

Preliminary Report on Aggregated Expert Predictions on COVID-19

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Executive Summary

We have conducted three weekly surveys that have asked a group of infectious disease modeling researchers to assess their collective expert opinion on the trajectory of the COVID-19 outbreak in the US. The following page provides a brief summary of the results from the third survey, administered on March 2nd and 3rd, 2020. Participants are modeling experts and researchers who have spent a substantial amount of time in their professional career designing, building, and/or interpreting models to explain and understand infectious disease dynamics and/or the associated policy implications in human populations. In general, we see a consensus among the experts that the outbreak will continue to grow in the US in coming weeks, and that well less than 50% of all COVID-19 cases have been detected by surveillance strategies.

Results from Survey 3 (administered March 2-3, 2020)

- 1. Experts predict that as of Monday, March 2nd between 6% and 25% of all COVID-19 cases in the US had been confirmed and that by Monday, March 9th between 11% and 36% will have been confirmed.**

The ranges reported above represent the 25th and 75th percentiles of the consensus distributions obtained from combining the predictions from all experts.

[We note that we were not as clear as we could have been in phrasing this question. Some experts may have interpreted our use of the term "COVID-19 cases" in different ways. In next week's survey, we will ensure that our questions in this regard are unambiguous.]

- 2. Experts forecast large 1-week and 2-week ahead increases in the number of confirmed cases, as reported by the CDC.**

Expert consensus distributions forecasted a median of 183 confirmed cases will be reported on March 9th (25th percentile = 114 cases, 75th percentile = 460 cases), and that a median of 599 confirmed cases will be reported on March 16th (25th percentile = 214 cases, 75th percentile = 1553 cases)

- 3. Experts anticipate a near doubling of the number of states that will have confirmed COVID-19 cases by Monday, March 9th.**

On March 2nd, 10 states had reported confirmed COVID-19 cases. Expert consensus forecasts predict that on March 9th, 19 states (25th – 75th percentile: 16 - 25) states will have reported cases.

- 4. Experts anticipate that between 11 and 19 countries will have 100 or more cumulative confirmed cases by March 8th, as reported by the WHO.**

On March 2nd, when this question was asked, seven countries (China, Korea, Italy, Iran, Japan, Singapore, and France) had reported 100+ cases. The median of the consensus distribution is 15 countries, with 25th and 75th percentiles of 11 and 19 countries, respectively.

- 5. The above results include answers from 17 experts.**

A total of 25 experts answered at least one survey and 19 experts have answered two or more surveys. Experts who participated in at least two surveys are listed below. Those in boldface participated in the current survey for which we are reporting results.

Expert name	Affiliation
Benjamin M Althouse	Institute for Disease Modeling, University of Washington, New Mexico State University
Dr. Caroline Buckee	Harvard TH Chan School of Public Health
Donald S. Burke, MD	Graduate School of Public Health, University of Pittsburgh
Lauren A Castro	Los Alamos National Laboratory
Sara Del Valle	Los Alamos National Laboratory
John M. Drake	University of Georgia
Stephen Eubank	University of Virginia
Lauren Gardner	Johns Hopkins University
Michael L. Jackson	Kaiser Permanente Washington
Justin Lessler	Johns Hopkins Bloomberg School of Public Health
Bryan Lewis, PhD, MPH	University of Virginia
Marc Lipsitch	Harvard T.H. Chan School of Public Health
Andrew A. Lover	University of Massachusetts- Amherst
Steven Riley	Imperial College
Caitlin Rivers	Johns Hopkins Center for Health Security
Roni Rosenfeld	Carnegie Mellon University
Samuel V. Scarpino	Northeastern University
Shaun Truelove	Johns Hopkins Bloomberg School of Public health
Cecile Viboud	Fogarty International Center, NIH