

# COVID Measures to Inform School Planning - *Updated*

As of April 18, 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.***

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# Updates – March 2021

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- 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/>

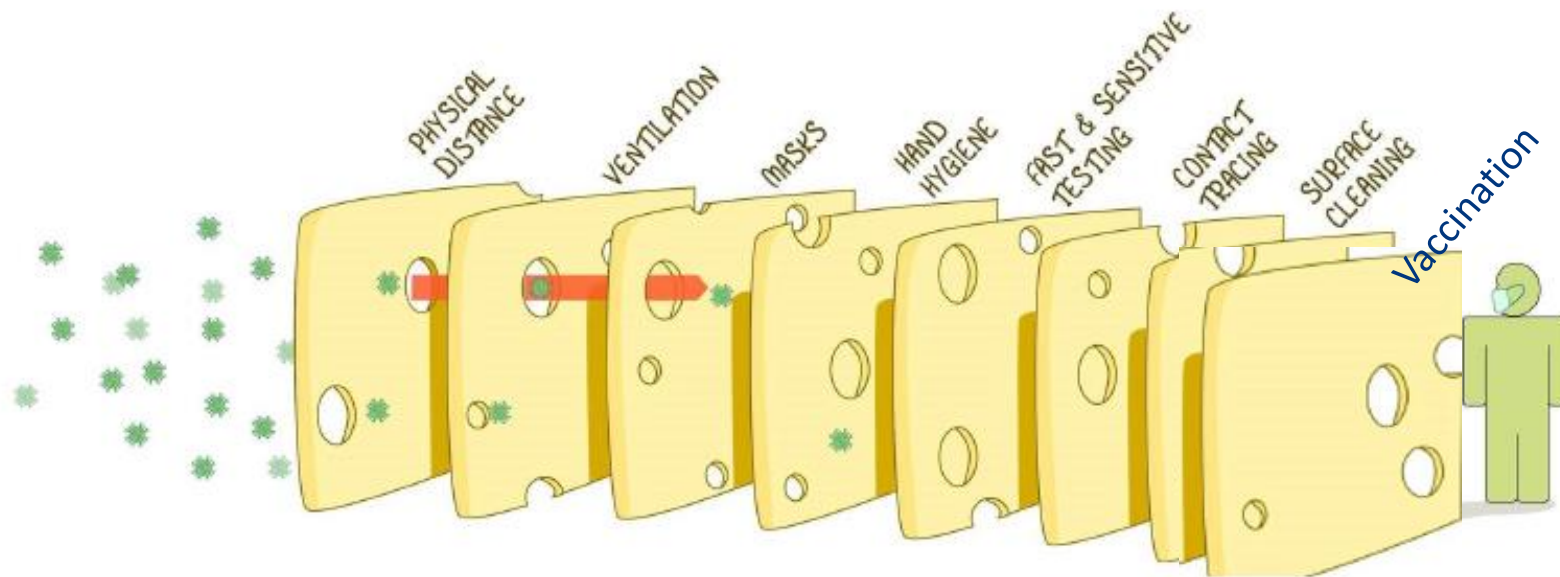
▪ **Brown University-Harvard University Safra Center, Pandemics Explained:**  
<https://globalepidemics.org/2020/12/18/schools-and-the-path-to-zero/>

▪ **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 @SBETCHPLAVATOR  
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 19<sup>th</sup> 2021, [https://www.cdc.gov/mmwr/Novel\\_Coronavirus\\_Reports.html](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>

