Reuse of FFP2 Masks: Pilot Study of the Dutch National Institute for Public Health and Environment (RIVM)

SUMMARY

The Ministry of Health for the Netherlands has conducted a preliminary study regarding the possibility to sterilize FFP2 respirator masks. The masks tested were specifically the 3M FFP2 NR D (type 8822) model. The masks are composed of primarily polypropylene and do not contain any cellulose. The limited study ideates reprocessing of disposable FFP2 mouth masks appears to be a possibility. A respirator mask was sterilized in an individual pouch in a Sterrad 100NX with AllClear using the Express cycle only and the respirator mask in the study was successfully reprocessed twice after which it showed signs of deformation or did not pass the fitness test.
The study concluded that when potentially implementing this process the following key points should be taken into account:

- The reprocessing of potentially contaminated oral masks should not interfere with the normal process in the Central Sterilization Unit to such an extent that the quality of the normally sterilized products may be compromised. In any case, the following should be considered
    - whether or not the masks should be packaged and sterilized
    - where the mouth masks are packed, if necessary
    - what protective measures are necessary for the staff concerned.
- A system should be set up in the institutions to collect used oral masks in a safe manner. In doing so, the institution should in any case pay attention to the length of time that mouth masks can be stored without adversely affecting the quality of the masks or the reprocessing process.
- As a minimum, the institution shall visually and tactile check that the mouth masks have not been adversely affected by the process (shape and properties of the material) after reprocessing.
- Because the masks are individually packaged during this study, no statement can be made about the effects of sterilizing multiple mouth masks in one package.
- Because moisture will enter the mask when using the oral masks, a drying phase in the hydrogen peroxide sterilization process is probably necessary to prevent the premature breakdown of the sterilization process due to the presence of moisture.
- A system should be established to record that an oral mask has been reprocessed, possibly also taking into account the number of reprocessing operations.
- Because hydrogen peroxide sterilizers are not available in all Dutch institutions, institutions that do not have access to them will have to make agreements with institutions where they are available.
- The shelf life of reprocessed mouth masks should be determined.

The preliminary conclusion by the researchers was that sterilization of respirator masks in Sterrad 100NX with AllClear may be completed twice utilizing the Express Cycle providing an acceptable result, and masks may be potentially used after both visual inspection and based on the results of the fit test. None of the testing and data has been reviewed or validated by ASP.

*To view the full study, please click here: https://www.rivm.nl/en/documenten/reuse-of-ffp2-masks