The ideas presented in this deck reflect the latest public health thinking and scientific evidence as of December 2020. However, the COVID-19 landscape is changing dramatically daily, and so must our recommendations over time.

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Overview

1. Summary & emerging recommendations
2. Context: K-12 Schools & COVID-19
3. Risk of infection among children
4. Risk of transmission from children – impact of schools
5. School closures & inequities
6. The way forward: strategies for reopening safely
Summary

- The risk of transmission within schools as well as from schools to the general population appears to be low when paired with proper public health interventions.
- When children do contract SARS-CoV-2 they are more likely to be asymptomatic or minimally symptomatic.
- There are trade-offs of keeping schools closed that include social, emotional, educational, and health consequences.
- At some point, community prevalence may exceed what is acceptable risk.
Emerging recommendations

- **Communities should consider prioritizing schools** over bars, restaurants, gyms, and other businesses

- Departments of Health should **adopt metrics for reopening schools** and specify thresholds for closing

- Schools and health departments must be supported and funded to:
  - Perform **routine testing in schools**
  - Ensure **infrastructure to respond to positive tests** (e.g. isolation, contact-tracing, etc.)
  - Make necessary physical infrastructure changes necessary to maximize safety
  - Enable **social distancing and infection control** strategies

- While schools are closed, we recommend **focusing relief efforts towards mitigating the social inequities generated** with respect to education, nutrition, socialization and safety.
The choice regarding school opening has forced tradeoffs between health and education. Limited data have made these decisions challenging.

Reopening schools has been a highly personal and political subject with a wide variation in practices domestically and globally. Evidence is still emerging.

Daycares have largely remained open since the pandemic began.

Remote or hybrid learning has dominated since mid-March 2020.

Differences remain between public and private institutions.

Some limited return to full in-person schooling began in fall 2020.

No consistent federal policies or approaches across the board.

Some schools have closed before other activities such as indoor restaurants and bars and gyms.
Risk of infection among children: overview

- Children <10 years of age are less likely to contract the infection than adults.
- As children become older their risk of infection approaches that of adults.
- Focusing on transmission rates proves to be more impactful, since analyses of mechanism of transmission in children have been inconclusive.

Source: https://www.cdc.gov/mmwr/volumes/69/wr/mm6939e2.htm

FIGURE 1. COVID-19 incidence* among school-aged children aged 5–11 years (N = 101,503) and 12–17 years (N = 175,782), by week — United States, March 1–September 19, 2020.'
Rates of severe disease and hospitalization are much lower in children than adults.

Risk of transmission from children in school settings

- Although children can transmit the infection, some studies of COVID-19 cases in schools have found that risk for transmission is low:
  - An Australian study tracked 27 COVID-19 positive individuals, of 1448 contacts, only 1.2% contracted Covid-19.
  - An Irish study tracked 6 COVID-19 positive individuals, of the 924 students and 101 adults close contacts, there were zero confirmed COVID-19 cases in schools.
  - A Swedish study examined the risk of COVID-19 infection by occupation, showed that taxi drivers and bus drivers had the highest rates while teachers had rates similar to the general population (did not close schools).

- However, large outbreaks have occurred, particularly in high schools without adequate public health prevention measures, including masks, ventilation, etc.
Risk of transmission from children: impact of schools

Emerging evidence suggests that when countries close schools, there is little to no impact on the overall trajectory of the pandemic relative to other measures.

Exhibit 3 Estimated effects of public school closures and restaurant or entertainment center closures on the daily growth rate in confirmed COVID-19 cases in the US, 2020

School closures exacerbate inequities

School closures impact children and families in many ways. These trade-offs must be recognized and should be considered within the local and individual context:

- Education
- Childcare
- Child protection
- Food access
- Disability services
- Mental & behavioral health support
- Socialization and development
- Physical activity outlets

“A June 2020 Reuters report "found that roughly 75 percent of districts have served 4.5 million fewer meals a week since closing, and about a third stopped providing federally required services to their special needs’ students."

“Without more resources, these disparities will worsen. Whatever school looks like this fall, we must be innovative and promote the well-being of all children, particularly children living in marginalized communities.” - Dr. Sara Goza, President of the American Academy of Pediatrics
The way forward: strategies to increase public health safety during school reopening
1. Prioritize K-12 Schools

**Dr Fauci urges Biden to ‘close the bars and keep the schools open’ amid alarming coronavirus spike**

‘The default position should be to try as best as possible within reason to keep the children in school’

Governments and public health response structures should prioritize opening K-12 schools over bars, restaurants, gyms and other public places with higher proven transmission rates.
2. Prioritize younger and high-needs students

Due to physical distancing needs for classes and transportation, not all students may be able to return in-person learning at one time.