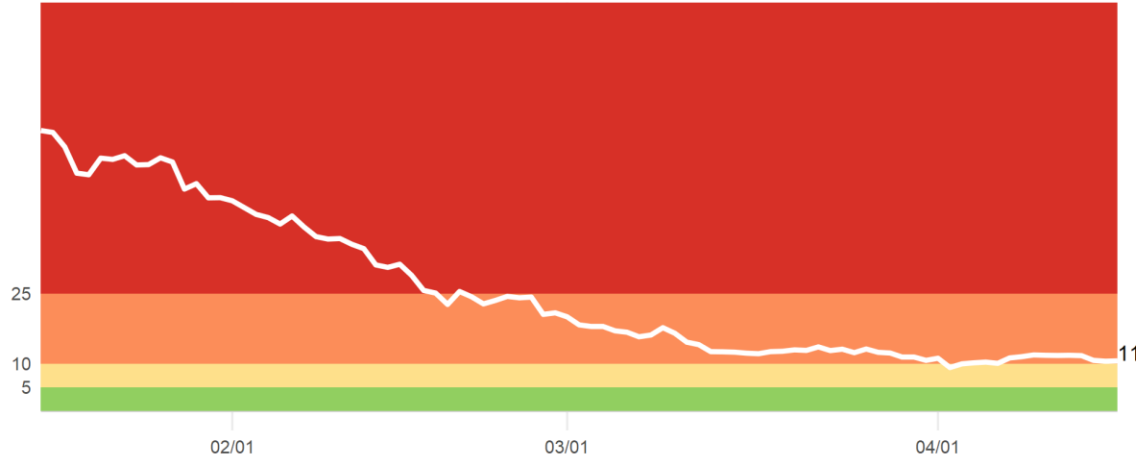
# Current Community Data

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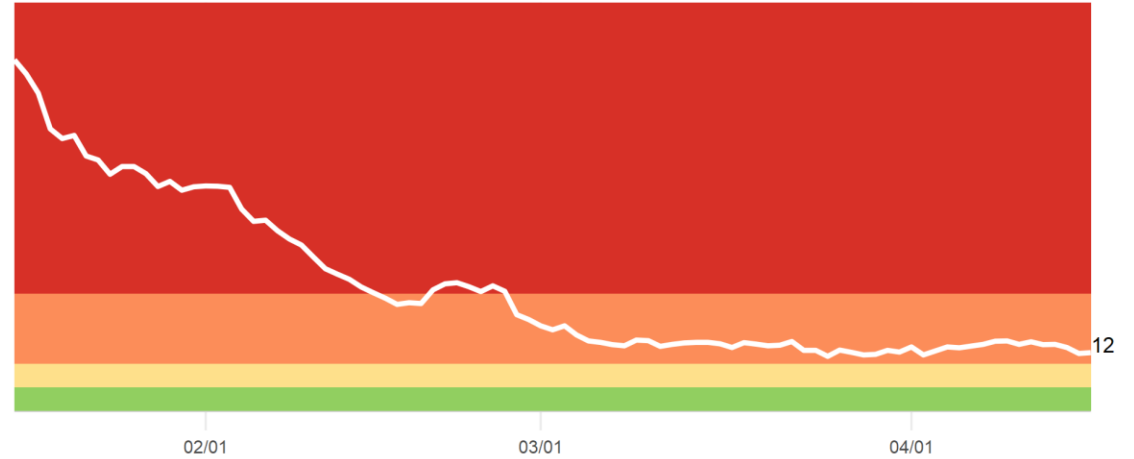
# Daily new cases per 100,000 (7-day moving average)

