

COVID Measures to Inform School Planning - *Updated*

As of May 2, 2021*

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



Updates – March 2021

- Updated guidance for schools has been issued by the Centers for Disease Control and Prevention (CDC); American Academy of Pediatrics (AAP); Brown University-Harvard University Safra Center, Pandemics Explained; and the World Health Organization (WHO).
- All organizations emphasize the value of in-person learning. Experience over the past year has shown that schools can effectively use mitigation to minimize the risk of in-school COVID transmission.
- This updated document briefly describes the updated guidance and provides links for information. The previously shared HGHI guidance can be found in the appendix.
- **With the variation in guidance and new evidence emerging, final decisions regarding school operations rest with individual districts to make in collaboration with local public health agencies.**

Protective Measures for Schools

CDC, AAP, WHO, Brown/Safra Pandemics Explained

Guidance contains similar suggestions to reduce the risk of COVID-19 transmission in the school building.

- Universal Masking
- Physical Distancing
 - *Recommendations for physical distancing have variation among agency guidance: see slide 7*
- Vaccination for staff and students as available
- Hand hygiene
- Improved ventilation and air flow
- Staying home when sick
- Quarantining or monitoring close contacts exposed to a positive case at less than 6 feet of distance for more than 15 minutes.
- Cleaning of physical space
- Pods / cohorts of students
- Screening / surveillance testing of asymptomatic students

Links

▪ **CDC:** <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/operation-strategy.html>

▪ **AAP:** <https://services.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/clinical-guidance/covid-19-planning-considerations-return-to-in-person-education-in-schools/>

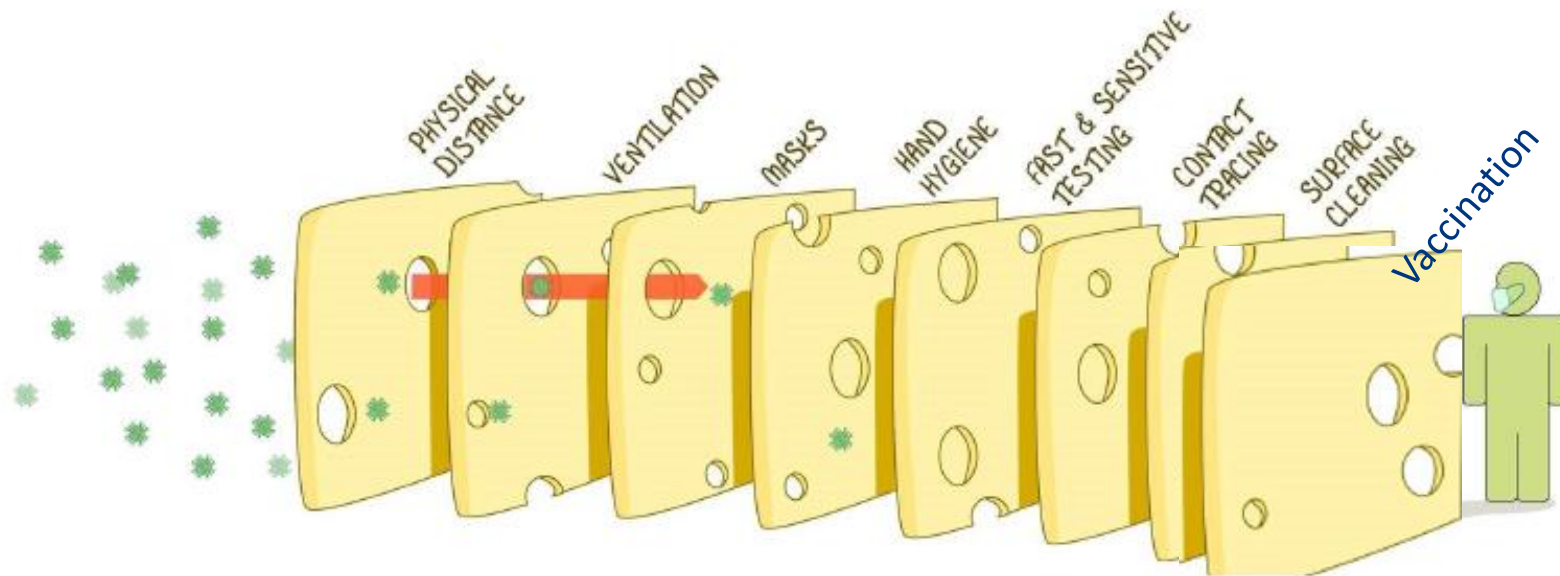
▪ **Brown University-Harvard University Safra Center, Pandemics Explained:**
<https://globalepidemics.org/2020/12/18/schools-and-the-path-to-zero/>

▪ **WHO:**
<https://www.who.int/publications/i/item/9789240017467>

The image below shows how adding multiple, layered mitigation strategies increases the effectiveness of all strategies in preventing in-school transmission.

THE SWISS CHEESE RESPIRATORY VIRUS DEFENCE

RECOGNISING THAT NO SINGLE INTERVENTION IS PERFECT AT PREVENTING SPREAD



EACH INTERVENTION (LAYER) HAS IMPERFECTIONS (HOLES).
MULTIPLE LAYERS IMPROVE SUCCESS.

