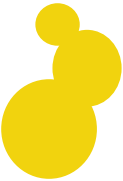


COVID-19 Public Health Concerns and K-12 Instruction

Introduction



As the beginning of the 2020-2021 school year approaches, school districts across the country are grappling with how to provide high quality instruction while minimizing exposure to the coronavirus (or COVID-19), for which no vaccine currently exists. Districts have been discussing whether to offer in-person instruction, on-line instruction, or some combination (hybrid). The decision is a difficult one given competing interests: on the one hand, COVID-19 infection rates are increasing in Nevada (and the U.S.), which suggests delivering instruction digitally either part or full-time would be prudent; on the other hand, the benefits of social interaction and classroom instruction, the reliance on schools as ‘community resource hubs,’ and child care challenges faced by working families lend support to in-class instruction.

Public health authorities have outlined recommendations for school districts to follow as they consider any form of in-person instruction during the upcoming school year. Generally, the basis for these recommendations rests upon the data and research collected up to this point, which includes information about rates of infection and transmission rates of different age groups. However, due to the recent onset of COVID-19, the research underpinning most of these recommendations has not been subjected, by and large, to standardized peer review. Research findings are preliminary and may be

revised as the knowledge base broadens. The academic research included in this policy brief reflects current scholarship on COVID-19, with specific attention to infection and transmission rates of different age groups.

The goals of this policy brief are to: (1) summarize the existing research on COVID-19 as it relates to children and young adults and their infection and transmission rates and test positivity rates; (2) summarize the guidance of national and public health agencies as it relates to school reopening plans; and (3) summarize the experiences of other countries that have reopened schools. This policy brief is organized as follows. Section 1 summarizes the existing research on transmission, infection, and test positivity rates. Section 2 summarizes the guidance from public health agencies. Section 3 summarizes health guidelines. Section 4 summarizes experiences of countries that have reopened schools. And Section 5 summarizes the reopening plans of the nation’s largest urban districts.

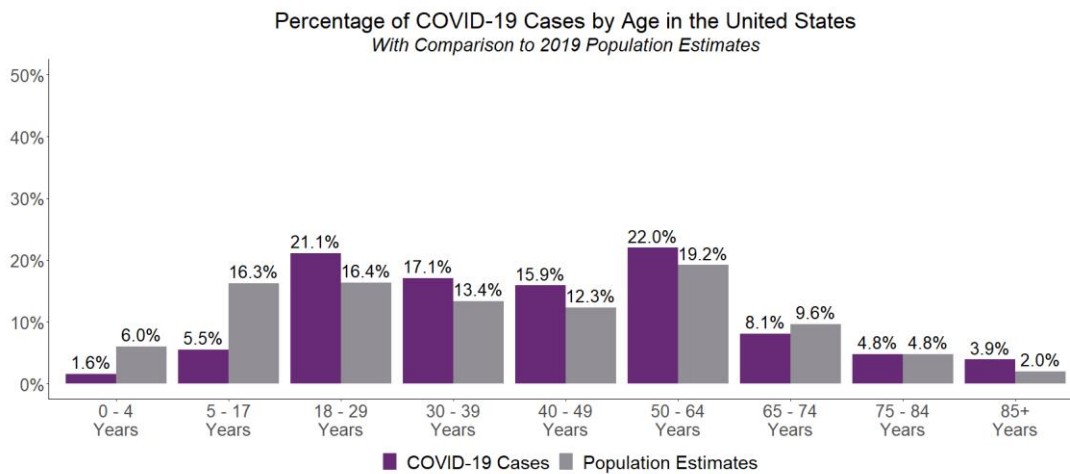
Incidence and Mortality of COVID-19 Among School-Age Children and Adults

This first section reviews existing research and data related to COVID-19 infection and transmission rates and the age groups that appear to be more severely affected (both in terms of cases and severity of the symptoms). This section also discusses the issue of test positivity rates.

