Children's Hospital of Philadelphia
PolicyLab

New COVID-19 Projections Show No Signs of Outbreak Abating in Midwest & Mountain States

PolicyLab at Children's Hospital of Philadelphia releases new guidance on in-person schooling during the pandemic

Philadelphia, Pa. – October 21, 2020 – New COVID-19 case projections and county-level test positivity data released today by PolicyLab at Children's Hospital of Philadelphia (CHOP) forecast a continued deteriorating situation throughout the Midwest and Mountain States, raising greater concern for major cities such as Chicago, Indianapolis and Denver. The model's forecasts have also worsened for parts of the South—including Arizona's metropolitan areas, counties across northern Texas and states in the Southeast—but show case counts will rise more slowly over the next four weeks in the Pacific Northwest and Northeast than in the central part of the country.

Increasing test positivity rates across the Midwest suggest this region's outbreak will only intensify over the next month. The researchers now project most counties in Michigan, Ohio, and Indiana will see explosive growth in case counts, following recent similar trends witnessed in Wisconsin and Minnesota. Rapidly increasing hospitalization rates have more than doubled in the last few weeks in many Midwestern cities, adding significant concern to the PolicyLab forecasts. The fall surge is also not expected to subside in the Mountain States, with Colorado and Idaho projected to see some of the most widespread community transmission in the country into late November. The researchers' forecasts for Reno and Las Vegas, Nevada, are beginning to worsen again, as well.

Resurgence risk has increased across much of the Southwest and Southeast. Following some relief from the summer wave, Arizona's Maricopa (Phoenix), Pinal, and Pima counties are expected to see growth in case counts again over the next four weeks. Test positivity rates and hospitalizations are up in counties across northern Texas, including Dallas, Wichita, El Paso and Lubbock. Metropolitan areas in southeastern states, such as Nashville, Tenn., Atlanta, Ga. and Greenville, S.C., are also at risk of widespread community transmission as the weather turns colder in that region. Furthermore, the researchers observed early signals of resurgent transmission risk in the California's Bay Area, along the southeast coast of Florida and throughout several parishes in Louisiana, which suggest the fall wave could spread even further.

There are some signs of optimism coming from the Pacific Northwest and Northeast, where PolicyLab's model projects case counts and testing positivity rates will grow at a much slower pace than other parts of the country. Hospital occupancy plateaued last week across Oregon, Washington and Massachusetts, and the researchers are encouraged to see targeted mitigation response plans have slowed the rate of growth in case incidence in New York City, where hospitalizations rates slowed last week, as well. These data are encouraging for the continued safe reopening of schools in many areas.

PolicyLab also released new guidance today for in-person learning during the pandemic that reflects the latest evidence on children's risk of contracting and transmitting COVID-19, as well as the success many schools have had with multi-layered strategies to maintain in-person learning while also protecting students, teachers and staff.

“We’re clearly in the middle of a fall wave, and much of the country is projected to see case counts dramatically rise over the next four weeks, warranting difficult discussions in school districts for when to suspend in-person learning, whether for a classroom or a whole school,” 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. “Yet, for schools in those parts of the U.S. that aren’t seeing accelerated growth of COVID-19 cases and hospitalizations, we’re advising education leaders that safe reopenings can still occur with strong safety plans, but that they will need to lean heavily on the advice of local health departments that can guide more informed decisions on when to close based on evidence of linked transmission between and among students and staff within a school.”

For additional comments from COVID-Lab’s lead investigators and collaborators on their updated forecasts and school reopening guidance, read this blog post: https://policylab.chop.edu/blog/covid-19-outlook-fall-wave-here-outcome-not-predetermined

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 COVID-19 transmission and test positivity rates across all U.S. counties, and projects case counts for 819 counties with active outbreaks, representing 82% of the U.S. population and 85% 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. This is just one tool in a toolbox of resources policymakers and decision-makers can use as they manage their COVID-19 response efforts.

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**.