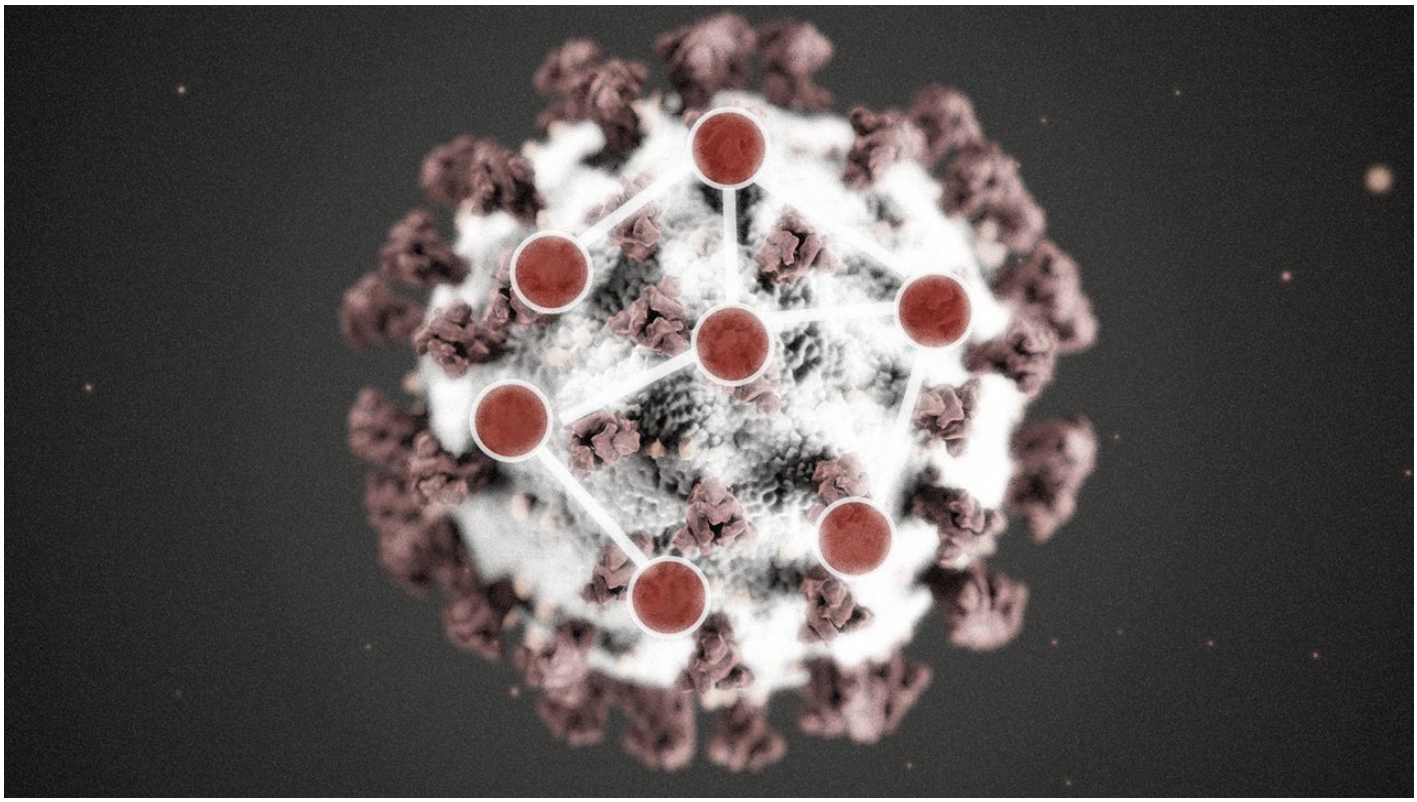

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THE STATE OF THE NATION:
A 50-STATE COVID-19 SURVEY
REPORT #8: FAILING THE TEST: WAITING TIMES FOR COVID DIAGNOSTIC TESTS ACROSS THE U.S.

USA, August 2020

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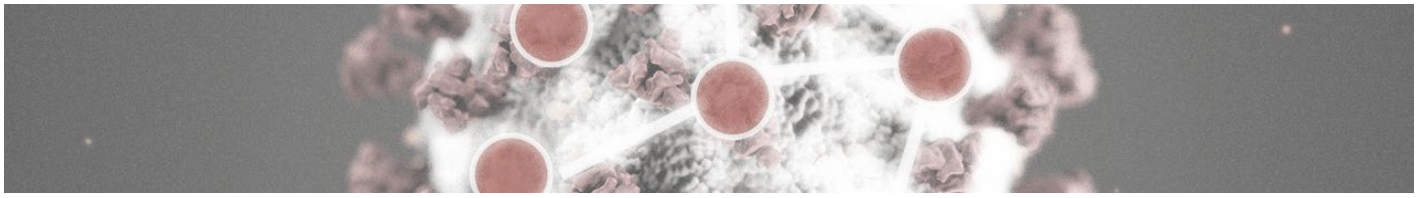

Report of August 3, 2020, v.1

***From*:** The COVID-19 Consortium for Understanding the Public's Policy Preferences Across States

A joint project of:
Northeastern University, Harvard University, Rutgers University, and Northwestern University

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COVER MEMO

Summary Memo— August 3, 2020

The COVID-19 Consortium for Understanding the Public's Policy Preferences Across States
Partners: Northeastern University, Harvard University, Rutgers University, and Northwestern University

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From July 10 to 26 we conducted the seventh wave of a large, 50-state survey, some results of which are presented here. You can find previous reports online at www.covidstates.org.

