

Reply to “Protecting against COVID-19 aerosol infection during intubation”

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DEAR EDITOR,

We appreciate the comments by Tseng et al¹ on our recent article Wu et al² published in the current issue of the *Journal of the Chinese Medical Association*. Indeed, it is very crucial to protect health care workers (HCWs) in this pandemic. Not only HCWs safeguard patient care, but also they are at high risk of contracting this contagious disease. Studies indicate that 3.8% (1716/44 672) of HCWs during the outbreak in China (as of February 11, 2020) were infected and 14.8% of confirmed cases were classified as severe or critical.^{3,4} A random sample survey in March 2020, in Noord-Brabant, Netherlands, revealed nearly 4% of the hospital staff is infected with this novel coronavirus, but the percentages vary per hospital (0%-10%).⁵ Mortality did happen even among young doctors. As we emphasized in previous overview and the authors concur that “stringent protection procedures should be conducted for high-risk procedures.”² Endotracheal tube intubation by all means is one of the most dangerous maneuver. It has been shown that aerosol might be generated during intubation and viral-containing droplets can floating or contaminate different surfaces for many hours.⁶ Particularly, viral loads are high in the early stage of symptom onset and lung-derived samples (such as sputum or aspirate) contain high viral load when the patient’s condition deteriorates and need intubation.^{7,8}

It has been shown that surgical face masks can effectively prevent viral spreading of many respiratory viruses, including the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).⁹ However, surgical face masks need to be removed during intubation. The authors invented a transparent acrylic “aerosol box” to protect the person who conducts intubation from aerosol spreading or droplet contamination. This device

seems promising in reducing the chance of infection during intubation. It would be very informative if the authors could demonstrate or show experimental data that how effective “the box” can contain viral-containing droplets inside the box and protect people from infection.

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