Are we Really Producing Public Health Experts in India? Need for a Paradigm Shift in Postgraduate Teaching in Community Medicine

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Introduction

The concept of community medicine (CM)/public health has evolved to its current position from the days when some medical educators regarded community health program as a “pump” that will go out into the community and bring in a sufficient number of patients to provide teaching material for the hospital and the medical school. Others regarded these programs as a “filter,” which will select from a community practice those interesting cases that can be used for teaching purposes. In India, the birth of public health dates back to more than a century. The public health administration in India actually started in 1869 with the appointment of a Sanitary Commission. On the recommendations of Medical Education Conference in 1955, departments of Preventive and Social Medicine (PSM), later named as CM, were established in Medical colleges all over the country. As the subject was new at that time, the public health experts thus produced tried their best to establish the departments more firmly in the medical colleges and the recognition of this subject as a medical specialty today—is only because of their hard work.

With the changing world, the face of Public Health also changed from time to time. The landmark “Calcutta declaration,” adopted in 1999 at the Regional Conference on Public Health in South-East Asia, urged the promotion of Public Health as a discipline and an essential requirement for health promotion. The new horizons and superspecialties fast emerged in CM, such as Epidemiology, Information Education Communication, Health Management, Health Economics, Nutrition, Health System Research, Environmental Health, and so on. Also the Information Technology advances have altered the face of CM all over the world.

In India, every year, about 200 physicians complete postgraduate (PG) training in CM, and thus in the last 30 years, approximately 6000 CM specialists have been produced. Most of them join government or private medical colleges as faculty, some of them either join national/international organizations or nongovernmental health organizations or get absorbed in medical research institutions. Ideally, the knowledge and skills gained in the field of CM should ultimately result in preparing future leaders of public health who could bring a sea change in the health care delivery system. But, are the current postgraduate teaching programs in CM producing quality experts to spearhead the cause of public health in India? This is a serious issue and needs deliberations.

Where we Missed the Path?

It is a known fact but only a few acknowledge it officially that most of the postgraduates in India, who opted for CM, are here because most of them were not getting some other clinical branch or are placed on low merits in postgraduation medical entrance test, with a few exceptions here and there. Also the career paths and employment opportunities in public health were not addressed duly by successive governments. Hence right from its inception, the career in CM in India was seldom a priority of medical graduates but a compromise most of the time.
Many medical colleges in India are not having the required infrastructure to have good community-oriented, field-based programs for demonstration and participatory education of the undergraduates. The same holds good for the postgraduate teaching also. Medical colleges, by and large, remain isolated from health care system and play a very limited role in public health services. And the quality of postgraduate teaching was, to some extent, not up to the mark to cater to the needs of the health care delivery system in India. There are variations in the curriculum of CM in different medical colleges with each of them having their own style for PG teaching. In most of the medical colleges, neither field practice areas nor their laboratories have been developed fully. In most of the CM departments, the so-called public health laboratories are just white elephants with their only motto to get through the Medical Council of India (MCI) inspection. These departments seldom come on the priority list of the government and college administration and hence most of the time the stress is on fulfilling the minimum criteria of MCI rather than pursuance of excellence.

The PGs of CM are seldom posted in clinical departments which results in erosion of their clinical skills which are required to understand the complexities of hospital working. Very rarely they are made to observe, learn and analyze the working of various sections of hospital. Apart from the topics of standard textbooks, they are seldom involved in discussions concerning the recent public health issues like private health insurance, medical tourism, public-private partnership in health system, user-fee concept, social audit, medical ethics, human rights, telemedicine, geographic information system in health etc. Thus when they face the challenges while doing their jobs, they struggle with these new concepts and hence unable to take strides in their respective fields. The opportunities for learning communication skills and leadership qualities, which are required for a good public health professional, are rarely made available to PGs. Most of them are not comfortable while using computers and latest softwares necessary for rapid analysis and interpretation. This handicap is often visible during scientific paper writing, when irrespective of having a good field data with them, most of PGs find it difficult to prepare scientific manuscripts and get it published in national and international level journals.

