10

COMMUNITY MEDICINE IN UNDERGRADUATE AND POSTGRADUATE MEDICAL EDUCATION

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The history of undergraduate medical education in Sri Lanka dates back to 1870 with the establishment of the Colombo Medical School. Even though the need for a medical school was pointed out by Sir George Anderson in 1852 , no action was taken to establish such an institution for many years. In 1869, Dr. Loos, the Colonial Surgeon of the Northern Province drew attention to the need for providing medical education in Ceylon in order that medical assistance might be more generally available based on the inquiry made into the "prevalence of an obstinate and loathsome disease in the island in the 1860s which led to misery and suffering of natives and depopulation of the Wanni districts". [1]

At the time of its establishment, the School had three departments, 25 students and the duration of the course was three years. With the elevation of the School to the status of a College in 1880 the duration of the course was extended to four years and later to five years in 1884. [2]

Even though there are no documents indicating details of the curriculum of the medical training at the time of establishment of the school, there is some indication that aspects related to public health and preventive medicine were taught, even during the early years of medical education. Dr. W. R. Kynsey who was the Principal Civil Medical officer during the period 1875 - 1897, praised the Ceylon Medical College for 'producing doctors who were able to successfully control epidemics in the country'. [3]

Reminiscences of the "graduates" of the time also indicate that the concepts of public health were included in the medical curriculum early. Wijerama[4] recalls his days in the medical school from 1916 to 1922 and refers to the teaching of hygiene in the fourth year by the Medical Superintendent of the General Hospital, Colombo while Rajasuriya (1934 - 39) refers to the teaching of public health in the fourth year and describes his experiences during this training as 'quite comprehensive and of practical interest'. [5]

With the establishment of the University of Ceylon under the Ceylon University Ordinance No. 20 of 1942, the school acquired University status and was incorporated in the University of Ceylon as the Faculty of Medicine. With this change, the degree awarded by the College i.e. LMS Ceylon was converted to the degree MB BS Ceylon. At this time, the Faculty of Medicine had six departments and the teachers of Public Health were under the Department of Medicine.[1]

The Calendar of the University of Ceylon for the Sessions 1948 - 49 provides details of the teaching of Public Health at the time.[1] Teaching was carried out during the fourth year of the medical curriculum and included 30 lectures and a series of demonstrations. The broad content areas included: vital statistics, public health administration, sanitation, control of communicable diseases, maternal and child health and school health. Practical exercises in statistics and epidemiology were also included. The evaluation was held at the end of fourth year as a component of the third MBBS examination.

The first resident training program in public health of two weeks duration was introduced with the batch 1942 – 47, in Kalutara. This programme is described as intensive, well organized and 'an enjoyable break in new surroundings'. [6]

A separate Department of Public Health was established in the Faculty of Medicine Colombo in 1949 and Professor O.E.R.Abhayaratne was appointed as the first Professor of Public Health in 1949. He served in this capacity until his retirement in 1968 when he was succeeded by Professor T.E.J. de Fonseka.

Undergraduate medical education in recent decades

The Faculty of Medicine, University of Ceylon established in Colombo was the only institution for training of medical undergraduates until 1962, when a Faculty of Medicine was established in Peradeniya as the Second Medical School of the University of Ceylon. Two more Faculties of Medicine, in Galle and Jaffna were established in 1978/79. The most recent additions to the undergraduate training facilities are the Faculty of Medicine, University of Kelaniya established in 1991 and that at the University of Sri Jayawardenapura in 1993. Accordingly, the number of undergraduates admitted for medical studies annually, increased from about 150 in late 1950's to approximately 900 in the late 1990s.

From the inception of undergraduate medical training, the curriculum was based on the British model. With reference to the Faculty of Medicine of the University of Ceylon, it is stated that "the scheme of studies in the 'professional schools' is primarily determined by the professional needs; the Faculty of Medicine in particular has to follow the general lines of the recommendations of the General Medical Council of the United Kingdom".[7] No major changes took place in the basic structure of the undergraduate curriculum and the 'British model' was extended to all the other medical faculties. Under this system, the duration of the training was five years and was broadly divided into preclinical,

paraclinical and clinical teaching. These curricula were subject-based with limited integration.

