

July 21, 2020

K-12 Education Recommendations for Municipality of Anchorage

Liz Snyder, PhD MPH,¹ Micah Hahn PhD MPH,² Lauren Lessard PhD MPH,³ Katie Cueva MPH MAT ScD,⁴ Lisa Schwarzburg PhD, Laura Grage RN BS,⁵ Rebecca Van Wyck,⁶ Thomas Hennessy MD MPH⁷

Coordination between the Municipality of Anchorage (MOA) and the Anchorage School District (ASD) is essential for safe K-12 education in Anchorage. This report summarizes recommendations on K-12 education during the COVID-19 pandemic and reviews data from other countries that have opened schools.

Background

In response to the COVID-19 pandemic, K-12 schools around the world have *closed*, *re-opened*, and some have *closed again*. In some countries, K-12 school reopening does not appear to have led to increased COVID-19 cases, potentially because there was low community transmission and/or extensive mitigation strategies (e.g. Denmark, Thailand, Norway). School reopening in places where there was higher community transmission (e.g. Israel, Germany) was followed by increased transmission. **The average rate of cases in the 14 days before schools were reopened in 17 countries reviewed in this report ranged from 0 to 4.49 per 100,000 population, while Anchorage was at 9.3 per 100,000 as of July 21th, and cases are on a steep upward trajectory** (Appendices A and B). However, even when there were low rates of community transmission and precautions taken to reduce transmission in schools, policymakers around the world paused school reopenings or closed schools again when case numbers increased.

Recommendations

According to Alaska Smart Start 2020 (Table 1), “Any decision about school dismissal or cancellation of school events should be made in coordination with local health officials. Schools are not expected to make decisions about dismissals on their own.” **Thus, the Municipality of Anchorage (MOA) should be prepared to inform, and respond to, school reopening/reclosing decisions.** We recommend that:

- **ASD and MOA develop specific quantitative metrics that will inform movement between phases of the Smart Start plan, towards both higher and lower risk scenarios.** Develop plans for both the district, and for individual schools, to open, close, re-open, and re-close as transmission rates and conditions fluctuate.
 - Metrics for moving towards high risk should be based on **shorter time periods** than those for easing restrictions because COVID-19 cases can increase very rapidly.
 - Metrics may include several components, including average case counts, public health capacity for testing and contact tracing, and healthcare capacity.
- **Encourage ASD to consider additional strategies employed by other countries that have reopened schools:**
 - Staggered start/break/dismissal times (several countries)
 - Daily temperature checks of all school-based individuals (all countries)
 - Opening in-person education only to younger students (several countries)
 - Opening in-person education to ½ or ⅓ of the student population each day (several countries)

¹ Associate Professor of Public Health; Director of the Food Research, Enterprise, and Sustainability Hub (FRESH), Division of Population Health Sciences, University of Alaska Anchorage

² Assistant Professor of Environmental Health, Institute for Circumpolar Health Studies, University of Alaska Anchorage

³ Assistant Professor of Health Science, Division of Population Health Sciences, University of Alaska Anchorage

⁴ Assistant Professor of Health Policy, Institute of Social and Economic Research (ISER), University of Alaska Anchorage

⁵ Research Professional, Division of Population Health Sciences, University of Alaska Anchorage

⁶ Research Associate, Institute for Circumpolar Health Studies, University of Alaska Anchorage

⁷ Adjunct Faculty, Division of Population Health Sciences, University of Alaska Anchorage

