

AB079. SOH21AS118. Please wear this mask, again: healthcare workers experience with sterilisation of filtering facepiece respirators (FFRs) for use in a personal protective equipment (PPE) shortage—a national roadmap for facial PPE sterilisation

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Background: With growing concern of coronavirus disease 2019 (COVID-19) infection rates limiting personal protective equipment (PPE) stock, we investigated the decontamination of filtering facepiece respirators (FFRs) as a solution to PPE shortage. International studies have shown re-sterilisation of FFRs maintains an acceptable filtration efficiency. However, no study has investigated the acceptability of such a process on the end-users. The purpose of this study is to investigate this.

Methods: Initially, a comprehensive questionnaire was used to assess if participants could identify a sterilised FFR from a brand new FFR. Subsequently, individual masks allocated to each participant went through 5 cycles of sterilisation, with the participant asked to evaluate the masks durability, structure, and function via an emailed survey after each cycle.

Results: Healthcare workers (HCW) could not identify a sterilised FFR from an original. Following sterilisation, mask appearance was 85% as expected compared to previous experience with FFRs. Nose fit was 75%, chin fit

was 78.5% and mask strap function was 100% as expected. Eighty percent were satisfied that in the event of a PPE shortage, they would be willing to wear a re-sterilised FFR during their work.

Conclusions: In this, first of its kind study, looking at HCWs experience with re-sterilised FFRs, respondent's state that sterilisation does not substantially affect the user's experience. These findings can be utilised to support education around a nationwide roadmap addressing re-sterilisation of FFRs, in response to PPE shortage.

Keywords: Facemask re-sterilisation; filtering facepiece respirator decontamination; healthcare workers satisfaction; personal protective equipment shortage; pandemic

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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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