Teaching of Public Health/Community Medicine in undergraduate medical education

The changing concept of public health had an important influence on the teaching of the subject in the medical curriculum. In the early part of the 19th century, public health focused on the improvement of the environment and on control of disease. During the latter part of the same century, the focus shifted to include ' the art and science of health promotion, disease prevention and disability limitation'. In the 1960s, social and behavioural aspects of disease and health were given a priority and by the late 1960s the discipline became identified as that dealing with health care for populations, focussing on measuring their health needs, planning and administering services to meet those needs i.e. .focus on the health of the community. These changes brought in new dimensions to the teaching and practice of public health, globally. [8]

In the undergraduate medical education in Sri Lanka, the responsibility for teaching Public Health is undertaken by a separate department, established in each of the Faculties of Medicine. It is interesting to note the manner in which the changes in the concept of public health influenced the 'naming' of these departments. The first Department established in 1949 in the Faculty of Medicine, Colombo was named as the Department of Public Health, which was changed to Public Health and Preventive

Medicine in early 1960s. The Department of Public Health and Preventive Medicine established in the Second Medical School in Peradeniya in 1963, changed its name to the Department of Preventive and Social Medicine within a few years of its establishment. A further change took place in the mid 1970s, when the departments in Colombo and in Peradeniya were re-named as Departments of Community Medicine.

In the Faculties of Medicine at Galle and Jaffna, which were established later, the relevant department was named as the 'Department of Community Medicine' from the inception. Faculties in Kelaniya and Sri Jayawardenapura introduced the teaching of Family Medicine/General Practice at departmental level and the staff responsible for these programs were included along with those who taught Community Medicine. These departments were named as Departments of Community and Family Medicine.

The availability of a 'University Community Health Project Area' (UCHP) attached to each of the Universities is an important development that took place with the establishment of these Departments. One of the objectives of the UCHP areas is to serve as a centre for field teaching and training in Community Medicine.

The aim of undergraduate medical education is to produce a basic doctor who will serve the community, in different capacities. Teaching of community medicine at undergraduate level has to be considered in relation to the above goal.

Until the mid 1960s, this 'subject' was taught in the third and the fourth years in the undergraduate medical curriculum and was evaluated at the end of year 4. For a brief period of 3 years, the evaluation of Public Health/Community Medicine was undertaken in the final year as Part I of the Final MBBS examination. In the late 1960s and early 70s, several changes were made in the content and the teaching methods which varied between Faculties.

In the early years of medical education, lectures, tutorials and field visits were the teaching methods used in the teaching of public health/community medicine. Within the traditional curriculum, several innovative approaches have been introduced in the past few decades, some of which are described in the sections to follow.

The *Family attachment/Social Paediatrics programme* jointly undertaken by the Departments of Community Medicine and Pediatrics was introduced in the Faculty of Medicine, Colombo from the early 1960s. The objectives of this program were to provide an opportunity for the students to: identify medical, social and environmental problems relevant to the family they are allocated to; study the health services available to the family and their utilization and factors influencing all the above; and to plan and implement activities that will enhance the health status of the family. Though subjected to several modifications, this programme continued as a part of the training in Community Medicine, integrated with a clinical discipline. Other Faculties of Medicine also implemented similar programmes, and the introduction of a scheme of evaluation whereby marks were allocated to each student on the basis of their performance gave an added impetus to the programme and to the importance of the learning experience. Details regarding the implementation of the programme and the evaluation varied between faculties.

A *Community Medicine clerkship* of one-month duration was introduced in 1977/78 at the Faculty of Medicine, Colombo. During this period, the students were given an opportunity to participate in all activities of a health unit (field-based and clinic-based activities) and were provided with an opportunity of working with the members of

the health care team. In addition, students participated in a series of seminars which focused on common health related problems in community settings.

Community based research is another new feature introduced along with the Community attachment clerkship. Small groups of students are given an opportunity to plan and carry out a research project and prepare a report and make a presentation, applying their knowledge of basic epidemiology and statistics.

Implementation of all the programs described above was facilitated by the availability of UCHP areas attached to each of the Departments.

