

Re-using FFP3 Masks and risk mitigation as we move from emergency to urgent care.

Patrick Magennis – BAOMS Chair, Paul Coulthard BAOS President (22 April 2020)

Background

This advice update has been produced in response to new PHE advice about re-using face Masks (inc FFP3) <https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control/managing-shortages-in-personal-protective-equipment-ppe> and also to requests for clarification of some aspects for our earlier guidance in particular the use of masks for short examination/procedures.

It should be viewed in the context of the risk created by Aerosol Generating Procedures (AGPs) and Aerosol Generating Exposures (AGEs). This advice is focussed solely on the mask element of Personal Protective Equipment (PPE) because that is where our advice is at variance from the advice given by Public Health England. In our view the PHE guidance represents a useful minimum, not a mandated maximum level of PPE and clinical judgement is always needed.

Re-using FFP3 masks, following the PHE guidance, creates an additional risk when handling and donning the pre-used mask in addition to the risks of doffing and storing it. In some cases these risks may be greater than using a surgical mask.

We stress that the mask is a single element of PPE and may not be the most important. For prevention of transmission it should be used with eye protection (ideally a full face visor) and as part of an overall infection control plan to reduce risk. This plan should combine PPE, Avoiding unnecessary activity (including unnecessary use of or changes of PPE – donning and doffing), Reducing the number of people exposed to risk, and Abbreviating any procedure by using the most experienced and skilled person to undertake the whole patient pathway (PARA). The most efficient patient pathway should be used to reduce risk to both patient and clinician.

Aerosol Generating Exposure (AGE), Aerosol Generating Procedures (AGPs) and Masks

Undertaking a simple oral examination, which could be considered an AGE, represents a lower risk of coronavirus transmission than an AGP such as use of a drill by nature, duration and proximity. In the absence of COVID symptoms of the clinician or patient, the viral aerosol generated by speech, a cough or a sneeze is thought to be very small. Lower amount of viral aerosol and shorter duration of the task may make the x4 reduction of viral exposure provided by a visor and a surgical mask sufficient risk mitigation where there are no additional risk factors.

In our advice on 19 March 2020 and on 24 March 2020 we stressed the importance of using appropriate PPE, Avoiding non-emergency procedures, Restricting those exposed to risk and Abbreviating the duration of any procedure. As we move from the 'emergency only' phase of the COVID Crisis to the provision of urgent care this change may include shorter and/or less invasive examinations/procedures compared to emergency treatment.

The difference between the theoretical benefit of an FFP3 Mask (x100 reduction of aerosol) compared to the protection provided by a water resistant Surgical mask (x4 reduction) becomes much harder to demonstrate as the risk reduces. Papers directly comparing both types of mask have struggled to show a difference outside procedures causing significant AGPs. If the risks of re-using an FFP3 mask are included, using a surgical mask may be the safer option.

If your patient pathway does not support using a single FFP3 mask beneath a full face visor for a whole session that is likely to include an AGP, then you should consider the balance of risk/benefit between using a waterproof surgical mask under the visor for short examinations or treatments with low AGE potential.

No patient pathway can be considered independent of the risk created to others by inefficient use of all types of PPE. No PPE provides complete protection. There is always a balance between risk and benefit.

Comment

During the initial phase of any pandemic, when a vaccine is not available, PPE plays a major part in disease control. It is important that we get the PPE right for dentistry including oral surgery procedures. Historically there has been extensive PPE research in regards to healthcare. For obvious reasons, there has been little research regarding coronavirus, and even less with respect to dentistry. We have reviewed much of the research evidence that is available and also taken a view from others ahead of us, in China and Asia, before presenting our considered advice.

Guidance and position statements about PPE are invariable based on interpretation of research evidence hence variation across professional bodies. Policy should not be compromised because of capacity. It is understandably difficult to await 'Gold Standard' evidence. The following commentary opinion from the Oxford Centre for Evidence-Based Medicine demonstrates the challenge between research, policy and patients' expectations.

<https://www.cebm.net/covid-19/editors-commentary-rapid-reviews-of-ppe-an-update/>