

## Short Communication

### Elevating the MD/MS/MDS Qualification: A Curriculum Update from a Public Sector Medical University, Lahore, Pakistan

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**Abstract** | MD/MS/MDS program is a postgraduate clinical degree offered at several medical universities of Pakistan including King Edward Medical University. It is classified as a Level III degree by Pakistan Medical and Dental Council and falls within level 7 category, according to National Qualifications Framework, Higher Education Commission of Pakistan. In this report, we propose curricular changes in the MD/MS/MDS degree along with improvements in research standards so it may be raised to a level 8 degree. This would improve quality of consultants produced and raise university rankings at the same time. A draft 'MD Psychiatry Curriculum' has been drafted as a model curriculum, which fulfills these criteria. This curriculum has a course work of 51 credit hours, covered in 8 semesters spread over 4 years. Detailed weekly timetables have been defined for the entire 4-year duration of the program. The research thesis requirements are upgraded to match Ph.D thesis requirement. This curriculum has been designed so that it is compatible with the 'King Edward Medical University MD/MS/MDS Amended Regulations 2014'. It is anticipated that adoption of such curriculum upgrades would raise the prestige and ranking of the University.

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#### Introduction

In the 25th meeting of the syndicate of King Edward Medical University (KEMU) "The King Edward Medical University MD/MS/MDS Amended Regulations 2014" were approved. The stated objectives of the program included

1. Training in chosen clinical field through a competency based system.
2. Development of skills in conducting research and its application to clinical environment.

MD/MS/MDS is a 4-5 year postgraduate clinical program depending on the specialty. For Cardiology, Dermatology, Gastroenterology, Neurology, Pulmo-

nology, Anesthesiology, Cardiac Surgery, Neurosurgery, Orthopedic Surgery, Pediatric Surgery, Plastic Surgery, Thoracic Surgery, Urology, it is a 5-year program whereas for Ophthalmology, Otorhinolaryngology, Obstetrics and Gynecology, Radiology, Pediatrics, Psychiatry, Oral and Maxillofacial Surgery, General Medicine, General Surgery, Community Medicine, four years are required for completion.

After clearing a competitive entry exam, the trainee is allocated a specialty within the MD/MS/MDS program according to merit and available slots. The trainee spends the first six months of induction period in their chosen specialty. During this period, he/



she is given an 'orientation' within the discipline and introduced to fundamental concepts of relevant basic sciences. The trainee is required to attend workshops on the following topics: Research Methodology and Biostatistics, Synopsis Writing, Communication Skills and Introduction to Computer / Information Technology and Software programs. For most 4-year programs an "Abridged Exam" is held after 1 year. Such disciplines include Ophthalmology, Otorhinolaryngology, Obstetrics and Gynecology, Radiology, Pediatrics, Psychiatry and Oral and Maxillofacial Surgery. For the remaining 4-year programs (General Medicine, General Surgery and Community Medicine) and all 5-year programs, an "Intermediate Exam" is held after 2 years. After their exams, the trainees continue their clinical training and research work. At the end of their training they submit their theses and appear for their final examination.<sup>(1)</sup>

### Academic level of MD/MS/MDS degree in the eyes of national accreditation bodies

In Pakistan, undergraduate and postgraduate medical degrees are currently recognized and endorsed by both Pakistan Medical and Dental Council (PMDC) and Higher Education Commission (HEC). These regulatory bodies outline levels of academic degrees according to their specific predefined criteria.

### Academic degree levels according to PMDC

According to the "Regulations for The Appointment/Promotions of Faculty Professorial Staff/Examiners/Principals/Deans/Administrative Staff in Undergraduate and Postgraduate Medical and Dental Institutions of Pakistan 2017" MD/MS/MDS degree is classified as a Level III degree in clinical sciences along with FCPS (Fellow College of Physicians and Surgeons) and PhD (Doctorate of Philosophy)<sup>(2)</sup>. These qualifications levels are largely applied for faculty appointments and promotion in medical institutes by the PMDC.

### Academic degree levels according to HEC

The Higher education Commission Pakistan has defined a "National Qualifications Framework" or "NQF" with the aim to improve and sustain the quality of higher education qualifications offered in Pakistan and win universal recognition of Pakistani higher education programs. NQF assigns each higher education qualification offered in Pakistan a level from 5-8. For reference of the reader, MBBS is qualified as level 6 degree, MPhil/equivalent as level 7 and PhD as level 8. According to HEC "The Framework does not describe qualifications at the same level as being equal and qualifications at the same level are not

interchangeable, however, they are at a comparable level in terms of knowledge, skills or competence required to be demonstrably completed"<sup>(3)</sup>. The highest qualification level 8 is currently assigned to Ph.D.

