The COVID-19 Pandemic

Effectiveness of Masks

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October 6, 2021
Daily New Cases with 7-day Rolling Average

Oklahoma

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

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

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

Daily New Cases
7-day Rolling Average

Through October 6:
- 620,834 Confirmed Cases
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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)
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.

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

<table>
<thead>
<tr>
<th>1-foot distance</th>
<th>3-foot distance</th>
<th>6-foot distance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No mask</strong></td>
<td>100%</td>
<td>17%</td>
</tr>
<tr>
<td><strong>Source masked</strong></td>
<td>0.6%</td>
<td>&lt;0.5%</td>
</tr>
<tr>
<td>Target masked</td>
<td>38%</td>
<td>7.5%</td>
</tr>
<tr>
<td>Both masked</td>
<td>&lt;0.5%</td>
<td>&lt;0.5%</td>
</tr>
</tbody>
</table>

Both Masked

Observational Studies

“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

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.