IAN M MACKEY
VIROLOGYDOWNUNDER.COM
DERIVED FROM @SBETCHPLANATOR
BASED ON THE SWISS CHEESE MODEL OF ACCIDENT CAUSATION, BY JAMES T REASON, 1990
VERSION 1.3
UPDATE: 12oct2020

 **THE ABC SCIENCE**
COLLABORATIVE

Schools

Cases, In-school Transmission,
Quarantine, Absences



Measurement and assessment of school cases

While useful to track what is happening in the community, we believe incidence and transmission of COVID-19 within the school setting remains the leading consideration. Useful data for schools to track are:

- **Cases:** Count and rate of school COVID cases
 - *Monitor closely for evidence of in-school transmission*
- **COVID-Related Absences:** Count of staff absent for COVID-related reasons (isolation, quarantining, caretaking)
 - *Assess adequacy of staffing levels for safe and effective operations*

Questions to Consider:

- Is there evidence of in-school / school-related transmission? (**YES** / NO)
 - If yes, note setting of transmission: in-class, extracurricular, transportation, etc.
- Is there enough staff to operate effectively and safely? (YES / **NO**)
- Are students and staff adhering to Protective Bundle with high reliability? (YES / **NO**)

Guidance to guide when to stop on-site learning based on cases and quarantines does not exist, so base decisions on practical considerations in partnership with local health dept.

If answers match **RED** responses above, consider methods to reduce potential exposures.

- If currently at full capacity, consider hybrid model. If currently using hybrid model, consider remote learning.
 - These changes may be short term (days or weeks) or within a specific grade or building

Closer look:

Recommendations for physical distancing in the classroom

As of 3/23/2021. For CDC recommendations re sports/extracurriculars see Slide 16.

CDC	3 feet	For elementary students at all community levels. For middle and high school students when community levels are Blue, Yellow, or Orange (<14 new cases per 100,000 per day or <100 new cases per 100,000 per week – see slide 16)
	6 feet	For middle and high school students when community levels are Red IF cohorting is not possible (Red >14 new cases per 100,000 per day or >100 new cases per 100,000 per week – see slide 16)
AAP	6 feet	Is ideal
	3 feet	Is acceptable if otherwise remote learning would be the only option.
HGHI / Brown-Safra	3 feet	For younger learners at all levels of community spread
	3 feet	For high schools when community spread is below 100 cases per 100,000 per day
	6 feet	For high schools when community spread is above 100 cases per 100,000 per day
WHO	3 feet / 1 meter	

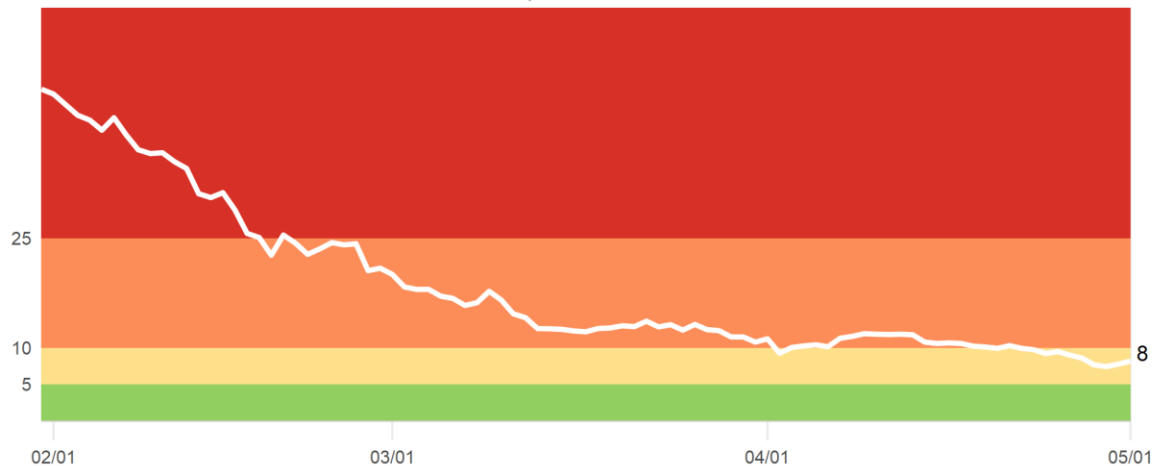
- CDC continues to recommend quarantine for close contacts exposed under 6 feet for more than 15 minutes as of 3/24/2021
- Emerging research shows low transmission in a school setting when protective measures are in place, even without quarantine: MMWR March 19th 2021, https://www.cdc.gov/mmwr/Novel_Coronavirus_Reports.html. See slide 13.
- See this link for COVID quarantine information from Ohio Department of Health: <https://coronavirus.ohio.gov/static/responsible/covid-19-fact-sheet-k-12-exposure-and-quarantine.pdf>

