

2 November 2020

## **BRIEF19**

*A daily review of covid-19 research and policy*

### **RESEARCH BRIEFING**

#### **New San Francisco study demonstrates imperfect science of contact tracing.**

Of the many proposed methods to detect and prevent transmission of covid-19, contact tracing has received both attention and skepticism. How can you track down people who may have been in touch with a symptom-free person? In a letter published today in [JAMA Internal Medicine](#), researchers attempted to evaluate the efficacy of contact tracing performed in San Francisco, CA during its shelter-in-place restrictions between April 13th and June 8th. While the city did a decent job contacting individuals shortly after positive tests, the data suggests that even the best-intentioned contact tracing is no match for the infectivity of SARS-CoV-2.

Of the more than 1600 reported cases in San Francisco, approximately 85% of those individuals were contacted, generally within a day of their test result. However, the researchers noted that the average person waited around three days from symptom onset before receiving a test, and another day to get their test result. By the time immediate contacts had been notified, an average of six days had passed, allowing for a lengthy window of time to pass on the virus. This challenge was demonstrated in the data as well, as San Francisco's positivity rate was 2.2% during this period. Around 10% of the contacts in this study later tested positive—a notably high “secondary attack rate.”

The authors note the obvious challenges of contact tracing: lags between infection, symptom onset, time to testing, and the time it takes to notify contacts. All of these factors contribute to individuals spreading covid-19 before they themselves know they have the virus. Furthermore, a larger proportion of contacts were members of the same household, often making quarantining less effective. Of course, more rapidly available testing could go a long way towards addressing these problems. Ultimately, contact tracing is a useful tool in assessing our ability to contain covid-19, but is by no means enough to eradicate the virus; nor is it truly feasible in many US cities.

—Fred Milgrim, MD

### **POLICY BRIEFING**

#### **Herd immunity still over the horizon.**

With the US hitting near-daily records for new coronavirus cases, the prospect of herd immunity has taken on fresh life. But in a recent [vlog](#), CEO of the American Medical Association, James Madara stated that any such protections remain a long way off. According to estimates from the Centers for Disease Control and Prevention (CDC), 9%, or roughly thirty million Americans have been infected and are immune. Per Dr. Madara, herd protection would require at least seventy percent, or two hundred and thirty million people to have immunity to achieve this goal. He argues that vaccines are one way to help reach this goal, but even this is not so simple. The Food and Drug Administration and CDC have set a fifty percent efficacy standard for coronavirus vaccines, meaning that nearly every American will need to be inoculated to achieve the coverage required. With lingering vaccine hesitancy, this may prove to be an elusive goal. *The American Medical Association.*

—Joshua Lesko, MD

*Kimi Chernoby, MD, JD, Policy Section Founder. Joshua Niforatos, MD Research Section Editor. Frederick Milgrim, MD, Editor-at-Large. Kane Elfman PhD, Publishing and Design. Jeremy Samuel Faust MD MS, Editor-in-Chief.*

<http://www.brief19.com/> Twitter: [@brief\\_19](#) [submissions@brief19.com](mailto:submissions@brief19.com)

*Brief19 is a daily executive summary of covid-19-related medical research, news, and public policy. It was founded and created by frontline emergency medicine physicians with expertise in medical research critique, health and public policy.*