The CM departments are not having any collaboration with their respective district health systems except one or two programs. There is a visible gap between the department of CM and other district level health agencies and other colleges/universities. For this reason, the PGs seldom get the opportunity to experience the real ground level activities in public health. The PGs remain cut off from the various national health programs and are ignorant about the latest changes/modifications in government policies which could influence health sector. This lack of ground experience hinders his/her performance as a health manager and administrator in future.

The current postgraduates in CM are at a loss to understand their role in improving the health situation in the country. So, what do the majority of postgraduate students do most of the time during their tenure as PG students? Teaching MBBS students (theory and practical), attending outpatient department (OPD), Immunization clinic, or Antirabies clinic, attending seminars and one or two conferences annually? What more? Once in a while participating in a health program for one or two days. That’s all. These duties could be easily performed by a plain MBBS graduate after one year training. Then what is the significance of having a postgraduation degree in CM? This question may raise many eye brows and people will come up with many answers, including the explanation that the basic objective of a CM department is to teach the undergraduates and postgraduates. Some will also come up with a few exceptions here and there and name five or six top medical colleges and institutes in India having good infrastructure and work culture in CM teaching. But it is the naked truth that in most of the medical colleges, the departments of CM are alien to the outside world.

Most of the PG students learn the art and science of CM and acquire basic competency, skills, and knowledge from their senior PG students and a few interested teachers in the department. Whenever a question is raised in isolation regarding the quality of postgraduate teaching, the most common reply is that the postgraduate students do not need spoon feeding and he/she should go for self-study by reading standard text books, journals, and surfing the internet. But is this the basic purpose of education? Does education mean only the transfer of knowledge and information from one generation to another? If this is true, then “Google” search engine would be the strongest contender for the best teacher award. But no, the true meaning of education is to impart the wisdom to utilize that knowledge and information and this comes from the experiences of our teachers and elders. Sometimes, the faculties just quote various verbatim definitions from standard text books regarding public health, CM, and Preventive and Social Medicine and try to convince that we are community people and have to work within the community. Agreed, no doubt, but the mere visits to the villages are just customary practices and in reality a mockery of the whole exercise. Until and unless the PGs observe, learn, and perform, side by side, the fine details and technicalities of various health resources and programs that directly influence community health, how can they be of help to the community and the nation later on? Just visiting
the community for the sake of visiting is of no help. The visits to community should be conducted with clear cut quantitative and qualitative objectives. Thus, there is an urgent need for a paradigm shift in the style of PG teaching to address the challenges in health care delivery system in India.

**A Few Suggestions for Postgraduate Teaching in Community Medicine**

**Modification in curriculum**

The basic course of PG teaching should be defined clearly and some minimum/basic competency skills must be imparted to the PG student uniformly throughout the country. Institutions that desire to excel beyond this should be welcomed and encouraged. The curriculum should be revised periodically according to the current needs of the health services in this country. For example, upcoming issues, such as occupational health, community health insurance schemes, private health insurance, medical tourism, public–private partnership in health system, user-fee concept, social audit, medical ethics, human rights, telemedicine, geographic information system in health, communication skills, medicolegal aspects of hospital administration, disaster management, medical record system, monitoring and evaluation of health programs, and so on, although already a part of the curriculum directly or indirectly, should be given more importance as they are real life issues having practical implications. Similarly, topics like health economics are theoretical in nature most of the time. Real life cost–benefit analysis, cost-effectiveness analysis, estimates, tendering procedures, project reports, budgeting, condemnation and disposal, financial audit, Indian taxing system relevant to hospitals, salaries, bank desk practices, log books, and so on, must be taught to the PGs so that when they enter the field, they already know all these procedures.

