PROBLEM BASED MEDICAL CURRICULUM

The traditional Subject Centred Curriculum cannot cope with the exploding biomedical knowledge. The curriculum is not able to accommodate bits and pieces of information accumulated in biomedical sciences over the years into a basic medical curriculum. In ancient times medical students learned the practice of medicine by being apprenticed to a practising doctor. Later, with the expansion of specialists, students took part in each discipline to receive instruction. Much of what we find today, in Medical Sciences, are comparatively young disciplines. What was once Anatomy has splintered into normal Anatomy and morbid Pathology. Pathology later gave birth to Physiology, which subsequently produced Biochemistry and Pharmacology. Infectious diseases that were nonexistent a few decades ago, have now fragmented into Parasitology and Microbiology.

'The sequence of the medical curriculum which is in practice in the old schools, is thus a result of convenient arbitrary decisions, and is not based upon the needs of training physician'

The Flexner Report on 1910, which focused on university based medical education, emphasised the strengthening of departments at the expense of students' programmes. The discomfort with the Subject Centred Curriculum was perceived in the USA as early as 1956 when Case Western Reserve Medical School in Cleveland commenced its integrated curriculum. This was followed by gradual changes in more than 60 medical schools in the USA. In 1967, the General Medical Council of the U.K. recommended flexibility in curriculum planning. This resulted in the evolution of schools with completely new integrated curricula, as in Southampton and Newcastle-Upon-Tyne, in Britain. Even some of the old schools of the University of London have made major departures, as seen in the Clinical Curriculum of Royal Free School of Medicine. This trend was followed by the newer schools in Canada in McMaster and Newfoundland, the University of Newcastle in Australia and Mastricht in the Netherlands.

Medical Schools in Asia are no exception, changes in the curriculum with few adopting the integrated curricula, as in Taiwan University, Napal, Jasira in Sudan and Arabian Gulf University in Bahrain. In the Southeast Asian countries, Malaysia took the lead and introduced integrated curriculum at the Unversiti Sains Malaysia's School of Medicine in 1982. Soon other countries in this region made changes to their curriculum. To name a few, the University of Hong Kong, Tokyo Women's University in Japan, Universitas Gadja Mada in Jogjakarta, University of the East Ramon Magsaysay Memorial Medical Center in the Philippines, Prince of Songkla University and Chulalongkorn University in Thailand and finally the National University of Singapore in 1998. I have come to realize that there are many more medical schools that have such plan in their pipeline.

The Integrated Curriculum has icons that enable the students to achieve their learning objectives. The icons are that the curriculum is spiral in nature, student centred, integrated, community based, with elective programme and problem based. Problem based curriculum is based on an integrated approach to medicine, which represents an alternative to studying blocks of classified knowledge in an organised sequence. The learning process could be analytically considered to occur in three stages; acquisition of understanding, retention, and transferability to new setting.

Acquisition of understanding takes place immediately during the learning activity. Retention of the material learned is a real problem in medical education. Research has shown that the forgetting of isolated facts in anatomy is no different from that of the forgetting curve obtained with nonsense syllables. Transfer can occur most effectively if what is learned, be it a cognitive or a motor skill, is rendered meaningful to the learner; that is, that it articulates clearly with what the learner already knows and can be made to fit into his organization or structure of knowledge. If meaningful learning leads to positive transfer more effectively than rote learning, it follows that the most stable objects of instruction are concepts, principles and general strategies rather than isolated facts. To optimise transfer they must be practised well in a variety of situations. The more closely the learning condition can simulate the actual application setting, the greater the likelihood of success.

Since problems in medicine are primarily those of individual patients, most problem situations relate to an individual clinical case. In this way health professionals learn in real life. It is also argued that problem solving and clinical reasoning skills can be better achieved by this method. It comes to my mind that problem based learning can be given in the curriculum in multitudes of ways. Real patients computerised patient problems, problem simulations can be used to assist this method of learning; even the traditional lecture and discussion methods could be modified to accommodate this approach.

The problem based learning consists of more than simply learning around clinical problems. It is a fundamental intellectual process that can be applied to physiological problems in research laboratories, to problem of family dysfunction and to issues relating to health care in the community or even ethical issues.

Whatever we may say, but the next millennium would see more medical schools adopting the integrated curriculum and problem based learning would be an essential tool in the achieving of the teaching objectives. Although University of Malaya Medical centre has adopted an integrated curriculum but it is not problem based but rather Scenario Initiated Learning (SIL). Similarly many institution has moved away from total PBL curriculum (except for McMaster) due mainly to maintain enthusiasm among the teachers of medicine and meanwhile Scenario initiated learning has become more convenient. Some schools of medicine use as much as 40% PBL while Singapore adopted 20% of PBL into their infant integrated curriculum. What about University Malaya? 10%, 20%, 30% your guess would be as good as mine. Whatever percentage of PBL we adopt, the success of the programme will depend on the Commitment of the Academic staff as this programme would be labour intensive and a herculean job to sustain interest for both the academics and students. In the implementation of the integrated curriculum teachers of medicine, students need a high commitment so that the programme would be successful. What transpired at the 1st Asia Pacific Conference on Problem Based Teaching held in Singapore was loud and clear, the commitment of the institution and policy makers is utmost important to ensure the success of this innovative curriculum.

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