

The COVID-19 Pandemic

Effectiveness of Masks

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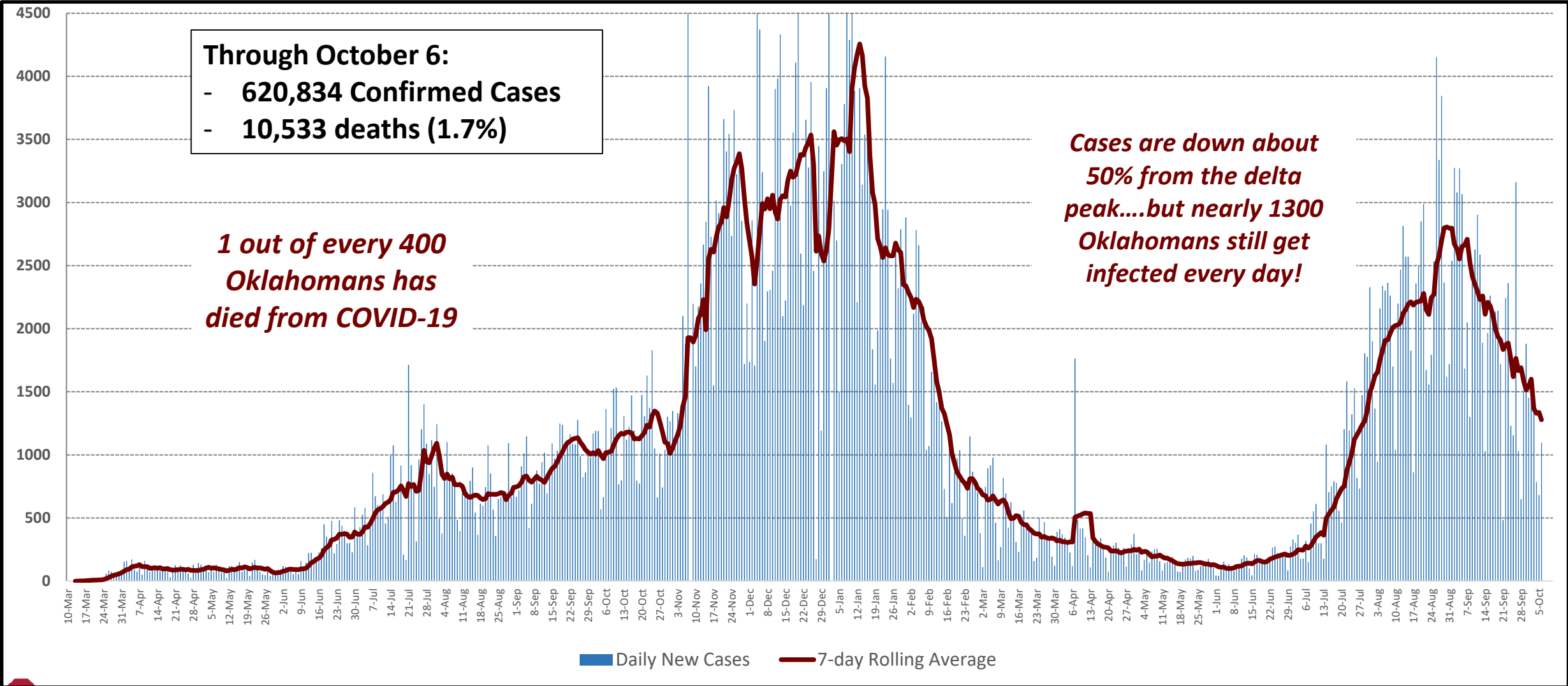
Daily New Cases with 7-day Rolling Average

Oklahoma

Through October 6:
- 620,834 Confirmed Cases
- 10,533 deaths (1.7%)

*1 out of every 400
Oklahomans has
died from COVID-19*

*Cases are down about
50% from the delta
peak...but nearly 1300
Oklahomans still get
infected every day!*



How do we know if masks work?



- Physical science studies
- Observational studies comparing groups with masks to groups without masks
- Randomized controlled trial where individuals or groups are randomly assigned to wear a mask or not
 - Generally would be considered unethical in the United States

Can masks really work?

- COVID virus is 50-140 nm in size – that's small enough to go through most masks, but.....
 - People do not breath out individual viruses – they breath out droplets that carry the virus
 - Masks effectively reduce those droplets from coming out
 - Masks help to prevent you from breathing in droplets
 - There is NO evidence of any harm (other than discomfort from wearing a mask)



All mask types reduced the size of the contaminated region significantly.

How You May Transmit COVID-19 Coronavirus From Talking Without Coughing Or Sneezing



Bruce Y. Lee Senior Contributor

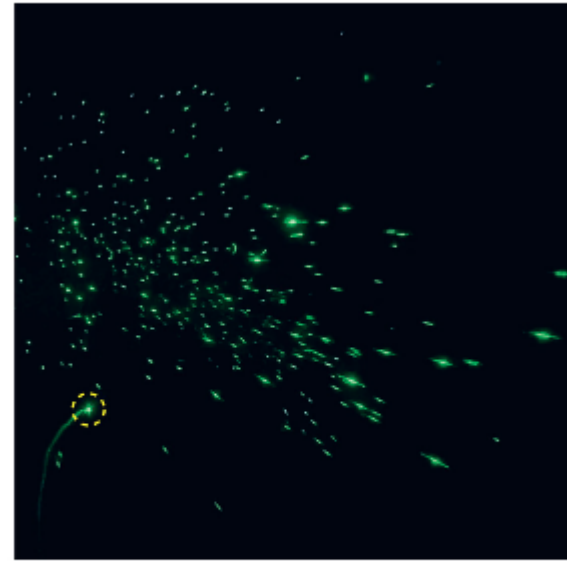
Healthcare

I am a writer, journalist, professor, systems modeler, computational and digital health expert, avocado-eater, and entrepreneur, not always in that order.