Current Community Data

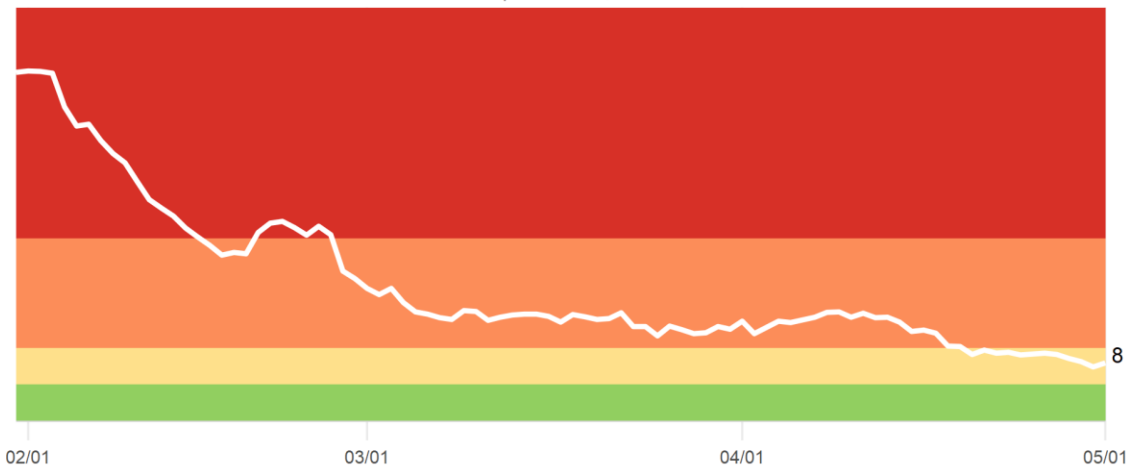
Daily new cases per 100,000, TTSI Levels (7-day moving average)

Daily seven day moving average Covid cases per 100,000 people in each county with TTSI levels

