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Title: Elastomeric Respirators: Expanding the “E” in PPE

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Dear Editor:

The CDC recently acknowledged transmission SARS-CoV-2 may include small particle aerosols over greater distances necessitating institutions to seek more appropriate respiratory protection for their patient-facing staff. Elastomeric respirators are an alternative to provide the needed level of protection that N95 respirators currently provide. Unlike N95 respirators that are traditionally single use, elastomeric respirators are intended for extended use, and with appropriate cleaning processes, for reuse. Given the rising cases of COVID-19 across the United States and the fractured supply chains for personal protective equipment such as N95 respirators, we performed an informal survey of academic institutions to determine if their staff are currently using elastomeric respirators when caring for patients with COVID-19 infection.

Hospital Epidemiologists from 45 institutions were surveyed via email, there were nine positive responses (~20% response rate) across seven states: Colorado, Massachusetts, Maryland, North Carolina, Rhode Island, Utah, and Virginia. All nine institutions invested in elastomeric respirators for their hospital employees; some specifically for certain departments (i.e., Respiratory Therapy, Anesthesiology, Otolaryngology, and General Surgery). A few had already been using elastomeric respirators in operating rooms before COVID, with initial use after the 2009 H1N1 pandemic. Due to asymptomatic spread and need for source control in the SARS-CoV-2 pandemic, it is important to note that all these institutions require a surgical mask be placed over the exhalation valve of the elastomeric respirator. It should be noted, while not unique to elastomeric respirators, users describe communication interference. Still, we believe elastomeric respirators are an additional tool many institutions are utilizing and others should be
exploring. Next step at our institution will be rolling out elastomeric respirators, fit-testing and the requirement for covering the exhalation valve with a surgical mask while awaiting newly designed valve covers from the manufacturer.

