



Commentary

EFFECTS OF THE SARS-COV-2 PANDEMIC ON MEDICAL EDUCATION IN ITALY: CONSIDERATIONS AND TIPS

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ARTICLE INFO

Article history:

Received 20 May 2020

Revised 31 May 2020

Accepted 06 June 2020

Keywords:

medical education, COVID-19, SARS-CoV-2, online teaching.

ABSTRACT

The pandemic due to the spread of the novel Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) has been an unexpected challenge for national health systems worldwide. The severity of the disease has forced Governments to introduce measures of containment and mitigation, including social distancing, smart working, and the closure of commercial activities. Universities have also had to stop lectures and practical training, even for medical, dental, and healthcare students. Online lectures have replaced traditional classroom lectures, and they would appear to be adequate for the teaching of bioscience. In some instances, telemedicine activities have replaced the practicals. The latter maybe efficacious for general medical activity training, but may result in a gap in terms of training for surgical specialties. Therefore, the scientific community should consider carefully the influence that this period has had on medical education and whether the healthcare workers who have experienced these educational changes could be negatively impacted.

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As of May 20, 2020, Italy had the sixth highest number of confirmed Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) infections and the third number of novel Coronavirus disease (COVID-19) deaths in the world [1]. The increase in Italy's alert status in response to the public spread of SARS-CoV-2 led to heavy economic and social effects [2]. The Decrees and Regulations adopted by the Italian Government, forced Universities to a rapid reorganization of teaching activities. In a short time, almost all the Italian institutes of education had to provide on-line lectures, and replan the mid-term educational and teaching objectives. Against this backdrop of a global medical emergency, the vocational training of healthcare professionals deserves particular consideration.

The media discussed the impact of school closures on student education extensively in general terms, and there is agreement that interruption of regular scholastic activities will likely have a negative impact not only on students' learning, but also on their future [1].

As professors involved in the education of undergraduate students of health sciences (medicine, dentistry, nursing etc.), we wish to stimulate a debate on education in our specific field. Indeed, we could expect an increase in achievement gaps as a result of this pandemic and we should try to prevent this issue.

In recent years, medical schools have employed virtual technology in addition to traditional classroom lectures, in anatomy, for example, and by means of telemedicine resources [3-5].

The evolved concept of the relationship between patient and healthcare operators needed a parallel evolution of the assessment methods in education, which includes highlighting practical activities and competences to be acquired [6].

The maintaining of physical distance was considered the most effective preventive strategy to limit the spread of SARS-CoV-2, combined with personal and respiratory hygiene rules, due to the lack of a vaccine and/or a standardized treatment, at the time [6].

Hence, in response to the COVID-19 pandemic, the health science schools have quickly adjusted teaching activities using e-learning and online platforms as well as examinations [7].

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DOI: 10.3269/1970-5492.2020.15.24

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Even though the web-based activities seem to have achieved their primary aims and objectives, the mid- and long-term outcomes of this temporary lack in traditional medical education on the learning process, self-confidence and clinical skills in practitioners should be assessed in the future [8].

In addition, the consequences of the stress, derived by moving the activities played in the place identified as “work” to the place identified as “home”, have to be examined as well. Working at home may be considered comfortable, however, the boundaries of privacy can be compromised, with resultant negative effects on students, administrative and teaching staff [6].

Surely, the true challenge was the attempt to deliver those skills that only practical training can provide, such as the contact with a cadaver in dissection (in anatomy labs), or patients during clinical examination and surgery [9].

In our opinion online teaching is adequate for most basic, pre-clinical courses, thanks also to the efforts of the academic staff. However, face-to-face lectures increase the level of interactivity, which is reduced in the e-learning setting and provide for an educational experience which goes beyond knowledge transmission. Additionally, clinical courses have suffered from the suspension/reduction of undergraduate student internships with a knock on impact on education.

The fulfilment of professional skills in clinical training present both educational and professional challenges.

Medical teachers will need to innovate and think outside the box to maintain the value of medical education in extreme circumstances. A solution may be represented by the virtual resources given by radiological cases to improve the diagnostic skills [10] and the introduction of telemedicine technologies that may contribute to the improvement of core competencies, medical knowledge, overall learning, and higher quality patient care [4].

Moreover, online teaching could represent an important aid to living with the virus in the future. It is likely that in order to avoid crowds and gatherings, an internship would include a very small number of students with more frequent shifts. Therefore, students would need to re-organize their own time. The flexibility of e-learning can allow the students to attend pre-registered lectures, to schedule meetings with professors for further explanations easily as well as respect the internship shifts.

The SARS-CoV-2 pandemic has represented a health emergency, with an unexpected loss of life due to COVID-19 disease, also among doctors and nurses, but the challenges raised in these difficult circumstances have constituted also an occasion to renew medical teaching approaches using the latest available technologies.

Finally, in the autumn, in order to start some internships again face-to-face it will be necessary also to consider mandatory influenza vaccination for healthcare workers and for all healthcare students [11].

Educators should investigate the effects of recent changes in order to learn about and apply different teaching techniques for the future.

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