

Letter to the  
Editor

# Fallow Time and Managing Aerosol Generation in Dental Clinics–Current Evidence and Financial Investment Implications

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## Author's Contribution

<sup>1</sup> Conception of study  
<sup>1</sup> Experimentation/Study conduction  
<sup>1</sup> Analysis/Interpretation/Discussion  
<sup>1</sup> Manuscript Writing  
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<sup>1</sup> Facilitation and Material analysis

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## Introduction

Recently, the Scottish Dental Clinical Effectiveness Programme (SDCEP) was tasked to perform a rapid review on the guidelines related to factors mitigating the effect of aerosol generation during dental procedures and reduction in fallow-time. Review<sup>1</sup>, reflecting the tireless work by the SDCEP review board can be truly considered as a report that the profession has been looking for. The SDCEP's review comes at a time when the science has not been comprehensive and doesn't outline how to best ensure public and staff safety in the dental clinic.<sup>2</sup> He hopes that the government policy and any new instructions will now reflect the recommendations made in this review.

Considering the issues of continued frustration of the dental profession, towards the end of June, the Office of the Chief Dental Officers (CDOs) in the UK tasked the SDCEP to get to grips with the matter. It is worth noting that SDECP<sup>3</sup> has been held in high regard for its outstanding work on antimicrobial resistance, antibiotic prophylaxis, dental amalgam, and periodontal care, and has been praised by all the CDOs in the UK four countries including England, Scotland, Wales, and Northern Ireland. In response,

the SDCEP immediately convened a multidisciplinary working group to identify and appraise all the available evidence concerning the generation and mitigation of aerosol dentistry and the associated risk of COVID-19 transmission. The aim was to reach a number of agreed position statements informing policy and clinical guidance.

The review members' dedication, commitment, and clinical and academic expertise have been hugely impressive.<sup>2</sup> All worked for almost three months and there were; remarkable academics, virologists, physicists, public health officials, and other wet-fingered dentists. The process required hours of virtual meetings piled on top of intensive review work. To complete the review, everyone almost felt like being a student again waking up to spend hours on physics of relevance to aerosol and epidemiology of airborne viral diseases.

## Recommendations

It would be certainly surprising to many dental care professionals, practitioners, and even dental academics, to know that aside from Severe Acute Respiratory Syndrome (SARS) and Middle-East

Respiratory Syndrome (MERS), there has been a dearth of historic research on dental aerosols and the aerosol-related infectious diseases transmission. Not only this has been acknowledged in the SDCEP after it had assessed past and current scientific evidence for aerosols and mitigation factors from around the globe but it also became clear that the existing evidence also was of low quality.

Consequently, SDCEP could not draw recommendations from the evidence alone. Hence the review is not to be taken as government guidance. Rather it aims to inform policymakers. The review has compiled and presented 'considered judgments' to help the profession at this unprecedented time. Each judgment had been supported by a majority of 75% of the review board to strike the best path forward. The review is also a living document and the group will have to be recalled when new evidence arises or developments unfold. As per the advice of the review board, the current recommendations should not be considered as the final ones, and as such the current restrictions might become stricter or more relaxed, in case of the pandemic becoming more or less severe.

The review<sup>1</sup> outlines the methodology and agreed on positions and gives a series of recommendations on the generation and mitigation of aerosols in dental practice and the associated risk of COVID-19 transmission. The review while admitting us as professionals to be familiar with AGPs but for the first time it has delineated between the different categories of AGPs including:

- High-risk dental procedures that require fallow time and ...
- Lower risk dental procedures that can be dealt with using standard control precautions.

In the dental clinical areas, a protocol of mechanical ventilation that ensures at least 10 changes per hour will bring the fallow time down to 10-minutes. Keeping this in view, the reviewers have agreed that a pragmatic fallow time of 10-60 minutes is recommended to reduce the risk of coronavirus transmission through the use of a series of mitigation techniques including:

1. The use of high-volume suction, already estimated to be used by 94% of dental practices in the UK, could reduce fallow time to 20-minutes if applied effectively.
2. Likewise, the use of rubber dams for all restorative dental procedures that produce aerosol is also recommended. But the key to reducing fallow time is ensuring a high ventilation rate.

3. Dental care providers must investigate the air change rate to ensure they comply with the guidance that clinical treatment rooms should have at least 10-air-changes per hour - an open window is probably not enough.
4. Mechanical ventilation ensuring at least 10-air-changes per hour should bring the fallow time down to 10-minutes, plus 10-minutes cleaning time will be in line with recommendations made in the review.

### Financial Investment Implication

With the recommendations and enforcements, if the fallow time was reduced to 10-minutes then the working capacity of a dentist would increase significantly and possibly up to 70% of the pre-COVID-19 capacity. Certainly, that would vastly improve the current threat to dentist viability and would help to tackle the worrying impact that lockdown has inevitably had on the population's oral health. However, to get to achieve this by instituting redesigning dental clinical areas, there are potentially vast costs involved. Hence the huge capital investment in dentistry is thus essential to move forward. Having said, this, it is not as frivolous as a single practice taking on some renovation but this is a public health measure and it is a reasonable asking from the government to help get dentistry back on its pre-covid level.

*This act would show the kind of commitment to our profession that we have needed and asked for since the outbreak first took shape.*

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