Currently, there are approximately 320,000 students enrolled in Clark County School District. As Table 1 indicates, individuals of all ages can contract COVID-19. Infection rates by age group are available through the Centers for Disease Control and Prevention (CDC); population estimates were obtained from the U.S. Census Bureau. Data reveals that cases of COVID-19 in the U.S. appear to be less prevalent in school-age population (those between 5 and 17 years of age) than other cohorts (18-74 years of age).

percent of the population, but 21.1 percent of the confirmed cases. Similar trends (i.e., incidence rates are higher than population estimates) are noted for those individuals in the 30 to 39, 40 to 49, and 50 to 64-year-old age brackets. In July, CDC Director Robert Redfield stated, “[T]here are 10 times more people testing positive for Covid-19 antibodies than there are people being diagnosed with the virus.”¹

Table 1: Percentage of COVID-19 Cases by Age in the United States



Source: COVID-19 data as of July 28th, 2020 from the CDC - <https://www.cdc.gov/covid-data-tracker/index.html#demographics>; 2019 Population Estimates from US Census Bureau

Specifically, school aged children (aged 5 to 17) make up approximately 16.3 percent of the total U.S. population but represent only 5.5 percent of the total confirmed COVID-19 cases. However, the age groups likely representing licensed and support staff in schools all report higher COVID-19 incidences than their respective incidences. Individuals between the ages of 18 to 29 make up 16.4

While children and young adults between 0-17 years of age can contract COVID-19, their symptoms are often less severe than adults and some may remain asymptomatic.^a However, students are not the only people who populate school buildings. Teachers and support staff are definitionally within the age groups (18 to 64 years of age) that are more disproportionately affected by the

^a Researchers assert that children may not be as severely affected by COVID-19 for the following reasons: since they are often afflicted with colds and influenza, they might have antibodies that provide them with some protection against COVID-19;

children’s immune systems may interact with the virus differently than do adults’ immune systems. Source: Mayo Clinic. COVID-19 (coronavirus) in babies and children.

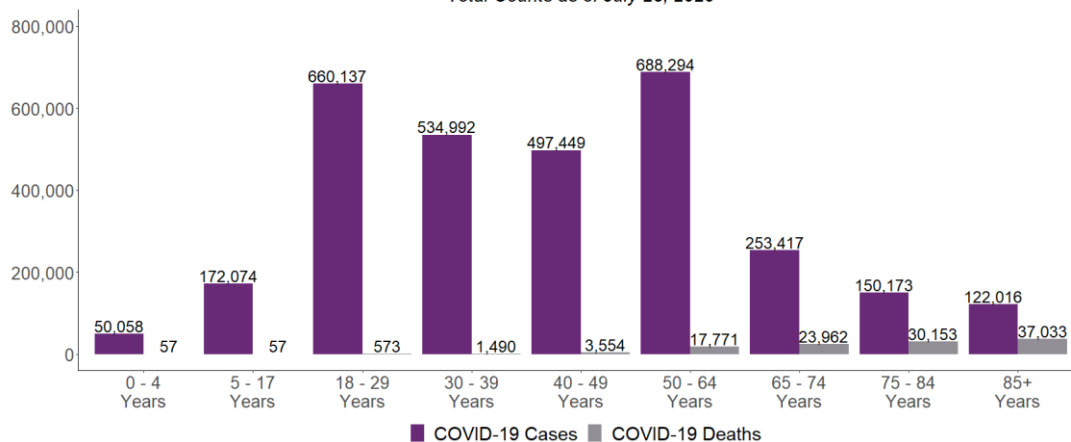
coronavirus. Slightly more than 30,000 licensed teachers and support staff are employed by CCSD.

The mortality rates of COVID-19 vary across age groups. Table 2 presents the absolute number of cases observed in the U.S., alongside the number of deaths in each age group. The death rate is calculated by taking the number of deaths and dividing by the total number of cases. Using this metric, individuals between 0 to 4 and 5 to 17 years of age have the lowest death rate of any other age group: – 0.1 percent for 0 to 4 year-olds – 57 deaths from 50,058 cases; and .03 percent for 5 to 17 year-olds - 57 deaths from 172,074 cases.