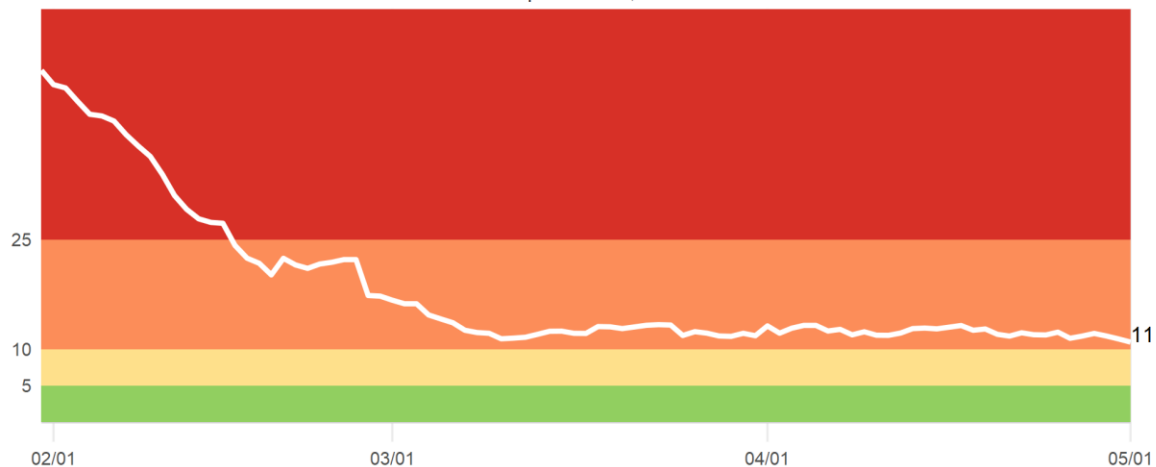
Butler County, Ohio
Population: 383,134



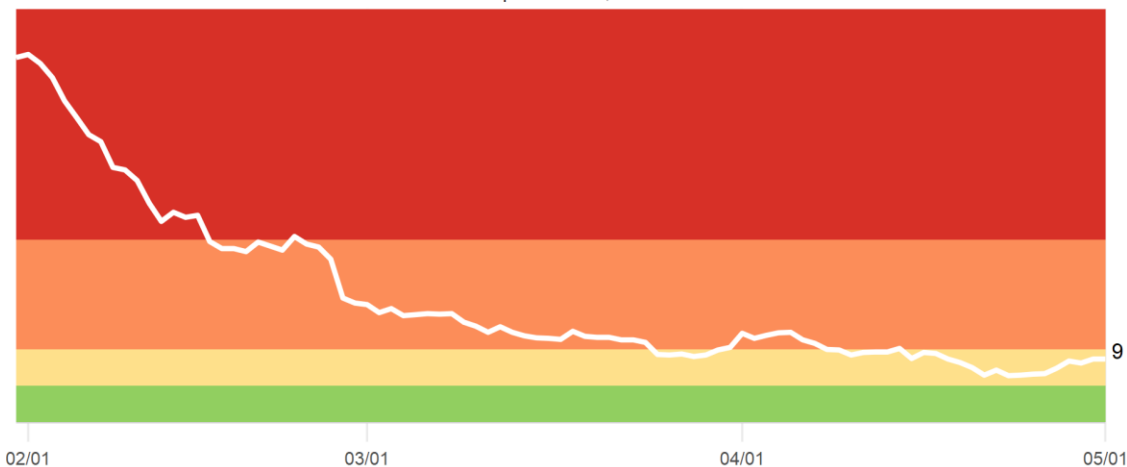
Warren County, Ohio
Population: 234,602



Hamilton County, Ohio
Population: 817,473



Clermont County, Ohio
Population: 206,428



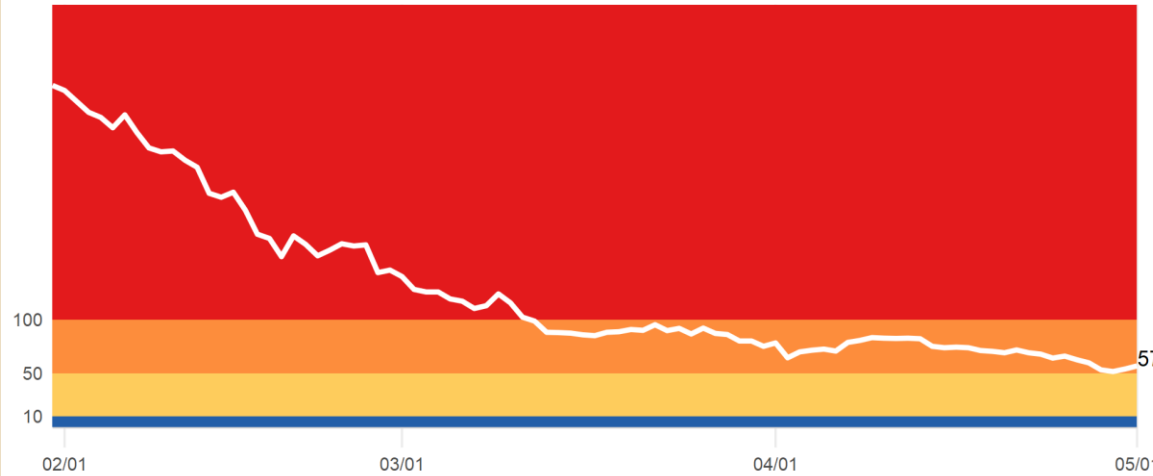
Levels are those suggested by Massachusetts Testing, Tracing, and Supported Isolation collaborative, information can be found here: <https://ethics.harvard.edu/ttsi-technical-handbook>. Per local leadership, the lowest threshold for our region is being set at 5 cases per 100,000
Data from The New York Times, based on reports from state and local health agencies. <https://www.nytimes.com/interactive/2020/us/coronavirus-us-cases.html> Pulled: 2021-05-02

As of 5/2/21

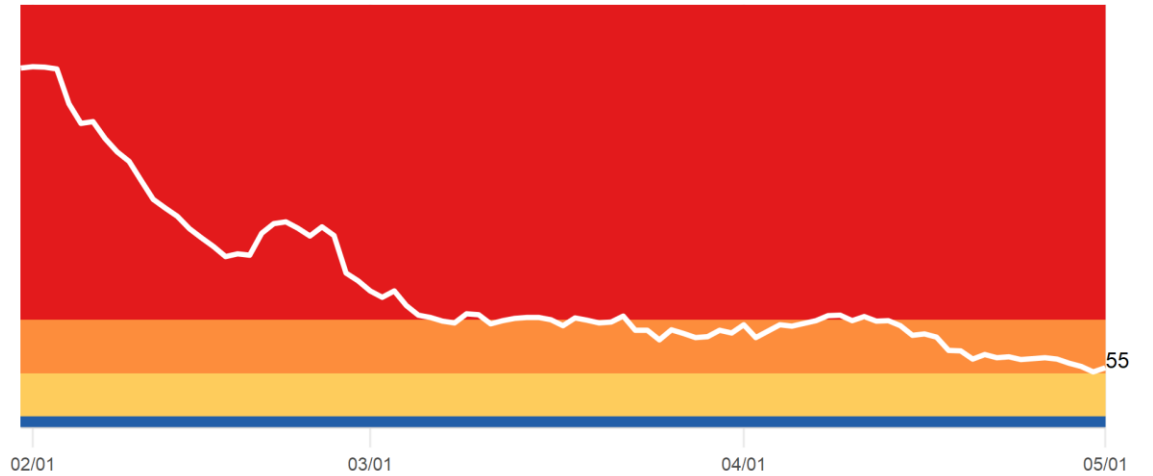
NEW CDC Thresholds: 7-day sum of new cases per 100,000

Seven day sum of new Covid cases per 100,000 people in each county with CDC levels

