

# Dental education in COVID-19 pandemic: When can we start?

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## ABSTRACT

Dentists and patients are exposed to pathogenic microorganisms and the risk of infection in 2019-nCoV due to special conditions in the provision of dental services, including face-to-face communication with patients, frequent contact with saliva and blood, and use of surgical instruments. With the decision of continuing education in dental schools without adequate consideration of the various aspects and critical measures, it is likely that dental schools will be the important centers for continuation of COVID-19 epidemic. This commentary provides useful tips for preparing students for dental education.

**Key words:** COVID-19, dentist, education, student

Community health around the world is affected by the new coronavirus pandemic, and the World Health Organization and the British Dental Association have made the necessary recommendations for self-care and prevention of infection and contamination of others.<sup>[1,2]</sup> After the outbreak of COVID-19, dental services were temporarily suspended due to the risks in some countries for elective care.<sup>[3]</sup> Despite the abundance of data on various aspects of the disease, very few studies have been conducted and published in the field of dentistry.<sup>[4]</sup>

The routes of disease transmission are somewhat known, and transmission by aerosol has also been confirmed. However, the main challenges for disease control are the lack of


access to personal protective equipment, the lack of vaccine production to create immunity, and the specific antiviral treatment for the disease.<sup>[5]</sup> The sum of these factors has caused, to date, (October 5, 2020) more than 35 million infected people and nearly 1 million people to die.

There is not much information about the practice and awareness of dentists about coronavirus, but the Desai study found that dentists have good knowledge and performance, which is important in combating COVID-19.<sup>[6]</sup> However, dentists and patients are exposed to pathogenic microorganisms and the risk of infection in 2019-nCoV due to special conditions in the provision of dental services, including face-to-face communication with patients, frequent contact with saliva and blood, and use of surgical instruments.<sup>[7]</sup> Therefore, special considerations are required to provide services in dentistry schools. Anyway, people need to visit dental hospitals and clinics for oral and dental

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health.<sup>[8]</sup> The release of aerosols from dental services makes dental environments the most dangerous environments for coronavirus transmission.

In addition to providing decent health-care services to the people of the community, dental schools are also responsible for educating students, so it can be said that students are at risk around the world. Therefore, it will face many problems whenever dental schools decide to reopen at any time:

1. Isolation: Because most dental treatments use devices that work with air pressure in the oral cavity, the production of aerosols will be present and these tiny droplets will be emitted up to a radius of 5–8 m. As in clinics, the distance between the units is less than this radius, the adjacent units will be contaminated with small droplets and these small droplets can enter the open oral cavity and, if contaminated, can infect the person.
2. Checking clients: Due to the presence of a large number of clients and companions, client control should be screened at the onset of COVID-19 at the time of admission and that, during the time of attendance, should be careful to maintain isolation. Effective implementation of this measure requires equipment, staffs, budget, and sufficient training
3. Protective equipment: In the epidemic situation, around the world, there is little access to protective equipment and disinfectants, which increases the risk of further spread of the virus
4. Reduction of referees: With the outbreak of COVID-19, the business transactions decreased and many jobs faced a decrease in income. Hence, the number of clients and the number of training cases are expected to decrease sharply
5. Fear of being in dental environments: It is possible that the number of clients will decrease
6. Concern of teachers, families, and students: This can be due to the fear of attending educational centers and dormitories of universities, which are usually crowded, or worrying about dealing with patients who could probably be asymptomatic carriers in the clinic environment
7. The possibility of decline in quality of dental education: Due to the possibility of a decrease in the number of clinic clients, increased absenteeism among students,

treatment plan changes due to COVID-19 risk, lesser surgical interventions due to the fear of the pandemic, there is a possibility of disruption in the quality of clinical education of students.

8. Psychological problems caused by COVID-19 pandemic, can affect the relationship with patients.

Training responsible and professionally competent students is one of the missions of dental schools, and it is necessary to think about the crucial measures to maintain the health of students, patients, and faculty members. Continuing education in dental schools will be possible according to the abovementioned items, but without adequate attention to the aspects of the decision to start teaching, it is likely that dental schools will be important centers for the continuation of the COVID-19 epidemic.

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### Conflicts of interest

There are no conflicts of interest.

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