Though outside the formal teaching in Community Medicine, *integrated ward classes* included in the final year Professorial appointments makes an important contribution to the student's understanding of the relevance of factors in the environment, in the family and in the health seeking behaviour in the causation of disease as well as in the management of a patient.

The document on the Curriculum of the Faculty of Medicine, University of Colombo 1986 [9] which describes the content of the teaching of Community Medicine enables the identification of the main changes that took place in the content, teaching methods and the time allocation, over the previous decade. Introduction of occupational health, broadening the teaching of maternal and child health to that of family health care, emphasis on health promotion and prevention of non-communicable diseases are among the main changes in the content while the use of the teaching methods described above contributed to the varied approaches used in teaching this subject.

At present, the Faculties of Medicine in Galle , Sri Jayawardenapura, Kelaniya and Jaffna have also included similar programmes in their training in Community Medicine, while the Faculty of Medicine, Peradeniya has a family attachment programme and a clerkship but does not include a research project.

Recent years have seen more innovative changes in the teaching methods in Community Medicine, implemented within the 'traditional' curriculum. These include : a *Community Attachment Programme* introduced in place of the Family Attachment, at the Faculty of Medicine, Galle, a *Community Health Project* in the Faculty of Medicine, Jaffna and a *Home Area Project* introduced at the Faculty in Sri Jayawardenapura. Though there are differences in the objectives of these programmes and the methods of evaluation, they all aim to provide opportunities for community based learning.

A major change in the undergraduate medical curriculum from the traditional British model was made in the Faculty of Medicine, Colombo with the introduction of *the new curriculum* in 1995. This curriculum envisages a more integrated, student-centered approach to medical education and is organized in five streams i.e. Basic Sciences stream, Applied Sciences Stream, Community Stream, Behavioural Sciences stream and the Clinical Sciences Stream, spread throughout the undergraduate training. [10]

With the introduction of the new curriculum, major changes took place in the teaching of the content included in the teaching of Community Medicine. Due to the integrated nature of the curriculum, some content areas which were taught in Community Medicine were included in the Applied Sciences stream, for example the epidemiology and prevention of cardiovascular diseases is now being taught in the module on cardiovascular system, principles of prevention of communicable diseases are included in the infectious and parasitic diseases module.

The teaching program in the Community Stream commences in Term 2 and continues till the end of the MB BS course. Objectives of the Community Stream were developed based on the objectives of the undergraduate medical education and the mission statement of the faculty. Teaching activities include: theoretical inputs, a Community Attachment, a Family Attachment and a research project.

Continuing the teaching of concepts relevant to Community Medicine during the final year and evaluating these inputs at the end of the course is an important feature in this curriculum. The teaching activities carried out in Year 5, in parallel to the professorial clinical appointments focus on: recognizing the social, environmental, family and community determinants on the occurrence and management of a clinical situation; identifying the impact of community and family interventions; learning successes and failures in primary care and referral mechanisms; and sensitizing students to the aetiology and management from a community perspective. Use of 'case studies' linked with group work and student presentations is the main teaching method adopted in this program.[11]

As described above, teaching of the concepts in Community Medicine is currently being undertaken in the different faculties using different approaches. Focus of teaching has changed in keeping with the changing concepts, with more focus on community based/ community oriented medical education through health promotion and more specific targeted interventions, to improve the health of people.

At the undergraduate level, where development of basic clinical skills form an important component of the training, linkages between clinical teaching and the teaching of community medicine are essential to make the students understand the balance between a person-centered approach to a population-based approach.

Postgraduate medical education in Community Medicine

With the establishment of the Faculty of Medicine, University of Ceylon in 1942, several postgraduate training programs were initiated. The programs leading to the Diploma in Tropical Medicine and Hygiene (DTM&H), Diploma in Child Health and the Diploma in Chest Diseases had inputs in public health to varying degrees.[1]

The first postgraduate course in Community Medicine was conducted by the Faculty of Medicine, University of Peradeniya in 1974/75 leading up to the award of the Master of Medical Science in Community Medicine. The duration of this programme was one year and included nine months of course work (including preparation of a dissertation) followed by a study tour of three months duration, in the South East Asian region. Seven medical officers participated in this programme. This programme was discontinued thereafter.

