

COVID Measures to Inform School Planning

As of September 13, 2020*

**Please note that the science of COVID-19 is evolving rapidly. The information in this PowerPoint reflects current existing models, and will be updated as-needed as guidance develops.*



Description

- The enclosed measures are offered as a tool to assist school leaders as they consider choices about on-site, hybrid, and remote learning models for their student populations.
- The existing **Ohio Public Health Advisory System** contains valuable community metrics. But 4 of the 7 indicators lag days or weeks behind new infections (increases in outpatient visits, ED visits, hospital admissions, ICU occupancy)
 - School Planning measures focus at the front end to catch increases in infections as they start
- Measures on the next slides are front-end indicators of a rise in new community infections. Schools can use these to assist in real-time decision making about remote, hybrid, and in-person learning.
 - Primary Measures: Assess how many people in the community have COVID & direction of trend
 - Secondary Measures: Community Performance Indicators - how community systems are coping
 - For Both: Proposed Thresholds for interpretation and decision support for in-person / remote / hybrid learning models

Primary measures: New Cases

1. Daily new cases per 100,000 (7-day moving avg)

Demonstrates level of virus in community

2. Trend line of daily new cases per 100,000

Indicates whether cases are increasing or decreasing

Secondary measure: Community Performance Indicators

Percent of COVID tests that are positive

Demonstrates adequacy of community testing (and prevalence of disease)

Also consider (not shown here): Positive test rates in asymptomatic people; Time from test to result (“turnaround time”); Contact tracing success rate

For all In-Person Learning, at all levels:

Measure implementation of reliable & bundled protection protocols

- Bundle: Stay Home when Sick, Distancing, Masking, Hand Hygiene, Cleaning
 - Also consider Cohorting, Ventilation
- School measures of daily cases and quarantine
- Important to maintain protocols consistently over time
 - Create systems to track school cases over time
 - Measure implementation of protection protocols
 - If protocols cannot be maintained, consider remote / hybrid models

Read more:

- Overview of protection strategies: Harvard Global Health Institute. *Risk Reduction Strategies for Reopening Schools*. Retrieved from <https://schools.forhealth.org/risk-reduction-strategies-for-reopening-schools/>
- Meta-analysis of distancing, masks, and eye protection: Chu et al. (2020) Physical distancing, face masks, and eye protection to prevent person-to-person transmission of SARS-CoV-2 and COVID-19: a systematic review and meta-analysis. *The Lancet*, 395 (10242), 1973-1987. Retrieved from [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)31142-9/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31142-9/fulltext).

