COVID-19 and Schools: Public health updates and considerations for returning to in-person learning

Presentation to the AAPS Board of Education
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Executive Director, Community Division / Student and School Health
August 12, 2020
Tonight’s Presentation

- Emerging research on pediatric COVID-19
- Ongoing challenges for school districts
- Considerations for moving to hybrid learning model
- Staff and student protocols for keeping schools open
- Closing thoughts and Q & A
Emerging research on children and COVID-19
Surge in pediatric COVID-19 cases

- U.S.: 97,078 new child cases reported in last 2 weeks of July, a 40% increase in pediatric cases
- Washtenaw County: 50% of new cases from July 25 – Aug 7 were in people <30 years old
- Multiple outbreaks in Detroit region due to teen parties

Children and COVID-19: State Data Report, A joint report from the American Academy of Pediatrics and the Children’s Hospital Association, 7/30/2020
Washtenaw County 2-Week Snapshot https://www.washtenaw.org/3108/Cases
What we know/don’t know about children and COVID-19

- In general, children are asymptomatic or experience mild symptoms of COVID-19, but in rare cases some do get very sick.
  - Latino/Hispanic and Black children have been disproportionately impacted by Multisystem Inflammatory Syndrome in Children (MISC).
- While children do transmit to others, more evidence is needed on the frequency and extent of that transmission. Recent studies suggest that ability to transmit varies by age.

CDC Morbidity and Mortality Weekly Report MWR, 8/7/2020
What do we know about children and Coronavirus transmission? KFF Issue Brief 7/29/20
ADULTS

- 30-40% of infected adults never develop symptoms
- Asymptomatic adults carry just as much of the virus in their nose, throat, and lungs, strongly suggesting that they can spread the virus without knowing it

- Georgia overnight camp outbreak (260 cases): asymptomatic transmission was common
  - Among 136 cases with available symptom data, 36 (26%) patients reported no symptoms;
- French hospital study to find asymptomatic pediatric cases: 45% (10) of 22 positive pediatric patients were asymptomatic. Study size was 438, roughly one of our elementary schools.
- More research needed on pediatric transmission potential

MMWR 2020;69:1023–1025. https://www.cdc.gov/mmwr/volumes/69/wr/mm6931e1.htm
Systematic SARS-CoV-2 screening at hospital admission in children: a French prospective multicenter study, Clinical Infectious Diseases, https://doi.org/10.1093/cid/ciaa1044
Why is asymptomatic infection in children important to school districts?

Some school mitigation measures become ineffective or less effective
- Prescreening at home
- Staying home when sick
- Isolation of sick children at school
- Classroom dismissals and school closures

Personal-level prevention becomes even more critical
- Physical distancing
- Face coverings (masks)
- Hand washing/sanitizing
Ongoing challenges for school districts

...and how AAPS is addressing them
...Whether it’s a primary school, secondary school, or even college, the three things needed to open safely are being able to test, to trace, and to isolate.

Rick Lange, MD
President, Texas Tech University Health Sciences Center
August 7, 2020
Retrieved 8/11/2020 from https://globalepidemics.org/july-6-2020-state-testing-targets/
AAPS testing and contact tracing: where we stand now

Testing
- Michigan has higher levels of diagnostic testing than many other states
- Local testing is available but turnaround times for results continue to vary widely
- Ideally we would have at least bi-weekly surveillance testing of all students and staff

Contact Tracing
- Efficacy directly impacted by test result turnaround times
- Varies county to county
- Schools required to collaborate with local health departments on tracing

Isolation and Quarantine
- May be delayed due to test result turnaround times
- Varies county to county
- School tracing efforts include notification of potential isolation/quarantine
What happened with our 4 (known) COVID-19 cases this summer

3 out of 4 cases were in individuals who live in Region 1, the Detroit region.
The AAPS community goes beyond Washtenaw County.

AAPS internal notification protocols worked.
In some cases, contact tracing was delayed by test result turnaround times.

People were very willing to cooperate and concerned for others.
Reminder that anyone can get this virus!

