Children's Hospital of Philadelphia
PolicyLab

New COVID-19 Projections Raise Continued Concerns for the Midwest, Northeast & Major College Towns

Philadelphia, Pa. – August 26, 2020 – New COVID-19 projections released today by PolicyLab at Children's Hospital of Philadelphia (CHOP) reveal large Midwestern cities will likely enter the fall with weekly case incidence counts nearly 10 times the rate of infection as when many European economies and schools reopened last spring. The models also suggest that New England cities, such as Boston, Providence and Hartford, could see significant virus resurgence in the coming weeks, approaching similar numbers to those in the Midwest.

In viewing this week's data, the researchers are more confident in their projections for the past several weeks that COVID-19 resurgence was slowly returning to Boston and the greater New England region, even as New York's case counts and test positivity rates remain among the lowest in the country. Transmission risk increased simultaneously this week in Massachusetts' Essex and Suffolk counties, which are now seeing 65-90 cases per 100,000 individuals—trends that are approaching existing hotspots like Indianapolis and Chicago. Rhode Island's projected case counts have surpassed those of the Philadelphia region and look more similar to the risk now forecasted for the Washington, D.C. metro area. Finally, as forecasts for many areas of the south continue to improve, particularly in vacation destinations, projected case growth in Mid-Atlantic counties remains flat, with the highest reported infection rates in the cities of North and South Carolina, which are surpassing those in the Midwest.

Along with this week's forecasts, the researchers also updated their dashboards to highlight the weekly trends in case incidence and test positivity rates for every county in the United States. These rates, alongside PolicyLab's school reopening guidance, can assist schools and universities with challenging decisions about reopening and the subsequent success of their safety plans.

In following repopulating college towns, the researchers are projecting worsening situations for communities like South Bend, Ind., and Chapel Hill and Raleigh, NC, after their well-reported campus outbreaks resulted in reversals to online learning. An outbreak at East Carolina University, in Greenville, NC, caused case counts in the area to quickly surpass 200 cases per 100,000 residents and test positivity rates to climb to 13%. Furthermore, the reopening of K-12 schools around Marietta, Ga., and in several counties throughout Alabama and North Carolina, have led to increasing case incidence, although it is too soon to forecast the magnitude and duration of that resurgence as schools initiate their safety plans for the fall.

"America is on the move—back to school, back home from vacation, back to some semblance of normal life—and it remains to be seen how severely these transitions will impact the continued spread of COVID-19 as we head towards fall," 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 should welcome the relief that some areas of the south and vacation destinations are finally seeing, but the continued concerns for our northern states and college towns are a reminder that with colder weather approaching, now is an important time to remain vigilant and commit to the distancing and masking routines that will help us navigate the pandemic in the months ahead."

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-buckle-ride-about-get-bit-bumpy

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 747 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**.