

Editorial

Current Challenges in Globalization of Medical Education; Looking through the Lens of Health Reforms

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Globalization of medical education is a need of the hour. Medical profession has faced many challenges and different institutions developed various strategies to cope with these challenges. In the past, the training model in medical education used was “Apprenticeship Model”. Then medical education evolved further to implement process and product based models. Now all over the world, outcome based or competency based model is the preferred way of trainings in medical profession. Accreditation Council for Graduate Medical Education (ACGME) Model in the US and CanMEDS Model of Canada are well known models internationally for imparting medical education. In South Asia, College of Physicians and Surgeons Pakistan developed and implemented its own “Competency Based Medical Education Model”. Among the medical universities of Pakistan, King Edward Medical University is the most prestigious and historic institution where competency based medical education is implemented and challenges of medical education are addressed phase-wise. The need for globalization of medical education was felt as a result of Information Technology (IT) boom. It was strongly felt to perform situational analysis for current challenges in specific regional training sites for medical education and to propose health reforms for better health care. Global challenges include diverse standards of undergraduate education, varied clinical practice contexts, variation in disease pattern, diverse ethnic, cultural and social backgrounds, and language barriers.¹ Some challenges operate even in the same country, if it is as vast as Pakistan and has diverse ethnic, cultural and social make-up and languages. The institutions in Pakistan while opting

for implementation of “Competency Based Medical Education Model” faced the huge challenge of uniform inductions of a large cohort of postgraduate students. Uniformity in the accreditation criteria of institutions, hospitals and supervisors, and regular updating of curriculum to meet national needs are some other challenges which need to be addressed. Keeping abreast of the international standards, and needs, the competency based medical education model of training of health professionals need to be implemented. Proper supervision and effective monitoring are essentially needed to address the variation of training. Structured training, transparent assessments, eliminating the element of subjectivity, certification of qualification, recertification, revalidation, continuous medical education, and continuous professional development are among the huge challenges faced by most of the institutions in Pakistan. The specific challenges faced by postgraduate medical education in Pakistan include rapidly expanding network of Post Graduate Medical Education (Colleges/ Institutions), inadequate preparation for induction in postgraduate medical education trainings, Male versus female ratio in various disciplines of medical profession, monitoring of training at various sites, examinations, and to ensure quality assurance mechanism. Ethical considerations especially in cultural context require specific and robust trainings and it is preferred to practice it diligently during postgraduate trainings.² In Pakistan, in the beginning too few people opted for Local Post Graduate Qualifications. At that time the challenge was how to attract people towards National Post Graduate Qualification. Now the scenario is changed after National qualifications have gained credibility;

the new challenges have emerged pertaining to different aspects of trainings and its certifications.

Nevertheless, huge amount of efforts and further deliberations are required to meet challenges and to propose practical solutions.³ The institutions particularly College of Physicians and Surgeons Pakistan and King Edward Medical University introduced effective strategies to address all these challenges; especially variation in training, expanding network of postgraduate medical education, monitoring, evaluations, and quality assurance. Institutions have formulated rules and regulations for various training programs, and implemented standards/criteria of accreditation and reaccreditation of institutions and supervisors. In College of Physicians and Surgeons Pakistan as well as in King Edward Medical University faculties headed by Deans are constituted and they are responsible for updating the curriculum according to the national and international needs. Keeping in view the “Competency Based Medical Education Model.” Timelines of postgraduate medical students induction in various training programs (every year in January and July) and the criteria for standard of induction is not only well defined but it is also implemented in letter and spirit. The other strategies adopted to combat these challenges include well defined policies and criteria (standards) for accreditation and re-accreditation, continuous updating of curriculum, timeline and minimum standards for induction, effective monitoring including E-log system, faculty development and continuous professional development, revamping of Examinations System including performance assessments, computer-based examinations, implementation of quality assurance tools and mechanisms. Because of the drawback in manual logbook entries as retrospective data monitoring was carried out by it so it was replaced by electronic logbook with 360 degree feedback. E-logbook system is a prospective data entry system and to some extent addresses the issues of trainings in real time. The data of e-logbook system and big data are successfully used for research and policy making. Now the role of faculty has increased and they are being practically involved in Multiple Choice Banks, new assessment techniques like Work Place Based Assessments (WPBA), Directly Observed Practical Skills (DOPS), Mini Clinical Examination (MiniCEX), and Case Based Discussions (CBD).

The examination system is revamped including on-site assessments. Introduction of real time computerized examinations is another development which has ensured quality, merit, transparency and saving of resources. Maintenance of quality assurance is still another important standard for any progressive institution. In King Edward Medical University, Quality Enhancement Cell (QEC) is actively assuring quality in both undergraduate and post graduate trainings which has recently been recognized by Higher Education Commission and QEC scores are above 90% marks.

