

COVID-19 information continues to evolve: What's new and what has changed?

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In early August, a handful of national media stories reported on a study from Duke University about face masks and COVID-19. The stories appeared to report something new, but they got it wrong.

The stories said people wearing neck gaiters—the thin, stretchy material that looks like an oversized turtleneck—were more likely to spread the

coronavirus than if they wore no mask at all. But there were two problems with the reporting: The study did not measure the effectiveness of face coverings, and there was no conclusion about gaiters.

"It was a really cool study, but it was misinterpreted," said Dean Blumberg, chief of pediatric infectious diseases at UC Davis Children's Hospital. "It was a proof of concept. They were testing a way to measure the effectiveness of masks against COVID-19. Now, they've gone off to get real data."

By any scientific measure, the SARS-CoV-2 virus is still brand new to researchers. The amount of information scientists around the world have developed in just over half a year is both astounding and unprecedented. But a key to understanding every piece of new information we hear is to realize that much of what scientists know is still evolving and not always definitive.

"We're learning as we go along," Blumberg said. "That's going to continue for a long time. The Duke study was a great reminder—you have to take these preliminary findings and be very careful in interpreting them."

A difficult road for public health leaders

The still-evolving nature of COVID-19 information has created road hazards for public health leaders trying to offer clear—but sometimes changing—advice and warnings to the public.

"When we update information, some people say, 'So, you're changing your story?'" said Brad Pollock, chair of the UC Davis Health Department of Public Health Sciences. "No, we've learned more now. There is a reason we call it the novel coronavirus. We never saw it before January and our understanding has evolved."

Part of the problem, Pollock said, is that many people lack what he called public health literacy. He said many don't understand the interconnected nature of public health or how advice or policies from health officials are based on science and research.

"That lack of understanding has made keeping people safe a lot more difficult," Pollock said. "Our messaging is based on our current knowledge, but with COVID-19, that knowledge is growing almost daily."

COVID-19 research and public health have been on a steady upward cycle together, but that cycle has sometimes been misread or viewed with suspicion.

"Researchers develop evidence, which helps form policies, which helps develop more evidence to refine, or even change, those policies," Pollock said. "Some people don't understand that. Some people interpret that as government trying to limit their freedom rather than informing them how to stay healthy and keep their neighbors healthy."

Exhibit A for evolving evidence: Face masks help prevent COVID-19

"At the beginning, we thought wearing masks was not a good idea because we were worried that people would feel invulnerable and fail to physically distance," Pollock said. "We have much better evidence now that shows [the importance of masking](#) in keeping everyone healthy. We've also seen that the majority of people still know to be cautious."

"In some ways," Blumberg said, "it's unfortunate that nothing has evolved more than the evidence about masks. The [science shows that face masks protect you and they protect others](#). But some people, for

whatever selfish or misguided reasons, still latch on to some disproven statement from five months ago."

Latest science on who transmits COVID-19 (part 1): People without symptoms

A [recent summary](#) of the latest data by the Centers for Disease Control and Prevention shows that about two-thirds of the COVID-19 transmissions in the U.S. come from people not showing [symptoms](#) – either because their cases are asymptomatic or the symptoms haven't developed yet.

"You're probably most infectious a day or two before you actually have symptoms, then for a couple days after," said Stuart Cohen, chief of the Division of Infectious Diseases and director of hospital epidemiology and infection control. "Mostly it's a four-day window around when you start getting sick."

So, the latest advice from Blumberg, Cohen, Pollock and many others: Assume everyone might be spreading COVID-19.

Latest science on who transmits COVID-19 (part 2): Young people

Early in the pandemic, some of the information available said younger adults were less likely to be infected by the coronavirus. Now, more than 60% of the COVID-19 cases in Sacramento County are among people age 18-49, and the largest single group is age 20-29. That's a trend nationwide.

"As a group, they are one of the reasons COVID-19 is still out of control," Cohen said. "What we want them to understand is that there are

some young people who do very badly with the disease."

Pollock said what's driving those infections among younger adults is a combination of human nature and lack of information.

"Young people feel invulnerable anyway," he said. "But there is also a lack of understanding about what's going on. Many young people still don't know they can be infected and infect many others. But our ability to monitor the epidemic has improved. Now we're certain we're tracing infections back to many younger people."

He said public health officials are trying to send the message that [young people](#) can easily spread the coronavirus to more vulnerable groups, including their parents, grandparents, family and other people they love.

"I like to believe that we can educate them," Pollock said. "I'm an optimist. I believe with good information, people will do the right thing."

More key areas with still-evolving science

- Long-term impacts: Researchers and providers are learning more and more about potential lung and heart damage from COVID-19, but much is still unknown, including whether the damage could be permanent.
- If COVID-19 patients develop immunity: And if they do, how long does it last? One reason this piece of science is progressing slowly is that researchers simply need time to elapse to effectively monitor patients and their immunity.
- Transmission from aerosols: Those are the lighter airborne particles that can float in a room for hours. Studies have identified [coronavirus](#) particles in aerosols, but the evidence is not clear whether those aerosols can transmit COVID-19.
- Transmission from contact: "This is not a major source of

transmission," said Blumberg. "Handwashing is still important, it just should not be our focus compared with social distancing and wearing masks."

Still, the CDC continues to [recommend handwashing](#), especially after:

- Coughing, sneezing or blowing your nose
- Spending time in a public place
- Caring for someone who is sick

"The good news," Blumberg said, "is there is no need to quarantine your packages and mail."

Provided by UC Davis

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