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Image Article

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Safe Disposal of N95 Masks/Respirators in Medical Care Set-ups

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CASE DESCRIPTION

N95 masks/respirators are one of the most important and commonly used Personal Protective Equipment (PPE) for the protection of health care workers against the COVID-19 pandemic. Recently, Centers for Disease Control and prevention (CDC) and many hospitals have emphasized proper donning and doffing methods of PPE *i.e.*, when to discard an N95 mask/respirator and how to decontaminate and re-use them etc. However, there are no guidelines pertinent to the safe and secure disposal of an N95 mask/respirator by any health regulatory authority like CDC, National Institute for Occupational Safety and Health (NIOSH) and Occupational Safety and Health Administration (OSHA), after its extended use and limited re-use. Many health regulatory authorities and universities have recommended the use of N95 masks/respirators during emergency dental care. In dental clinics, these masks/respirators should not simply be disposed in the waste bins as this can pose a potential source of infection, leading to a serious health hazard and environmental pollution and contamination. In the present scenario, there is a high possibility of its unscientific re-use due to increase demand and very limited availability. The present crisis however demands a full-proof method of safe disposal of N95 masks/respirators. It is found that the SARS-COV-2 viruses, when left exposed, can survive upto 72-hours. These masks/respirators are medical wastes and should be disposed of as per the biomedical waste management guidelines. As a responsible health care provider, we should not throw our used masks/respirators indiscriminately in the workplaces, open waste bins, homes, roadside and parks etc. which can pose a health hazard to other people. The following simple steps can be practiced for safer and secure disposal of the N95 masks/respirators and prevent if any unscientific recycle and re-use:

Step-1: Cut the mask/respirator into multiple pieces, including its elastic straps by a pair of scissors (Figure 1A).

Step-2: Put the mask/respirator inside a secure plastic container/box containing 0.5%-0.6% household bleach solution for 30 minutes or 1% sodium hypochlorite solution for atleast 3-minutes (Figure 1B).

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Step-3: Dispose of the mask/respirator into a municipal garbage unit or at the designated biomedical waste disposal bucket/bag.



Figure 1: A) N95 respirator after cutting it to multiple pices, B) Secured plastic box containing respirator pieces in 1% sodium hypochlorite solution.

During this COVID-19 pandemic crisis, it is equally very important to focus on the safe and secure disposal of a used N95 mask/respirator so that the further spread of infection can be prevented. This process can be practiced in homes and offices also. Keeping the workplace and society safe for everyone is a collective responsibility and by following the above simple steps, it can be achieved.

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CONFLICTS OF INTEREST/COMPETING INTERESTS

The authors declare that they have no conflicts of interest to disclose.

ETHICS APPROVAL

Not required.

CONSENT

Not required.

DATA AND/OR CODE AVAILABILITY

Not applicable.

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AUTHORS' CONTRIBUTION STATEMENTS

Dr. Ashok Kumar Jena identified the idea and prepared the manuscript and did the correspondence. Dr. Jitendra Sharan searched the literature and edited the manuscript.

ETHICAL APPROVAL

This article does not contain any studies with human participants or animals performed by any of the authors.

INFORMED CONSENT

For this type of study informed consent is not required.

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