Reopening Schools: Considerations for Marin

June 25, 2020
PROMOTE & PROTECT

THE

health, well-being, self-sufficiency and safety

FOR ALL IN

Marin
Health Defined

• “A state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity.”
  • WHO Constitution (1948)
Our Challenge: How do we open schools in Marin County, knowing COVID-19 is part of our environment?

- Shared values
  - Health
  - Education
  - Equity
  - Evidence
  - Choice
  - Dialogue and communication

- Shared challenges
  - Uncertainty
  - Novel virus
  - Fear
  - No zero risk options
  - Adaptability
Continuums of Risk

Students, Staff, Community

• COVID-19 Infection
• Other physical health
• Mental Health
• Social Health
  • Learning and Development
  • Equity
COVID-19 Risks

Questions:

1) Are children as easily infected as adults?
2) What is the clinical severity of infection in children?
3) How do school closures impact community case rates?
4) What has been the experience with cases in schools?
5) How can we talk about reopening when cases are increasing?
Age-dependent effects in the transmission and control of COVID-19 epidemics

Nicholas G. Davies, Petra Klepac, Yang Liu, Keesha Prem, Mark Jit, CMMID COVID-19 working group & Rosalind M. Eggo

Nature Medicine (2020) | Cite this article

• Case data from China, Italy, Japan, Singapore, Canada and South Korea
• Infection rates among people of different ages with known exposures
• Clinical severity among cases of different ages
• Modeled impact of school closures on population rates
Are children as easily infected as adults?
What is the clinical severity of infection in children?

- “Susceptibility to infection in individuals under 20 years of age is approximately half that of adults aged over 20 years”

- “Clinical symptoms manifest in 21% of infections in 10- to 19-year-olds, rising to 69% of infections in people aged over 70 years”
COVID-19 Cases by Age: Marin County

Age

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Population</th>
<th>Cases</th>
<th>Hospitalizations</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-18</td>
<td>16%</td>
<td>21%</td>
<td>12%</td>
<td>3%</td>
</tr>
<tr>
<td>19-34</td>
<td>17%</td>
<td>31%</td>
<td>30%</td>
<td>6%</td>
</tr>
<tr>
<td>35-49</td>
<td>16%</td>
<td>17%</td>
<td>13%</td>
<td>5%</td>
</tr>
<tr>
<td>50-64</td>
<td>17%</td>
<td>23%</td>
<td>28%</td>
<td>22%</td>
</tr>
<tr>
<td>65-79</td>
<td>20%</td>
<td>20%</td>
<td>50%</td>
<td>3%</td>
</tr>
<tr>
<td>80-94</td>
<td>22%</td>
<td>15%</td>
<td>8%</td>
<td>4%</td>
</tr>
<tr>
<td>95+</td>
<td>6%</td>
<td>6%</td>
<td>5%</td>
<td>22%</td>
</tr>
</tbody>
</table>

If you are a person with a disability and require this document in an alternate format (example: Braille, Large Print, Audiotape, CD-ROM), you may request an alternate format by calling: (415) 473-4167 (Voice), (415) 473-3232 (TTY), or by e-mail at: cmair@marincounty.org
How do school closures impact community case rates?

• “School closures have a limited effect on population case rates”

• School closures are not likely to prevent surges

Fig. 3: Effect of school closure under different demographics and subclinical infectiousness.

From: Age-dependent effects in the transmission and control of COVID-19 epidemics
How do school closures impact community case rates?

https://www.cgdev.org/blog/back-school-update-covid-cases-schools-reopen
Can we prevent spread in schools?

School based contact tracing in Australia: High Schools

- 8 students infected (2 cases in the same school at 2 schools)
- 4 teachers infected
- 863 close contacts were tested including nasal swab and antibodies
- Only 1 student infected
School based contact tracing: Primary Schools

- **Cases**
  - Staff case
  - Student case

- **Close contacts**
  - Staff close contact
  - Student close contact

- **Secondary cases**
  - Secondary student case

- 1 student cases—no transmission to peers or teachers
- 5 teacher cases—infected 1 student

*Prepared by the National Centre for Immunisation Research and Surveillance (NCIRS) 26 April 2020*
Relevant Questions:

• With smaller cohorts in school fewer days, is there more mixing of children through the week?
  • If so, would this problem be equitably distributed?

• With the decision to resume in classroom learning, what is the added risk of moving it to every day?

• Besides distance learning, how else can we achieve the goal of fewer children in the classroom?
  • Outdoor classrooms
  • Outdoor learning, Parks
How can we talk about reopening with cases increasing?
COVID-19 Cases, Marin County

*Recovered is currently defined as 14 days post-diagnosis with COVID-19 excluding deaths and those currently hospitalized*

Source: Marin HHS • Get the data • Created with Datamapper

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Daily Tests Performed, Marin County

<table>
<thead>
<tr>
<th>7-Day Rolling Average Percent Positive</th>
<th>Date Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1%</td>
<td>6/12/2020 - 6/19/2020</td>
</tr>
</tbody>
</table>

Data incomplete for the most recent dates (4-7 days) due to reporting delays. There may be slight variation between the daily number of cases reported in this chart (by testing date), and daily increases in cumulative cases at the top of this website, which uses last report date.

Source: California Reportable Disease Information Exchange (CalREDIE) • Get the data • Created with Datawrapper

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Hospitalization and death rates, per case, are declining.

Increases in detection of cases with less severe disease.
### Percent Hospitalized/Deaths Over Time

<table>
<thead>
<tr>
<th>Time Period</th>
<th>% of cases hospitalized</th>
<th>% of cases died</th>
<th>Average age of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>March-mid April</td>
<td>17.1%</td>
<td>8.0%</td>
<td>55.9</td>
</tr>
<tr>
<td>Mid April-mid May</td>
<td>5.9%</td>
<td>0.8%</td>
<td>37.2</td>
</tr>
<tr>
<td>Mid May-present</td>
<td>3.2%</td>
<td>0.4%</td>
<td>34.5</td>
</tr>
</tbody>
</table>

Both % hospitalized and %deaths decreased over time, with the average age of cases also growing younger.
Primary Driver of Increased Cases in Marin

Population

• Essential Workers, mainly LatinX
• Index case for household
• Household transmission
• High proportion of asymptomatic or mildly symptomatic

Strategy

• Partner with community based organizations
• Bilingual bicultural capacity
• Outreach to employers and community
• Aggressive testing, contact tracing, support for cases and their families
• Income support, housing, food, healthcare

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San Quentin Outbreak

• CDCR-managed
• May 30 Transfer 122 inmates from Chino
• Tested on site, placed in shared unit
• As of June 24, 456 cases
• Assistance for County at request of prison
  • SME, PPE, Staff Testing support
• Diagnostic of gaps in Correctional system
• Surge plan:
  • First offer on site care
  • Hospitals throughout region, mainly SF
  • State may mobilize field hospital
Our challenge

• How do we safely continue to re-open, knowing the virus is part of our environment?
  • Carefully
  • Together
  • Optimize self measures
  • Recognize and mitigate risk
  • Follow the data
  • Adaptive and flexible
  • Rethink assumptions of how things are done
Thank you