Primary Measures and Proposed Thresholds

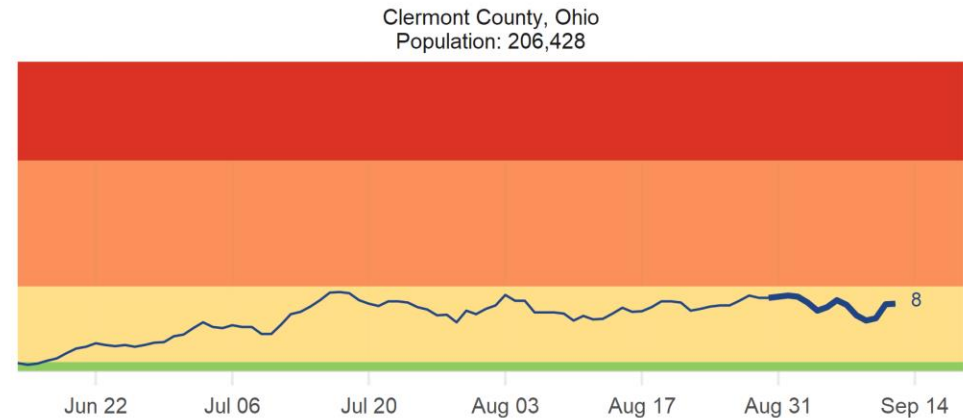
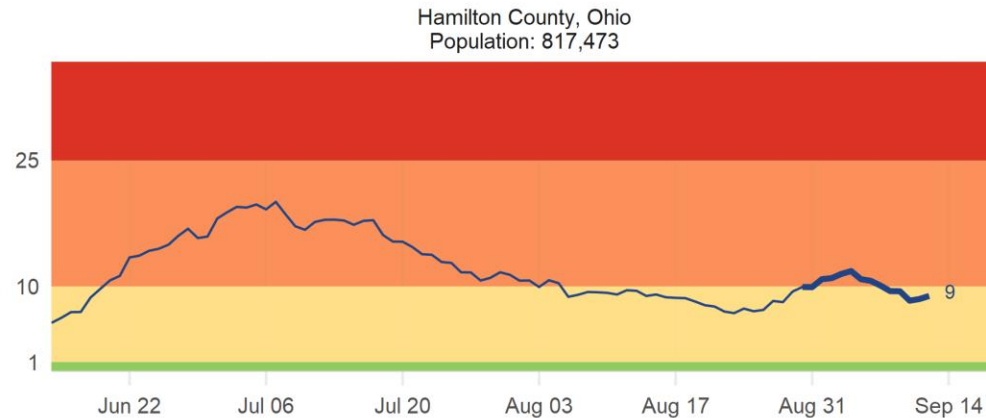
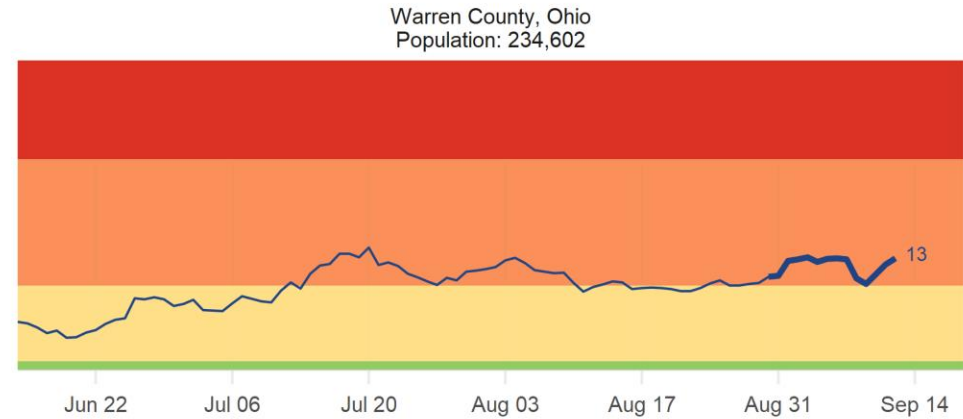
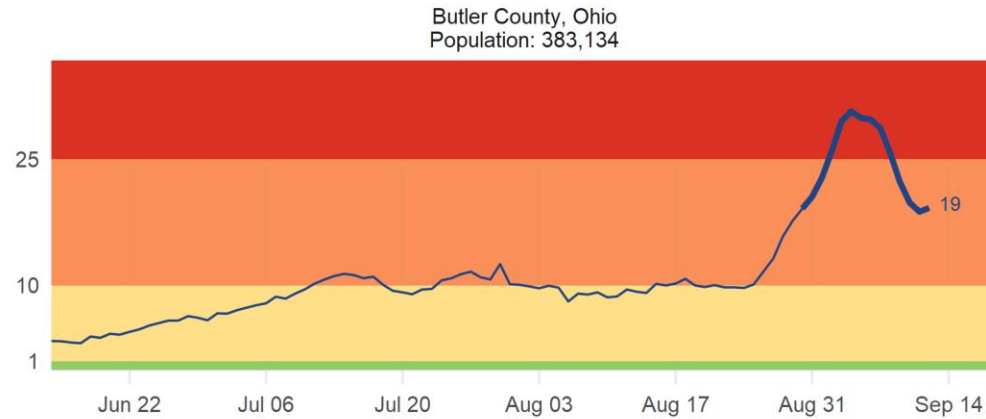
Below is an adaptation of suggested thresholds from Harvard Global Health Institute (*see link below for original recommendations*). Schools should consider student needs and ability to implement protection protocols as they make the decision for their district.