Note on methods:

We surveyed 19,058 individuals across all 50 states plus the District of Columbia. The survey was conducted on 10-26 July 2020 by PureSpectrum via an online, nonprobability sample, with state-level representative quotas for race/ethnicity, age, and gender (for methodological details on the other waves, see covidstates.org). In addition to balancing on these dimensions, we reweighted our data using demographic characteristics to match the U.S. population with respect to race/ethnicity, age, gender, education, and living in urban, suburban, or rural areas. This was the seventh in a series of surveys we have been conducting since April 2020, examining attitudes and behaviors regarding COVID-19 in the United States.

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Failing the test: Waiting times for COVID diagnostic tests across the United States

Rapid turnaround of testing for COVID-19 infection is essential to containing the pandemic. Ideally, test results would be available the same day. Our findings indicate that the United States is not currently performing testing with nearly enough speed. In our large (19,058 respondents) national survey, conducted between July 10 and 26, we asked whether respondents had been tested for COVID-19 and how long they had waited to get results. Our finding: 37% of those who had been tested by nasal swab received results within 2 days, and the average wait time was 4.1 days; with 31% of tests taking more than 4 days, and 10% 10 days or more. Further, there are few signs that turnaround times are diminishing. For individuals who responded that their last test had been in April, they had waited on average 4.2 days to get results; and for individuals tested in July, 4.1 days.

Background: Testing (and especially testing asymptomatic individuals) is a cornerstone of containing the spread of COVID-19. In particular, public health experts have indicated that a testing regime for controlling the spread of the disease should involve (1) testing higher risk asymptomatic individuals; (2) isolating positive cases; (3) testing the contacts of positive cases (who now should be considered "higher risk"), and repeating this cycle. This type of control strategy, effectively implemented, could help limit the spread of the disease while reducing reliance on far more costly interventions, such as stay at home orders and shutting down schools.

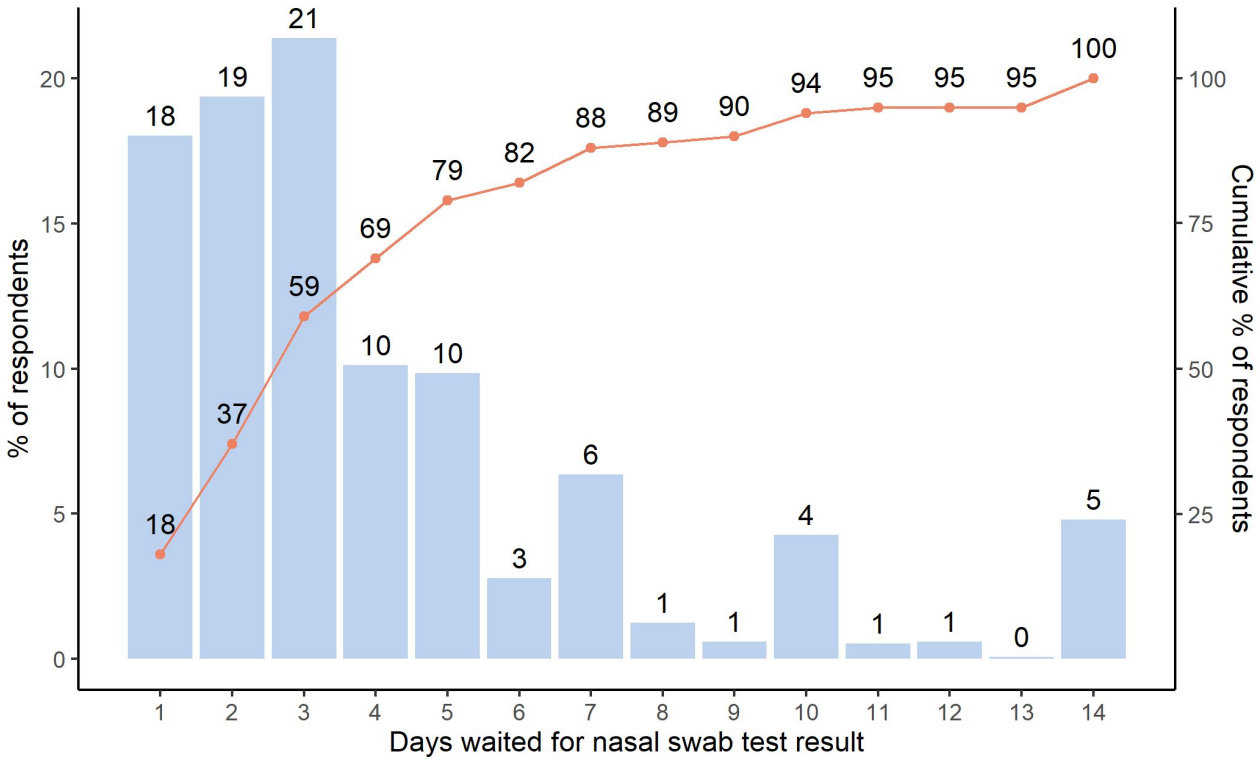
This testing and isolation strategy works because it reduces exposure of people to individuals who are contagious but have no symptoms. This "asymptomatic transmission" is the key driver of the spread of COVID-19 since people who are infected but not showing symptoms are more likely to go about their daily routines without adopting behaviors to prevent transmission. As a point of comparison, a previous coronavirus first reported in Asia in 2003 (Severe Acute Respiratory Syndrome, or SARS) did not spread nearly as widely because infected individuals were generally infectious only after they started demonstrating characteristic symptoms.

