

There's more to COVID safety than 6 feet of social distance. Here's what else to consider

September 3 2020, by Marie McCullough



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Philadelphia, New Jersey, New Mexico, and more than a few cities and states in between are allowing restaurants to resume indoor dining at 25% capacity, with tables at least six feet apart.

What's the scientific basis for these safeguards?

"Not a clue," emailed James Garrow, spokesperson for the Philadelphia Department of Public Health. "Could be an arbitrary level intended to severely limit capacity."

Actually, these pandemic precautions are not so much arbitrary as oversimplified, too rigid, and outdated, British infectious disease experts warn in a paper published last week in *BMJ*.

"We propose graded recommendations that better reflect the multiple factors that combine to determine risk," wrote the researchers, led by Nicholas R. Jones at the University of Oxford.

Those factors include room occupancy levels, exposure time, [face masks](#), ventilation, viral shedding, whether people are breathing normally or coughing and sneezing, and whether they are silent, speaking, shouting, or singing.

For example, singing, coughing, and sneezing generate warm, moist, high-momentum gas clouds filled with [droplets](#) that move faster than typical ventilation flows, the researchers wrote. Studies suggest these droplets can travel up to eight meters (about 26 feet) "within a few seconds."

Staying six feet apart (two meters) is a simple rule of thumb now stuck in the public mind - and on store floors with tape or decals. But the rationale for this distance goes back to 19th century studies of how far visible droplets traveled from a person after coughing, sneezing, or talking. Since large droplets fell close to the person emitting them, this "reinforced and further entrenched the assumed scientific basis" of the six-foot rule, the researchers wrote.

As for reducing restaurant occupancy to 25%, that may not be enough to reduce risk in poorly ventilated spaces where people have removed

masks to eat.

"The key parameters are distancing and ventilation, and whether these can be achieved adequately at 25% occupancy will depend very much on the nature of the space," said Charles Haas, a professor of environmental engineering at Drexel University. "Other than saying that 25% is better than 50%, which is better than 100%, the reasoning to me is far from transparent."

Alas, like every aspect of the pandemic, scientific reasoning is limited and evolving.

"Further work is needed to develop specific solutions" for various indoor environments, the researchers concluded. "Physical distancing should be seen as only one part of a wider public health approach."

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Citation: There's more to COVID safety than 6 feet of social distance. Here's what else to consider (2020, September 3) retrieved 27 April 2024 from <https://medicalxpress.com/news/2020-09-covid-safety-feet-social-distance.html>

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