

COVID-19 and Dentistry

Subjects: **Dentistry, Oral Surgery & Medicine**

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Dentistry is a healthcare profession requiring close contacts between the dental practitioner and the patient. In particular, many dental procedures generate aerosols and droplets which are proved to be the major transmission route for COVID-19.

COVID-19

SARS-CoV-2

dentistry

According to the World Health Organization (WHO), the coronavirus disease 2019 (COVID-19) pandemic had, of April 2021, killed 2,850,521 people with most countries affected. The USA has accounted for nearly 20% of these deaths. There are many reasons for the wide disparity in death rates of different countries, such as the societal and political reactions to the infection, the clustering of infection in large cities, habitation in crowded multi-generation households as well as the underlying health and age profile of the population. Although the fatality rate is below 1% of the population, those infected can require mechanical ventilation and can suffer prolonged symptoms during their recovery phase. The most common of these post-infection symptoms include insomnia, fatigue and memory loss. About 2% of patients who have suffered COVID-19 go on to have these symptoms for more than 3 months.

The COVID-19 pandemic has ravaged Europe, India and the Americas, while countries such as China and South Korea have put in place containment measures quickly and thereby reduced the spread of the disease. Thailand and Vietnam are examples of countries that had minor outbreaks that were quickly controlled. New Zealand, Australia and China quickly contained the disease in their countries and then put in place strict border controls to prevent re-infections coming into the country. China, Hong Kong, Singapore, and Taiwan had previous experience with severe acute respiratory syndrome (SARS), a coronavirus outbreak in 2002–2003. Both SARS and COVID-19 are spread by droplet infection and can cause a severe respiratory illness. The Chinese government eradicated SARS by taking containment measures such as cancelling the 1 May national holiday, instituting school closures, etc. This demonstrated the value of lockdown measures.

With the present COVID-19 pandemic, those countries that were slow to put containment measures in place have seen the worst rise in deaths. Containment measures include prohibiting social gathering and instituting testing programmes, tracing those who test positive, and requiring them to self-isolate. With re-emergence of the infection in second and third waves, political leadership has been needed to combat public complacency. With continued spread of the virus, variants have arisen due to genetic drift (UK variant B117 variant; South African variant (B1351, 501Y, V2) and the Brazilian variant (P1 variant)). These variants are more transmissible.

At the peak of the pandemic, the health system in Italy was put under great pressure, which forced the Italian government to close all non-essential businesses and industries in March 2020. Governments have used the

lockdown measures to protect their health systems and prevent them from being overwhelmed. The pandemic has seen a general reorganisation of the healthcare workforce with volunteers and retired clinicians helping to fill gaps left by staff falling sick. Healthcare workers have suffered increases in stress-related illness due to changes in routine ^[1]. In most African countries (except South Africa) there have been comparatively fewer infections per head of the population. However, developing countries have limited resources to undertake mass testing and intensive care facilities are inadequate.

In those countries that have quickly rolled out an effective vaccination programme, such as USA and the United Kingdom, a reduced infection rate has resulted. There is a disparity between the vaccination rates of these wealthier countries that can afford the vaccines and that of developing countries which do not have the necessary resources to cope. COVAX is a programme coordinated by the World Health Organization that aims to ensure fairer vaccine access and it should result in a wider distribution of vaccines later in 2021.

References

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