

March 23, 2020

Random Testing is Urgently Needed

James H. Stock, Harvard University

In the absence of testing equipment – most recently, swabs – tests for the novel coronavirus have been rationed, with the most vulnerable or those in most need of help prioritized.

As tests become more widely available, however, some of the new testing resources should be devoted to randomized testing. What we learn from those tests has critical implications for policy response and for the economy.

A key coronavirus unknown is the asymptomatic rate, the fraction of those infected who have either no symptoms or symptoms mild enough to be confused with a common cold and not reported. A high asymptomatic rate is decidedly good news: it would mean that the death rate is lower, that the hospital system is less likely to be overrun, and that we are closer to achieving herd immunity. From an economic point of view, a high asymptomatic rate means it is safe to relax restrictions relatively soon, and that hospitalizations can be kept within limits as economic activity resumes.

Conversely, a low asymptomatic rate would require trading off losing many lives against punishing economic losses.

Neither the asymptomatic rate nor the prevalence of the coronavirus can be estimated if tests are prioritized to the symptomatic or if the included asymptomatic are unrepresentative (think NBA players).

Instead, we need widespread randomized testing of the population. To inform policy where it is most urgently needed, randomized testing should start in the hardest-hit states, then move to the rest of the country.

Some early estimates of the asymptomatic rate suggested it could be as low as 20% ([Diamond Princess](#) – also an unrepresentative pool), but some recent estimates are higher, including 50% (early data for [Iceland](#)) and as high as 85% ([China](#)). But none of these studies are for representative random samples in the U.S.

We don't need to wait for the CDC to organize randomized testing: this can be done by states, which need to manage their local economies wisely.

Most recessions begin because national markets fail, like in the financial crisis. But this time, the driving mechanism is localized shutdowns of the service industry. Thus, local policy response, driven by local data, can make a big difference for the local economy.

Strange as it might seem, it would be good news if many of us already have been exposed to the coronavirus but never knew it. If so, when paired with widespread testing for coronavirus antibodies (as is [being trialed](#) in Colorado), businesses could start to reopen and we might be able to avoid long-term economic damage. If not, policymakers need to start grappling now with the wrenching choice between nightmare scenarios trading off many deaths against the economic destruction.

Lets get the facts before we confront that dystopian tradeoff.

James Stock is Professor in the Harvard Economics Department and was a member of President Obama's Council of Economic Advisers in 2013-2014.