The Facebook company is partnering with academic institutions to support COVID-19 research and to help inform public health decisions.

Currently, we are inviting Facebook app users in the United States to take a survey collected by faculty at Carnegie Mellon University (CMU) Delphi Research Center, and we are inviting Facebook app users in more than 200 countries and territories globally to take a survey collected by faculty at the University of Maryland (UMD) Joint Program in Survey Methodology (JPSM). Sampled users see the invitation at the top of their News Feed, but the surveys are collected off the Facebook app and the Facebook company does not collect or receive survey responses. UMD and CMU (“survey host universities”) each partnered with the broader public health community to design the surveys, which ask users about any current symptoms as well as other factors related to their risk of exposure to the virus.
We hope these surveys will help public health researchers track and forecast the spread of COVID-19. Even with as few as several thousand responses, survey data like these have been successfully used to forecast the spread of the flu and other illnesses. These data are important complements to COVID-19 confirmed diagnoses given limited availability of tests and to hospital admissions given the timing of hospitalization late in the disease process after the need for resources has been realized. These data are especially urgent in low resource settings where these alternative data are not always available to track the spread.

Additionally, these survey data can be used in conjunction with other Facebook tools mobilized to help track the spread subject to the terms and conditions of the respective survey host university’s Data Use Agreement. For example, the Data for Good Disease Prevention Maps use aggregated and anonymous Facebook movement data to summarize the prevalence of staying near home and the probability of exposure to new populations.

These data in these maps can help health researchers understand how population dynamics influence the spread.

With over 2 billion people on Facebook alone, our survey invitations can reach large segments of the global population to significantly represent age, gender and location.

Each day, a new sample of Facebook users are invited to participate in a survey about any symptoms they have experienced in the last 24 hours.

The surveys are conducted by academic partners using survey tools off Facebook.

We don’t share who took the survey with academic partners, and they don’t share individual survey responses with us.

We do share survey weights that correct for non-response and sample representativeness.

The symptom map reflects the aggregated data adjusted for sample bias, and helps health experts, policymakers and researchers monitor the spread of COVID-19 symptoms and forecast potential outbreak areas.

Aggregated data are available from our partners, and non-aggregated data from these partners are only available to eligible researchers with signed Data Use Agreements.
The survey instruments are owned by the survey host universities and are available, along with their translations, with the data. Facebook and the survey host universities appreciate the feedback received on the survey questions, and they may consider input along with many other factors if making revisions to the survey in the future.

The global survey collected by faculty at UMD is organized in 5 sections: (A) consent; (B) health symptoms; (C) contacts with others; (D) mental health and economic security; and (E) socio-demographic characteristics.

- Global survey questionnaire from UMD (EU)
- Global survey questionnaire from UMD (Non-EU)

The US survey collected by faculty at CMU was launched in English but is anticipated to be soon available in Spanish, Chinese, French, Brazilian Portuguese, and Vietnamese. The US survey is organized in 5 sections: (A) consent; (B) household symptoms used for forecasting; (C) personal symptoms; (D) contacts with others and other risk factors, including mental health; and (E) socio-demographic characteristics.

- US survey questionnaire from CMU
While the survey host universities design, collect, and analyze the survey data, Facebook provides assistance with questionnaire translation, survey sampling and recruitment, and statistical bias correction.

SAMPLE DESIGN

The Facebook app invites a new sample of adult users to take the survey each day. These users see an invitation at the top of their Facebook News Feed to an optional, off-Facebook survey. The sampled users can then choose whether or not to consent to the survey. If they consent, they are redirected to a Qualtrics survey hosted by UMD or CMU.

The surveys are daily repeated cross-sections. Sampled users may be invited to take the survey again in either a few weeks or months, depending on the density of their area.

The responses of sampled users who participate more than once will not be linked longitudinally. In order to enable an agile public health response, we aim to provide data that can detect either outbreaks or successful containment over time rather than cumulative or overall prevalence alone.

We stratify the sample using administrative boundaries within countries and territories to provide geographic coverage. We are constantly working with the survey host universities to optimize the sampling design, including incorporating adaptive sampling, which could improve statistical power for local area estimates in priority areas as the pandemic progresses.