What's coming out of your mouth when you talk? (Photo: Getty) GETTY

B Flashes in a Single Video Frame



Emission of Droplets While a Person Said "Stay Healthy."

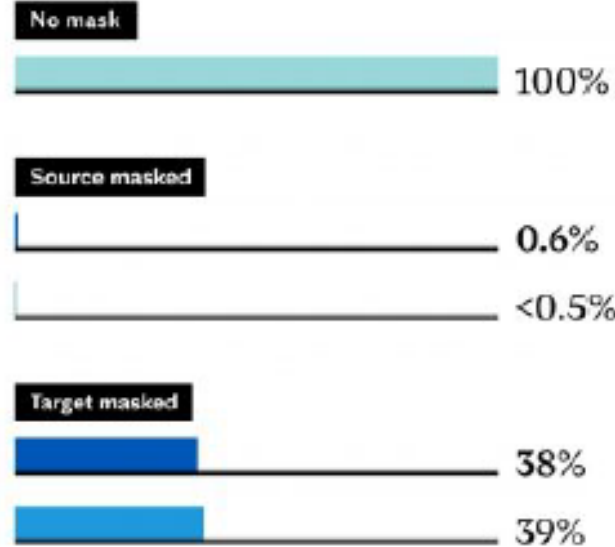
Watch this video – see what happens when you talk and see how a mask can change that!

<https://www.youtube.com/watch?v=UNHgQq0BGLI>

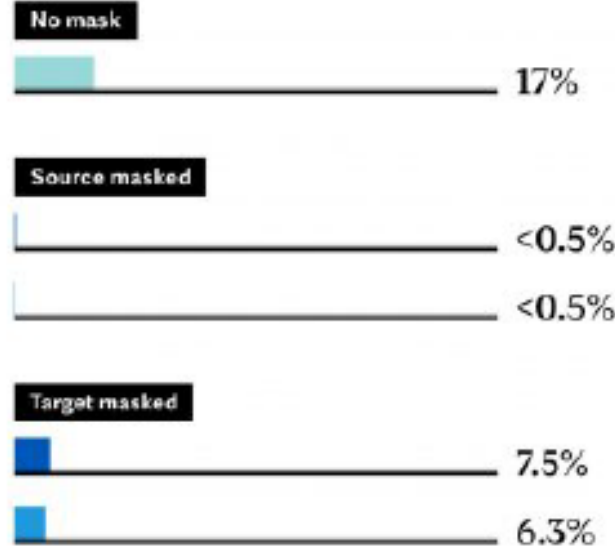
Exposure Risk Based on Masking and Distance

NO MASK DISPOSABLE MASK FABRIC MASK

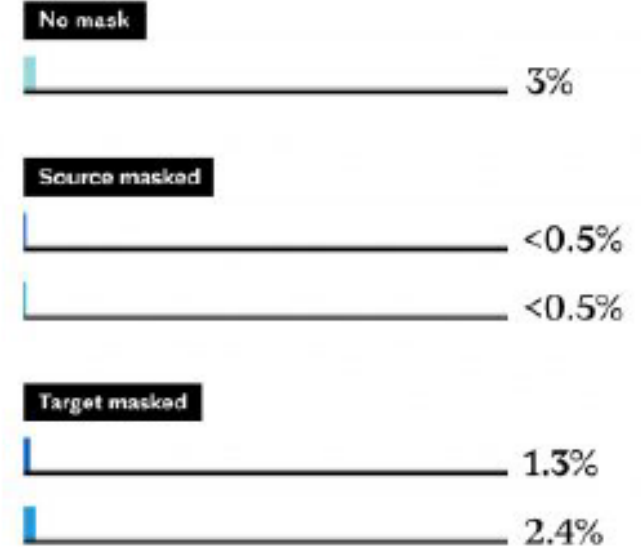
1-foot distance



3-foot distance



6-foot distance



Masking Scenario	1-foot distance	3-foot distance	6-foot distance
Both masked	<0.5%	<0.5%	<0.5%
Both Masked	<0.5%	<0.5%	<0.5%

Observational Studies

Clinical Review & Education

JAMA Insights

Effectiveness of Mask Wearing to Control Community Spread of SARS-CoV-2

John T. Brooks, MD; Jay C. Butler, MD

“COVID-19 spreads primarily through respiratory droplets exhaled when infected people breathe, talk, cough, sneeze, or sing... ..The amount of small droplets and particles increases with the rate and force of airflow during exhalation (eg, shouting, vigorous exercise)... ..An increasing number of ecological studies have also provided persuasive evidence that universal mandatory mask wearing policies have been associated with reductions in the number or rate of infections and deaths.”

But there is one randomized trial

The Impact of Community Masking on COVID-19:

A Cluster-Randomized Trial in Bangladesh

Jason Abaluck^{†,‡,1}, Laura H Kwong^{†,2,3}, Ashley Styczynski^{†,4}

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Emily Crawford¹, Jade Benjamin-Chung⁷, Shabib Raihan⁵

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Faika Laz Bani¹⁰, Aura Rahman¹⁰, Tahrima Saiha Huq¹⁰,

Stephen P. Luby^{§,2,4}, Ahmed Mushfiq Mobarak^{§,1,12 *}

August 31, 2021

A large, randomized trial led by researchers at Stanford Medicine and Yale University has found that wearing a surgical face mask over the mouth and nose is an effective way to reduce the occurrence of COVID-19 in community settings.

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