Category	Daily New Cases per 100,000	Schools should:
Red	>25	Encourage remote learning for all learners when possible
Orange	10<25	Consider remote or hybrid learning unless Community Performance Indicators (<i>slide 3</i>) met. If Community Performance Indicators are met, follow guidance in Yellow:
Yellow	1<10	Consider if school protective protocols can be strictly implemented (<i>see slide 4</i>) → If no, consider remote or hybrid learning → If yes, consider return to in-person with possible prioritization & phase-in: <ul style="list-style-type: none">• Priority 1: preK-5, special education through 8th• Priority 2: grades 6-8 and special education for grades 9-12• Grades 9-12:<ul style="list-style-type: none">○ Not a priority in Orange – continued remote or hybrid learning○ Return in Yellow on hybrid schedule IF distancing can be maintained for all grades, majority of time
Green	<1	All grades in school with strict protection protocols

* Harvard Global Health Institute. *The Path to Zero and Schools: Achieving Pandemic Resilient Teaching and Learning Spaces*. Retrieved from https://globalepidemics.org/wp-content/uploads/2020/07/pandemic_resilient_schools_briefing_72020.pdf.

Daily new cases per 100,000 (7-day moving avg)

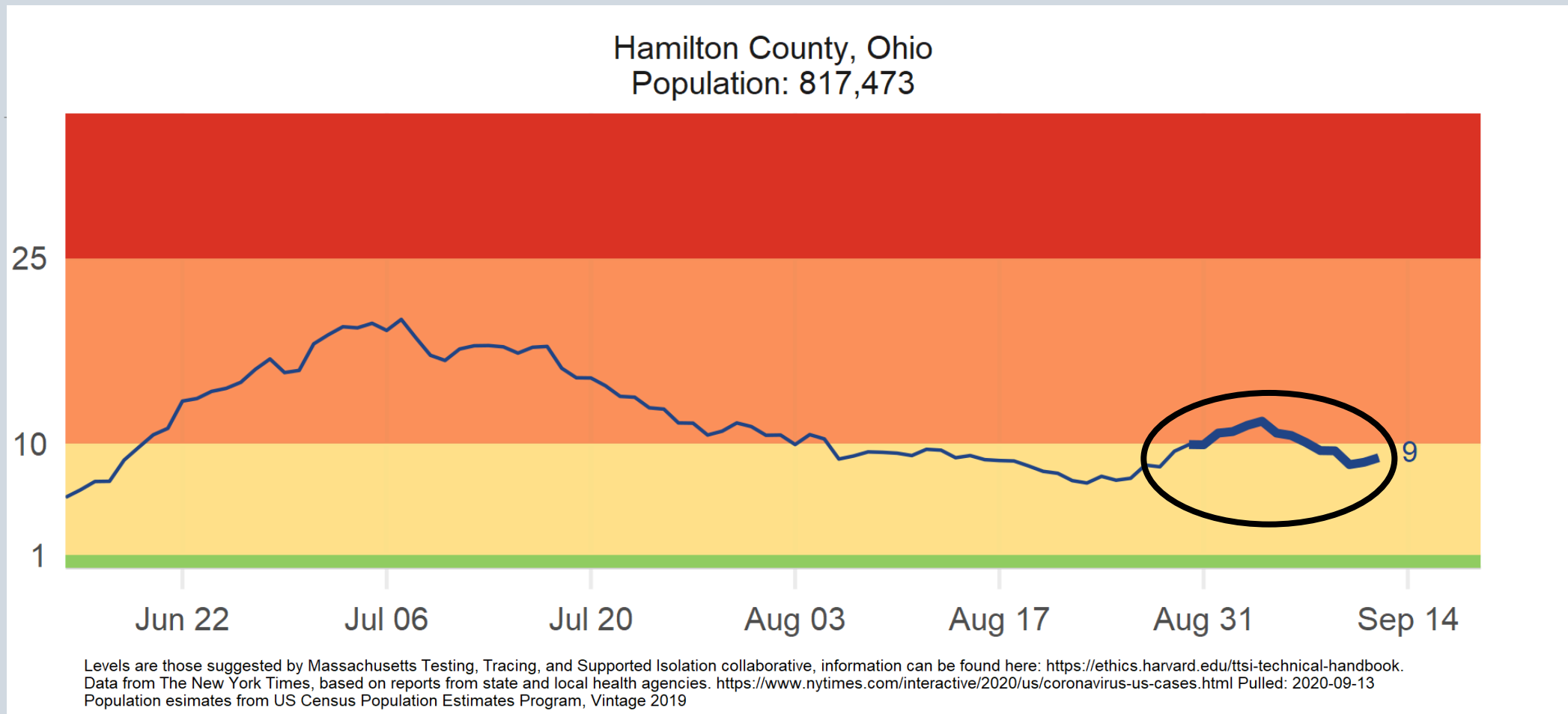
Seven day moving average of new COVID-19 cases per 100,000 people
Previous two weeks in bold