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

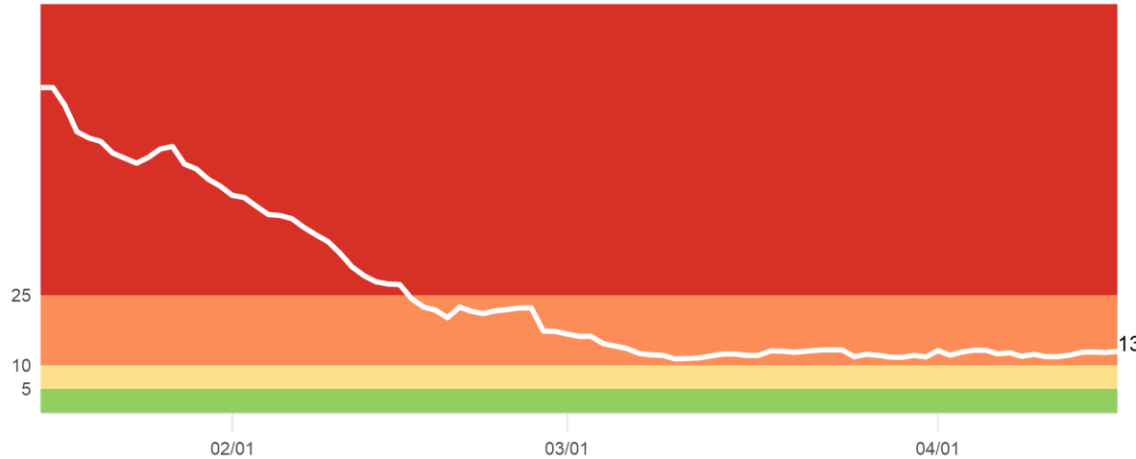
Butler County, Ohio  
Population: 383,134



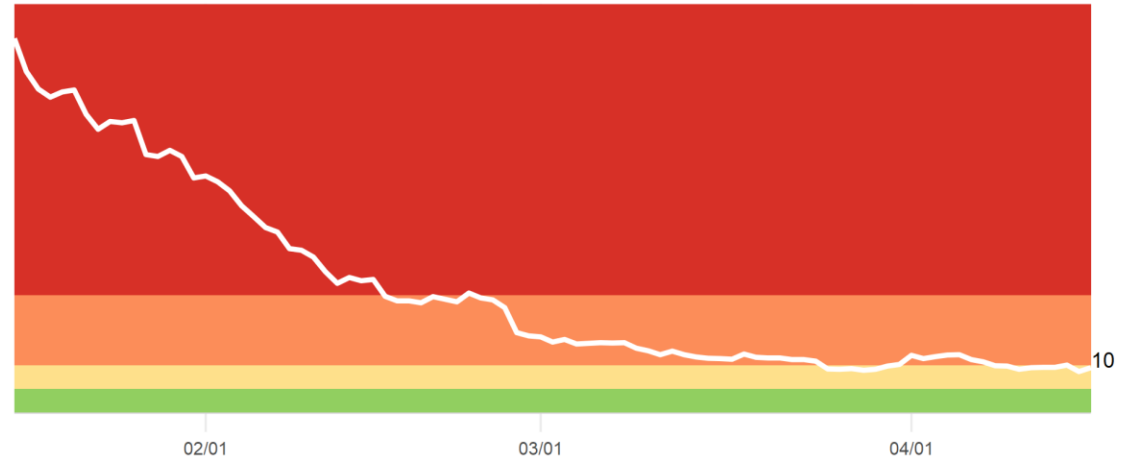
Warren County, Ohio  
Population: 234,602