According to the statistical evidence, more specialists are required in health care system to provide better quality of health care services. Moreover, geographical distribution and gender wise availability of medical doctors and dentists is a big challenge. Most of the medical doctors and specialists are practicing in large urban cities. The total number of Registered Medical & Dental practitioners in the Country is 232,358. Total number of recognized medical and dental colleges in Pakistan is 114, further divided as 51 in Punjab and Islamabad, 23 in Sindh, 17 in Khyber Pakhtunkhwa, only 2 in Baluchistan and only 4 in Azad Jammu and Kashmir. Situation of distribution of trained faculty in these recognized medical and dental colleges is alarming. The dearth of faculty poses a huge challenge for policy makers and all stakeholders for effective planning as a large number of faculty members in medical and dental colleges in the country are not formally trained. College of Physicians and Surgeons of Pakistan has played a vital role in producing well-trained specialists, consultants and trained faculty members in Pakistan as well as provided immense services worldwide for training of medical practitioners/faculty members. Total 74 disciplines are available for fellowship (FCPS) trainings, and 22 disciplines for Membership (MCPS) trainings. College of Physicians and Surgeons has trained 32,027 postgraduate students since its inception. About 22,604 fellows and 9,423 members of College of Physicians and Surgeons Pakistan are serving the ailing humanity and delivering health care services in various areas, regions, institutions and organizations.⁴ Currently total post graduate residents of College of Physicians and Surgeons are 21, 922, among them are 10,031 are male doctors (46%) and

11,891 are lady doctors (54%). They have stringent monitoring through e-log system and well planned exposure to international faculty and training courses. Effective Feedback of evaluation system is the continuous feature implemented for quality assurance.

King Edward medical University is the oldest medical institution in Pakistan and produces 16672 Medical graduates, 558 graduates in Allied Health Sciences, 219 in B.Sc Physiotherapy, 138 in Doctor of Physiotherapy, and 466 B.Sc Honors in Vision Sciences. The post graduate degree programs include Doctor of Philosophy in Anatomy, Biochemistry, Community Medicine, Basic Sciences and Clinical Sciences, M.Phil in Anatomy, Biochemistry, Community Medicine, Public Health, Physiology, Pharmacology, Pathology, Physiotherapy, Optometry, Orthoptics, Investigative ophthalmology and Forensic Medicine. Clinical training programs include twelve disciplines in Masters in Surgery (MS), eleven disciplines in MD, one in MDS and seven disciplines in University fellowships.

In order to meet training needs of health professionals, Pakistan is the first country in South Asia region to sign collaborative agreements for better training and capacity building of postgraduate students and future specialists. Technologically advanced countries including United Kingdom, Canada, USA, Turkey, Australia, and Germany offered large number of scholarships to the students. Better training opportunities, technology transfer and international exposure are provided to the future generation of health professions and medical teachers through collaborative agreements and Memoranda of Understanding. Technologically advanced countries are approached for capacity building for health care professionals of Pakistan and to meet health care needs of our country. A very successful program of postgraduate training in Ireland has been launched and greatly applauded worldwide as the model training program. This program of postgraduate rotations to United Kingdom has produced "Brain gain not Brain Drain". The best medical post graduate residents are being selected on merit to get training in prestigious hospitals in United Kingdom under guidance of consultants and supervisors and renowned medical professionals for a pre defined time period. This has brought collaborative partnerships,

exchange of knowledge, development of skills and competencies, professional development and better training opportunities for postgraduate students of King Edward Medical University. Similarly, collaborative agreements have also been signed with Ministry of Health Kingdom of Saudi Arabia, Medical universities in China, Turkey, Canada and USA. The delegation from Pakistan visited Saudi Commission for Health Sciences, and also had a fruitful meeting with presidents of Royal Colleges London for technology transfer. Professor Sheila Macnell Professor of Tissue Engineering and Director IRCBM (Interdisciplinary Research Center in Bio materials) University of SHEFFIELD UK visited King Edward Medical University for mutual collaboration in innovative research and biotechnology especially in delivering Autologous Keratinocytes to burn patients. Delegate of Specialists in Public Health from Scotland and England lead by Ex. Kemcolian (1987) Prof. Mahmood Adil, Medical Director and Global Health Champion at the NHS National Health Services Scotland visited KEMU. They offered to contribute in activities of Office of Research Innovations and Commercialization of KEMU. They discussed with faculty to get patents from original research ideas and innovations.

King Edward Medical University was invited in BRIMEA Conference China. King Edward Medical University and China Medical University both were declared as sister universities. Faculty of King Edward Medical University showed its keen interest in making use of Information technology, robotic surgeries, simulations and artificial intelligence for better training of health care professionals. King Edward Medical University was declared as the "Centre of Excellence in Medical Education" by Association of Common Wealth Universities in 2018. Higher Education Commission of Pakistan, and British Council arranged a meeting with highly reputable ten universities of United Kingdom and invited their Vice Chancellors to visit King Edward Medical University for collaboration in medical education, research and students exchange programs. King Edward medical University is now the member of Association of Common Wealth Universities, the world's oldest international network of universities, established in 1913 with the vision of supporting higher education for the benefit of individuals and

societies in over 50 countries across commonwealth and beyond. These international collaborations will help to meet the challenges of globalization in medical education.

Conclusion

We are facing challenges in medical education related to trainings, assessments and monitoring of clinical competences due to multifaceted problems. These challenges need to be addressed by strengthening on-site supervision and E-log monitoring and exposure to good foreign training institutions. Health reforms are the need of the hour and shall encompass proper incentives to attract medical workforce in rare specialties, for instance, anesthesia, critical and emergency care, preventive medicine. Furthermore, other proposed solutions to existing challenges are autonomy of institutions with accountability and responsibility, and close liaison between Institutions ,regulatory and

accrediting bodies especially Pakistan Medical and Dental Council, Higher Education Commission, College of Physicians and Surgeons Pakistan and Medical Universities.

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