

# EDITORIAL

## THE CHALLENGES OF COVID-19 FOR MEDICAL EDUCATION AND TRAINING IN MEDICAL SCHOOLS IN DEVELOPING COUNTRIES- IS IT A BLESSING IN DISGUISE?

The recent COVID-19 pandemic has affected societies in all aspects of living throughout the globe and the sufferings continue. Education in general and medical education and training, in particular, is under enormous pressure especially in developing countries where the technology, resources, and expertise is lagging behind the developed nations. Contrary to online teaching, assessments, and promotions without being summatively assessed (at the end of year/semester) to next grades in general education, there is a fear that these steps may hamper patient safety if undergraduate medical students are not trained and assessed in conventional ways.<sup>1</sup> This article is about discussing these challenges in the context of the Pakistani perspective, especially in public sector medical schools. Moreover, many of these challenges can be converted into opportunities which are discussed in the next section.

Since March 23, 2020, all face to face teaching sessions in medical schools and clinical training in teaching hospitals in Pakistan is at a halt. However, both private and up to some extent the public sector medical schools have continued online teaching sessions to undergraduate medical students. The opinions of students about the utility of these activities are divided between satisfactory and unsatisfactory. Most of the online teaching sessions are one way, with uploading of teaching materials while some institutes have much-improved e-learning system. The situation of clinical teaching is dismal due to many reasons. Many clinical training facilities have halted bedside teachings, seminars, tutorials, and other teaching activities for medical students. Many clinical units, which were previously used for training the students have been converted to quarantine facilities for managing patients with COVID-19. Although online teachings, whatever the quality may be, can instill knowledge into the students, these are by no way a good way of instilling attitudes, and other soft skills in these students. The hidden curriculum which is mostly related to role modeling, communication, and acquiring proper attitudes in students cannot be taught through online teaching. Similarly, clinical training in the form of history taking, clinical examination, problem-solving, clinical reasoning, clinical judgment, and critical thinking, is very difficult to teach through online platforms. Moreover, procedural skills, though, taught nowadays via online videos, and demonstrations, will limit the students to the “knows” and “knows how” level of Miller’s pyramid.<sup>2</sup> The hands-on training of students and clinical assessments will still be limited. This may leave a big gap in the skills acquisition of students during their clinical training.

Challenges to assessments are more worrisome, as the end of the year assessments has been postponed so many times in the last 5 months by the universities. Similar is the case with formative assessments, as these activities were stopped due to abandoning of all teaching activities in the country due to lockdowns. This is not only challenging the system of promotions of students but the long-term consequences may result in endangering patient safety especially for students of year-5.<sup>3</sup> In no way, these students can be left without end-of-the-year assessment, as there is the issue of “fitness to practice” if these students are not assessed in terms of their knowledge, skills, and attitudes at the time of exit from the medical schools.

These challenges, which the students and institutes have faced, made the curriculum committees, faculty, and deanery much stronger in most of the medical schools, in terms of their preparations in these difficult times. The COVID-19 pandemic has shown us that students’ teaching can continue in times of calamities, pandemics, lockdowns, political instabilities, and other such situations where face to face teaching is not possible.<sup>4</sup> Gone are the days, that educational institutions used to be kept locked in political uncertainties, strikes, and other situations. ZOOM, Google MEET, and other online platforms have transformed the way we keep in touch with students during uncertain times.<sup>5</sup> Time has come that the curriculum developers have to adapt to these situations by modifying their syllabi, teaching methods, tools, and assessment techniques to keep the educational activities operational.<sup>6</sup> This is an opportunity for us to continue our educational activities according to the schedule and stop wasting the allotted time to the curriculum. The time has come that these online platforms need to be used even when the pandemic is over, thus transforming the curriculum into a “hybrid” form of face-to-face and online teaching in near future. Similarly, assessments have to become “hybrid” as well. The medical education institutions need to train the faculty, develop hybrid curricula and hybrid assessment methods (at least formative assessments) to incorporate the technology into teaching and assessment activities. These online platforms for teaching and assessment will save time, act as a teaching and assessment tool, boost the competencies of the faculty, improve the delivery of the contents and incorporate more avenues for teaching and training of medical students.

Incorporating these e-learning strategies into clinical rotations will help the students in many ways. Many skills that we teach and learn at the bedside, can

be presented as videos and live demonstrations for students. This can create opportunities for curriculum developers as delivering a uniform curriculum rather than an opportunistic one, as is presently happening in many clinical rotations. Moreover, this can cover a large number of students at one time, rather than a small group of students in a limited space.

Some of the challenges for such “hybrid curriculum” for curriculum developers, policymakers, implementers, and faculty may be, a “resistance for change culture” in the institutes, lack of faculty preparedness, lack of infrastructure, meager finances for some institutions, interrupted internet availability, lack of proper curriculum for hybrid teaching especially in clinical rotations and many unforeseen issues. Issues faced by students in such a situation may be, internet non-availability in certain areas, lack of gadgets with students, and failure to keep pace with the syllabus by some. Challenges for hybrid assessments include a large number of students in some public sector medical schools, internet speed, and interrupted services, lack of faculty preparedness, the possibility of cheating, and other unforeseen issues. One way of erasing the issue of cheating is to inculcate the “open book assessment” techniques. Even that looks to be challenging as such assessments need converting the didactic question items into a problem solving one, where the students need to do a lot of critical thinking to answer such questions. Although looking daunting, the time has come to challenge our faculty to develop such items and manipulate the existing archaic assessment techniques and challenge the minds of learners.

In summary, the COVID-19 pandemic has trained us in many ways. It would have taken us decades to start using the online teaching and assessment activities that we are using today. It has challenged the policymakers and curriculum developers to create syllabi that can replace the traditional face to face teaching and

assessment activities. The curriculum committees are thinking of incorporating online activities into curricula of both basic sciences and clinical sciences to make it a hybrid curriculum. This new form of teaching and assessment model will go a long way in improving teaching, innovating clinical rotations structure and converting the traditional assessment items into the format of problem-solving questions.

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