- Plastic dividers between student desks/cafeteria seats (several countries)
 - Micro groups of 12 students who only socialize with each other (Denmark)
 - Handwashing every two hours (Denmark)
 - Test all school-based individuals (students, teachers, staff, etc.) every four days (Germany)
 - Temporarily close a school if any student, teacher, or staff member tests positive, then test all individuals to confirm no additional positive cases before reopening (South Korea)
 - Keep children at home if at least one parent does not work outside the home (Denmark)
 - Monitor compliance to safety measures to ensure commitment does not diminish over time (Israel)
- **ASD and MOA develop an Anchorage-wide communication strategy on education**, that includes:
 - Messaging to ASD stakeholders (such as teachers, staff, students, and parents) that in-person school may not be advisable based on the risk threshold and current epidemic trajectory. Parents need to be prepared for this situation.
 - Focus on the need to decrease community transmission to increase the likelihood of in-person K-12 education, including reiteration of COVID-19 reduction strategies such as social distancing, mask wearing, hygiene practices, and potential business closures.
- **MOA should prepare for continued economic disruption and job loss if school does not fully reopen in-person this fall.** Identify additional protocols and supportive family/economic policies implemented in other regions to facilitate working families amid school closures, including:
 - Increased family leave
 - Facilitate increase in ASD funding through strategies such as a graduated income tax or bonds to allow for modifications of in-person education, including: decreased class sizes, outdoor instruction, simultaneous in-person and online education, increased PPE, designated contact tracers, testing capacity, etc.
 - Increased physical space allotted for education, such as permitting classes to take place in public parks, libraries, conference centers, museums, etc.
 - Increased funding for online education
 - Provision of masks to all school-based individuals

COVID-19 in Young People

School-age children both contract and transmit COVID-19. Emerging evidence indicates that infection in children occurs **less often**, and is **often milder** than infection in adults, although the role of children in transmission, and the long-term effects of COVID-19 infection in children are **not yet clear**.⁸ A recent study from South Korea found that COVID-19 transmission rates from young people age 10-19 were higher than other age categories, while transmission among youth under 10 were less than half the average rate.⁹ However, there are counterexamples, and evidence is still forthcoming. For example, a recent report from Florida found both that 31% of tested children were positive for COVID-19 (compared to an 11% positivity rate in adults).¹⁰

COVID-19 and Education Policies

The ASD Smart Start Plan has four risk levels that overlap with the State of Alaska risk thresholds - each based on average new cases in the last 14 days. The ASD plan states that district-level decisions will be made **every two weeks**. However, it's unclear how long it will take before the impact of school reopening is seen in COVID-19 case numbers, and decisions to relax restrictions quickly may cause increased transmission. The ASD plan also describes that decisions will be "based on **direction from the Municipality** or State." Currently available plans from ASD do not describe how this consultation will take place or what criteria will be used to provide this direction to ASD. We recommend that this process be articulated, including developing clear metrics that will be considered and identifying individuals who will be involved in those consultations.

⁸ <https://dontforgetthebubbles.com/evidence-summary-paediatric-covid-19-literature/>

⁹ <https://wwwnc.cdc.gov/eid/article/26/10/20-1315-t2>

¹⁰ <https://www.sun-sentinel.com/coronavirus/fl-ne-pbc-health-director-covid-children-20200714-xcdall2tsrd4riim2nwokvmsxm-story.html>

Table 1. Comparison of State of Alaska and ASD Smart Start Alert Levels

The Anchorage School District (ASD) has proposed in-person K-12 learning when there are under 29 new cases/day (on average over 14 days). ***This threshold may be surpassed prior to scheduled K-12 school reopening this fall.*** As of July 21st, Anchorage had seen 27 cases/day on average in the previous 14 days.

State of Alaska Alert Levels

ASD Smart Start Alert Levels

Alert Level	Average daily incidence over the past 14 days	Average daily case number equivalent for Anchorage	Alert Level	Average daily incidence over the past 14 days	Other ASD considerations for moving between risk levels	What does ASD functioning look like?
High	>10 cases per 100,000	>29.2	High	>29		5 e-learning days a week
Intermediate	5-10 cases per 100,000	14.6-29.2	Medium High	15-28	High number of student and staff absenteeism; Ability to have adequate staff; Need for additional physical distancing space; Isolated "hot spots" with the Municipality; Other pertinent info from State, community, and health officials	Students attend 2 days a week
Intermediate	5-10 cases per 100,000	14.6-29.2	Medium Low	15-28	Ability to have adequate staffing; No isolated "hot spots" within the Municipality; Other pertinent info from State, community, and health officials	Students attend 5 days a week (5.5 hrs a day)
Low	<5 cases per 100,000	<14.6	Low	<15		Students attend 5 days a week (6.5 hrs a day)

Appendix A. Reopening Schools Around the World

Table 2. 14-day case average per 100,000 in countries that re-opened schools during the COVID-19 pandemic relative to the school reopening date