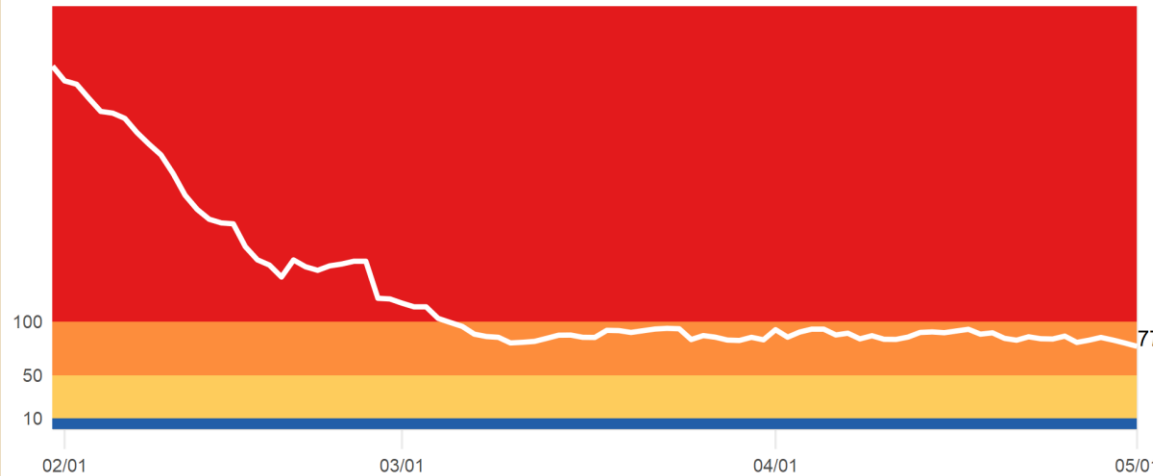
Butler County, Ohio
Population: 383,134



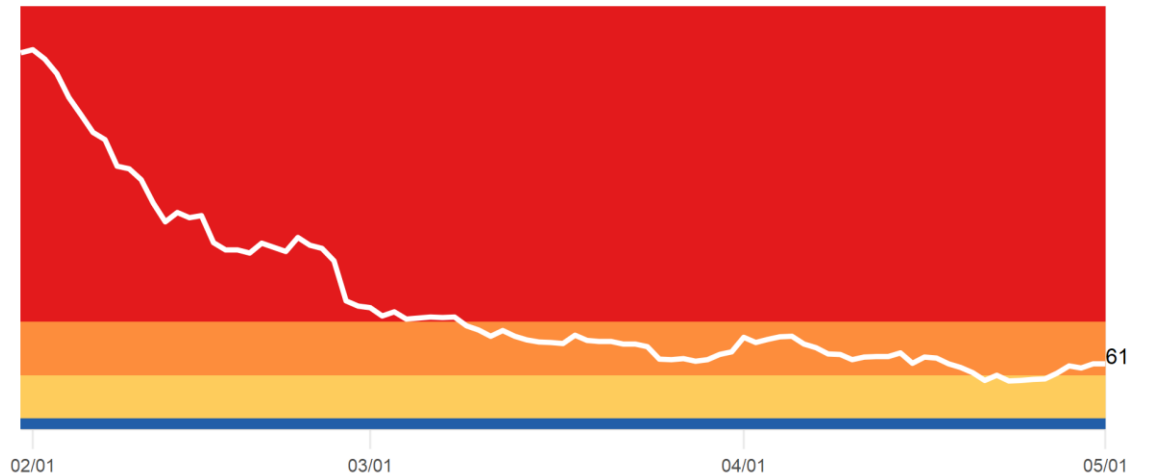
Warren County, Ohio
Population: 234,602



Hamilton County, Ohio
Population: 817,473



Clermont County, Ohio
Population: 206,428



Levels are those found in CDC's Operational Strategy for K-12 Schools through Phased Mitigation, <https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/schools-childcare/K-12-Operational-Strategy-02142021.pdf>
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: 2021-05-02

As of 5/2/21

Current Data : Percent of community COVID tests that are positive

CDC Thresholds

Community Level	% of Tests that are positive
-----------------	------------------------------