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: 2021-04-18

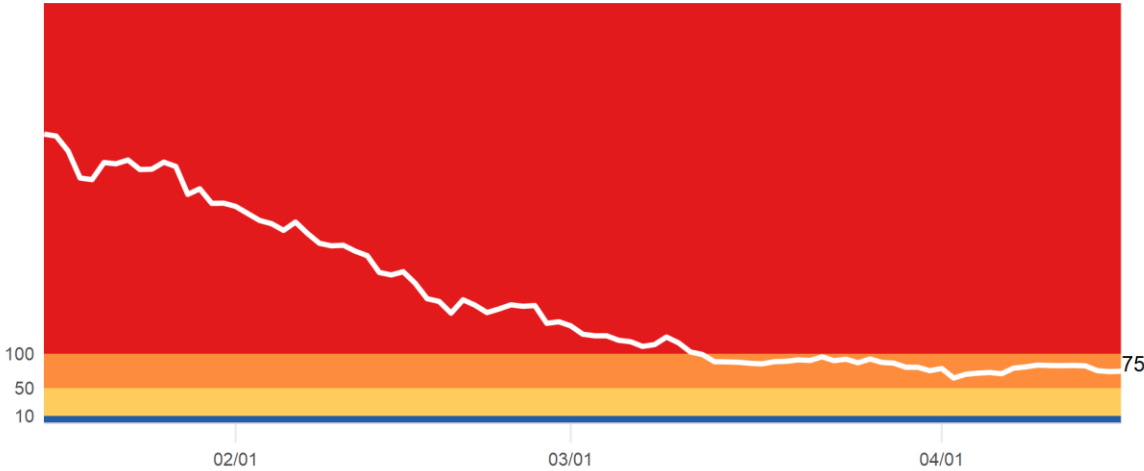
As of 4/18/21



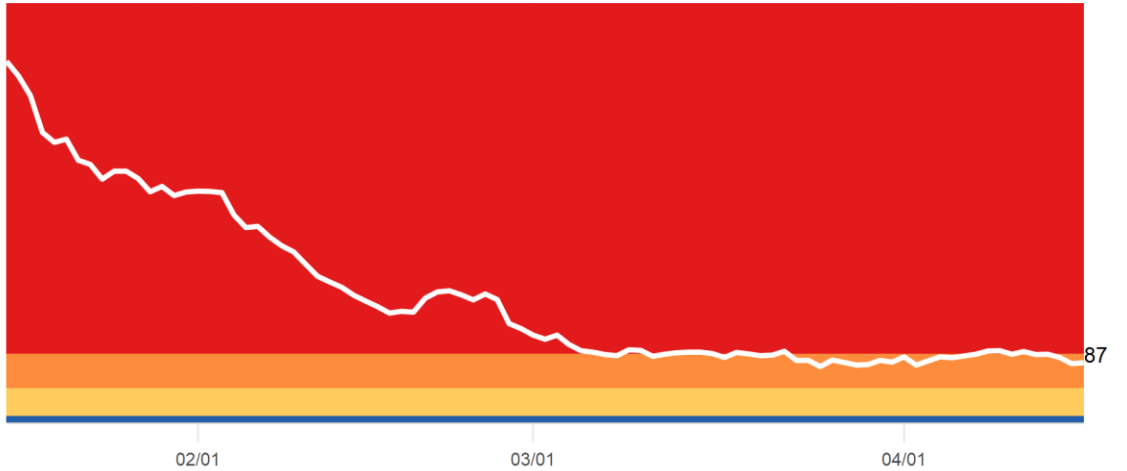
# NEW CDC Thresholds: 7-day sum of new cases per 100,000

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

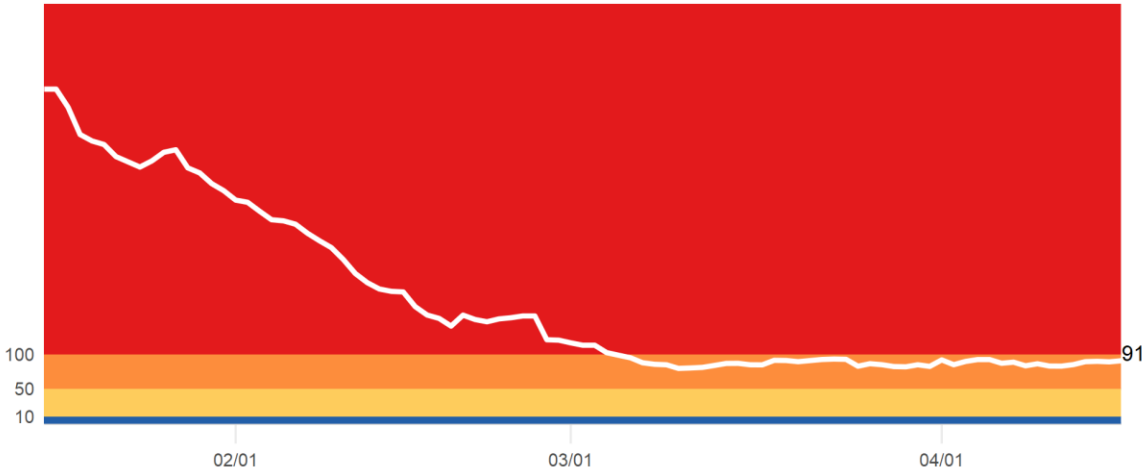
Butler County, Ohio  
Population: 383,134