1.7M
Global survey weekly responses

500K
US survey weekly responses
The Facebook company provides analytic weights that adjust for non-response and coverage biases. By non-response bias, we mean that some sampled users are more likely to respond to the survey than others. To adjust for this, Facebook calculates the inverse probability that sampled users complete the survey using their self-reported age and gender as well as other characteristics we know correlate with non-response. We then use these inverse probabilities to create weights for responses, after which the survey sample reflects the active adult user population on the Facebook app. By coverage bias, we mean that not everyone in every country has a Facebook app account or uses their account regularly. To adjust for this, Facebook adjusts the weights created in the first step even further so that the distribution of age, gender, and administrative region of residence in the survey sample reflects that of the general population. Making adjustments using the weights ensures that the sample more accurately reflects the characteristics of the target population represented.

The weights will be available for the United States as well as 114 other countries and territories globally where we are able to generate high-quality weights. The current set of weighted countries and territories are listed on the next page. The set of countries and territories for which weights are available will be revised over the course of data collection as we and the survey host universities evaluate sample coverage within each country. For more details about the weighting methodology and the general population benchmarks used, please see the weighting documentation provided with the data.

We and the survey host universities designed this effort with privacy in mind from the start.

Facebook does not receive any survey responses to do this bias correction. Instead, UMD and CMU send Facebook the Random ID number for the users who completed the survey. Facebook only has access to public, aggregated survey data provided by the universities.
PUBLICLY AVAILABLE, AGGREGATED DATA

- Aggregated global survey data are made available to the public by UMD.
- Aggregated US survey data are made available to the public by CMU.

REQUESTS FOR ACCESS TO NON-AGGREGATED DATA FOR RESEARCH PURPOSES

Offering the symptom survey datasets to researchers with a privacy-minded approach enables experts to generate more impactful insights to aid public health responses. Academic and nonprofit researchers may request access to non-public, non-aggregated survey data for their research. This includes files with the survey variables and weights. Once a request is approved by Facebook and the survey host universities, the researcher’s institution must have signed Data Use Agreements (DUAs) in place before data access will be provided.

Eligible researchers may see more information and submit a Request for Data Access online for consideration by Facebook and the survey host universities. They will need to fill out a short form and attach a project summary, including a description of their analysis plan and any complementary work. Facebook and the survey host universities will then proceed with onboarding researchers with signed DUAs.

Institutions will need to sign different DUAs for access to non-aggregate survey data from UMD and CMU, as well as weights from Facebook. Survey data and weights will then be shared with researchers by UMD and CMU.

- To access non-aggregate non-US survey data, institutions will need to sign a DUA with UMD.
- To access non-aggregate US survey data, institutions will need to sign DUAs with CMU and Facebook.

For questions about data access, please reach out to covid19symptomsurvey@fb.com.

Appendix A: Survey weights are provided for the following countries and territories - Afghanistan, Albania, Algeria, Angola, Argentina, Armenia, Australia, Austria, Azerbaijan, Bangladesh, Belarus, Belgium, Benin, Bolivia, Bosnia and Herzegovina, Brazil, Bulgaria, Burkina Faso, Cambodia, Cameroon, Canada, Chile, Colombia, Costa Rica, Cote D'Ivoire, Croatia, Czech Republic, Denmark, Dominican Republic, Ecuador, Egypt, El Salvador, Ethiopia, Finland, France, Germany, Ghana, Greece, Guatemala, Haiti, Honduras, Hong Kong, Hungary, India, Indonesia, Iraq, Ireland, Israel, Italy, Japan, Jordan, Kazakhstan, Kenya, Kyrgyzstan, Lao People's Democratic Republic, Lebanon, Libya, Madagascar, Malaysia, Mali, Mauritania, Mexico, Morocco, Mozambique, Myanmar, Nepal, Netherlands, Nicaragua, Nigeria, Norway, Palestinian Territories, Oman, Pakistan, Panama, Paraguay, Peru, Philippines, Poland, Portugal, Puerto Rico, Qatar, Republic of Korea, Republic of Moldova, Romania, Russian Federation, Saudi Arabia, Senegal, Serbia, Singapore, Slovenia, South Africa, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Taiwan, Province Of China, Thailand, Tunisia, Turkey, Ukraine, United Arab Emirates, United Kingdom, United Republic of Tanzania, United States, Uruguay, Uzbekistan, Vietnam, Yemen.