Medical Education in Hong Kong - Past, Present, and Future

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The Past

Historically, mainstream Western medicine was closely associated with religious activities. Dating back to the early Middle Ages, the church played a dominant role in the provision of medical education in Europe. Physicians were trained as apprentices in monastery infirmaries and hospitals. With the development of universities in western Europe, medical training gradually shifted to the medical schools. However, the mentor-apprentice relationship between medical teachers and students continued for many centuries until the 17th and 18th centuries when medical education began to assume its modern characters. Basic sciences teaching and application of scientific principles to patient management started to be incorporated into the medical curricula. In Britain, the establishment of the General Medical Council following the passage of the Medical Act in 1858 allowed a statutory regulatory body to exert greater control and influence over medical education, as well as to ensure better quality assurance of medical practice. This had resulted in significant improvements in medical education standard across the country.

The improvement in the quality of medical education in Europe was however not seen in the United States where medical schools were mainly profit-driven with profits being derived from hefty school fees. Standards were very variable and in general quite low. Many medical schools did not provide patient-based education. This abysmal situation lasted until the turn of the last century when Abraham Flexner published the historic Flexner Report that revolutionised medical education in the US. A school teacher-cum educational researcher, Flexner was impressed by the medical schools he saw during his tours around Europe, especially those in Germany. After returning to the US, he was commissioned by the Carnegie Foundation to make recommendations on the way forward for medical education in the US. He visited all the 155 medical schools in the US and Canada, and published a report which severely criticised the medical schools for their lack of standard, poor evaluation method and lack of clinical teaching. He pointed out that medical education should be a form of formal university education rather than an enigmatic process of apprenticeship. He recommended the introduction of robust basic sciences training in the laboratories, to be followed by clinical teaching in teaching hospitals. He believed that the two sets of training should be very distinct with no overlapping in between. The Flexnerian curriculum was adopted by most medical schools and became the mainstay of medical education for a few decades, including that in Hong Kong, until the late 20th century.

The Present

During the 1990’s, the Flexnerian model was challenged because of the compartmentalisation of basic sciences and clinical training, and the lack of skills training. Many medical educationists were of the opinion that because of these deficiencies, the curriculum was inadequate in preparing students to become practitioners who were capable of meeting the demands of the patients and the society in the present days. The Flexnerian model gradually lost its dominance as many medical schools underwent curriculum reforms in the late 1990’s. In all these reforms, “integration” became the buzzword. HKU introduced a new integrated curriculum with a heavy element of PBL (problem-based learning) in 1997 while CUHK adopted an integrated curriculum with less elements of PBL in 2001.

In the design of the new medical curriculum in CUHK, we have made reference to the famous book “Tomorrow’s Doctors” published by the General Medical Council in 1993. We agreed with the GMC’s observation that the then existing curriculum burdened the students with excessive factual information and unnecessary memorisation, and lacked training in the skills that physicians needed to acquire before they could provide holistic and compassionate care to their patients. The new curriculum significantly trims down the core teaching content by 30%, and introduces student-selected components that allow in-depth studies in areas of particular interests to the students. It also places significant emphasis in three areas: firstly the training of skills in communication, secondly the methodologies for searching and critically appraising evidence in medical practice, and thirdly the development of proper attitudes and behaviours as a responsible medical practitioner. Replacing a subject-based curriculum that segregates basic sciences from clinical teaching, the new curriculum is system-based with horizontal (among disciplines) and vertical (between basic sciences and clinical) integration. Students are given opportunities to have clinical contact as early as in their first year of studies. Many of the large-class lectures are replaced by small group teaching. Student assessments have also been revamped with the introduction of formative and summative components. In short, the curriculum has become much more structured in terms of teaching and learning as well as assessments.

In introducing major changes to our curriculum, we recognise the importance of keeping under review its effectiveness. The new curriculum at CUHK has now been implemented for a total of seven years. Throughout
this period the Faculty has been diligently collecting student feedback through a number of channels. While there is still much room for improvement, the new curriculum has so far received very positive feedback from our students. There is a general feeling among the students that they can now spend more time taking part in extracurricular activities which make them feel more like "receiving university (as opposed to vocational) education". They also feel that with early clinical contact and the integrated approach to basic sciences and clinical learning, they now have a better understanding of the clinical applications of the scientific principles. Comments from external examiners have in general been very favourable. The evaluation scores given by the intern supervisors to the first two batches of interns who have graduated from the new curriculum also compared favourably with their predecessors.