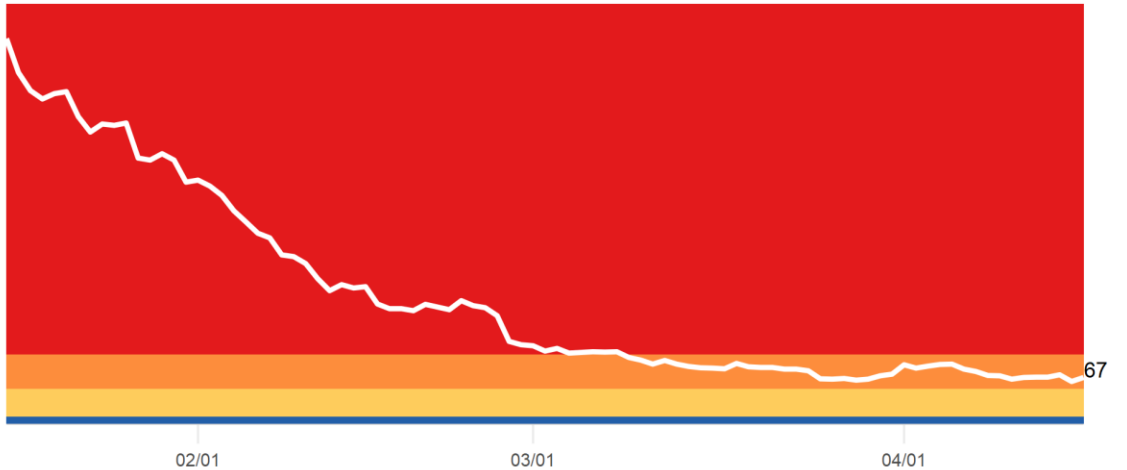
Warren County, Ohio  
Population: 234,602



