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, respondents 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

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