Key Summary of Published Article

Seroprevalence of SARS-CoV-2-Specific IgG Antibodies Among Adults Living in Connecticut: Post-Infection Prevalence (PIP) Study

Background
- Estimates of the percentage of a population with SARS-CoV-2 antibodies (seroprevalence) are important for guiding public health responses.
- However, many estimates are limited because they are based on specimens collected for a specific reason. Such study designs may produce estimates that represent a sick population instead of the general population.
- SARS-CoV-2 seroprevalence in Connecticut has been previously reported, but the estimate was based on individuals receiving routine wellness checks as well as symptomatic patients seeking care. This may have biased the estimate.
- Objective: In the Post-Infection Prevalence (PIP) study, investigators surveyed and tested a randomly selected representative sample of adults in Connecticut to estimate the prevalence of self-reported COVID-19 symptoms, adherence to risk mitigation measures, and the prevalence of SARS-CoV-2 antibody (IgG) positivity.

Methods
- Investigators conducted a cross-sectional survey of people residing in non-congregate settings (e.g., excluding nursing homes) in Connecticut and enrolled a representative sample of 735 adults, between June 4 and June 23, 2020.
- Additionally, from June 23 to July 22, 2020, investigators oversampled non-Hispanic Black and Hispanic individuals to provide more accurate estimates for these subpopulations.
- Sociodemographic information, symptoms, and adherence to COVID-19 risk mitigation measures were collected via phone interview.
- After an interview, serum specimens were collected from respondents (June 10-July 29, 2020). Each specimen was tested at Quest Diagnostics using the Ortho-Clinical Diagnostics Vitros anti-SARS-CoV-2 IgG assay.
- The state-wide seroprevalence was estimated after weighting the random sample. Seroprevalence among non-Hispanic Black and Hispanic subpopulations was also estimated.
- The seroprevalence of this randomly selected study population was compared to that found across all SARS-CoV-2 antibody (IgG) testing completed at Quest Diagnostics in Connecticut during the study period.

Results
- Among the 567 individuals that completed serology testing at the state-level, the mean age was 50 (±17) years, 53% were women, and 75% were non-Hispanic White individuals.
- Since March 1, 2020, 73% of the study sample reported avoiding public places, 75% reported avoiding small gatherings of family or friends, and 97% reported they wore a mask at least some of the time when they left their residence.
- Based on 23 of 567 individuals testing positive for SARS-CoV-2-specific IgG antibodies, the estimated state-wide weighted seroprevalence was 4.0% (90% CI, 2.0%-6.0%).
  - The estimated weighted seroprevalence was 6.4% (90% CI 0.9-11.9) for the non-Hispanic Black population and 19.9% (90% CI, 13.2-26.6) for the Hispanic population, based on the random state sample and oversamples.
- Seroprevalence was estimated to be 11.3% (90% CI, 5.4-17.2) among individuals who reported ≥1 symptom and 0.6% (90% CI, 0.0-1.3) among asymptomatic individuals.
- Based on 25,274 SARS-CoV-2 IgG antibody tests conducted at Quest Diagnostics across Connecticut during the study period, the seroprevalence was 8.4%.

Conclusions
- The PIP study indicates that, for infections through June 2020, the estimated SARS-CoV-2 seropositivity is low (4.0%) in Connecticut, though it varied by race/ethnicity.
- Therefore, it is important to maintain continued adherence to COVID-19 risk mitigation measures to avoid a resurgence of COVID-19 infections in this state.
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