Once this was understood, those symptoms effectively served as a signal that the infected individual should be isolated. If individuals with COVID-19 simply manifested with a purple nose before they were contagious, the disease would be easier to contain and would quickly disappear. Testing is the functional equivalent of that purple nose; in a world where everyone could take a perfectly accurate test every day that would produce results in a few minutes, and self-isolate after a positive result, new infections would drop to near zero within a few weeks. While we are some distance from that ideal scenario, the cycle of testing and contact tracing, if rapid enough, gets us closer to that possibility.

Given the timing of how quickly and how long someone is infectious, speed in producing reliable enough results is of the essence for COVID-19. For certain contagious diseases like many sexually transmitted diseases, a wait of a week would likely not be consequential--because the infected individual is unlikely to infect many more people in that time. However, for COVID-19, peak asymptomatic contagiousness for many people may only be a week, which means that a week-long delay would render a positive test nearly useless to prevent further transmission. As such, the turnaround time for COVID-19 test results can have a major impact on efforts to control the spread of the virus.

In order to evaluate typical waiting times, in our survey we asked individuals how long they waited for their testing results. 18% of our sample report having been tested for COVID-19 at least once. In Figure 1, we report the distribution of waiting times for the most common test (nasal swabs, the standard PCR-based test for infection).

Figure 1: Distribution of days waited for nasal swab test result



We find that the mean waiting time nationally was 4.1 days, and median waiting time 3 days. Only 37% of people received test results within 2 days, and 21% waited more than 5 days.

In **Table 1** (on p.7), we report median waiting times (for nasal swab tests) by state for the most recent test that someone had taken.[1]

The waiting time is strikingly similar across states-- with six states (Hawaii, Iowa, Kentucky, New Jersey, Ohio, and Washington) with a median waiting time of 2 days, twelve states (and DC) (Arizona, Arkansas, California, DC, Delaware, Florida, Montana, Nevada, Oklahoma, South Carolina, Tennessee, and Texas) more than 3 days, and for 33 states with a median time of exactly 3 days. The relative consistency of long waiting times throughout the country highlights that it represents a national problem, not a local one.

Finally, we note that the waiting time for results is not evenly distributed across the population. Mean wait times for white respondents were 3.9 days; for African American respondents 5.0 days, and for Hispanic respondents 4.6 days. The longer wait times for African Americans and Hispanic Americans mean that containment strategies will be less effective in those populations.

Key conclusions from these analyses:

- **Most (63%) people are not getting results within the 1-2 days that would be optimal to aid contact tracing.**
- **A substantial minority (21%) of individuals are receiving test results too late (5+ days) to be of any significant assistance in helping to control the spread of COVID-19.**
- **The testing challenges are national in scope, with most states reporting a median waiting time of 3 days or more.**
- **Waiting times are longer for African Americans (5 days) and Hispanic Americans (4.6 days) compared to white respondents.**

Public health experts have recently proposed the use of (yet to be approved by the FDA) at-home tests that provide users with results within minutes, similar to over-the-counter at-home pregnancy tests, to complement nasal swab tests using PCR. These tests are not as sensitive as traditional laboratory tests at identifying infected individuals, with greater false negative rates. However, they do show great promise at identifying especially infectious individuals, because they appear to perform better for individuals who are shedding more virus. These tests may therefore dramatically speed the cycle of testing/isolating/tracing by enabling the rapid identification of at least a subset of highly infectious individuals.

[1] The median is more robust in small sample sizes than the mean.

Table 1. How many days did you wait to receive the results from your most recent test?			
	Median		Median
National	3	MS	3
AK	3	MT	5
AL	3	NC	3
AR	4	ND	3
AZ	5	NE	3
CA	4	NH	3
CO	3	NJ	2
CT	3	NM	3
DC	4	NV	4
DE	4	NY	3
FL	4	OH	2
GA	3	OK	5
HI	2	OR	3
IA	2	PA	3
ID	3	RI	3
IL	3	SC	5
IN	3	SD	3
KS	3	TN	4
KY	2	TX	4
LA	3	UT	3
MA	3	VA	3
MD	3	VT	3
ME	3	WA	2
MI	3	WI	3
MN	3	WV	3
MO	3	WY	3