

Why Do Experts Change Their Minds?

On February 29, 2020, the U.S. Surgeon General at the time tweeted a clear message.

"Seriously people—STOP BUYING MASKS!" Dr. Jerome Adams wrote in a Twitter post.

"They are NOT effective in preventing general public from catching #Coronavirus, but if health-care providers can't get them to care for sick patients, it puts them and our communities at risk!"

A little over a month later, public health officials told people to wear masks if they couldn't socially distance.

In May 2020, the World Health Organization (WHO) recommended surfaces be cleaned and disinfected to prevent the spread of the coronavirus. Sales of disinfectant and hand sanitizer soared. Now, the risk of getting the virus via contact with surfaces is considered to be low.

Confused? You're not the only one. During a global health emergency, government and health experts have a responsibility to regularly provide guidance to keep people safe. During the pandemic, some people have become wary of public health advice because it switched course a few times.

HAS THE ADVICE CHANGED?

Yes. But not because scientists just felt like changing it. At first, we didn't know how the coronavirus was being transmitted from person to person. We didn't know if it was via surfaces or through the air. We also didn't know if masks would effectively prevent the virus from spreading. And there were concerns that if people were told to wear masks, they would feel overconfident that they were protected and then take more risks—for example, by hanging out in a crowded room with lots of unmasked individuals.

It's understandable for people to become confused when advice changes or because scientists are sometimes reluctant to give definitive guidance. But experts have to be cautious. Giving the wrong advice during a pandemic could have disastrous effects. Scientists are under enormous pressure to give advice, but they have to base their advice on data.

THE SCIENTIFIC PROCESS

Research takes time, and is an iterative process. Data have to be collected, analyzed, and reviewed, often through multiple studies. Once researchers had time to study the coronavirus, they began to understand how it travels from one person to the



SHUTTERSTOCK

Current Do's and Don'ts of Mask-Wearing (But Stay Tuned for Possible Updates)

Do choose masks that

- ➊ Have two or more layers of washable, breathable fabric
- ➋ Completely cover your nose and mouth
- ➌ Fit snugly against the sides of your face
- ➍ Have a nose wire to prevent air from leaking out the top of your mask

Don't choose masks that

- ➊ Are made of fabrics, such as vinyl, that make it hard to breathe
- ➋ Have exhalation valves or vents, which allow virus particles to escape
- ➌ Are prioritized for healthcare workers, such as N95 respirators

Source: U.S. Centers for Disease Control and Prevention

next. They could analyze data to see how effective some safety measures—such as disinfecting surfaces—really were.

Conducting research is only the first step. After testing and sometimes re-testing a hypothesis, researchers ask other scientists to check their results and provide feedback. This process is called "peer review" and can take months. Other scientists might suggest changes to a study or express doubts about the results or methods. Often, results of one study will later be supported, undermined, or refined by a new study.

In April 2020, aerosol researchers warned that the coronavirus was being transmitted through small particles in the air. However, the WHO was reluctant to change its advice on masking due to a lack of evidence supporting this claim at the time. Later, a team of more than 200 scientists and public health bodies studied the available data and found that the virus was indeed airborne. More than one year after airborne transmission was first proposed, the WHO acknowledged that infected people do transmit the virus through liquid droplets and aerosols produced when talking,

sneezing, coughing, or even breathing.

Based on this and other findings, the WHO currently advises that people wear masks, as one of several precautions to protect themselves and others from COVID-19. They also recommend getting vaccinated, physical distancing, keeping rooms well ventilated, avoiding crowds, and regularly washing hands.

WILL THE ADVICE CHANGE AGAIN?

Maybe. But that doesn't mean scientists aren't doing their jobs properly. The point of research is to find things out by gathering data to make informed decisions. Changing a recommendation isn't a bad thing—it means new evidence has come to light that calls for an update.

In other words, scientists draw conclusions as you would, based on what you know. But you'd be willing to change your mind as you gain new information and insights.

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