### Registering MD/MS/MDMS as a level 8 degree with HEC

MD/MS/MDS is currently not registered in National Qualification Register of HEC. The authors strongly feel that with the proposed changes in the curricula it can fulfill the requirement of a level 8-degree according to National Qualifications Framework of HEC.

### Importance of this curricular update

**For society; better doctors:** Significant advances in medical sciences are not possible without clinical research. While basic research lays the groundwork, it is the clinical translational research, which brings findings from "bench to bedside". Clinicians trained in research are the ideal human resource to fulfill this noble objective<sup>(4)</sup>. The current postgraduate clinical degrees do not place the amount of importance on research as required by a level 8 degree. Raising the bar of research requirement would produce these clinician scientists who would take clinical translation research in Pakistan to the next level. Furthermore, recent studies have shown that contrary to popular assumption, involvement of faculty and hospital resources in clinical research tends to enhance rather than distract from health care delivery. It has been demonstrated that patient outcomes are actually better in hospitals participating in clinical studies.<sup>(5)</sup>

The authors maintain that it is not possible to obtain this goal without introduction of a level 8 clinical degrees. A recent study conducted in Agha Khan University Hospital, arguably one of the better clinical research centers of Pakistan, revealed a concerning state of affairs regarding the knowledge and inclination of residents and interns towards clinical research. The major hurdles to research cited by the study participants were: lack of time, infrastructure, funding, mentors and future benefit.<sup>(7)</sup> A quality MD/MS/ MDS degree tailored to incorporate quality research as a graduation requirement, can address most if not all of these issues.

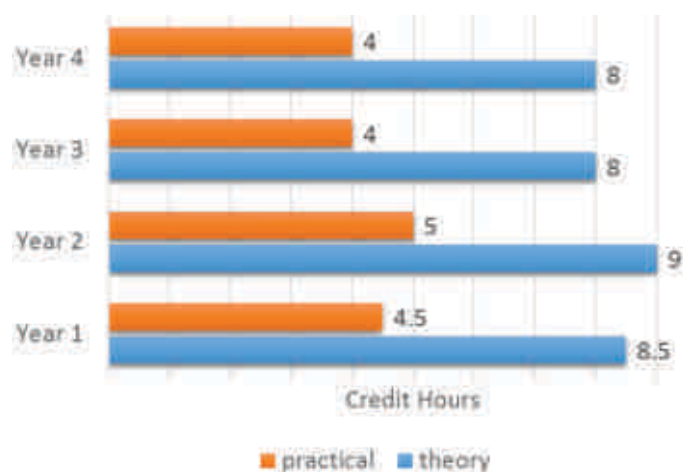
**For university better ratings:** The Higher Education Commission of Pakistan has introduced a system of university rankings with the objectives of "improving Quality and Research" and "to promote a culture among HEIs of Pakistan for participation in the World Rankings".<sup>(8)</sup> University ranking is an indicator of perceived university excellence and a university with a



higher rank always attracts more meritorious students, and more competent faculty.<sup>(9)</sup> A quick look at the HEC criteria for university ranking shows that a significant weightage is given to PhD program, a level 8 degree.<sup>(10)</sup> While medical universities in Pakistan have started PhD programs, it is mainly relevant to basic medical sciences. Most of the resources of medical universities including King Edward Medical University are focused on clinical degree programs including MD/MS/MDS program. Thus, if this degree is elevated to level 8, it is expected to make significant impact on university ranking without removing focus from clinical programs.

### The psychiatry MD curriculum as case study

The Department of Psychiatry KEMU, in collaboration with university colleagues, has taken the lead in developing a 'Model Level 8 MD Curriculum' by adapting the existing curriculum to the requirements of HEC for a level 8 degree. Credit hours have been defined, research training is incorporated and the weekly timetable of all 4 years has been laid out, down to the hourly details of each day.