The organizational structure to implement a programme of postgraduate medical education in Sri Lanka was first established in April 1974 by the Institute of Postgraduate Medicine Statute No.1 of 1974, made under the University of Ceylon Act No.1 of 1972. This was re-established in May 1979 by the Postgraduate Institute of Medicine Ordinance No. 2 of 1979 and subsequently by the Postgraduate Institute of Medicine (PGIM) Ordinance No.1 of 1980 under the Universities Act No.16 of 1978.[1] The Board of study in Community Medicine was one of the first Boards of Study to be established under the PGIM.

Postgraduate training in Community Medicine aims at training personnel who are able to function as specialists in Community Medicine in varied positions in the health system. A specialist in Community Medicine may be called upon to serve in a given

capacity on one of the several sub-disciplines within community medicine e.g. MCH, Epidemiology, Health Education and Health Administration.

The first postgraduate program to be implemented by the Institute of Postgraduate Medicine (and continued under the Postgraduate Institute of Medicine) was that leading to the Doctor of Medicine in Community Medicine, which commenced in early 1978. This program included four Parts: Part I- experience in a health unit (1 year); Part 2- full time course work (1 year); Part 3- field based research and submission of a thesis (2 years), Part 4- overseas training with a focus on a sub-discipline (9 months to 1 year).

The MD program continued until 1987, when it was decided to introduce a two-tiered system of postgraduate training, at Masters level (MSc Community Medicine) and at the doctoral level (MD Community Medicine).

The MSc Community Medicine programme includes a full time course of three terms duration and preparation of a dissertation. The course includes course units and clinical attachments. To enter the MD programme, the applicants should have obtained the MSc Community Medicine degree and have a minimum of one year's experience in a public health post. Thus, the MSc and the MD programmes could be considered as a continuum[13].

With the introduction of the two-tiered system, the MD program was re-organized to include three parts.

- Part I - Course work of 3 months.
- Part II- Attachment to a training unit of 1 year and 9 months and conduct of a research study based on which the trainee has to submit a thesis. During this period the trainee has to undertake a series of rotational attachments to specialized units, undertaking service activities related to community health programmes.
- Part III - Overseas training of 9 months to I year.

Since the inception of the postgraduate training programmes in Community Medicine, a total of 188 medical officers have obtained the MSc Community Medicine and 107 have been awarded the MD Community Medicine, as of end 1999.

A postgraduate training program leading to MSc Health Education was introduced in 1984, under the Board of Study in Community Medicine with the aim of training persons with expertise in health education. Three such courses have been conducted so far, and 34 trainees have successfully completed the programme.

A MSc/MD training programme in Community Dentistry commenced in 1992, with the aim of training specialists in Community Dentistry. A total of 18 dental surgeons have successfully completed the MSc programme. As of end 1999, one trainee has completed the MD training programme while four others, are in different stages of the MD programme.

An increased demand for postgraduate training in the field of Community Medicine has been observed in recent years, with more than 80 applicants appearing for the qualifying examination even though the number who could be accommodated in the program is limited to approximately 35.

The Board of Study in Community Medicine has periodically reviewed the training programs in keeping with the changing needs, and appropriate changes have been made to improve the quality of the training.

Considerations for the future

In this millenium, we are likely to experience many changes in the health status, health needs and health services delivery. Expectations of the public for health care will change. If the discipline of community medicine in the undergraduate medical curriculum is expected to enhance the ability of the 'basic doctor' to work in a given setting, it is necessary to impart the "ability to understand the complexities of the interaction between the health of the individual or of a population within which disease is determined or health persists". [14]

Halfden Mahler former Director General of the World Health Organization, summarizes several of the important challenges for medical education, as follows: "The development of health personnel able and willing to service the community by providing health care, promoting health, preventing disease and caring for those who need, is a formidable task for educators".[15] This statement is equally true of all health personnel, irrespective of the position they hold in a health care system. Undoubtedly, training in Community Medicine both at undergraduate and postgraduate level has a major role to play in meeting these challenges.

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