Key Summary of Published Article

SARS-CoV-2 (COVID-19)
Estimated Antibody Prevalence

How common were antibodies to SARS-CoV-2 in the United States from July to September 2020?

Background

Testing for SARS-CoV-2 antibodies in large groups of people can help estimate what proportion of the population has had COVID-19.

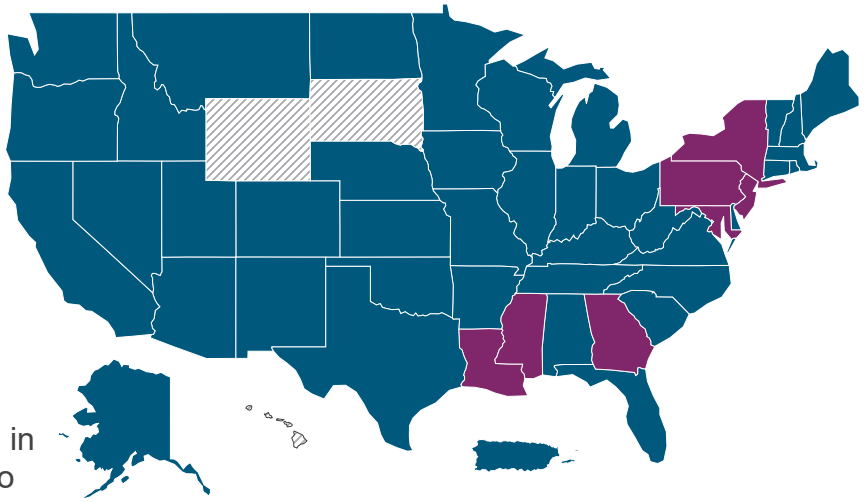
Study Design and Results

Patient specimens from across the United States that were initially sent to 1 of 2 large clinical laboratories as part of routine care (not related to COVID-19) were tested for SARS-CoV-2 antibodies (IgG).

Estimated Prevalence of SARS-CoV-2 Antibodies

From 4 time periods in 2020:
July 27-August 13
August 10-August 27
August 24-September 10
September 7-September 24

177,919 specimens



Prevalence was <1% to 25% in the 50 states, DC, and Puerto Rico.

Hawaii, South Dakota, Wyoming not included, because of insufficient data

<10% prevalence across all 4 periods

≥10% prevalence in at least 1 period

Most people in the United States did not have SARS-CoV-2 antibodies from July to September 2020.

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SARS-CoV-2 (COVID-19)
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Article Title: Estimated SARS-CoV-2 Seroprevalence in the US as of September 2020

Kristina L Bajema,[1] Ryan E Wiegand,[1] Kendra Cuffe,[1] Sadhna V Patel,[1] Ronaldo Iachan,[2] Travis Lim,[1] Adam Lee,[2] Davia Moyse,[2] Fiona Havers,[1] Lee Harding,[2] Kelly Martin,[2] Marjorie Biel,[2] Yangyang Deng,[2] William A Meyer III,[3] Mohit Mathur, [4] Tonja Kyle,[2] Adi Gundlapalli,[1] Natalie Thornburg,[1] Lyle Petersen,[1] Alicia Fry,[1] Aron Hall,[1] Chris Edens[1]

[1]COVID-19 Response Team, Centers for Disease Control and Prevention, Atlanta, GA; [2]ICF, Rockville, MD; [3]Quest Diagnostics, Secaucus, NJ; [4]BioReference Laboratories, Elmwood Park, NJ

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Background

- Seroprevalence surveys are important for refining COVID-19 disease burden and transmission estimates, which are likely underestimated through passive case reporting.[1]
- Despite their usefulness, seroprevalence surveys in the United States have been limited to certain geographic areas, populations, and time periods.[2-5]
- Large-scale seroprevalence surveys can better estimate the disease burden across the general population.
- **Objective:** In this cross-sectional study, investigators estimated SARS-CoV-2 seroprevalence in a broad population consisting of various age groups and time periods across 52 US jurisdictions.

Methods

- A repeated cross-sectional study was carried out involving residual sera from patient specimens initially submitted as part of routine clinical care, or screening, unrelated to COVID-19. Patient specimens were from 2 clinical laboratories (Quest Diagnostics, BioReference Laboratories) across 52 US jurisdictions.
- Residual sera were tested for SARS-CoV-2 antibodies using immunoassays with FDA emergency use authorization.
- Seroprevalence was estimated for 4 age groups across 4 sampling periods of 2 weeks each between July and September 2020:
  - Age groups: 0 to 17 years, 18 to 49 years, 50 to 64 years, and ≥65 years
  - Sampling periods: July 27 to August 13, August 10 to 27, August 24 to September 10, and September 7 to September 24

Results

- A total of 177,919 specimens were tested for SARS-CoV-2 antibodies: 26,716 specimens (15.0%) from patients 0 to 17 years, 55,044 (30.9%) from patients 18 to 49 years, 48,514 (27.2%) from patients 50 to 64 years, and 47,513 (26.7%) from patients ≥65 years.
- SARS-CoV-2 seroprevalence ranged from <1% to 23% in the 52 jurisdictions tested.
- Seroprevalence estimates by sampling period were possible for 49 of the 52 jurisdictions.
  - In most (42/49) jurisdictions, <10% of people had evidence of previous SARS-CoV-2 infection throughout all 4 sampling periods.

Conclusions

- SARS-CoV-2 antibody prevalence estimates varied widely across US jurisdictions, with seroprevalence estimates as high as 23% in certain time periods.
- However, overall, most people in the United States did not have serologic evidence of SARS-CoV-2 infection as of September 2020.
- These findings suggest the need for continued public health preventive measures.

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