**Figure 1:** Year-Wise Break Down of Credit Hours for Proposed MD Psychiatry Curriculum.

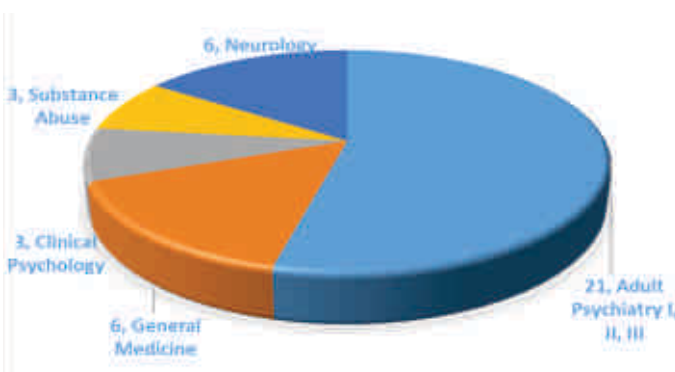
Higher Education Commission requires that for a degree to reach level 7, 30 credit hours of course work is required. Furthermore for a degree to be elevated to level 8 a further 18 credit hours of course work is necessary along with original innovative research.<sup>(9)</sup> Thus, the authors analyzed the competencies required of a graduate of MD psychiatry after consulting with the senior faculty of the Department of Psychiatry, King Edward Medical University and developed a 51 credit hour course work spread over 4 years as shown in Figure 1 and Table 1. The proposed model curriculum includes a weekly timetable for each week of the 4 year course. For every week details of theory and practical contact hours have been defined as shown in Table 2. The relative distribution of credit hours according to topics of psychiatry and allied sciences

are shown in Figure 2. The complete draft curriculum is available as an online supplement to this paper.

**Table 1:** Breakdown of 8 Semesters Spread Over 4 Years.

Semesters/	Title of Courses	Theory	Practical	Black module
Semester 1*	Adult Psychiatry I	4.5	2.5	7
Semester 2*	Rotation in General Medicine	4	2	6
Semester 3*	Adult Psychiatry II	4.5	2.5	7
Semester 4*	Adult Psychiatry III	4.5	2.5	7
Semester 5,	Clinical Psychology module 1	2	1	3
Semester 5,	Substance Abuse module 2	2	1	3
Semester 6*	Neurology Rotation	4	2	6
Semester 7,	Child and Adolescent module 1 Psychiatry	2	1	3
Semester 7,	Liaison Psychiatry module 2	2	1	3
Semester 8,	Forensic Psychiatry module 1	2	1	3
Semester 8,	Geriatric Psychiatry module 2	2	1	3
		33.5	17.5	51

\*These courses have one module only.



**Figure 2:** Course Content Distribution of MD Psychiatry Course (Number of Credit Hours, Name of Course).

The biggest challenge in the endeavor to upgrade the MD curriculum, was accomplishing this task within the framework of the MD/MS/MDS regulations of KEMU 2014<sup>(1)</sup>. The following changes are suggested with reference to the course work:

1. The first two semesters may be accommodated in the first year of the course. The combined assessment of semester 1 and semester 2 will fulfill the requirement of the abridged exam at the end of the first year as per MDMS regulations 2014.
2. Similarly semesters 3-4, 5-6 and 7-8 may be accommodated in years 2,3 and 4 and their respective semester exams may be conducted after each

**Table2:** Proposed Timetable for Week 1, Semester 1 of the Coursework.

DAY	COURSE CONTENT	LEARNING OUTCOMES	DURATION <sup>a</sup> (hrs)
Mon	Self-study day	Student studies topics according to learning objectives of the week	2
	Clinical Training	Clinical duty	4
Tues	Lecture/seminar: Topic 1	1-Introduction to Signs & symptoms of psychiatric disorders	1.5**
	Tea Break		0.5
	Self-study	Student studies topics according to learning objectives of the week	2
	Clinical training	Supervised clinical work recorded in log book	2*
Wed	Case conference	Student presents topic for 1 hour.	11
	Tea break		0.5
	Self-study	Student studies topics according to learning objectives of the week	2.5
	Clinical Training	Supervised clinical work recorded in log book	2*
Thurs	Lecture	2- Disturbance of emotions and mood 3-Disturbance of perception	2**
	Clinical Training	Clinical duty	4
	Self-study day	Student studies topics according to learning objectives of the week	2
Fri	Clinical Training	Supervised clinical work recorded in log book	4*
	Self-study day	Student studies topics according to learning objectives of the week	2
Sat	Grand round: Bedside teaching	4-Disturbance of thought	1**
	Tea		0.5
	Self-study	Student studies topics according to learning objectives of the week	2
	Clinical training	Clinical work duties	2.5

<sup>a</sup> total hours for the day are 6; \*clinical contact hours (8); \*\*theory contact hours (total 5.5); Total credit hours for this week: 0.4466(0.28+0.166).

semester as part of the continuous internal assessment required by the semester system of HEC.

- At the end of 4 years (and 8 semesters) a final exam may be taken which fulfills the requirements of existing MD/MS/MDS curriculum.

With reference to the research standards, it is proposed that the thesis be sent to at least one foreign reviewer from technologically advanced country and publication of at least one research article in an impact factor journal be made mandatory to satisfy the research standards required for a level 8 degree.

### Conclusion

Thus, we have proposed model MD curriculum, which satisfies the criteria for course work and research requirements of a level 8 degree according to the National Qualifications Framework, HEC.

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