

Masks could save the lives of 66,000 Americans by Dec. 1—if more people wear them

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By Dec. 1, there will be an estimated 295,011 coronavirus deaths in the United States since the start of the pandemic. But nearly 66,000 of these

deaths—about one in four—could have been prevented if all Americans would wear a mask in public, according to the Institute for Health Metrics and Evaluation (IHME) at the University of Washington.

While the estimates are based on projections, the institute's previous models have been accurate for several months.

"The accuracy (of IHME's model) is within 5% of the true estimate for projections up to four weeks later," said Ali Mokdad, professor and chief strategy officer of population health at IHME.

Despite the bleak numbers of [coronavirus](#) cases and deaths six months into the pandemic, public mask wearing continues to be a contentious topic. Experts have said repeatedly that the pandemic can be controlled if everyone wore [masks](#) properly while in public. But over the summer, the number of new cases has risen considerably, mostly in states that do not require masks in public or have been slow to adopt such mandates.

Currently 32 states—including Pennsylvania and New Jersey—and the District of Columbia require wearing masks in public, according to AARP. Texas and Montana also have mandates, but allow counties with low case totals to opt out. In the remaining states, including Florida, Georgia, Arizona, and Iowa, masks are not required.

The evidence supporting masks is clear. One study found that earlier in the pandemic, at least 200,000 U.S. coronavirus cases were avoided by mask-wearing mandates. Another preliminary study of almost 200 countries has found that [government policies](#) requiring public mask wearing are associated with lower per-capita mortality from the coronavirus, even after controlling for other factors, including population density, lockdown policies, and international travel restrictions.

"You look at the countries that got large segments of the population to wear masks early— countries like Hong Kong, Taiwan, and Slovakia—they have seen way less mortality from the coronavirus compared to other countries," said the preliminary study's lead author, Christopher T. Leffler, an associate professor of ophthalmology at Virginia Commonwealth University.

Mandating proper mask-wearing in public can help increase compliance, as IHME's latest report states. But Mokdad noted that one doesn't always lead to the other. For instance, in no-mandate states, more people started wearing masks and staying home after they saw that cases were soaring. On the other hand, some states with public mask mandates, like Illinois and Indiana, have relatively low self-reported compliance rates. According to IHME, about 55% of people in the U.S. say they wear a mask when they go out in public, up from 30% in the middle of April.

The importance of mask wearing has grown with increasing evidence that the coronavirus is airborne, meaning you're more likely to get it from another person's exhalations than from touching a surface. One study showed that the coronavirus was present in air samples collected from the hospital rooms of coronavirus patients, demonstrating the need for better ventilation.

"Even the whole idea that breathing and talking can create transmission is sort of an admission that airborne transmission is a factor," said Joshua L. Santarpia, associate professor of pathology and microbiology at the University of Nebraska Medical Center and lead author of the study.

But this is not like the fictional movie *Outbreak*, where a virus quickly becomes airborne and infects a crowded theater.

"That's not a realistic assessment of what airborne means for this

disease," Santarpia said. "It is apparent that mask wearing of any kind and social distancing are having an impact."

Another study sought to visualize the effects of a cough or sneeze, and found that droplets from an uncovered cough can spread out to eight feet on average and a maximum of 12 feet—both estimates are farther than the six feet recommended for social distancing.

"To see all of this with my own eyes was surprising. One of the good surprises was how well homemade masks could work," said Siddhartha Verma, an assistant professor of engineering at Florida Atlantic University and lead author of the study.

Different types of masks vary in effectiveness. Verma's study showed that a stitched mask made from quilting cotton limited the spread of droplets to two to three inches, which is just as effective, if not better, than a commercial mask.

Using a mask doesn't eliminate the risk of contracting the virus. That's why it's important to also practice social distancing.

"No one is saying masks are 100% effective, but they will in fact reduce transmission if not prevent it," Santarpia said.

Another measure that could help, experts say, is a national policy on masks, like other countries have implemented.

"It's very confusing to the public. A national mandate will help instead of leaving it up to the states," Mokdad said.

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