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EDITORIAL

The role of Pakistan Medical & Dental Council in steering undergraduate medical curriculum reforms in Pakistan

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There has been an exponential increase in the number of medical colleges in Pakistan over the past few decades, especially in the private sector. Pakistan has a strong medical education system with 48 public sector and 75 private sector medical colleges. Around 16,625 new doctors graduate from these colleges annually, with more colleges currently in development.[1] Pakistan Medical & Dental Council (PM&DC), being the major regulatory body in the country needs to ensure that the colleges produce high-quality, fit-for-purpose and safe physicians that are competent to meet the health needs of the population. Shaping the vision for 21st century medical education and steering undergraduate medical curriculum reforms is a major challenge for the regulatory body. Moreover, medical universities and medical colleges in the country are equally important stakeholders in pursuing these reforms. This editorial briefly reviews the medical curriculum guidelines recently released by the PM&DC and suggests how the curriculum can be reformed.

According to a survey by the PM&DC, 65% of the colleges are still using traditional curricula, another 25% are following integrated curricula and the remaining 10% are using the hybrid curriculum. Almost all colleges with traditional subject-based curricula are progressively transitioning towards integrated modular curriculum.[2] PM&DC guidelines recommend that medical colleges should adopt a six-step approach for curriculum development, as suggested by Thomas PA, et al.[3] PM&DC curriculum guidelines emphasize that a good integrated medical curriculum should preferably be community-based, with an emphasis on primary health care.

The recently revised curricular guidelines provide a list of 40 competencies to be achieved by a medical doctor during the five years of training.[2] These competencies relate to patient assessment (7 competencies), procedural skills (13 competencies), patient care (5 competencies), prescribing (5 competencies) and therapeutic procedures (11 competencies).[2] The document provides basic guidance on the strategies and assessment methods for traditional as well as integrated, themes-based curricula. PM&DC directs all universities following traditional curriculum be shifted to integrated-one by 2026. The document lacks enough guidance on how medical colleges move toward an integrated, theme based/modular curriculum. PM&DCs' own role in steering the process of curriculum reforms is not clear.

PM&DC guidelines provide a detailed list of subjects and topics to be covered by the colleges. A hefty number of 36 major and minor subjects have been included in the list, with a major emphasis on disease oriented clinical specialties, drifting the curriculum away from its community-oriented base. The inclusion of Family Medicine as a subject denotes the growing recognition of national policy on adopting a family practice-based model of care in the country. This strategic shift will help in addressing the shortage of family physicians in the country.[4] It is encouraging to see patient safety being introduced. Surprisingly, the suggested topics under 'patient safety' also include 'health informatics, artificial intelligence, health-financing and time management'. The Patient Safety Curriculum Guide by WHO serves as an excellent resource for identifying the content that is well aligned with the core principles of patient safety.[5] Infectious diseases have been included as a stand-alone subject, while infection control has been incorporated under Family Medicine. The PM&DC curriculum guideline, in its current form, is an aggregate of different subjects and topics without any guidance on how to align the subjects with competencies and how to translate them into an outcome-oriented, themes based or modular curriculum to produce fit-for-purpose physicians. Over the years, the curriculum is stuffed with a large number of topics, with little attention to the elimination of outdated and redundant topics. Only a limited number of topics can be taught in a defined period (five years in this case). An over-stuffed curriculum runs the risk of curricular hypertrophy and carcinoma,6 seriously compromising its viability.[7] The absence of clear national curriculum strategies and insufficient guidance may lead to the development of substandard curricula at the institutional levels to produce low-quality physicians that may not fit well with the expected national outcomes.

The new curriculum guideline leave several critical questions unanswered: What is the national strategy for curriculum development? How will the transition from subject-based to theme-based curricula be facilitated? What

approaches should medical colleges adopt to develop different modules? How competencies should be disaggregated into learning objectives and aligned with assessment? Which taxonomy should guide the framework for learning strategies and the formulation of educational goals and objectives? How the curriculum should be mapped at the macro and micro levels and how should blueprinting be conducted? Guidance has not been provided on how the colleges will cover the long list of topics and how the topics and subjects shall be prioritized and mapped? While a list of teaching strategies is provided, it lacks clarity on when and how these strategies should be applied.

Unfortunately, these gaps in the curriculum guidelines are not new. They have existed for a long time, even in the previous versions of the PM&DC curriculum guidelines.[8] Probably, the root cause of these shortcomings lies in the traditional medical curriculum in Pakistan, which is largely a replica of the outdated British model. Revisions are often made without adequate consultation with key stakeholders, resulting in a curriculum that fails to adequately reflect the unique social and cultural context of Pakistan.[9] In addition, weak monitoring and regulatory framework of the curriculum further leads to poor quality of education at the grassroots.[10] The deplorable state is that the evaluation and monitoring of the curriculum have not even been mentioned in the new guidelines.

