

MEDICAL EXAMINER

## The Coronavirus Is Airborne. Keep Saying It.

It's a jarring message, and the right one.

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In the U.S., COVID-19 is spreading like wildfire. At the same time, the research community is learning more and more about how the coronavirus gets from one person to another. There are many nuances, and we don't know everything about it yet. But we're in an emergency, and we do have actionable facts. To help break through the noise, the public should be warned, plainly, and often: The coronavirus is airborne.

Researchers and medical practitioners have spent months pressing the public health establishment to evolve on messaging about the ways that COVID-19 spreads. At first, many experts thought that the virus spread mainly via large droplets, like those that fly out of your mouth and fall to the ground within a few feet, particularly when you cough. Then it became clear that people without coughs or other symptoms could—and, in many, many cases, do—spread the virus too. In an April 1 letter to the White House, the National Academy of Sciences raised concerns about the risk of the spread of the coronavirus through small droplets, which can accumulate around us as we talk and even as we breathe normally. Two days later, the Centers for Disease Control and Prevention recommended people could wear “face coverings” over their mouths and noses if they wanted. In early July, 239 scientists called on the World Health Organization to finally recognize the risk of airborne transmission of COVID-19. WHO now acknowledges that coronavirus-carrying droplets may remain suspended in the air in crowded indoor spaces, but its messaging tends to convey the risk of airborne spread of COVID-19 as an afterthought. For example, a WHO Q&A page gives the impression that if we’re all staying about 3 feet away from one another, the distance they recommend, and taking care to wash our hands, everything will be OK.

It won’t be. The updated message that needs to reach people is: In addition to visible routes of transmission like getting coughed on or touching a surface and then your face, COVID-19 can spread through the air we breathe, particularly indoors. Or more succinctly: The coronavirus is airborne. Repeat it. Tell your friends and family. We should be hearing it on the radio and podcasts, seeing it in PSAs on TV and YouTube. It should be written on little signs that we must pass as we carefully make our way into grocery stores. While we don’t need to worry about infectious clouds of coronavirus roaming an open beach—the outside is pretty safe, if you can stay distanced—we do need to be really worried about encountering the virus anywhere there are people in poorly ventilated spaces, because the coronavirus is, indeed, airborne. The message needs to break through the noise of a world that produces about 350,000 tweets every minute, in which a person’s knowledge of the pandemic differs depending on their preferred news source, and where a full third of Americans are not consistently wearing face coverings into stores and other businesses.

A big part of the challenges around messaging might be that the word *airborne* implies different things to specialists in different disciplines. In aerosol science, airborne can describe particles that drift on air currents. In medicine, *airborne* evokes a set of specific disease control measures appropriate for patients with tuberculosis or chickenpox, such as isolating patients in special rooms with negative air pressure. As a scientist, I can

relate to the specialized nature of this term, but as part of the general public who wishes to avoid COVID-19, it doesn't much matter to me if one virus that can be infectious in the air for about 30 minutes (which is the estimate for SARS-CoV-2), and another virus that can be infectious in the air for two hours (the case for the measles virus), are both described as airborne. That's a matter of degree. What matters to me is that if I'm in the same room as a person infected with COVID-19 and they are consistently singing, yelling, talking, or even simply breathing, there are SARS-CoV-2 viral particles carried by small droplets drifting through the air that could potentially infect me. That seems to be true even if I'm over 6 feet away if I'm stuck in a room for a while that is not ventilated—say, a dive bar. I am more likely to be concerned about all this if I have it ringing in my head that the coronavirus is airborne.

“The coronavirus is airborne”—that statement is jarring. It conveys that something harmful can be present, even when it cannot be seen with the naked eye or felt on the skin. Many people have already heard the expression “it's airborne” in the context of Outbreak, the 1995 Dustin Hoffman thriller (and the fifth-most-popular movie on Netflix in March!). It's already associated with a life-threatening disease. A concise warning lends itself to repetition, a key tactic in getting an idea across. Most importantly, “the coronavirus is airborne” provides direct support for precautionary measures for preventing the spread of COVID-19, such as keeping at least 6 feet of distance from people who are not in your household, wearing a face covering over your nose and mouth when in public, spending the bare minimum amount of time in indoor spaces that aren't your home, and improving the ventilation in buildings. (Surface transmission might be less common, but, yes, it's still important to wash your hands with soap and water.) If you're going to be inside for a long time with people from a variety of households—say, at a school—care should be taken to ensure that the chance someone with an infection is there is very low.

There is no time to waste. COVID-19 has already killed over 674,000 people, including more than 152,000 Americans. Failures of government, the private sector, international bodies, and on down the line have been out of many individuals' control. But experts responding to COVID-19 can control how they communicate with the public. While the scientific and technical nuances of COVID-19 are absolutely critical, the pandemic is a crisis, and now is definitely not the time for perfect to be the enemy of a good, lifesaving blanket statement. Communication with the public should prioritize engagement and clarity so it becomes more likely that people adopt effective protective measures that mitigate the spread of COVID-19. Say it with me: The coronavirus is airborne. The coronavirus is airborne. The coronavirus is airborne.

