

## EDITORIAL

A CRITICAL REVIEW OF UNIVERSITY OF HEALTH SCIENCES  
INTEGRATED MODULAR CURRICULUM FOR MBBS

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The University of Health Sciences Lahore has recently introduced an integrated modular curriculum (IMC) for its undergraduate MBBS program. There is no specific international obligation on Pakistan to follow an integrated modular curriculum for MBBS. Many medical schools in USA, UK, Australia and India have adopted and then left the integrated modular curriculum for undergraduate medical courses. Basic to clinical (vertical) integration is the problem of medical schools where basic medical sciences are taught by non-medical teachers. Pakistani medical colleges have physician teachers in all basic medical sciences. UHS curriculum has many flaws in designing, implementation and assessment. Without proper training of teachers, IMC is not suitable for Pakistan.

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The University of Health Sciences Lahore has recently introduced an integrated modular curriculum (IMC) for its undergraduate medical (MBBS) program. These modules are designed to integrate the learning objectives, allowing students to develop a deeper understanding of the interconnectedness of different medical disciplines.<sup>1</sup>

There is no specific international obligation on Pakistan to follow an integrated modular curriculum for MBBS. Pakistani doctors who meet the licensing requirements of other countries can practice medicine internationally. The World Federation for Medical Education (WFME) has set global standards for medical education<sup>2</sup> which do not include the implementation of an integrated curriculum. Its standards do not offer a universal core curriculum and are not prescriptive.<sup>3</sup> Many medical schools in USA, UK, Australia and India have adopted and then left the IMC for undergraduate medical courses.

Basic to clinical (vertical) integration is the problem of medical schools where basic medical sciences are taught by non-medical teachers. Pakistani medical schools have physician-teachers in all basic medical sciences. During their lectures these physician-teachers refer to other medical subjects for horizontal as well as vertical integration.<sup>4</sup> Physiology teachers do a double integration. Firstly, they integrate basic sciences of Physics and Chemistry with basic medical sciences like Physiology and Biochemistry. Secondly, they integrate basic medical sciences with the clinical sciences like medicine, surgery etc. Although vertical integration is not a problem for basic medical science teachers in Pakistan, even then they need a proper training for implementation and assessment of IMC. There is no curricular development without teacher development.

When deciding about the type of curriculum for MBBS course, we should see the educational continuum of a doctor *in toto*. Before entering the MBBS course the students follow a subject-based curriculum in pre-medical classes. After MBBS, they will definitely pursue their postgraduation which is mostly subject-specific. What 'special' benefit can there be from following a zigzag course of study during MBBS. Medical field is

not about patient dealing only; it includes Medical Teaching, Medical Administration, Medical Research, Medical Diagnostics, etc. Will IMC help them in their future careers? During MBBS the learning materials (books etc.) available are subject-specific. No book in the market is available which is theme-based which is the basis for IMC. In addition, the 1<sup>st</sup> year student has to purchase *all* books of MBBS course or the college has to purchase 5 times the number of books they now have in libraries.

UHS Integrated Modular Curriculum<sup>1</sup> is not, by definition, a 'Curriculum'. A curriculum is meant for a program or course of study, e.g., MBBS. UHS Integrated Modular Curriculum, is 'Syllabus' for First Year of MBBS. When we compare it with the curricula of other Medical Universities in Pakistan, King Edward Medical University is still following the previous curricula of UHS; FJMU is following curriculum of PMDC & HEC; the Rawalpindi Medical University's downloaded curriculum<sup>5</sup> is not 'Curriculum', that is just a timeline or a timetable for modules. Nishtar Medical University's (not yet published) Part-1 of the curriculum has a 'Subject-Based Modular Curriculum' which is a strange terminology for a modular curriculum. Khyber Medical College curriculum<sup>6</sup> is in the form of modules for each year of MBBS and is not a complete one-book curriculum. The downloaded curriculum (999 Pages) of Dow University of Health Sciences<sup>7</sup> is a curriculum in true sense; although it has a 'Semester System' of examination. It is clear that in Medical Colleges of Pakistan, there is no uniformity of curriculum, instruction, and assessment. For uniformity of curriculum, it would have been better to follow the '2022 Guidelines for Undergraduate Medical Education Curriculum (MBBS)' of Pakistan Medical Commission.<sup>8</sup>