All 4 recovered, and no further spread occurred.
Classroom Indoor Air Quality (IAQ)

- Indoor environments are most concerning for coronavirus transmission
- Complexities of Asymptomatic individuals and aerosol emissions
- The special challenges of classrooms – density & time within classroom space

Zhang, J. Integrating IAQ control strategies to reduce the risk of asymptomatic SARS CoV-2 infections in classrooms and open plan offices, Science and Technology for the Built Environment, (26) 2020.
Making classroom air safer

…the #1 method is source control

- Preventing transmission from asymptomatic virus carriers
  - Masks provide a critical barrier, reducing the number of infectious viruses in exhaled breath, especially of asymptomatic people and those with mild symptoms
  - Masks reduce an individual’s emission rate
  - Universal face masking is essential to reopening schools

The CDC recommends all people 2 years of age and older wear a mask in public settings and when around people who don’t live in your household, especially when other social distancing measures are difficult to maintain.

Goal for in-person learning
K-12 students and masks

- Masks may also serve as PPE
- CDC recommends teaching students how to use cloth face coverings before returning to school - can practice at home
- Mask breaks, e.g. for meals
- Cloth face coverings should not be placed on:
  - Children younger than 2 years old
  - Anyone who has trouble breathing or is unconscious
  - Anyone who is incapacitated or otherwise unable to remove the cloth face covering without assistance

At a pre-K graduation ceremony in Jersey City, N.J., Credit: Seth Wenig/Associated Press, June 2020.
Considerations for beginning a transition to hybrid (in-person) learning
MI Safe Start Plan - Metrics

...must be complemented with an understanding of the on-the-ground contextual realities.

A. Is the epidemic growing, flattening, or declining?
Evidence analyzed includes:

- **The number of new cases per million:** low levels of new cases can suggest limited continued transmission; high levels of new cases can suggest continued transmission activity.

- **Trends in new daily cases:** sustained decreases may suggest that there has not been new takeoff of the disease; increases would provide concern that there has been new takeoff.

- **% positive tests:** if testing levels are high, a low proportion of positive tests is further evidence of declining spread, and also suggests that we have a good understanding of the state of the epidemic. If there is a high proportion of positive tests, it could suggest further disease spread, or that we have a poor understanding of the true extent of the epidemic.

Must also pay close attention to trends for each metric

MI Safe Start Map

Region 2S: Detroit Area
“Med-High Risk” as of 8/9/20

Data retrieved from https://www.mistartmap.info/ on 8/11/2020
### Table 1: School Re-Openings: Country Comparisons on Key Metrics Compared to Current U.S. Data

<table>
<thead>
<tr>
<th>Country</th>
<th>Date of reopening</th>
<th>Daily Cases</th>
<th>Daily Cases Per Million Population</th>
<th>Positivity Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>—</td>
<td>65,750.4</td>
<td>198.6</td>
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<td>5/4/2020</td>
<td>1,140.3</td>
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<td>Greece</td>
<td>6/1/2020</td>
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(7-day averages)

**NOTES:** U.S. estimates calculated based on most recent data. France positivity rate from May 24. Vietnam positivity rate from April 29. Data represent 7-day average, as of re-opening date (unless other date noted).

Detroit region and Washtenaw County data retrieved from [https://www.mistartmap.info/](https://www.mistartmap.info/) on 8/11/2020

Table 1 from What do we know about children and Coronavirus transmission? [KFF Issue Brief](https://www.kff.org/issue-brief/what-do-we-know-about-children-and-coronavirus-transmission/)

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Other considerations

- Availability of PPE for staff and students
- Availability of treatments and vaccines
- Current local outbreaks involving young people
- New research or guidance from state or federal sources
Summary of considerations

* “Low Risk” status on Mi Safe Start Map

Additional considerations for returning to in-person learning:

- Local outbreaks involving young people
- New research on impact on children or guidance from state or federal sources
- Other new information that comes to light

* Currently at a medium-high risk
Staff and student protocols needed to keep schools open
Critical public health protocols for students and staff

...to keep everyone safe and avoid a cycle of opening and closing schools

Prescreening
- Before coming to school, answer a list of symptom questions and indicate other exposure risks
- Follow protocol if symptomatic
- Staying home when sick

Case Notification
- Immediately report a positive test result

Isolation & Quarantine
- Follow Washtenaw County Health Dept protocol for isolation or quarantine

Personal protections
- Universal face coverings
- Social distancing
- Hand hygiene
Closing Thoughts

- Hopeful signs for treatments and vaccine
- U of M students trickling back to campus
- We must remain vigilant in our prevention efforts

AAPS Commitments

- We will err on the side of caution to protect students and staff
- We will continue to pay attention to new research and guidance
- We will continue to partner with health authorities
THANK YOU!

Q&A