Country	Date of Reopening	Daily Case Count Averaged over 14 days ¹¹	Population	14 day case avg/100,000 on the date of Reopening	Impact of Reopening Schools
<i>Taiwan</i>	25-Feb	0.9	23,780,000	0.00	Little to no increase in new cases ¹²
<i>Vietnam</i>	18-May	3.5	95,540,000	0.00	Little to no increase in new cases ¹³
<i>Thailand</i>	1-Jul	2.6	69,430,000	0.00	Little to no increase in new cases, some schools reclosed July 15 due to 1 imported case ^{14,15}
<i>Hong Kong</i>	27-May	1.3	7,451,000	0.02	Schools reclosed after 14 total new cases July 7 ¹⁶
<i>New Zealand</i>	14-May	1.5	4,886,000	0.03	Little to no increase in new cases ¹⁷
<i>Japan</i>	24-Mar	44.1	126,500,000	0.03	Unknown ¹⁸
<i>Greece</i>	1-Jun	6.5	10,720,000	0.06	Unknown ¹⁹
<i>South Korea</i>	8-Jun	43.4	51,640,000	0.08	Schools re-closed after unrelated outbreak of 69 cases May 29 ²⁰
<i>Austria</i>	15-May	43.3	8,859,000	0.49	Little to no increase in new cases ²¹
<i>Switzerland</i>	11-May	48.9	8,570,000	0.57	Unknown ²²
<i>France</i>	11-May	1033.3	66,990,000	1.54	Unknown ²³
<i>Norway</i>	20-Apr	99.4	5,368,000	1.85	Little to no increase in new cases ²⁴
<i>Finland</i>	1-May	116.1	5,518,000	2.10	Little to no increase in new cases ²⁵

¹¹ Case data from Center for Systems Science and Engineering (CSSE) at Johns Hopkins University COVID-19 Data Repository

¹² <https://www.weforum.org/agenda/2020/05/coronaviruscountries-schools-education-covid19-reopen-classroom>

¹³ <https://www.vox.com/21270817/coronavirus-schools-reopen-germany-vietnam-new-zealand>

¹⁴ <https://www.nytimes.com/2020/07/16/world/asia/coronavirus-thailand-photos.html>

¹⁵ <https://www.bangkokpost.com/thailand/general/1951388/two-schools-close-in-city-because-of-virus-scares>

¹⁶ <https://www.npr.org/sections/goatsandsoda/2020/07/10/889376184/photos-how-hong-kong-reopened-schools-and-why-it-closed-them-again>

¹⁷ <https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-current-situation/covid-19-current-cases#curve>

¹⁸ <https://globalhealth.washington.edu/sites/default/files/COVID-19%20Schools%20Summary%20%282%29.pdf>

