

## Big new serology study from Spain with approx 5% seroprevalence

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[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)31483-5/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31483-5/fulltext)

- Huge new sero prevalence study in the Lancet this morning estimating the seroprevalence of SARS-CoV-2 infection in Spain at national and regional level.
- From April 27 to May 11, 2020, 61 075 participants (75.1% of all contacted individuals within selected households) answered a questionnaire on history of symptoms compatible with COVID-19 and risk factors, received a point-of-care antibody test, and, if agreed, donated a blood sample for additional testing with an immunoassay.
  - o 35 883 households were selected from municipal rolls using two-stage random sampling stratified by province and municipality size, with all residents invited to participate
- Prevalences of IgG antibodies were adjusted using sampling weights and post-stratification to allow for differences in non-response rates based on age group, sex, and census-tract income. Using results for both tests, we calculated a seroprevalence range maximising either specificity (positive for both tests) or sensitivity (positive for either test).
- **Seroprevalence was 5.0% (95% CI 4.7–5.4) by the point-of-care test and 4.6% (4.3–5.0) by immunoassay**, with a specificity–sensitivity range of 3.7% (3.3–4.0; both tests positive) to 6.2% (5.8–6.6; either test positive), with no differences by sex and lower seroprevalence in children younger than 10 years (<3.1% by the point-of-care test).
- There was substantial geographical variability, with higher prevalence around Madrid (>10%) and lower in coastal areas (<3%).
- **Around a third of seropositive participants were asymptomatic**, ranging from 21.9% (19.1–24.9) to 35.8% (33.1–38.5).
- The majority of the Spanish population is seronegative to SARS-CoV-2 infection, even in hotspot areas.
- **Most PCR-confirmed cases have detectable antibodies**, but a substantial proportion of people with symptoms compatible with COVID-19 did not have a PCR test.

Interestingly, Dr Naylor's reactions was that given Canada has 1/2 the Spanish rate of confirmed COVID-19 cases, we can expect next week's CBS report to be <5% overall for Canada, with follow-up analyses showing Montreal/Toronto standing in for Madrid.

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