

2 June 2020

Dear Member

We are all delighted by the recent announcement that in England, and hopefully soon in the other home nations, orthodontics will be returning to work. However, our previous way of practicing will change, at least in the short term, as a result of the Covid 19 pandemic.

It is clear that the lockdown has had a significant impact for many and there will be a difficult period ahead during which we have to manage patients in treatment, those on waiting lists and the new referrals that need consultation and advice.

Resolving the Aerosol Issue

There is one area where there is still confusion and lack of clarity. That is the position of slow speed handpieces and 3:1 syringes and the production of aerosols that may contain a viral load that could be harmful to patients and staff.

Public Health England's guidance entitled "COVID-19: infection prevention and control guidance" (1) states on page 32, that procedures currently considered to be potentially infectious Aerosol Generating Procedures ("AGPs") for COVID-19 in dentistry are: **"Some dental procedures (for example, high-speed drilling)"**.

The PHE document takes its evidence from the National Services Scotland ("NSS") document entitled *"Assessing the evidence base for medical procedures which create a higher risk of respiratory infection transmission from patient to healthcare worker Version Final. 12th May, 2020."* (2)

The NSS document was a rapid review of over 5000 results screened with 367 relevant articles rapidly assessed. The findings of this rapid review identified weak evidence for an increased risk of respiratory infection transmission associated with a number of medical procedures. The list included **dental procedures using high speed devices such as ultrasonic scalers and drills**. The review also states that there is no evidence of appropriate quality or strength identified for a number of medical procedures. In this list are **Dental procedures not involving high speed devices, e.g. scaling by hand**.

The NSS document refers to the World Health Organisation guidelines 2014. (3) *"Infection prevention and control of epidemic-and pandemic prone acute respiratory infections in health care"*. In the NSS document AGPs are referred to as *"any medical and patient care procedure that results in the production of airborne particles (aerosols)"* The WHO document further states *"that there is only consistent evidence of an increased risk of aerosol transmission for the following procedures: tracheal intubation, tracheotomy procedures, noninvasive ventilation, and manual ventilation before intubation."*

It is the view of the BOS that this review and statement are too vague and do not address the subtleties of dental rotary instruments in enough detail to give adequate guidance for orthodontic practitioners returning to work.

The BOS has prepared a factsheet (4) on AGPs which we consider explores the best available evidence in a rational and considered way. It is our conclusion that it is not possible to be certain that using a slow speed handpiece or 3:1 syringe does not produce a form of aerosol. It is possible that the aerosol may contain a COVID-19 viral load that could be harmful to patients and staff.

The BOS has also produced a document “*AGP and Non AGP Orthodontic Procedures*” (5) to help orthodontic practitioners to reduce or avoid an AGP wherever possible. We are mindful of the fact that under certain circumstances it may be necessary to perform an AGP to allow you to adequately care for your patients following a risk assessment.

The national guidance does not place using slow handpieces and 3:1 syringes in the risk category, but nor does it state they do not produce an aerosol or droplet spread. The BOS has asked for further clarity to be given on this and hopes it will be forthcoming in the near future.

The BOS’s concern is for the protection of the public and its members. Therefore, we suggest that any procedure which could create aerosol, splatter or droplet production should be considered a risk and must be avoided or minimised as much as possible. If the use of a slow handpiece or 3:1 syringe is necessary, caution should be taken to reduce the production of an aerosol as far as it is practicable. High volume aspiration should be used alongside the procedure. PPE as recommended by PHE should be worn.

The Trustees of the British Orthodontic Society

1. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/886668/COVID-19 Infection prevention and control guidance complete.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/886668/COVID-19_Infection_prevention_and_control_guidance_complete.pdf)
2. https://hpspubsrepo.blob.core.windows.net/hps-website/nss/3055/documents/1_agp-sbar.pdf
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5. <https://www.bos.org.uk/Portals/0/Public/docs/Advice%20Sheets/COVID19%20FACTSHEETS/Recovery%20Phase%20Advice/AGP/Table%20of%20AGP-Non%20AGP%20v7.pdf>