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: 2021-04-18

As of 4/18/21

# Current Data : Percent of community COVID tests that are positive

## CDC Thresholds

Community Level	% of Tests that are positive
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Blue	<5%
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Yellow	5% - 7.9%
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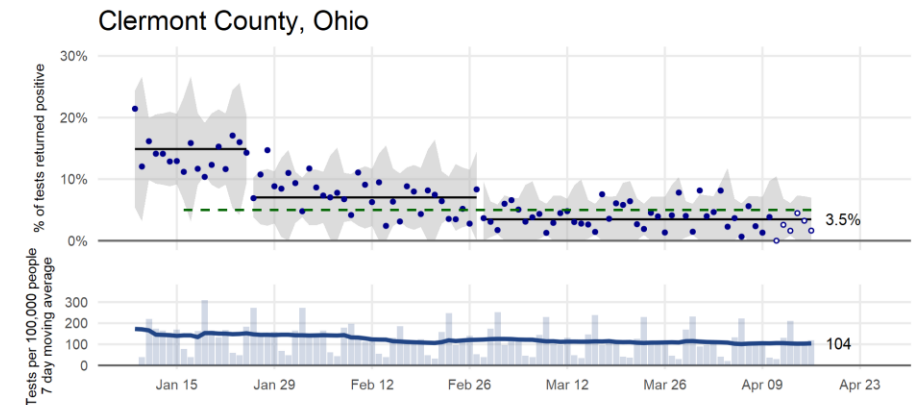
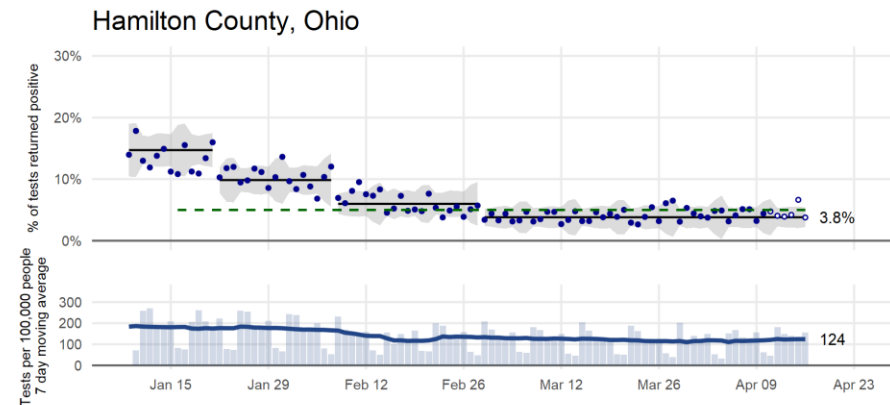
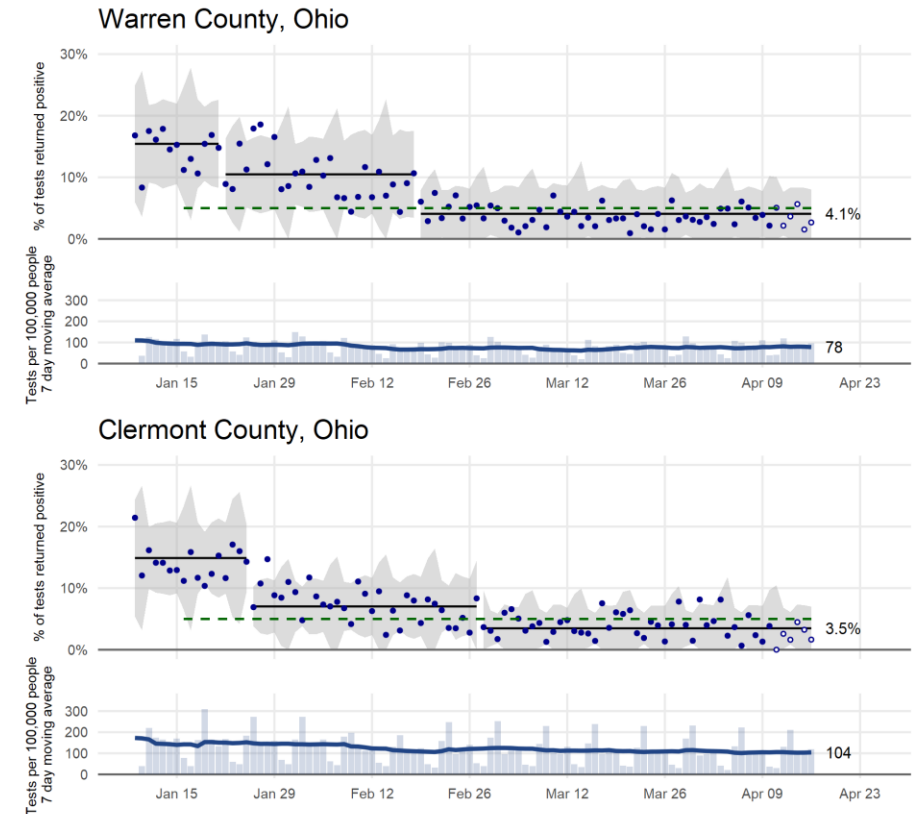
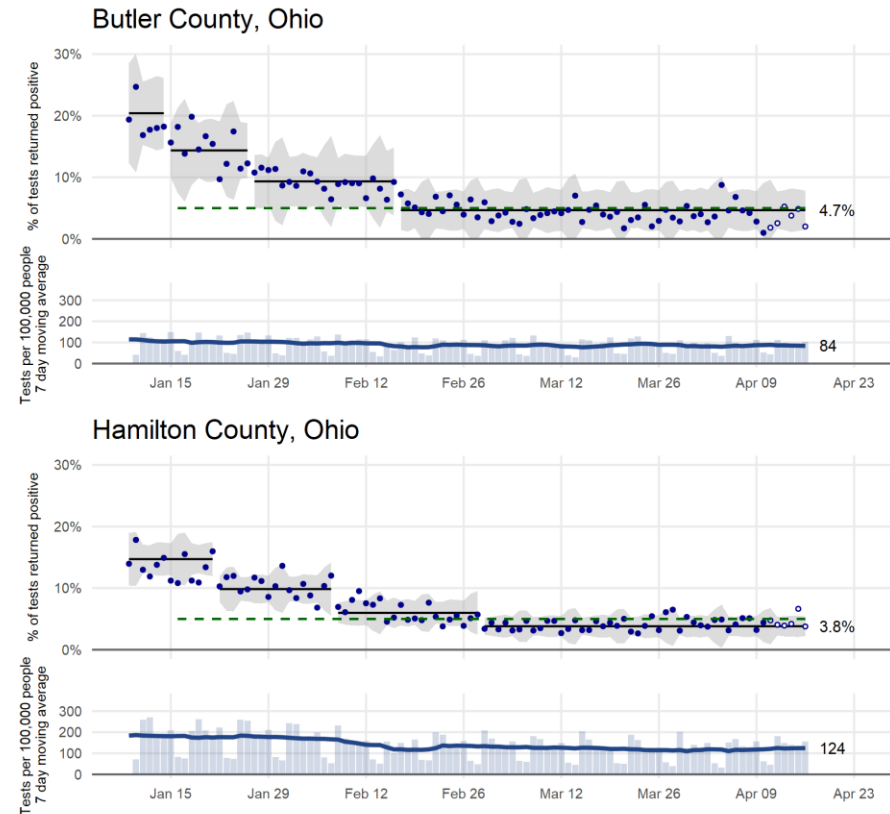
Orange	8% - 9.9%
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Red	10% or more
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See slide 17 for details on CDC Community Levels