Blue	<5%
------	-----

Yellow	5% - 7.9%
--------	-----------

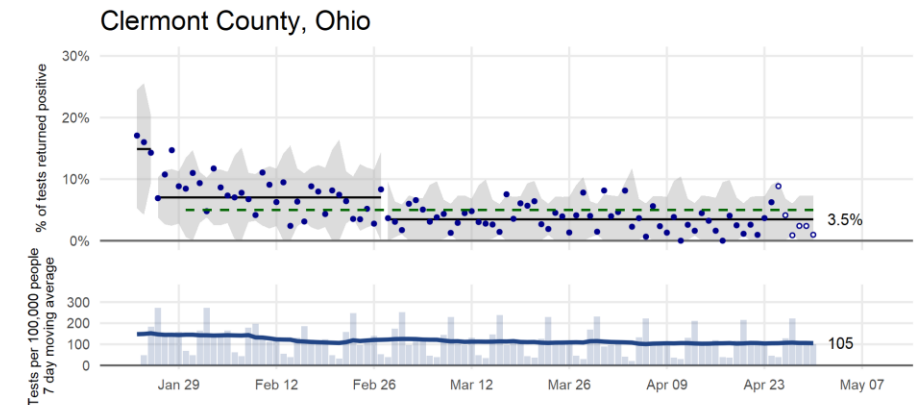
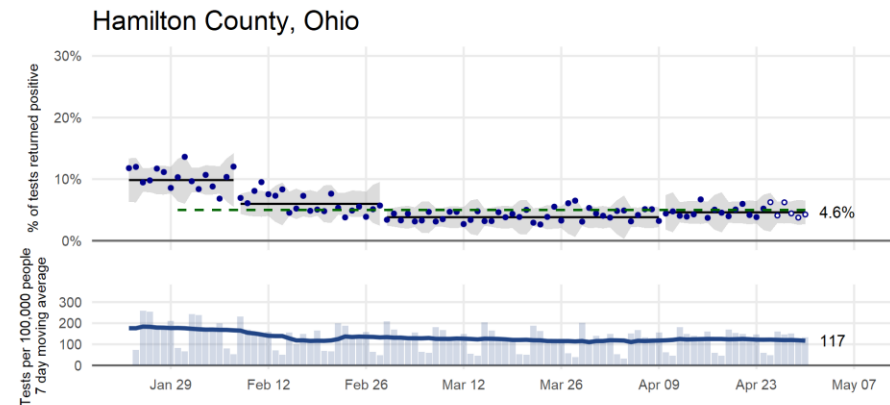
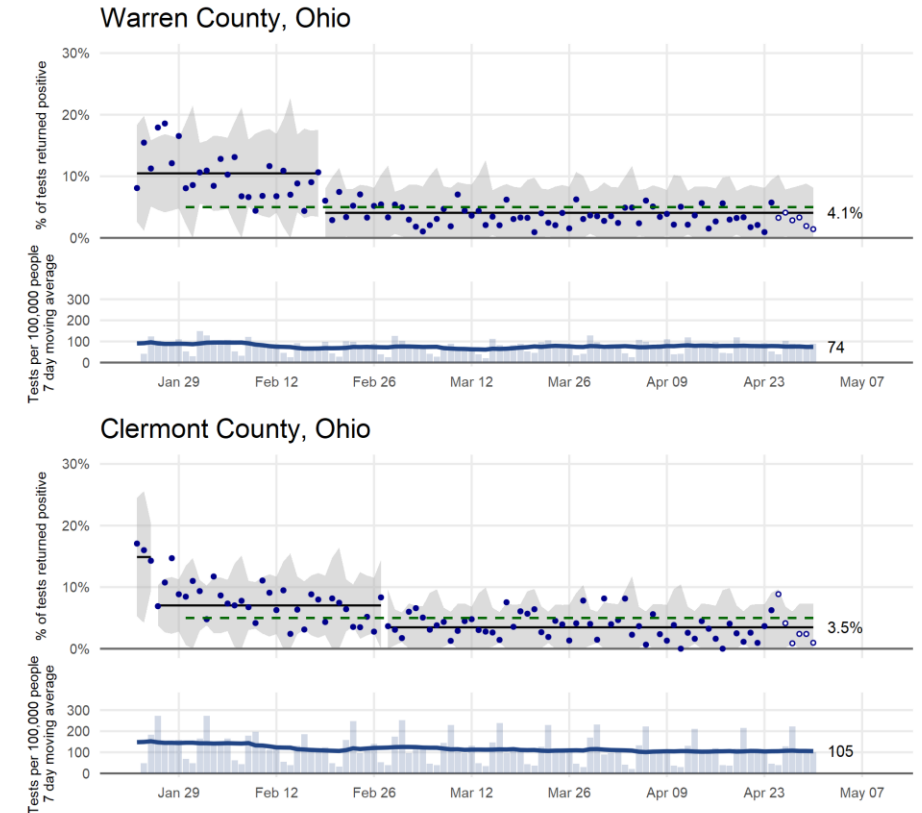
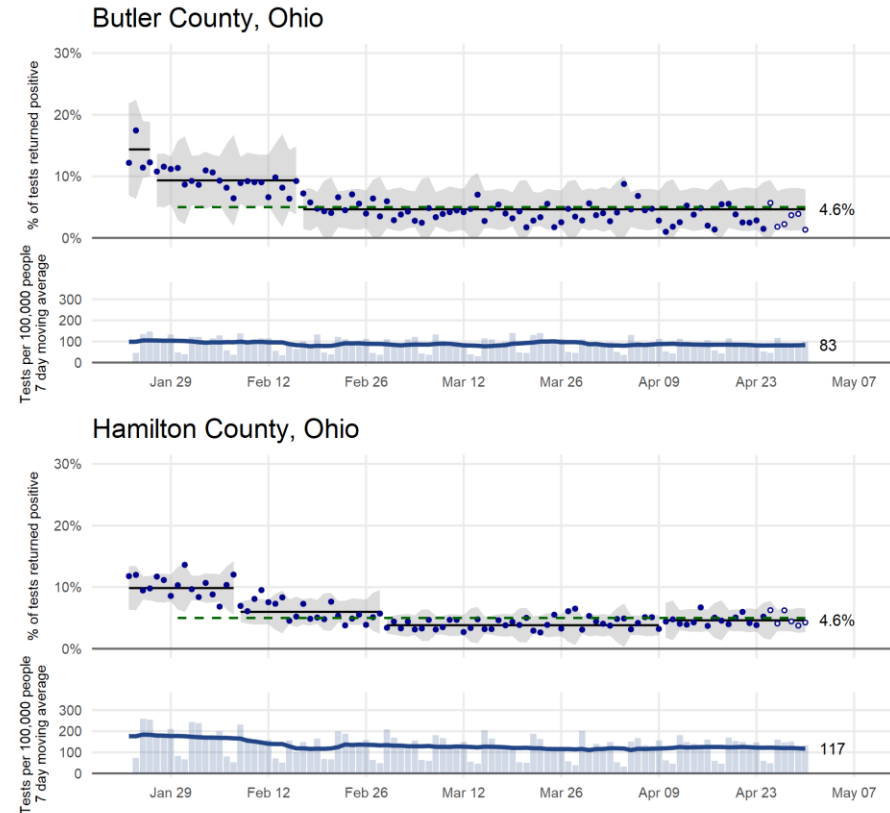
Orange	8% - 9.9%
--------	-----------