Levels are those suggested by Massachusetts Testing, Tracing, and Supported Isolation collaborative, information can be found here: <https://ethics.harvard.edu/tsi-technical-handbook>.
Data from The New York Times, based on reports from state and local health agencies. <https://www.nytimes.com/interactive/2020/us/coronavirus-us-cases.html> Pulled: 2020-09-13
Population estimates from US Census Population Estimates Program, Vintage 2019

Values when selected other countries opened schools: Denmark = 3.3, Germany = 0.8, Norway = 1.6

Trend line of daily new cases per 100,000



Previous 2 weeks. CDC positive indicators for continued re-opening:

- 14th day less than 1st day, 9 of past 14 days declined
- REBOUND = 5 consecutive days of increase

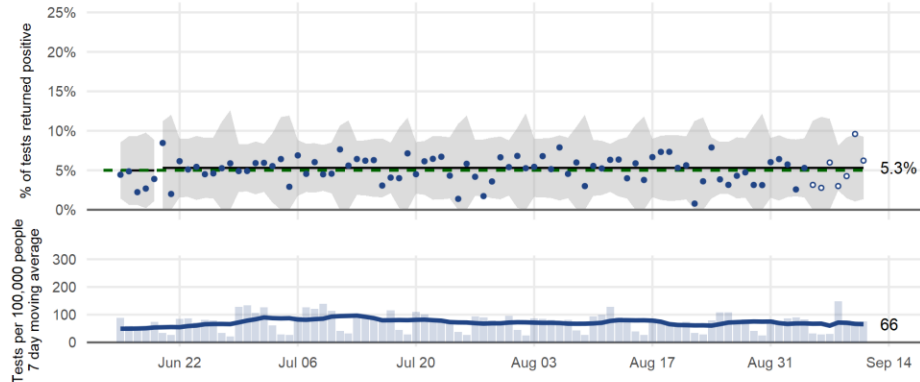
Secondary Measure: Percent of COVID tests that are positive

Goal: < 5% (CDC)*, <3% (Harvard)**

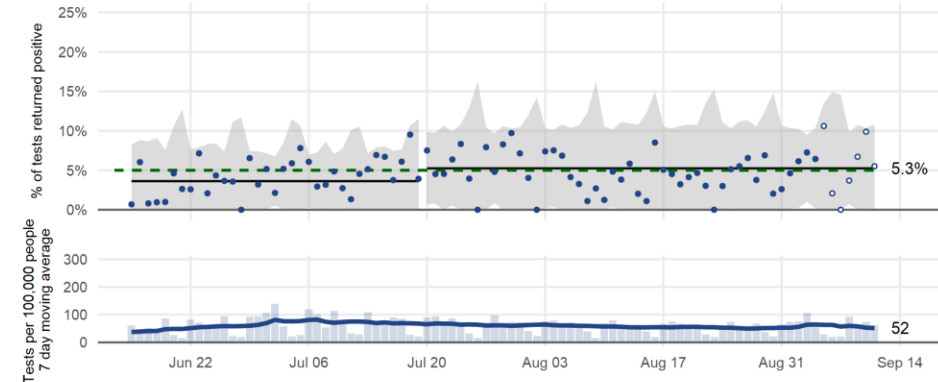
Positivity rate and tests per 100,000 people by county

