

Use of airborne precautions for COVID-19 outside “AGPs” in healthcare settings

Tom Lawton¹, Matt Butler¹, Christine Peters¹, Eilir Hughes¹, Huw Waters¹, David Tomlinson¹, and Lindsay Fraser-Moodie¹

¹Affiliation not available

June 28, 2021

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Tom Lawton, Consultant Critical Care, Bradford Teaching Hospitals NHS Foundation Trust

Matt Butler, Consultant Geriatrician, Cambridge University Hospitals NHS Foundation Trust

Christine Peters, Consultant Microbiologist, NHS Greater Glasgow and Clyde

Eilir Hughes, General Practitioner, Ty Doctor, Nefyn, Gwynedd

Huw Waters, Consultant Risk Analytics, FreshAir.Wales

David Tomlinson, Consultant Cardiologist, University Hospitals Plymouth NHS Trust

Lindsay Fraser-Moodie, GP Trainee, East of England Deanery

On behalf of FreshAir NHS

28th June 2021

Since the early days of the pandemic there has been debate as to whether COVID-19 transmission can be airborne, and whether healthcare workers require routine airborne precautions, or if respiratory PPE can be preserved for a small list of “Aerosol Generating Procedures”.^[1] The former question is now largely satisfied - COVID-19 is airborne^[2] - but the latter remains and official UK guidance leaves the matter up to individual NHS Trusts to decide.^[3]

FreshAir NHS is a group of frontline NHS workers who wrote an open letter signed by over 1,600 colleagues to all governments of the UK nations in January 2021 requesting airborne mitigations to prevent infections in healthcare staff and reduce nosocomial infection risk to patients.^[4]

We therefore welcome pragmatic data from Ferris, Ferris et al showing that a simple substitution of filtering face piece (FFP3) respirators for fluid resistant surgical masks (FRSM) appeared to eliminate 100% of the 47-fold increase in excess risk of COVID-19 infection in healthcare workers (HCWs) caring for patients on COVID-19 “red” wards.^[5] Prior to the introduction of FFP3, HCW infection rates on “red” wards were greater than those on “green” wards, and also demonstrated no correlation with community case rates, suggesting infections resulted from direct patient care - in line with genomic evidence that a large proportion

of HCW infections are transmitted from patients.^[6] Some studies have suggested that staff infection rates merely reflect transmission in the community such that staff rates increase as community rates rise and are therefore inevitable.^[7,8] This study highlights that this is only true for non-COVID-19 facing staff, with exposure to infected patients being the driving factor for infections in COVID-19 facing staff.

This has important implications for healthcare worker protection as the UK copes with what is hopefully an “exit wave” as well as trying to reduce the massive backlog of other work whilst coping with inevitable staff sickness and isolation. It also touches on our responsibility as a learning healthcare system to ensure preparedness for future epidemics and pandemics.

However, if the precautionary principle were the only factor to consider then the UK would have used airborne precautions from the start of the pandemic - so clearly there are other factors to address. PPE was in short supply in early 2020,^[9] which may have made rationing more appropriate, but supply chains have largely recovered - and reusable PPE has both environmental and cost savings.^[10] Fit-testing staff adds burden to infection control teams, but NHS trusts which have made the switch have demonstrated it is possible, and there is evidence that reusable elastomeric respirators (but not disposable FFP3 masks) may be used safely with a “fit check” alone.^[11] It is clear that tighter-fitting masks can be less comfortable - particularly if the fit is not suitable for the user, but surveyed staff appear in general to prefer the higher level of protection.^[12] Most healthcare staff are now vaccinated, but the B.1.617.2 (delta) variant appears to reduce vaccine effectiveness at a time when staff absences due to sickness and isolation can critically hamper NHS recovery as patients await delayed treatment.^[13]

The only remaining argument appears to be that we are beholden to the past; that to change guidance now would be to admit that mistakes were made. Whilst this may have a powerful emotional hold on local and national policymakers and leaders; the best pandemic responses have come when we have learned and changed course when necessary: *“Progress is impossible without change; and those who cannot change their minds cannot change anything.”*^[14]

Competing interests

TL, MB, CP, EH, DT, LF-M are practising NHS clinicians and subject to UK PPE guidance

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