## 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 04/18/2021.

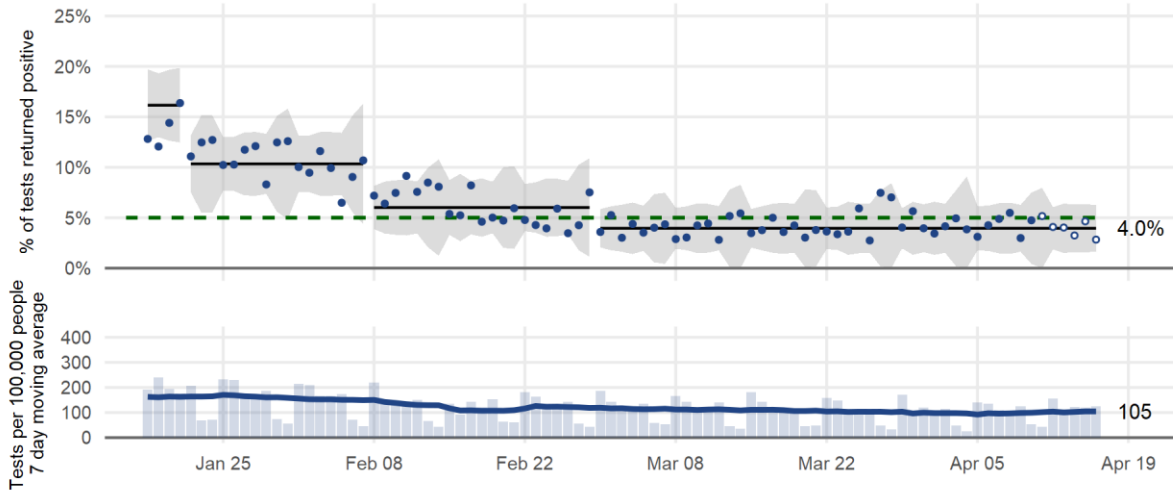
Open circles indicate points highly subject to change. Location is based on address provided to the lab.  
Source: The Health Collaborative data as of 4/18/2021