Red	10% or more
-----	-------------

See slide 17 for details on CDC Community Levels

Positivity rate and tests per 100,000 people by county

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

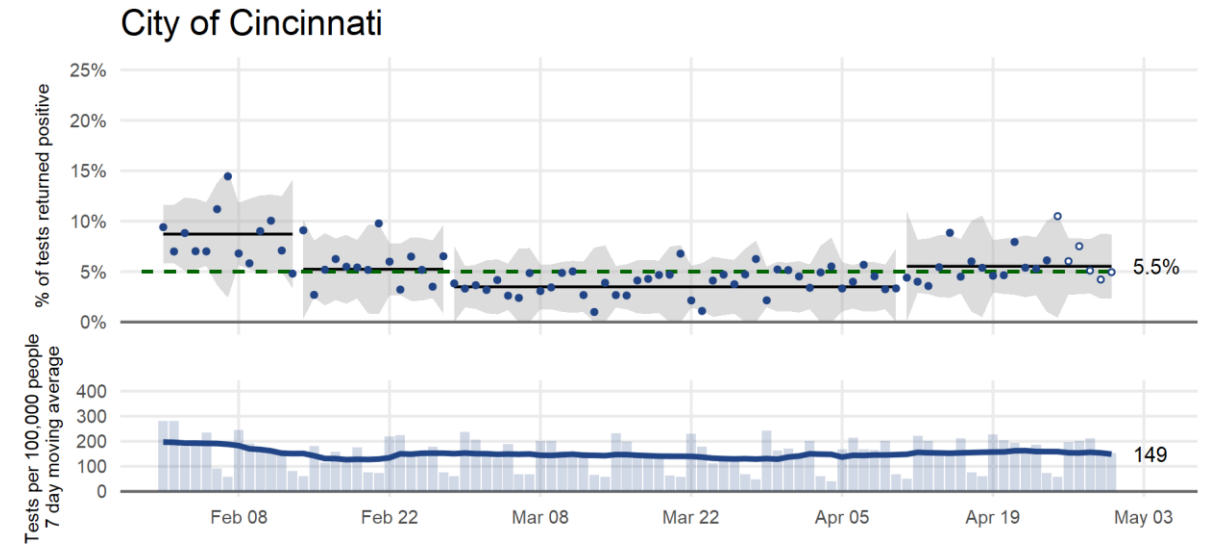
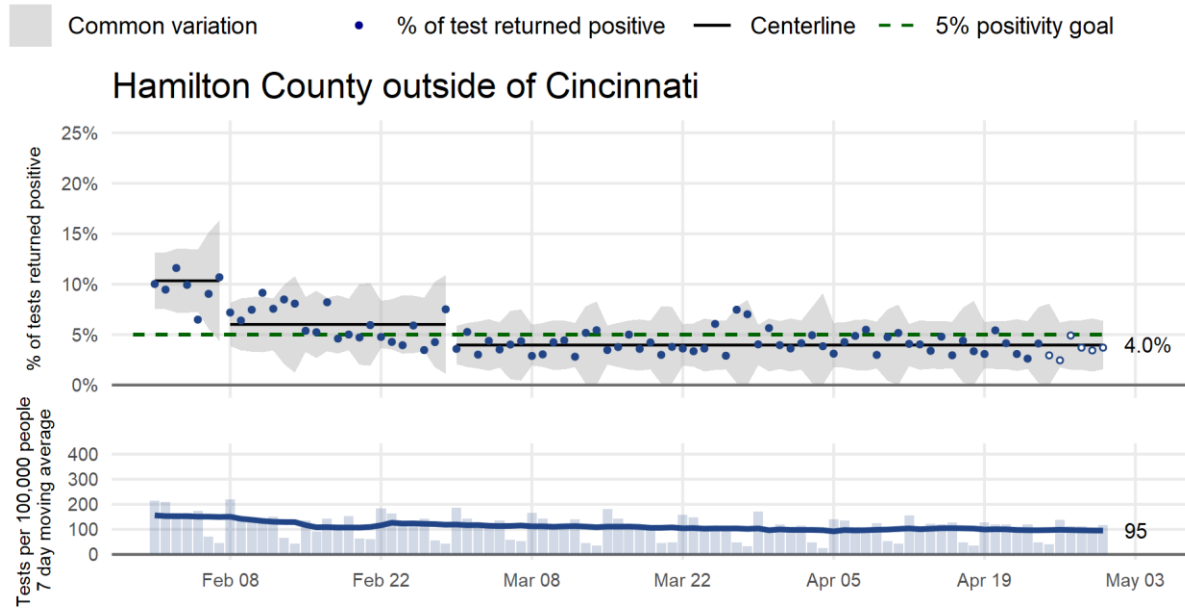


Open circles indicate points highly subject to change. Location is based on address provided to the lab. Source: The Health Collaborative data as of 05/02/2021.

Open circles indicate points highly subject to change. Location is based on address provided to the lab. Source: The Health Collaborative data as of 5/2/2021

Current Data: Percent of community COVID tests that are positive

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



Open circles indicate points highly subject to change. Location is based on address provided to the lab.

Source: The Health Collaborative data as of 5/2/21

References and Data Resources

American Academy of Pediatrics. *COVID-19 Guidance for Safe Schools*, January 2021. Retrieved from <https://services.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/clinical-guidance/covid-19-planning-considerations-return-to-in-person-education-in-schools/>

Brown University/Harvard University Safra Center, Pandemics Explained. *Schools and the Path to Zero: Strategies for Pandemic Resilience in the Face of High Community Spread, Updated December 2020*. Retrieved from <https://globalepidemics.org/2020/12/18/schools-and-the-path-to-zero/>.

Centers for Disease Control. *Operational Strategies for K-12 Schools through Phased Mitigation*, February 2021. Retrieved from <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/operation-strategy.html>.

Children's Hospital of Philadelphia. *Policy Review: Evidence and Guidance for In-person Schooling during the COVID-19 Pandemic*. Retrieved from <https://policylab.chop.edu/reports-and-tools/policy-review-evidence-and-guidance-in-person-schooling-during-covid-19-pandemic>.