At the initiation, the PG degree course, which has to be covered in three years, should be divided topicwise with flexibility in the schedule. This may include lectures, surveys, hospital management, seminars, field visits, health program monitoring and evaluation, research methodology, practicals, teaching, training and dissertation work, and so on. Regular updating of faculty and PGs is crucial for critically analysing health issues. Most of the time the faculty development plan is inadequate and institutions are not updated on government policies and programs. There should be an inbuilt system where the national and state health and family welfare ministries should regularly send all the public health policy documents, publications, reports, and other materials to the departments of CM directly. The list of all medical colleges could be easily procured from the MCI website. This will update the knowledge of the faculty and PGs. Critical analyze of government policies by the ‘think -tank’ of CM all over the country will help in further improvement of health programs. Journal clubs help residents to develop the habit of staying updated on the significant literature that is published every year in medical science. As individual subscription is rather expensive, there should be a provision for institutional subscription to important national and international journals.

**Health management and administration component**

Hospital management and administration should be a compulsory part and parcel of the curriculum. The PG students must be involved in the functioning of the various departments of the medical college hospitals as well as district hospitals. To have an exposure to health management, administration and knowledge about current status of health programs, the PGs should be posted in a hospital in the clinical departments, namely, pediatrics, gynecology and obstetrics, medicine, and surgery for 1 month each. This will enable them to know the practical problems in various departments. Along with the functioning and requirements of the clinical departments, they should also be given the opportunity to learn about the other departments in hospitals, such as pharmacy, laboratories, blood bank, and sterilization department, and also other contingencies such as the oxygen gas plant, stores, the kitchen, and the laundry. Apart from this, various processes, such as solid waste management, inventory control, indent, medical record, medical audit, security, public relations, reporting, and so on, should be included in their training so that they have a firsthand experience of comprehensive hospital services.

There should be liaising of the departments of CM with different nodal officers-in-charge of various national and state level health programs along with senior district level health officials. They should be called upon periodically to demonstrate and deliver lectures/seminars on the actual working in their respective fields at the ground level including micro planning, monitoring and evaluation etc. The PG students must be allowed to get firsthand experience of the field by accompanying the nodal officers of various national health programs. They should be directed to stay in the field and observe the basic preparations, such as microplanning, logistic management, training of staff for health programs, coordination with different departments, meeting with senior officials, dealing with subordinates, public speaking, communication skills, leadership qualities, and so on. The cost and arrangements for these activities could be chalked out in consultation with the college authorities. After that, they should be instructed to prepare a detailed report of the field work done and submit to the department with the critical appraisal of that program. Each PG should be involved in at least
five or six important health programs in his/her area. All PGs should, in fact, be able to prepare action plans, work schedule, and develop managerial skills to work out the requirements of primary health services to meet the unmet needs.\(^{(7)}\)

**Revitalization of Reorientation of medical education scheme**

The government of India launched the reorientation of medical education (ROME) scheme in the year 1977. It aims at involving medical colleges directly in the health care delivery system by accepting total responsibility for health services of at least three Community Development Blocks in the first instance, ultimately extending to the whole district. The scheme failed to get momentum in most colleges. The ROME scheme should be revitalized in all medical colleges as it is an effective practical approach for teaching public health principles and practice to undergraduate as well as postgraduate students.\(^{(8)}\) Most of the time, fresh public health professionals are not familiar with the formats and reporting of health system. So under the ROME scheme, the community should be utilized as the laboratory of public health teaching. All the working of Community Health Centers, Primary Health Centers, and subcenters should be integrated in the curriculum of postgraduate studies and should include data collection from records, analysis, calculation of demographic indicators, preparation of reports, and suggestive action for further improvement. Coverage evaluation surveys and outbreak investigation by students should be encouraged. Thus this kind of applied epidemiology and biostatistics will help them in the field after the completion of PG.

