

# In the matter of Factors Influencing the Transmission of Influenza

Docket Number CDC–2020– 0102

Dear CDC:

The Centers for Disease Control and Prevention is considering a research project to determine whether safety precautions are needed for influenza. Based on the scientific evidence, influenza, like coronavirus, is transmitted predominantly through aerosols<sup>1</sup>. Dr. Milton has shown in his Facebook live on September 23, 2020 hosted by the University of Maryland School of Public Health<sup>2</sup> described aerosols as a particularly effective method of transmission, while intranasal transmission requires about one hundred times higher dose response curve. And while infection via aerosols easily produced severe influenza, it took a substantially higher level if intranasal only to produce mild symptoms. In addition, influenza has been shown to transmit by asymptomatic spread, similar to SARS-CoV-2.<sup>3</sup>

In light of the refusal of the CDC, as well as the World Health Organization (WHO), to acknowledge that SARS-CoV-2 is airborne, in order to understand transmission of influenza, the CDC and WHO need to accept the science that proves COVID-19 is airborne. While COVID-19 and influenza are transmissible through aerosols predominantly, it is important to admit that the same factors that affect the airborne transmission of SARS-COV-2, including physical distancing, mask wearing, and ventilation also work to stop influenza. That is why this flu season is mild<sup>4</sup>. In addition, influenza has a vaccine while COVID does not right now. The actions of coughing and breathing produce aerosols for COVID-19 and influenza, and the CDC should accept that.

In terms of precautions for influenza, it needs to be remembered that the flu is not as transmissible as SARS-COV-2. Due to the severity and infectiousness of SARS-COV-2, the appropriate personal protective equipment is a N95 respirator. However, for influenza, normally, a surgical mask would be sufficient. In the event of a severe flu season, there could be a need to upgrade masks from a surgical mask to a N95 respirator. In any case, improving ventilation and keeping the doors closed to the patient's room are well advised.

Because of these factors, a control group is not needed. Instead, using culturability of influenza through the droplet capture method used to show SARS-COV-2 is infectious 15 feet away, or the test of the aerosolized fomites, can be used to determine that influenza is airborne. By using a culturation test, the CDC can determine any link between antibodies and infectability or cell culture, which would also be relevant in the case of SARS-COV-2.

### Mitigation

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<sup>1</sup> While they are defined to be infectious secretions in the notice for request for comment, those secretions are really aerosols.

<sup>2</sup> <https://www.facebook.com/UMD.SPH/videos/266077071131731/>

<sup>3</sup> Hayward AC, Fragaszy EB, Birmingham A, et al. Comparative community burden and severity of seasonal and pandemic influenza; results of the Flu Watch cohort study. *Lancet Respir Med* 2014 1 June

<sup>4</sup> <https://www.cdc.gov/flu/weekly/index.htm> Date accessed was December 7, 2020

In light of the CDC's refusal to recommend proper precautions for stopping coronavirus, it is necessary to describe here the appropriate measures that would stop influenza in a pandemic. These are the same measures that would stop a severe flu and coronavirus.

First, in terms of mask wearing, the evidence is very clear that masks work and reduce the transmission of influenza, coronavirus, and other respiratory diseases. The CDC recommends cloth face coverings<sup>5</sup> be worn when unable to maintain six feet of physical distancing.<sup>6</sup> Due to aerosol transmission, when sharing a room with others, a mask should be worn indoors as well as until the air is purified.

Second, in terms of appropriate personal protective equipment, for a respiratory disease that travels by aerosols, the recent CDC guidance shows a misunderstanding of transmission. By using a cumulative fifteen minute total over a period of twenty-four hours, the CDC suggests that masks other than N95 respirators are insufficient. The CDC recommends N95 masks<sup>7</sup> be used, but only as precautionary guidance, while the WHO recommends droplet precautions and not wearing a respirator unless aerosol generating procedures are involved. This is logically inconsistent with the recommendation that contact tracers should not consider applying any differential based on mask usage.

Third, the cumulative risk from exposure is not a bright line where fifteen minutes of exposure puts you at risk while less exposure is not risky. The change from a consecutive fifteen minute period to fifteen minutes over twenty-four hours shows this risk. In addition, shaking clothing is not the same thing as being in close contact unless contact transmission is emphasized or droplets fall on clothing and easily transmit between individuals from brief touches.

Fourth, the CDC should recommend the guidance they issued on December 7, 2020 for ventilation as the basis for any reduction in influenza. As both COVID-19 and the flu are airborne<sup>8</sup>, the CDC should update its guidance on respiratory prevention to be consistent with the new guidance.

### Conclusion

Instead of focusing on protections from an influenza pandemic, the CDC should focus on stopping COVID-19 and apply those lessons to protect healthcare workers

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<sup>5</sup> The CDC has changed terminology from a cloth face covering to a mask, possibly because of an increase in disposable masks not cleared by the Food and Drug Administration to meet standards for a surgical mask.

<sup>6</sup> The use of the term "social distancing" is a term that is close to "social isolation," a topic that should be avoided. For those reasons, the term physical distancing should be preferred. The CDC also in early December issued an update on mask wearing to recommend masks indoors outside of one's home, although this is not in policy.

<sup>7</sup> Under OSHA regulations, employers requiring employees to wear a respirator must do a medical examination and provide training. In addition, masks like unpowered N95 respirators require a fit test. Some requirements have been relaxed due to the COVID-19 pandemic.

<sup>8</sup> The December 7 guidance on ventilation sets the boundary between droplets and aerosols at 100 microns. This does not mean that everything transmitted by aerosols requires a N95 mask.

from an influenza pandemic. Since this study is unnecessary to determine that influenza is airborne, the study should be cancelled.

Sincerely,  
Theo Allen