# Current Data: Percent of community COVID tests that are positive

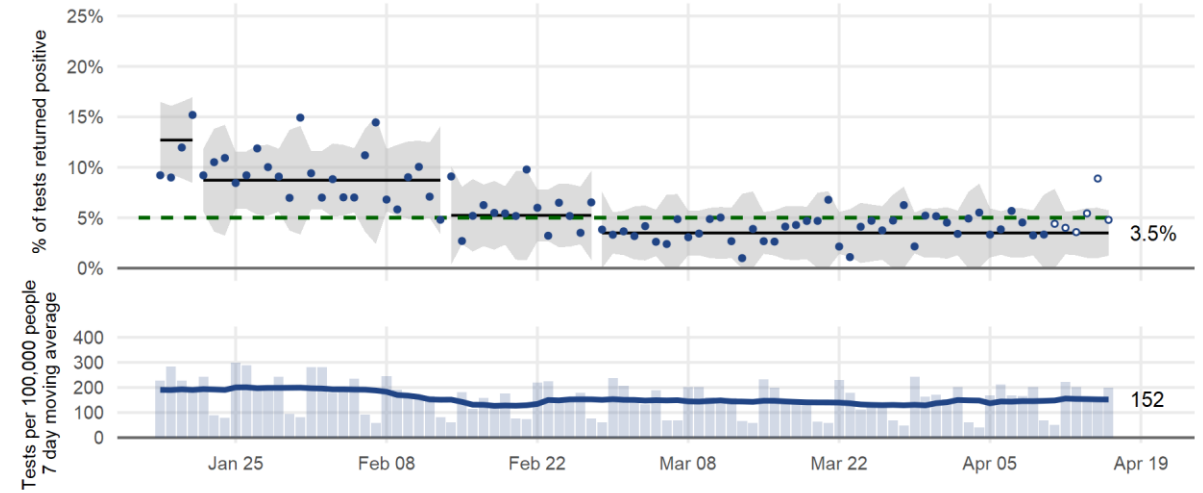
Positivity rate and tests per 100,000 people for Hamilton County and City of Cincinnati

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

Hamilton County outside of Cincinnati



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 4/18/21

# 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

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**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



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*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
<b>Elementary Schools</b> Physical distancing: at least 3 feet between students in classrooms		<b>Elementary Schools</b> Physical distancing: at least 3 feet between students in classrooms. Cohorting recommended when possible	
<b>Middle and High Schools</b> Physical distancing: at least 3 feet between students in classrooms		<b>Middle and High Schools</b> Physical distancing: at least 3 feet between students in classrooms Cohorting recommended when possible	<b>Middle and High Schools</b> 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
<b>Sports &amp; extracurricular activities</b> occur with at least 6 feet of physical distancing to the greatest extent possible	<b>Sports and extracurricular activities</b> occur with at least 6 feet of physical distance required	<b>Sports and extracurricular activities</b> 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-19<sup>1</sup>**

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 <sup>2</sup>	0-9	10-49	50-99	≥100
Percentage of NAATs that are positive during the past 7 days <sup>3</sup>	<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><b>Consider if school protective protocols can be strictly implemented (<i>see slide 4</i>)</b></p> <p>If no, consider remote or hybrid learning</p> <p>If yes, consider return to in-person with possible prioritization &amp; phase-in:</p> <ul style="list-style-type: none"> <li>• Priority 1: preK-5, special education through 8<sup>th</sup></li> <li>• Priority 2: grades 6-8 and special education for grades 9-12</li> <li>• Grades 9-12: <ul style="list-style-type: none"> <li>○ Not a priority in Orange – continued remote or hybrid learning</li> <li>○ Return in Yellow on hybrid schedule IF distancing can be maintained for all grades, majority of time</li> </ul> </li> </ul>
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](https://globalepidemics.org/wp-content/uploads/2020/07/pandemic_resilient_schools_briefing_72020.pdf).