¹⁹ <https://www.ft.com/content/dcdadf44-37ed-3e2c-bdffe475617c6e8>

²⁰ <https://www.bbc.com/news/world-asia-52845015>

²¹ <https://ourworldindata.org/coronavirus/country/austria?country=~AUT>

²² <https://www.bbc.com/news/uk-scotland-52412171>

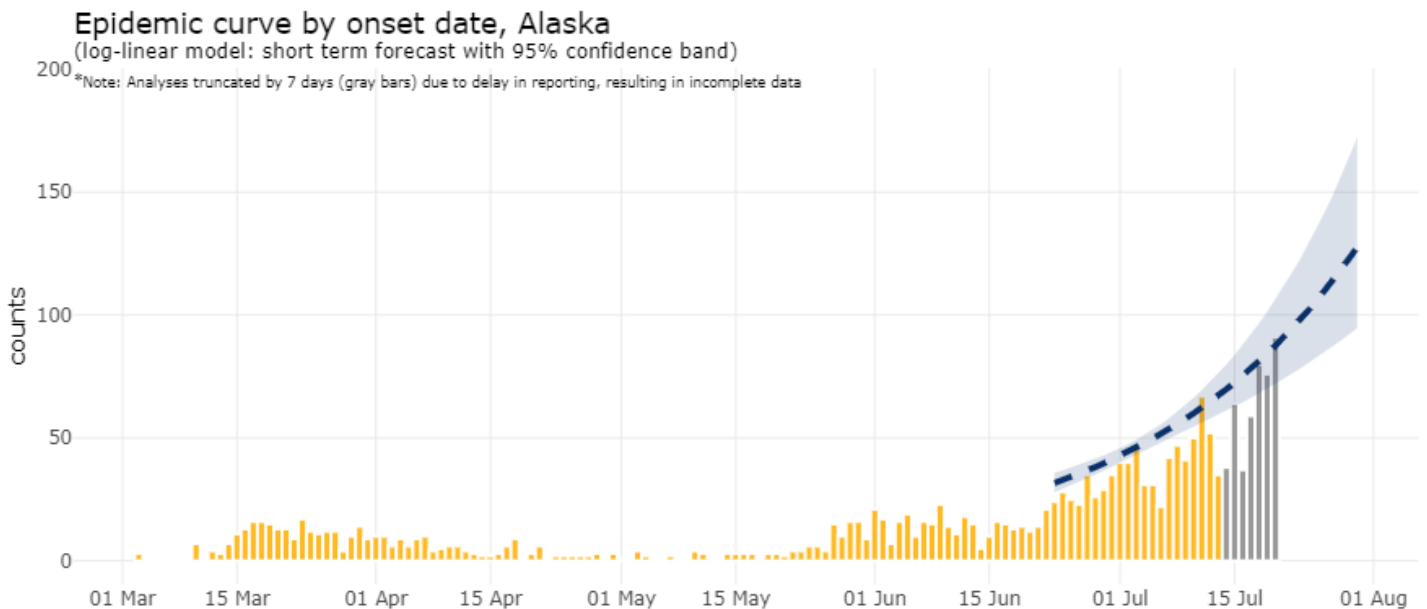
²³ <https://globalhealth.washington.edu/sites/default/files/COVID-19%20Schools%20Summary%20%282%29.pdf>

²⁴ <https://doi.org/10.1101/2020.06.24.20139634>

²⁵ <https://ourworldindata.org/coronavirus/country/finland?country=~FIN>

<i>Israel</i>	3-May	208.6	8,884,000	2.35	Outbreaks and increased transmission. All educational institutions (schools, daycares, universities, etc.) closed July 16. ²⁶
<i>Belgium</i>	18-May	383.9	11,460,000	3.35	Unknown ²⁷
<i>Germany</i>	20-Apr	3218.6	83,000,000	3.88	Outbreaks and increased transmission ²⁸
<i>Denmark</i>	15-Apr	260.8	5,806,000	4.49	Little to no increase in new cases ²⁸
Current Rates for Comparison, as of July 20					
<i>United States</i>	21-Jul	60882.4 ²⁹	329,990,450 ³⁰	19.19	
<i>Alaska</i>	21-Jul	51.6 ³¹	731,566 ³²	7.61	
<i>Anchorage</i>	21-Jul	24.8 ³³	290,406 ³⁴	9.35	

Appendix B. Epidemic curve by onset date, Alaska, July 21, 2020³⁵



²⁶ <https://www.israelhayom.com/2020/07/16/new-lockdown-measures-announced-as-israel-enters-new-phase-in-pandemic/>

²⁷ Moens B. All nursery and primary schools in Belgium to reopen in June. Politico. 2020 May 27; Available from: <https://www.politico.eu/article/all-nursery-and-primary-schools-inbelgium-to-reopen-in-june/>

²⁸ <https://doi.org/10.1101/2020.06.24.20139634>

²⁹ <https://www.cdc.gov/covid-data-tracker/#trends>

³⁰ <https://www.census.gov/popclock/>

³¹ <https://coronavirus-response-alaska-dhss.hub.arcgis.com/>

³² <https://live.laborstats.alaska.gov/pop/projections.cfm>

³³ <https://coronavirus-response-alaska-dhss.hub.arcgis.com/>

³⁴ <https://live.laborstats.alaska.gov/pop/projections.cfm>

³⁵ Original model by Jared Parrish, Alaska Department of Health and Social Services and Anchorage adaptation by Ben Matheson, Municipality of Anchorage