Children's Hospital of Philadelphia
PolicyLab

County-level COVID-19 Projections Improve Following New Masking, Distancing Requirements

Philadelphia, Pa. – August 5, 2020 – New COVID-19 projections released today by PolicyLab at Children's Hospital of Philadelphia (CHOP) show clear evidence that mitigation efforts recommended by the White House Coronavirus Task Force are working to reduce risk of continued widespread transmission in states that have adopted them. Conversely, the model's four-week forecasts have worsened for states that have not enacted masking mandates or adopted strong social distancing practices, such as Oklahoma, Missouri, Tennessee and Georgia.

In addition to their regular four-week COVID-19 case projections for 747 counties across the U.S., the researchers have been closely following a special analysis of rollback scenarios involving universal masking and tightening of social distancing and occupancy policies in 158 of the country's largest counties. These modeled scenarios reflect guidance being shared with state governments by the White House Coronavirus Task Force, for whom the scenarios were originally prepared. The researchers are beginning to see improved forecasts in the states that have adopted these policy recommendations, many of which are considered hotspots. For example, transmission risk for the next four weeks has consistently decreased in communities across Louisiana, Alabama, Ohio, Indiana, Arizona and Colorado, which have all established universal masking mandates.

Still, many hotspots continue to see concerning forecasts for continued resurgence. The Upper Midwest and communities along the western coast of Lake Michigan, including Chicago and Milwaukee, continue to have high risk for resurgence in the coming weeks. The model shows heightened risk for growing case counts to quickly reproduce in Baltimore and the Virginia and Maryland suburbs of Washington, D.C., which will likely threaten the nation's capital in the coming weeks. Forecasts for Boston now look worse than those of New York City, which has been largely insulated from current resurgence in the Northeast, but still remains at risk from increasing infections in New Jersey, the Philadelphia region and south following the I-95 corridor. Data from the model also shows that residents in states across the Heartland and to the south, including Oklahoma, Nebraska, Kansas and, once again, the Dallas and Houston metro areas, are not practicing enough social distancing to reduce the surging spread of the virus in those regions.

"In the face of unwillingness to invoke federal powers mandating practical, evidence-based strategies to combat widespread transmission of coronavirus throughout the county, it's encouraging to see that the White House Coronavirus Task Force's work to align state leaders on sensible distancing and masking policies is gaining traction with most governors, leading to improved forecasts and declining national daily case rates," said David Rubin, MD, MSCE, director of PolicyLab at CHOP and a professor of Pediatrics at the University of Pennsylvania's Perelman School of Medicine. "We can only hope that other governors who have been holding out on enacting these strong public health measures will fall in line to unify our response as a nation and sufficiently protect all communities as we head towards fall."

For additional comments from lead investigators Dr. Rubin, Dr. Gregory Tasian, and Dr. Jing Huang on their updated forecasts and findings, read this blog post: https://policylab.chop.edu/blog/covid-19-outlook-regaining-control

Background

Researchers at PolicyLab at CHOP and the University of Pennsylvania developed the model, known as COVID-Lab: Mapping COVID-19 in Your Community, which tracks and projects COVID-19 transmission across 747 U.S. counties with active outbreaks, representing 80% of the U.S. population and 89% of all identified coronavirus cases. The researchers built their model to observe how social distancing, population density, daily temperatures, and humidity affect the number and spread of COVID-19 infections over time across a county, accounting for test positivity rates and population characteristics such as age, insurance status, crowding within homes and diabetes prevalence. COVID-Lab's projections forecast the number of coronavirus cases communities could experience over the next four weeks based on a three-day average of their current social distancing practices, defined by the change in travel to non-essential businesses as compared to pre-epidemic. The application of this model, which focuses on time-varying transmission rates during the early months of the pandemic in the U.S., was released on July 23, following peer review, in *JAMA Network Open*. You can read more about how the team validates their models for accuracy in this blog post. The data are publicly available in the form of interactive maps and graphs.

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About PolicyLab at Children's Hospital of Philadelphia: PolicyLab at Children's Hospital of Philadelphia (CHOP) is dedicated to achieving optimal child health and well-being by informing program and policy changes through interdisciplinary research. Founded in 2008, PolicyLab is a Center of Emphasis within the CHOP Research Institute, one of the largest pediatric research institutes in the country. With more than 30 highly regarded faculty and 60 passionate staff who bring expertise from myriad of fields covering health, research and health policy, our work focuses on improving public systems, improving health care delivery and improving child health outcomes. For more information, visit **http://www.policylab.chop.edu**.