The Future

Although we are pleased with the initial outcome of the curriculum reform and are convinced that the direction of our change is correct, we are fully aware that there are still deficiencies in the design as well as our execution of the new curriculum. After a few years experimenting with the new curriculum, it is apparent that some of our colleagues still do not embrace the new concept of the reform. They are concerned that the reduction in the teaching of factual information would produce a generation of medical students and doctors who do not possess the full range of knowledge necessary to enable them to become safe medical practitioners. With this perceived knowledge gap, the skeptics fear that the new curriculum is going to produce a group of second class doctors. To ensure the success of the new curriculum, it is our duty to convince these colleagues that in this day and age, there are more important things and skills that students need to acquire other than pure factual knowledge. As an example, with the rapid advances in medicine, it is more important for the students to equip themselves with the skills that would enable them to access new knowledge on their own rather than memorising voluminous amount of factual information fed to them which may have no direct relevance to their practice. This is particularly true when much of this information may become out-of-date within a very short period of time. To give students more time to learn these new knowledge and skills, it is only appropriate to reduce much of the "over-teaching" that was so prevalent in the past. In fact, even with the trimming of our core teaching, our curriculum may still be too broad and the scope too ill-defined so that the students might lose their focus in their studies. They would certainly run the risk of "missing the forest for a tree" if they are unable to differentiate the essential information from the less important ones. In compliance with the requirements of the University Grant Committee, our Faculty is now putting a lot of effort in devising a set of outcome-based guidelines for teaching and learning. Hopefully this will provide the students and teachers with a more clear-cut indication of what the students are expected to achieve upon completion of every stage of their medical studies.

In the review of our new curriculum, I believe that we are still deficient in two areas that need improvement. The first is the imbalance between hospital-based specialty teaching and teaching in primary health care. Primary health care has been hailed as the gate-keeper of the health care system by international authorities such as the WHO, our own government, and to some extent the public. Primary care teaching has however not been given its fair share of emphasis in the curricula of our medical schools. The family medicine units are underprovided when compared to their counterparts in countries where primary health care is well established. There are historical reasons for this lopsided phenomenon. The academic clinical units are duty bound to provide clinical services to hospital patients and there is therefore a need for a sufficient number of clinical professors to shoulder this service load. Primary health care in the past was not considered a specialised field in Hong Kong as it was provided mainly by general practitioners who had little or no postgraduate training. However in this day and age, we all recognise the importance and sophistication of primary care, so much so that the Hong Kong College of Family Physicians requires its trainees to go through 6 years of structured post-internship training. Yet the teaching of primary care to medical students, which we all agree should be in the community rather than in the hospitals, still depends to a large extent on the goodwill of primary care physicians in the community who are providing free teaching services to the faculties. Given this arrangement, quality assurance would not be easy, and little can be done to stimulate the interest of our students in considering primary health care as their future career. In all the other developed countries where primary health care is well organised, such as the UK, Canada, and Australia, their governments have all injected substantial resources into primary health care teaching in medical schools. Primary care physicians in the community are reasonably remunerated so that they can dedicate a certain number of sessions every week to providing structured undergraduate teaching. It is only through the support of our Government that we can bring life to primary care teaching, and prepare our students properly for a career as primary care providers. It is now time for the two medical schools at HKU and CUHK to work together towards a better primary care service for our community.

Another area of deficiency in our medical education is character building of our students. From time to time, we hear criticism about our junior doctors being immature, self-centred, emotionally fragile, and lack of compassion for their patients. It seems that our efforts in emphasising the acquisition of communication skills, ethics, and attitudes in the new curriculum have not helped building the character of some of our students. This is not surprising since ‘Rome was not built in one day’. It would be unrealistic to expect that we can shape, or change, these young people's attitude and character through classroom teaching of some ethical principles or a glossary of technical jargons. It is through life experiences and wider exposure to humanity issues that students can learn the ways to improve their interpersonal skills as well as their emotion and adversity quotients, to cultivate a demeanour that can gain them the trust of their patients, to be sensitive to the special needs of their patients, and to understand the dimensions of life and personality of their patients.
beyond their physical illnesses. Lack of such exposure is a major deficiency in disciplines with a strong emphasis in vocational training, such as medicine. While character building should have begun during the early formative years of the individuals (primary and secondary schools), the introduction of the 3+3+4 curriculum may provide us with an opportunity to correct, to a certain extent, the deficiency since medical students will join the university at an earlier age and for an additional year. We should make use of this extra year to implement a programme for character building and training appropriate for future medical practitioners. More emphasis on general education to enhance the exposure of our students to philosophy, literature and culture, traditional values, and ethics may also help.

No medical education programme can claim to be perfect. There is more to being a good doctor than being able to make an accurate diagnosis or design an effective treatment plan. We expect a good doctor to be confident, empathetic, compassionate, humane, personal, responsible and forthright. To keep up with rapid advances in medicine, the doctor also needs to be a lifelong learner. To design a curriculum that helps students to acquire all these diverse attributes is indeed a great challenge. Despite the deficiencies mentioned above, I believe we are moving in the right direction with our new curriculum. We will need however to be vigilant to ensure that we will not derail. Through continuous self reflection and improvement of our curriculum we hope to achieve our mission of providing education to our students who are ready to provide quality health care to our community upon their graduation.