essential that local professionals would be able to identify and implement their own list-development process and aid in ushering transformative changes health professional education.

A CBE model that is designed around an institute's mission and the needs of the students will enable an educational institute to transform the educational experience again, assure quality curricula and learning, and help students improve health systems. The teachers should teach for mastery and not test scores.

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