Editorial Note on Face Masks during Covid-19

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Editorial Note

In this issue, we explore the topic of face masks. Face masks have been worn by health professionals to protect themselves since the plague in the middle Ages. Due to shortages of N95 masks during the COVID-19 pandemic, many institutions are asking staff to wear surgical/medical masks for routine care of COVID-19 patients, reserving N95 respirators for aerosol producing procedures. However, recent systematic reviews/meta-analyses were unable to support or refute this practice. Wearing face masks in public is now recommended worldwide, but empirical evidence about the most effective masks to prevent the spread of SARS-CoV-2 is not available. Many questions remain about how to best protect ourselves and our patients from SARS-CoV2. Two recent articles provide detailed reports of how to test respirators/masks and include mask evaluations on a small number of participants.

This quality improvement study used the Occupational Safety and Health Administration’s Quantitative Fit Testing Protocol for Filtering Face piece Respirators in a laboratory to assess the fitted filtration efficiencies (FFEs) of 29 mask alternatives worn by one male with no beard and one female volunteer. Probes were fitted into the face masks to sample aerosol inside the mask.

The best veil was a N95 with a face shield, which had a FFE of 99.6%. Other regularly utilized N95 respirators, even those that lapsed in 2009, had satisfactory FFEs more noteworthy than 95%. N95 respirators not appropriately ‘fitted’ accomplished FFEs somewhere in the range of 90% and 95%. Two Centers for Disease Control and Prevention (CDC)- endorsed imported respirators not ensured by the National Institute for Occupational Safety and Health (NIOSH), and those not affirmed (n = 6) neglected to accomplish 95% FFE. Careful covers with ties accomplished a FFE of 71.5%, while those with ear circles had just 38.1%.

Attendants need to know the adequacy of the N95 respirators and careful/clinical covers provided by their bosses. The technique used to decide FFEs in this investigation might be repeated in different foundations. Terminated N95 respirators, and some less usually utilized respirators might be adequate substitutes for inaccessible standard N95 respirators. Measures to guarantee careful/clinical covers fit cozily to the face ought to be taken. Further exploration is expected to assess veil adequacy for COVID-19 with broadened use, with various utilizations, with face shields, and on various facial designs system, they evaluated 14 face masks/respirators worn by either one or four participants. One participant was male, but no other participant descriptions were given. A computer algorithm counted the number of particles videotaped for each test.

The experimental device was described thoroughly, and recognized limitations included using a cell phone camera and measuring only a small part of the enclosure. The device effectively measured droplets emitted during speech that were larger than 0.5 m. Although not the primary purpose, evaluations of face masks/respirators were included. The droplet transmission fractions ranged from 0.1% for the N95 without a valve to 110% for the neck gaiter. The single layer neck gaiter was less effective than no mask. The authors explained the neck gaiter seemed to convert larger droplets into smaller droplets that remain airborne longer.


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