Children's Hospital of Philadelphia
PolicyLab

New COVID-19 Projections Show Improvements in California & Florida, School & University Reopenings Further Threatening Midwest

Philadelphia, Pa. – September 2, 2020 – Updated COVID-19 projections released today by PolicyLab at Children's Hospital of Philadelphia (CHOP) show improving four-week forecasts for most counties throughout Florida and California, states that led the summertime surge in case counts across the U.S. However, within declining nationwide infection rates, these improvements are overshadowing worsening risk for resurgence in parts of the South, Midwest and Heartland where the reopening of universities and K-12 schools is exacerbating already tenuous situations.

In this week's modeling data, the number of repopulating college towns that have heightened risk for widespread community transmission far outnumber the few campuses that appear to be conferring no new risk to their communities. This is especially notable in regions that reported high case counts before students arrived again, such as the South and Midwest, where the reopening of colleges and some K-12 schools has quickly accelerated the risk for widespread transmission and increasing test positivity rates in the coming weeks. The increasing risk is particularly of concern for smaller college towns—such as Morgantown, W.Va., State College, Pa., and Bloomington, Ind.—that have already seen campus outbreaks. Furthermore, more than two weeks into the new semester, test positivity rates remain over 10% in Iowa City, Tuscaloosa, Ala., and Boone, Mo.

The researchers are watching very closely for impacts across Minnesota, which is seeing some of the highest risk in the PolicyLab model, as the state forges ahead with reopening K-12 schools and colleges simultaneously, while being located in a part of the country that sees some of the earliest arrival of colder weather. Finally, data validity concerns in Mississippi and Texas, and growing risk for virus resurgence in parts of Tennessee, South Carolina, and North Carolina, are reasons to closely monitor forecasts in the South over the next few weeks.

Aside from the challenges that school reopenings are bringing to communities, the forecasting model projects that case counts will likely continue to decline over the next four weeks in many major metropolitan areas across California, including San Diego and San Francisco, and Florida, including Miami and Orlando. The researchers also observed some stabilization in parts of New England—such as Boston and Providence—and modest improvements in projections for Baltimore and other parts of Maryland, as forecasted risk declines in coastal counties. The forecasts for these northern areas, as well those for Denver, Seattle and its neighboring communities in the Pacific Northwest, are becoming more favorable for safely reopening schools for in-person learning, as per PolicyLab's school reopening guidance and recommended test positivity and case incidence thresholds, assuming college openings do not add new risk.

"While we feel relieved to see improving forecasts for much of California and Florida, and some stabilization in the Northeast, the challenging situation in the Midwest and Heartland has us very concerned for the health and safety of those communities in the weeks ahead," 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 know clearly now that, despite best efforts, college reopenings have not been going well in areas of high

transmission. Although the virus is spreading among younger, often healthier adults, we are mindful that these students don't live in a bubble. Monitoring emergency department and hospital visit rates in these communities over the next 2-3 weeks will be informative as to the sustainability of these outbreaks."

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-labor-day-effects-have-begun-colleges-are-leading-way

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 817 counties with active outbreaks, representing 82% of the U.S. population and 88% 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**.

###

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**.