Nevada’s first case occurred on March 5, 2020, with the first death reported on March 16, 2020. Since then, Nevada’s cases increased in April, flattened in May – likely due to the stay at home order – and then increased significantly in June and July. July has been the deadliest month for COVID-19, coinciding with the highest number of confirmed cases. However, the data in this figure may be skewed, as Nevada had difficulty obtaining tests at the beginning of the outbreak so both the confirmed cases are likely low and the corresponding death rate (number of deaths divided by total cases) likely inflated due to the lack of testing available.

Table 2: COVID-19 Cases and Deaths by Age in the United States

COVID-19 Cases and Deaths by Age in the United States
Total Counts as of July 28, 2020



Source: COVID-19 data from the CDC - <https://www.cdc.gov/covid-data-tracker/index.html#demographics>

However, the death rate increases with age. For individuals between the ages of 50-64, the death rate is 2.6 percent. The death rate increases to 9.5 percent for individuals between the ages of 65 to 74. Again, the CDC noted there are 10 times more people testing positive for Covid-19 antibodies than there are people being diagnosed with the virus.

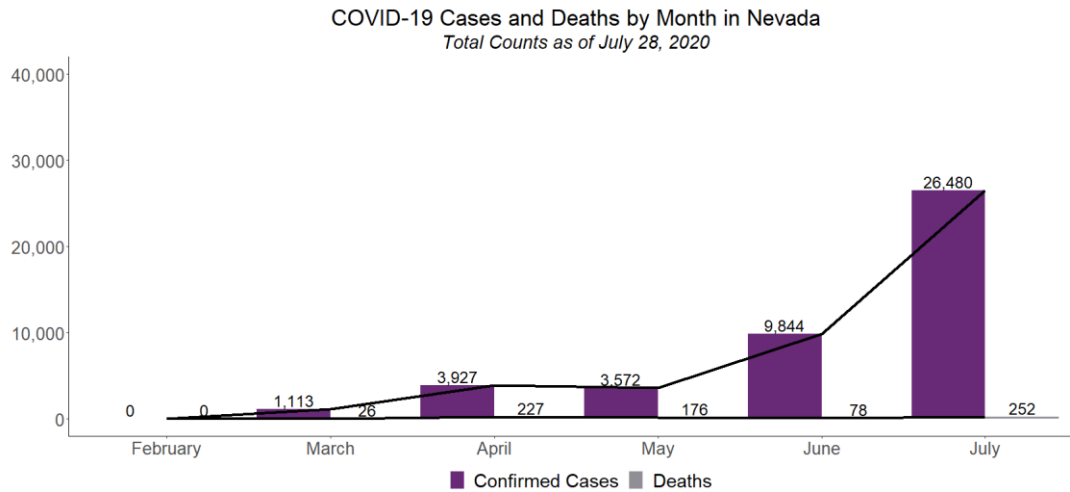
Table 3 (page 4) displays Nevada’s COVID-19 cases and deaths from February to July 2020.

Early studies suggest that children may not be as severely affected by COVID-19. In a study of 2,143 COVID-19 cases in patients under 18 years old in China, researchers found that approximately 94 percent of the cases exhibited moderate symptoms (defined as having a frequent fever and cough, but no signs of shortness of breath). **Only six percent had severe or critical symptoms, but the severe cases were disproportionately concentrated in the youngest children.** Severe

and critical cases accounted for approximately 10 percent of the cases in infants less than one year old and approximately seven percent for children ages 1 to 5. The six percent of severe and critical cases for those individuals under 18 years of age was a notably smaller

could be because of cross-protection from other coronaviruses, or because of protection provided from other respiratory illnesses that more frequently affect children than adults.⁷

Table 3: COVID-19 Cases and Deaths by Month in Nevada



Source: Data from USAfacts.org

percentage than was observed in adults. Approximately 19 percent of adult cases resulted in severe or critical infections.² However, recent studies suggest that while children may not be as severely affected by COVID-19 as adults, they have similar viral loads.³ One recent study found that “**children younger than age 5 may host up to 100 times as much of the viral RNA in the upper respiratory tract as adults.**”⁴

