

Other journals in brief

A selection of abstracts of clinically relevant papers from other journals.
The abstracts on this page have been chosen and edited by Reena Wadia.

COVID-19 vaccine – what do the students think?

Mascarenhas A K, Lucia V C, Kelekar A, Afonso N M. Dental students' attitudes and hesitancy toward COVID-19 vaccine. *J Dent Educ* 2021; DOI: 10.1002/jdd.12632. Online ahead of print.

There's a need to include information on the safety and effectiveness of the COVID-19 vaccine in the dental curriculum.

Using an online platform, in 2020, a survey was administered anonymously to dental students at three dental schools to assess the attitudes of dental students to the novel COVID-19 vaccine. Nearly, all participants had positive attitudes toward vaccines in general, agreed they would likely be exposed to COVID-19, and personally knew someone who had COVID-19; however, only 56% are willing to take a COVID-19 vaccine as soon as an FDA-approved vaccine was available. Of those unwilling to take the vaccine, 63% reported they would take it if mandated by the health systems/dental school; however, 16.3% of the overall respondents would not take the COVID-19 vaccine even if mandated. Several factors are associated with vaccine acceptance, such as trusting public health experts, concerns about side effects, and agreeing with vaccine mandates. The authors highlight the need for an educational curriculum about the safety and effectiveness to promote the uptake of COVID-19 vaccine.

<https://doi.org/10.1038/s41415-021-3173-y>

Dental education during the pandemic – how effective?

Goob J, Erdelt K, Güth J F, Liebermann A. Dental education during the pandemic: Cross-sectional evaluation of four different teaching concepts. *J Dent Educ* 2021; DOI: 10.1002/jdd.12653. Online ahead of print.

Digital teaching concepts are currently widely accepted.

This cross-sectional study evaluated the advantages of student satisfaction with and functionality of three digital teaching concepts during the SARS-CoV-2 pandemic compared to a conventional lecture setup. Dental students in the clinical study phase at a German university hospital were surveyed. A total of 44 questions were answered in four main sections: general technical components, acceptance, evaluation and functionality, and overall evaluation and grades of the various digital concepts. The use of Zoom conference, livestream, and pre-recorded PowerPoint was compared to the conventional lecture setup. Students were very satisfied with the provision, quality, and benefit of the digital concepts. The asynchronous concept was significantly more satisfying than the synchronous concepts in many aspects but was less successful in interactions. In the overall evaluation and grading, the asynchronous concept was rated significantly better than the other synchronous concepts, followed by Zoom conference, conventional lecture, and livestream, while Zoom conference and the conventional lecture showed no significant difference.

<https://doi.org/10.1038/s41415-021-3176-8>

Seroprevalence and vaccine responses

Shields A M, Faustini S E, Kristunas CA *et al.* COVID-19: Seroprevalence and Vaccine Responses in UK Dental Care Professionals. *J Dent Res* 2021; DOI: 10.1177/00220345211020270. Online ahead of print.

Natural infection with SARS-CoV-2 prior to enhanced PPE was significantly higher in DCPs than the regional population. Natural infection leads to a serological response that remains detectable in over 70% of individuals nine months from the peak of the first wave of the pandemic. A single dose of the Pfizer-BioNTech 162b vaccine is associated with an antibody response indicative of immunological memory.

Dental care professionals (DCPs) are thought to be at enhanced risk of occupational exposure to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). However, robust data to support this from large-scale seroepidemiological studies are lacking. This study reported a longitudinal seroprevalence analysis of antibodies to SARS-CoV-2 spike glycoprotein, with baseline sampling prior to large-scale practice reopening in July 2020 and follow-up post-implementation of new public health guidance on infection prevention control (IPC) and enhanced personal protective equipment (PPE).

In total, 1,507 West Midlands DCPs were recruited into this study in June 2020. Baseline seroprevalence was determined using a combined IgGAM enzyme-linked immunosorbent assay and the cohort followed longitudinally for six months until January/February 2021, through the second wave of the coronavirus disease 2019 pandemic in the United Kingdom and vaccination commencement. Baseline seroprevalence was 16.3%, compared to estimates in the regional population of 6% to 7%. Seropositivity was retained in over 70% of participants at three- and six-months follow-up and conferred a 75% reduced risk of infection. Non-white ethnicity and living in areas of greater deprivation were associated with increased baseline seroprevalence.

During follow-up, no polymerase chain reaction-proven infections occurred in individuals with a baseline anti-SARS-CoV-2 IgG level greater than 147.6 IU/ml with respect to the World Health Organisation international standard 20–136. After vaccination, antibody responses were more rapid and of higher magnitude in those individuals who were seropositive at baseline. Natural infection with SARS-CoV-2 prior to enhanced PPE was significantly higher in DCPs than the regional population. Natural infection leads to a serological response that remains detectable in over 70% of individuals six months after initial sampling and nine months from the peak of the first wave of the pandemic. This response is associated with protection from future infection. Even if serological responses wane, a single dose of the Pfizer-BioNTech 162b vaccine is associated with an antibody response indicative of immunological memory.

<https://doi.org/10.1038/s41415-021-3177-7>