Common variation % of test returned positive 5% positivity goal Centerline

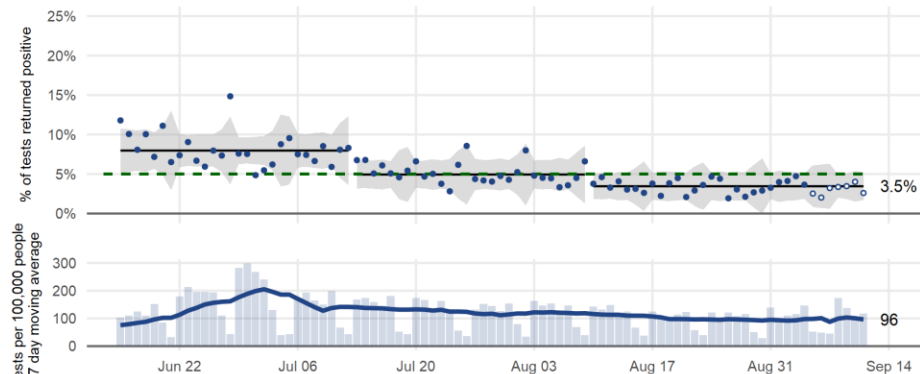
Butler County, Ohio



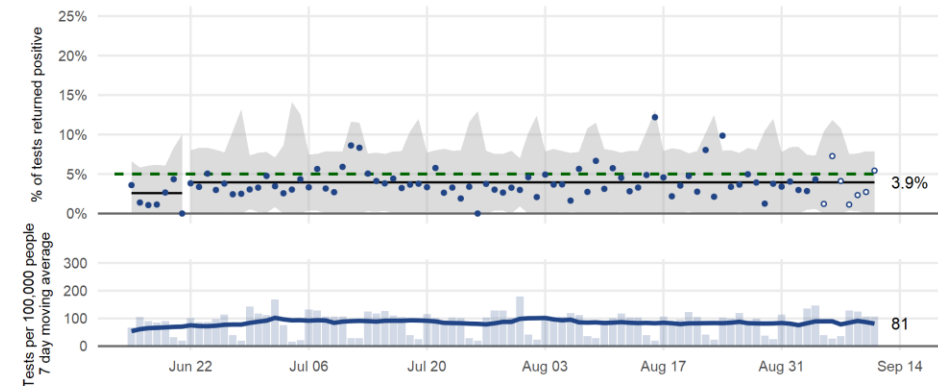
Warren County, Ohio



Hamilton County, Ohio



Clermont County, Ohio



Open circles indicate points highly subject to change. Location is based on address provided to the lab.
Source: The Health Collaborative data as of 09/13/2020.

*Redfield, R. Transcript for CDC Telebriefing on New Resources and Tools to Support Opening Schools, July 24, 2020. Retrieved from <https://www.cdc.gov/media/releases/2020/t0724-new-resources-tools-schools.html>.