Schools may need to prioritize students, and should consider:

- **Special needs and high needs students** are the most likely to suffer disproportionate impacts from remote learning
- **Younger children** are less likely to spread the virus and are less likely to benefit from remote learning
- **Early childhood education** provides key social skill development for younger children

<table>
<thead>
<tr>
<th>Prioritization Tiers</th>
<th>Priority Student Populations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1</td>
<td>High needs and special needs students</td>
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<tr>
<td>Tier 2</td>
<td>Pre-K through 3-grade</td>
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<tr>
<td>Tier 3</td>
<td>4- grade through 8- grade</td>
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<tr>
<td>Tier 4</td>
<td>9- grade through 12- grade</td>
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</tbody>
</table>
3. Utilize a framework for assessing risk of school transmission

### CDC Core Indicators for School Transmission Risk:

The [CDC](https://www.cdc.gov) recommends community prevalence guide reopening decisions, so mitigating community transmission is critical to reopening safely.

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>Lowest risk of transmission in schools</th>
<th>Lower risk of transmission in schools</th>
<th>Moderate risk of transmission in schools</th>
<th>Higher risk of transmission in schools</th>
<th>Highest risk of transmission in schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of new cases per 100,000 persons within the last 14 days*</td>
<td>&lt;5</td>
<td>5 to &lt;20</td>
<td>20 to &lt;50</td>
<td>50 to ≤ 200</td>
<td>&gt;200</td>
</tr>
<tr>
<td>Percentage of RT-PCR tests that are positive during the last 14 days**</td>
<td>&lt;3%</td>
<td>3% to &lt;5%</td>
<td>5% to &lt;8%</td>
<td>8% to ≤ 10%</td>
<td>&gt;10%</td>
</tr>
<tr>
<td>Ability of the school to implement 5 key mitigation strategies:</td>
<td>Implemented all 5 strategies correctly and consistently</td>
<td>Implemented all 5 strategies correctly but inconsistently</td>
<td>Implemented 3-4 strategies correctly and consistently</td>
<td>Implemented 1-2 strategies correctly and consistently</td>
<td>Implemented no strategies</td>
</tr>
<tr>
<td>• Consistent and correct use of masks</td>
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<td>• Social distancing to the largest extent possible</td>
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<td>• Hand hygiene and respiratory etiquette</td>
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<td></td>
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<tr>
<td>• Cleaning and disinfection</td>
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<tr>
<td>• Contact tracing in collaboration with local health department</td>
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</tr>
<tr>
<td>Schools should adopt the additional mitigation measures outlined below to the extent possible, practical and feasible.</td>
<td>Implement all 5 strategies correctly and consistently</td>
<td>Implement all 5 strategies correctly but inconsistently</td>
<td>Implement 3-4 strategies correctly and consistently</td>
<td>Implement 1-2 strategies correctly and consistently</td>
<td>Implement no strategies</td>
</tr>
</tbody>
</table>
4. Mitigating in-school risk

Communities most affected by school closures have also been disproportionately impacted by COVID-19 and often lack the resources to reopen safely. These priorities should be directed in a preferential fashion, recognizing structural inequities.

1. Build Capacity for Infection Monitoring and Response
   - Strong COVID-19 testing for students and teachers
   - Robust contact tracing for any case
   - Training for school staff on isolation precautions and safety protocols

2. School Resources
   - PPE
   - Barrier Protection
   - Cleaning supplies
   - Ventilation infrastructure

3. Financial and supervision support for families
   - Daycare
   - Job security
   - Paid Time Off during illness
5. Managing in-school risk

- **Enact routine rapid testing** as a part of active and passive surveillance within the school system
- Establish contact tracing procedures with local health departments
- **Mandate staff and student vaccination** for flu and COVID (when available)
- **Distancing between desks 3 feet min**, 6 feet preferred
- Physical partitioning
- Student and class cohorting
- **Improve air filtration and ventilation**
- Identify community and school transmission indicators
- Identify secondary indicators
- Communicate plans openly and often with staff, unions, parents, and students

Follow **recommended CDC protocols** to create health, social and behavioral, and environmental measures to manage risk

Elimination of risk is not possible with on-going community transmission. Cases **will** occur in school students and staff. If cases are rapidly detected and contained, risk may be mitigated.

Community prevalence may rise to and exceed what is an acceptable risk. This must be individually decided by each community depending on both the primary and secondary indicators, as well as mitigation strategies in place to prevent further spread.
US Public Health Accompaniment Unit

For more information please contact LearningCollab@pih.org

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Appendix: Reopening tools

CDC provides readiness checklists for:

- **Policies & procedures** (ex. cohorting students, mealtimes, daily health checks, designated staff for COVID response)
- **Facilities & supplies** (ex. ventilation systems, water systems, cleaners and disinfectants)
- **Education & training** (ex. safety protocols, importance of social distancing)
- **Communication & messaging** (ex. ensure communication is developmentally appropriate and accessible to all)
- **Gatherings, visitors & events** (ex. Develop protocols, prioritize outdoor activities)

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**Considerations for K-12 Schools: Readiness and Planning Tool**


**CDC Readiness and Planning Tool to Prevent the Spread of COVID-19 in K-12 Schools**