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Postgraduate Medical Training and COVID-19 Pandemic: Should We Stop, Freeze, or Continue?

Available online 19 May 2020

Abstract

While many countries in the world are going through a state of lockdown to limit the spread of coronavirus disease 2019 (COVID-19), such a state may affect postgraduate medical training (PGMT) adversely in different aspects. These include a decreased number of clinical cases related to the specialty, staff shortage, cancelation of educational conferences, and difficulties conducting formal in-training and licensing examinations. Trainees, program directors, licensing bodies, and other stakeholders are in a difficult situation regarding what to do next. Such a situation raises several critical questions related to the training that we tried to address here.

Keywords: Education; Assessment; Postgraduate training; COVID-19

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1. Under the quarantine period or COVID-19 lockdown, should medical programs stop accepting new trainees?

The simple answer is no. Medical trainees (residents or fellows) are the backbone/driving force for most, if not all, of the large hospitals. Indeed, expanding the programs may appear reasonable to increase the workforce during such a critical time. They are like “soldiers in a war,” where you depend on them for survival.

2. During the lockdown state, should the actual training be postponed or frozen?

Physicians and physicians-in-training are the frontline workers defending and helping sick patients during such crises. Promoting and graduating qualified physicians are highly needed during such time, more than at any time ever. However, there is a delicate balance between continuing graduating physicians and
maintaining/ensuring the quality of graduating doctors. Slight modification or shoveling some of the rotations to different allocations can be done to accommodate the current situation and educational needs. Yes, some medical or surgical specialties will be affected by the current lockdown more so than other specialties. Professional educators should think outside the box about different ways of accommodating the trainees’ educational needs. For instance, clinical research rotation can be utilized during such time for the profoundly affected specialties.

3. How can we ensure a high caliber of training during such a difficult time?

Centers across the region or the country should share their educational activities to ease the situation for each other. Teleconference activities across many centers should expand more to involve most, if not all, the centers in the region or country. Sharing patients’ clinical presentation and management will increase the exposure to cases and getting a different perspective from different professionals. Utilizing various educational tools are warranted to compensate for some of the weakness during such a period. For instance, some programs will suffer from low exposure to specific clinical cases or activities, like elective surgical procedures and so on. Such weakness can be mitigated by utilizing simulation activities.

4. How can we evaluate and assess the trainees as an individual program or as a licensing body?

Program directors and trainees may wonder how the assessments and exams will look like during such a critical period and whether some exams can be waived or cancelled. Generally, there are standard tools that have been used to assess knowledge acquisition and competencies in medical practices. These include, and are not limited to, multiple-choice questions (MCQ), in-training evaluation reports (ITER), objective structured clinical examination (OSCE), logbook or portfolio, and others. Licensing examinations usually include all of the above-mentioned methods and take place in a predefined location that trainees may need to travel to in order to complete such exams. Besides, a gathering is usually extensive, which may not be permissible during such lockdown status. However, within these lockdowns, we need to rethink how to do things differently, while maintaining high quality of the assessment tools. With an existing plethora of online technology like Zoom, Cisco Webex, and many others, such exams like

| Table 1 | Educational assessment tools. |
|---------|-------------------------------|
| Tool    | Commonly used in licensing exams | Feasibility during lockdown | Can be done remotely | Can be completed Individually or with a small group |
| MCQ     | +++ | - | +++ | +++ |
| OSCE    | +++ | - | ++ | ++ |
| ITER    | +++ | +++ | NA | NA |
| Logbooks | ++ | +++ | NA | NA |
| Oral Exam | +/- | - | ++ | ++ |
| SAQ     | +/- | - | ++ | ++ |

| Table 2 | Training challenges and solutions. |
|---------|-----------------------------------|
| Challenge | Suggested solutions |
| Decrease exposure of cases/patients [more trainees/fewer patients] | • *Cases of the week*: Collaboration among the centers to do teleconference meetings and discussions to share interesting cases. • Shoveling of certain rotations instead of the others; for instance, focusing on research or public health issues during the shortening periods. • Utilize simulation cases, card cases, and other tools to cover such areas. • Empower the trainees to be proactive and objectives oriented. Such attitude will lead to open discussion for various topics that have not been exposed or seen. |
| The expected shortage of educators [more trainees/fewer educators] | • Online *half day*: Academic teleconference across the centers, where the staffs from different centers collaborate and share their educational loads and needs. • Utilize online resources like lecture series or webinars. |
| Evaluation issues [no travels, no gathering] | • *Online MCQ and OSCE*: Through video-conferencing technology, where the trainee can participate in the exam from his or her home or hospital. • *Maintain* great emphasis on other readily available tools like ITER, feedback, and logbook to promote students’ development and academic growth. |
OSCE can be done remotely without the need for travel and a large gathering of trainees and examiners. Further details can be reviewed in Table 1.

Finally, a take-home “Table” that summarised the current challenges due to COVID-19 lockdown state and some suggested solutions can be summarised in Table 2.

Conflict of interest

The author declares no conflicts of interest.

Funding

No funding was received for this study.

References

1. World Health Organization. Director-General’s opening remarks at the media briefing on COVID-19. https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19-25-march-2020. Accessed March 25, 2020.

2. Bandiera G, Sherbino J, Frank JR, eds. The CanMEDS assessment tools handbook: an introductory guide to assessment methods for the CanMEDS competencies. Royal College of Physicians and Surgeons of Canada; 2006.

Ali H. Algiraigri

Department of Hematology, King Abdulaziz University Hospital, Jeddah, 22252, Saudi Arabia

E-mail address: aalgiraigri@gmail.com

31 March 2020