Major reforms are needed in the current Pakistani undergraduate medical curriculum. PM&DC needs to review the existing guidelines and involve curriculum development experts and key stakeholders to develop a new 21st-century curriculum. According to Dankner R, et al.,[11] the reform process should address a few key concerns: what should prompt a medical school to change its curriculum? How should such change be steered and managed? What kinds of paradigms may inform such a change? What constitutes success in a curricular reform and, how can curricular reforms be evaluated? As the major regulatory body, it is the responsibility of the PM&DC to identify important stakeholders and expert educationists and steer the process of curriculum reforms in the country. In addition, instead of developing a prescriptive curriculum with a list of topics, outcomes and competencies may be defined and revision to be done at the institutional level. This will encourage colleges to promote creativity and innovation in curriculum development and find their niche and have ownership of their specific curricula.

National curriculum reforms should be addressed at least at two major levels: strategic level and operational level. Strategic reforms are needed in three major domains: addressing the health needs of the communities (community-based curriculum), identifying the outcomes and competencies of the physicians (competency-based curriculum) and using Inter-professional education and collaborative practice (IPECP) based strategies, through effective use of digital technologies to produce competent physicians that can provide needed health services to the communities. The strategy will lead to the development of a curriculum that is community-, competency- and inter-professional education-based with the primary focus on producing high-quality, safe and fit-for-purpose physicians. Community-based curriculum focuses on the health needs of the community concerned with primary healthcare at its heart, broadening students' exposure to One Health approach in todays' complex health ecosystem, health security and other public health issues in the country.[12-14] Learning activities include training at primary health care settings, field projects and surveys, family health programs and site visits to schools, farms, shopping centers and factories that have a major impact on the surrounding environment.[15] Competency-based curriculum prepares the students for practice that is fundamentally oriented to program outcomes and organized around competencies derived from an analysis of community needs. It de-emphasizes time-based training and promises greater accountability, flexibility, and learner-centeredness.[16] It shifts the focus of education and training away from primarily medical knowledge to envision physician training that also emphasizes patient-centered care, communication, professionalism, critical thinking, teamwork, advocacy, and appropriate use of limited resources.[17,18] The IPECP approach provides students and practitioners with opportunities to learn and collaborate with diverse professionals in authentic settings, fostering an understanding of team dynamics, communication skills, and a shared commitment to patient-centered care in the classroom, online, in practice settings, and through continuing professional development and lifelong learning.[19,20]

The operational planning of the curriculum involves developing guidelines on translating the new curriculum strategy into a modules/themes-based curriculum, deciding about the levels of integration, developing templates for modules, and mapping and blueprinting the new curriculum and its distribution across the five years. Once the strategic and operational plans for the new curriculum have been developed, they must be validated. Extensive capacity building of the faculty and ongoing support from the PM&DC shall be needed to develop and roll out curricula at the institutional level. The curriculum reform process is time and cost intensive. There is no short-term panacea to curriculum reforms. It requires strong leadership, governance and regulatory support, stakeholder participation, expert consultations and consensus building at different levels. Fortunately, a critical mass of health professions educationists has been developed in Pakistan over the past few years. These educationists are now working in most medical colleges in the country. Departments of medical education have been established, albeit with limited authority and staff capacity. We urge PM&DC to pay serious attention to leading and steering evidence-based curriculum reforms in the country, to ensure that the medical colleges in the country produce high-quality, safe and fit-for-purpose physicians. We urge PM&DC to consider the following recommendations to steer the medical curriculum reforms in Pakistan.

1) Conduct a detailed needs assessment and situation analysis for the need for curriculum reforms.

2) Involve all relevant stakeholders in the curriculum reform process.

3) Curriculum reforms must be done to produce physicians that fit well with the needs of the community and are in line with the family practice-based model of care adopted by the federal and provincial ministries of health.

4) A strategic framework for curriculum reforms should address the integration of community-, competency- and inter-professional education-based curricula using digital technologies.

5) Operational level reforms should provide detailed guidance on the development of modules, curriculum mapping and alignment and its distribution over time.

6) Guidelines developed by the PM&DC must provide comprehensive checks and balances to evaluate and monitor the development and implementation of curricula by the medical universities and medical colleges, to ensure the quality of education.

7) PM&DC must ensure that the roles and responsibilities of departments of medical education in curriculum development and implementation process are clearly delineated and the departments have enough qualified staff to spearhead the process of curriculum development and its implementation.

8) PM&DC must ensure that medical colleges has a comprehensive faculty develop program for the development and implementation of the new curriculum at the institutional level.

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