**Harvard Global Health Institute, *Testing Targets*. Retrieved from <https://globalepidemics.org/testing-targets/>.

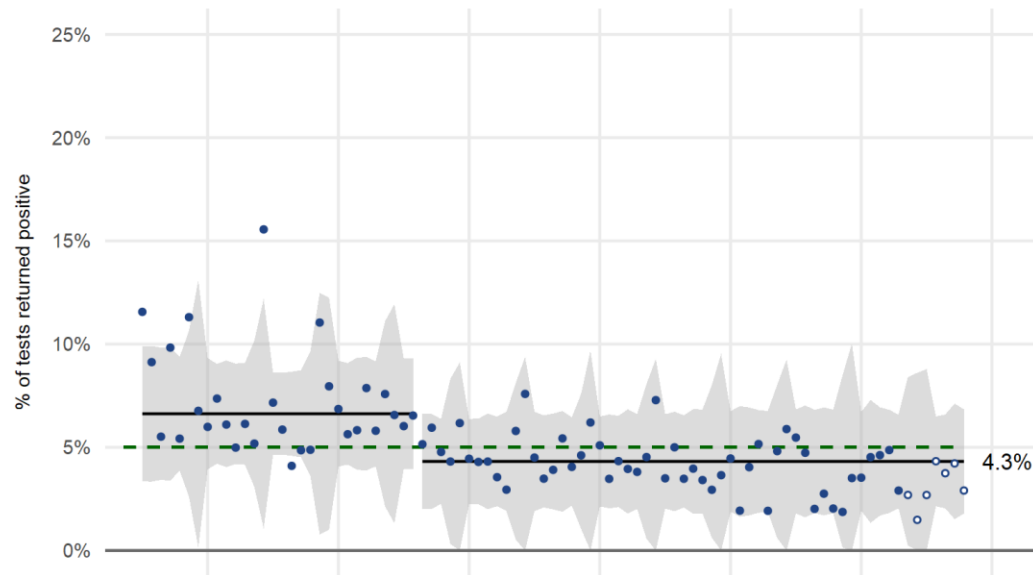
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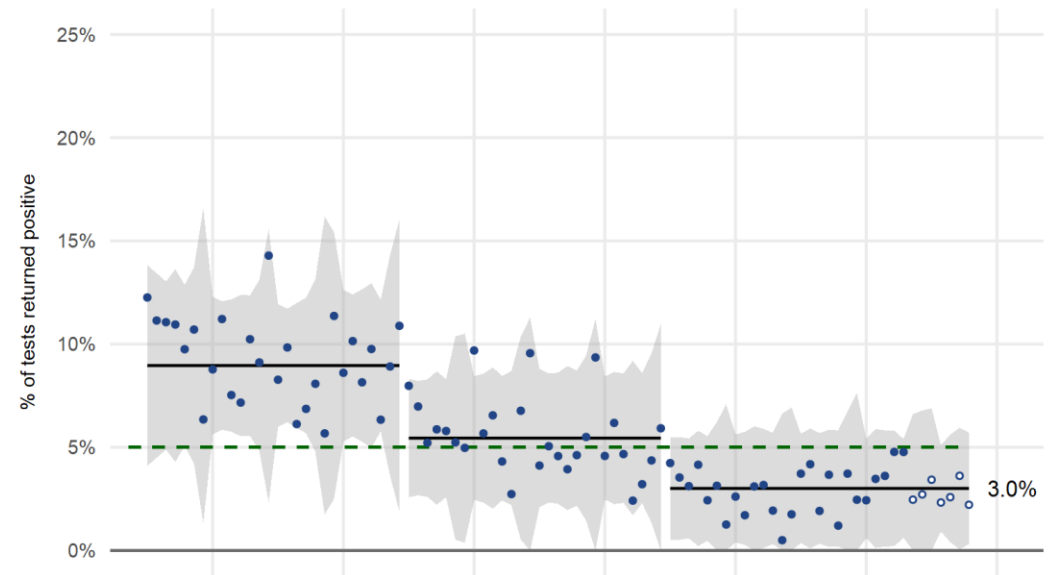
Positivity rate and tests per 100,000 people for Hamilton County and City of Cincinnati

Common variation • % of test returned positive - - 5% positivity goal — Centerline

Hamilton County outside of Cincinnati



City of Cincinnati



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**Harvard Global Health Institute, *Testing Targets*. Retrieved from <https://globalepidemics.org/testing-targets/>.

References and Data Sources

Harvard Global Health Institute. *The Path to Zero and Schools: Achieving Pandemic Resilient Teaching and Learning Spaces*. Retrieved from https://globalepidemics.org/wp-content/uploads/2020/07/pandemic_resilient_schools_briefing_72020.pdf.

Harvard Global Health Institute. *Risk Reduction Strategies for Reopening Schools*. Retrieved from <https://schools.forhealth.org/risk-reduction-strategies-for-reopening-schools/>

Chu, D.K., Akl, E.A., Duda, S., Solo, K., Yaacoub, S., Schunemann, H.J. (2020) Physical distancing, face masks, and eye protection to prevent person-to-person transmission of SARS-CoV-2 and COVID-19: a systematic review and meta-analysis. *The Lancet*, 395 (10242), 1973-1987. Retrieved from [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)31142-9/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31142-9/fulltext).

Redfield, R. (2019, July 24). *Transcript for CDC Telebriefing on New Resources and Tools to Support Opening Schools*. <https://www.cdc.gov/media/releases/2020/t0724-new-resources-tools-schools.html>

Data Sources:

- The Health Collaborative Situational Dashboard: <https://www.cctst.org/covid19>. Includes
 - Daily New Cases per 100,000 people by county, Greater Cincinnati Regional Data
 - Daily COVID Tests that are Positive
- Harvard Global Health Institute, Key Metrics for COVID Suppression: <https://globalepidemics.org/key-metrics-for-covid-suppression/>
 - Daily New Cases per 100,000 people by county, United States
 - Current Test Positive Rate by State, vs target of 3% or lower

Reviewed By

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