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).

Harvard T.H. Chan School of Public Health. *Risk Reduction Strategies for Reopening Schools*. Retrieved from <https://schools.forhealth.org/risk-reduction-strategies-for-reopening-schools/>

World Health Organization. *Checklist to support schools re-opening and preparation for COVID-19 resurgences or similar public health crises*, December 2020. Retrieved from <https://www.who.int/publications/i/item/9789240017467>.

Data Sources:

- The Health Collaborative Situational Dashboard: <https://www.cctst.org/covid19>. Includes local data -
 - 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

Emerging Science

Effectiveness of three versus six feet of physical distancing for controlling spread of COVID-19 among primary and secondary students and staff: A retrospective, state-wide cohort study <https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciab230/6167856>

Incidence and Secondary Transmission of SARS-CoV-2 Infections in Schools <https://pediatrics.aappublications.org/content/early/2021/01/06/peds.2020-048090>

Dawson P, Worrell MC, Malone S, et al. Pilot Investigation of SARS-CoV-2 Secondary Transmission in Kindergarten Through Grade 12 Schools Implementing Mitigation Strategies — St. Louis County and City of Springfield, Missouri, December 2020. MMWR Morb Mortal Wkly Rep. ePub: 19 March 2021. DOI: <http://dx.doi.org/10.15585/mmwr.mm7012e4>.

Doyle T, Kendrick K, Troelstrup T, et al. COVID-19 in Primary and Secondary School Settings During the First Semester of School Reopening — Florida, August–December 2020. MMWR Morb Mortal Wkly Rep. ePub: 19 March 2021. DOI: <http://dx.doi.org/10.15585/mmwr.mm7012e2external icon>.

Hershow RB, Wu K, Lewis NM, et al. Low SARS-CoV-2 Transmission in Elementary Schools — Salt Lake County, Utah, December 3, 2020–January 31, 2021. MMWR Morb Mortal Wkly Rep. ePub: 19 March 2021. DOI: <http://dx.doi.org/10.15585/mmwr.mm7012e3external icon>.

Reviewed By

Hamilton County Public Health: Commissioner Greg Kesterman, MPA; Assistant Health Commissioner Jennifer Mooney, PhD, MS; David Carlson, MPH; Tom Boeshart, MPH

Cincinnati Health Department: Commissioner Melba R. Moore, DBA, MS, CPHA; Maryse Amin, PhD, MS; Steve Englender, MD, MPH; Grant Mussman, MD

Cincinnati Children's Hospital Medical Center: Robert Kahn, MD, MPH; Susan Sprigg, MPH; David Hartley, PhD, MPH; Andrew Beck, MD, MPH

The Health Collaborative: Craig Brammer, CEO; Alex Vaillancourt, CPHIMS, Chief Information Officer



APPENDIX



CDC Strategies 3/23/2021

All Schools Implement 5 Key Prevention Strategies: Universal and correct use of masks required; Physical distancing; Handwashing and respiratory etiquette; Cleaning and maintaining healthy facilities; Contact tracing in combination with isolation and quarantine

Low Transmission Blue	Moderate Transmission Yellow	Substantial Transmission Orange	High Transmission Red
Elementary Schools Physical distancing: at least 3 feet between students in classrooms		Elementary Schools Physical distancing: at least 3 feet between students in classrooms. Cohorting recommended when possible	
Middle and High Schools Physical distancing: at least 3 feet between students in classrooms		Middle and High Schools Physical distancing: at least 3 feet between students in classrooms Cohorting recommended when possible	Middle and High Schools Schools that can use cohorting: at least 3 feet of distance Schools that cannot use cohorting: at least 6 feet distance between students in classrooms
Sports & extracurricular activities occur with at least 6 feet of physical distancing to the greatest extent possible	Sports and extracurricular activities occur with at least 6 feet of physical distance required	Sports and extracurricular activities only occur if they can be held outdoors, with more than 6 feet of physical distancing	

Schools may consider adding **Screening Testing** of asymptomatic individuals to this table of strategies. As of March, 2021:

- CDC recommends once per week for teachers and staff at all levels of community incidence.
- CDC recommends routine screening testing for all students at Yellow, Orange, and Red levels.
- *See link below for Screening Testing recommendations for extracurricular activities*

CDC-defined levels of community transmission

Note: CDC community thresholds are different from the previously-used HGHI thresholds and current Brown University-Harvard University Safra Center guidelines

Table 1. CDC Indicators and Thresholds for Community Transmission of COVID-19¹

Indicator	Low Transmission Blue	Moderate Transmission Yellow	Substantial Transmission Orange	High Transmission Red
Total new cases per 100,000 persons in the past 7 days ²	0-9	10-49	50-99	≥100
Percentage of NAATs that are positive during the past 7 days ³	<5.0%	5.0%-7.9%	8.0%-9.9%	≥10.0%

Below are levels previously recommended by HGHI. These were discontinued with new guidance issued in January 2021

Community Measures, proposed thresholds:

Below is an adaptation of suggested thresholds from Harvard Global Health Institute (*see link below for original recommendations*).

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	<p>Consider if school protective protocols can be strictly implemented (<i>see slide 4</i>)</p> <p>If no, consider remote or hybrid learning</p> <p>If yes, consider return to in-person with possible prioritization & phase-in:</p> <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.