**Development of documentation skills**

Apart from their thesis/dissertation, drafting of new protocols of different programs and preparing reports along with the Standard Operating Procedures (SOPs) should be included in the curriculum so that PGs become aware of the whole process of starting a new/modified health program in the community. It is the sad situation in this country that hundreds of dissertation/thesis on so many relevant health issues are written by CM postgraduates every year but only a very few of them get published. Hence a lot of hard work and useful data get stacked into old library sections and it is seldom shared with district, state, or other health institution authorities.\(^{(9)}\) Thus the PGs should be trained in the art and science of writing articles for national and international journals during their PG course. They should be encouraged to publish articles in scientific journals.\(^{(10)}\) The data should also be shared with district health authorities along with recommendations for action at a local level.

**Enhancing organization capabilities**

Most of the time, the PGs help the departments in organizing seminars and conferences. This enhances their organizing skills but along with it they should be encouraged to help the district health authorities in organizing health exhibitions, health camps, and health stalls at cultural and religious fairs so as to broaden their horizon in organization skills and let them learn how the government machinery works at the ground level. Similarly, communication skill plays a very crucial role in the field of public health. A good orator and trainer leaves a long lasting impact on the mind of the listener and get the work done easily. So the PGs must be given a chance to get experience in imparting training to field workers. Wherever feasible, they should be permitted to attend the training sessions of health trainers of district and state levels as well as trainers of the World Health Organization (WHO), such as Surveillance Medical Officers in Polio Eradication program and Consultants in Revised National Tuberculosis Control Program (RNTCP). Health talks by PGs in the community, including schools, colleges, and universities and that too on various topics should be promoted.

**Innovative teaching**

Problem-based learning and integrated teachings are the new hot buzz in teaching across the world. Pedagogic shift from traditional teaching to a student-centered approach requires a change in the role of the educator.\(^{(11)}\) The leading medical colleges should develop these teaching styles, and capacity building of the faculties from other colleges should be done through workshops. Some topics are comparatively new to the medical field. Most of the time the PGs mug up these topics only from the examination point of view. There should be collaboration with other college/university faculties at the start of the session for having special lectures on the basics of management, administration, biostatistics, research methodology, and others for PGs so that their concepts will be clear in these topics.

Due to ever increasing influence of Information-technology in field of public health, all the latest software on epidemiology and biostatistics, such as Epi info, SPSS, reference manager, and many more, should be practically taught to the postgraduates by hiring professionals from departments of statistics/management of local colleges/ universities other than the medical college. Very few PG students have acquainted this skill in a handful of medical colleges in India and that too because of their personal interest. This should not be ignored any more so that the postgraduates after passing out are not alien to the new world of information technology in medical sciences. There should be a compulsory six-month certificate course in computer education for PGs in their first year residency. This will help in introducing new innovations in PG teaching in CM.
Conclusions

As conventionally happens in the government setup, the crucial positions in health sector are handled by bureaucrats and ministers who do not have the training or experience in public health.\(^6\) In terms of making a real difference to policy, the researchers/faculty members of medical colleges need to be much more proactive.\(^{12}\) For preparing the real public health experts in this field, the type of postgraduate education in CM imparted by the present system is not sufficient. The postgraduates must be equipped with the necessary skills so that they can learn and practice the modern scientific methods for public health. Just letting them go to the actual field after postgraduation degree without imparting comprehensive and practical education would be just defeating the purpose of education. What we really need is the change in the mind set of the academicians and health administrators. Very few academicians are well versed with the ground functioning of various national health programs. Many of them have never seen the ground reality or some of them have worked in one or two programs and that too for a few days in the field. Similarly, the field experts are seldom given the chance to contribute substantially to research and academics because they are always preoccupied with their work. There exists an invisible gap separating academics and field work in public health. This must be bridged.

Thus there is a need for a paradigm shift in the style of the postgraduate teaching in Public Health in India. The present faculty has to take it as a challenge. The first thing we need is to accept that there are lacunae in this matter. After diagnosing what actually went wrong, one can think of the treatment modalities. The time is mature to produce real public health experts who can take care of the “health” of the health care delivery system in India. Let us herald a new change in CM teaching so that no one in future could opt for PG in CM only because he/she was not getting admission to some clinical branch.

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