UHS Curriculum does not mention that how many credit hours MBBS course has as is required internationally. This only mentions that the whole MBBS course is five-years duration, having 6,000 hours in total; 1,200 hours per year and 35 hours per week of study. The curriculum does not mention the subjects in the Curricular Framework mentioned at pages 52-54; but

inside the modules, wrongly mentioned is ‘Curriculum of Individual Subjects’, e.g., at page 60. This is a wrong terminology; the course contents of one subject for one examination are called ‘syllabus.’ UHS Curricular Framework is not complete, this only mentions the modules of the First Professional. The Curricular Framework of the whole MBBS course should have been completed first to decide which topics of any basic medical sciences are to be taught in which year of the MBBS course. UHS Curricular Framework does not mention teaching hours of each subject taught in a year or the total hours of a subject taught in five-years. To complete this Framework, senior teachers of each clinical specialty should identify the topics of each basic medical science subject they need to be taught with their subject topics. For example, teachers of Otorhinolaryngology and Ophthalmology will prefer Physiology of Special Senses to be taught in 4<sup>th</sup> Professional MBBS which is presently placed in 2<sup>nd</sup> Professional MBBS Framework. Likewise, teachers of Obstetrics and Gynaecology will prefer Physiology of Reproductive System to be taught in the 5<sup>th</sup> Professional MBBS. UHS Curricular Framework should also include ‘Transcript’ of the MBBS course.

Teachers from 4 to 5 Departments are involved in each module; coordination among different departments is difficult in our settings. As one subject is taught, in parts, in different years of the MBBS course, students will lose intra-subject integration which is important resulting in very superficial and patchy knowledge of each subject. List of Physiology Lab Practicals, given in the UHS Modular Curriculum is about half than in the traditional curriculum. There is no Physiology Lab work during Musculoskeletal Module. Interestingly, at Page 211, the assessment scheme shows one OSPE too with one Structured Viva station for 24 Marks! What will be assessed here? It is noteworthy that according to the ‘Inspection Proforma for MBBS 5 Years Program’<sup>9</sup>, issued by the UHS, many of the instruments of Physiology Lab become redundant.

For Physiology, the Foundation Module has lectures 40 and Practical 10 hours, Haematopoietic and Lymphatic Module has 20 lectures and 6 Practical hours; Musculoskeletal Module has 34 lectures and zero Practical hours; Cardiovascular Module has 75 lectures and 10 Practical hours; Respiratory Module has 45 lectures and 10 Practical hours; total being 250 hours in First Professional MBBS. According to the ‘2022 PMC Guidelines’<sup>8</sup>, time allocated to Physiology is 400 hours total (200 hours in 1<sup>st</sup> and 200 hours in 2<sup>nd</sup> Professional). If 250 hours are consumed in 1<sup>st</sup> Year, what will be the distribution of remaining 150 hours in other 4 Years?

Guidelines of PMC (2022) at pages 29–32 may be followed with some modification.

The Assessment scheme at pages 210–212 shows that students have to pass a module ‘as a whole’; not required to pass each subject separately. Previously, students used to study *topics* of a subject selectively; now students will study *subjects* selectively. If, for example, there are 10/100 MCQs from subject A, a student may skip subject A course altogether and aim for 55% from the remaining subjects, subject A being totally ignored!

Problems faced by medical colleges in Pakistan in implementing the modular curriculum are many. Some of them are: Present infrastructure, i.e., large classrooms, less tutorial rooms, possibly no or only one skills lab etc.; implementation of modular curriculum requires a different (larger) set of faculties and a different set of instruments. In some medical colleges, hospitals and college buildings are far away from each other making it difficult for faculty as well as students to shuttle between places. In case of failure a student will not know which part of the paper is to be prepared more for supplementary exam.

Inclusion of modern e-learning, Computerized Data Acquisition Systems, Virtual Dissection Table, Dissection, Telemedicine, Robotic Surgery, etc. should be considered. Without proper training of the teachers, IMC is not suitable for Pakistan.

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