Early studies suggested that the proportion of exposed household members is lower in children than in adults.⁵ One study published in *Nature* suggests that **individuals 20 years of age and younger are approximately half as susceptible to COVID-19 infection.**⁶ Of those younger individuals who contract the disease, nearly 80 percent are asymptomatic or have minor symptoms. The study hypothesizes this

However, there may be an urban-rural divide. As the authors note, “across cities, the lower susceptibility and clinical fraction in children relative to adults was counteracted by greater contact rates among children relative to adults.”⁸ This suggests that **even though children may be less likely to contract COVID-19, increasing the number of contacts children experience will likely increase the overall incidence of cases in an area.** Additionally, because children are less likely to show symptoms, they may be less likely to be tested (especially at the beginning of the outbreak).⁹

A meta-analysis of 30 studies and 53,000 patients from the United States, Australia, South Korea, and China found that severe symptoms occurred in about 20 percent of coronavirus cases, with fatality occurring in approximately **three percent** of the cases. The

research suggested **individuals who are 50 years of age or older, or male, were at a greater risk of developing severe symptoms.**¹⁰ In Nevada, approximately one third of its roughly 27,000 instructional staff (not including support staff) are 50 years of age or older.¹¹ Adults in Nevada between the ages of 20-69 account for 80 percent of the 43,000 COVID-19 cases.¹²

Transmission of COVID-19 Among School-Age Children

The research on transmission rates among school-age children in a school setting is far from conclusive. A study conducted in Australia analyzed eighteen COVID-19 cases (nine students and nine staff) reported in 15 schools. Public health staff identified 863 close contacts with those initially infected. Only two of the 863 close contacts were diagnosed with the novel coronavirus. Researchers believed it is likely, although they could not confirm, that the two secondary cases could be attributed to the initial cases identified in the schools.¹³

Two separate studies published in *Pediatrics* suggested that in early cases of COVID-19, **up to 90 percent of the children who tested positive were thought to have contracted the disease from their familial contacts who first displayed symptoms.**¹⁴ Unfortunately, because nearly all of the infections noted in children were thought to originate from an adult family member, the studies were unable to conclude if children can pass the infection to other children and/or other adults.¹⁵

In another study, also published in *Pediatrics*, researchers find that **children contract COVID-19 "far less frequently" than adults and found it less likely to be spread among children.**

Researchers write that "transmission in schools may be less important in community transmission than initially feared."¹⁶ They conclude, "While two reports are far from definitive, they provide early reassurance that school-based transmission could be a manageable problem and school closures may not have to be a foregone conclusion, particularly for elementary school aged-children who appear to be at the lowest risk of infection."¹⁷

However, a July 2020 study from South Korea, published by CDC, challenges early research. The study finds that **children ages 10-19 can spread the virus at the same rate as adults, while children younger than 10 transmit the disease to others at about half the rate of adults.**¹⁸ Researchers found that children ages 10-19 (the age of middle and high school students), were more likely to infect others than adults. While this study has limitations, public health experts have supported the approach, design, and rigor of the research.

In short, data and research suggest that **school-age children are less likely contract the disease as well as exhibit severe symptoms.** However, research is inconclusive, albeit preliminary, regarding school-age children's ability to **transmit** the disease to others.¹⁹ In short, as stated by the National Academies of Sciences, Medicine and Engineering in their July 2020 report, *Reopening K-12 Schools During the COVID-19 Pandemic: Prioritizing Health, Equity, and Communities*:

Evidence to date suggests that children and youth (aged 18 and younger) are at low risk of serious, long-term consequences or death as a result of contracting COVID-19. However, **there is insufficient evidence with which to determine how easily children and youth**

contract the virus and how contagious they are once they do. Similarly, while some measures—such as physical distancing, avoiding large gatherings, handwashing, and wearing masks—are clearly important for limiting transmission, there is no definitive evidence about what suite of strategies is most effective for limiting transmission within a school setting when students, teachers, and other staff are present. The fact that evidence is inadequate in both of these areas—transmission and mitigation—makes it extremely difficult for decision-makers to gauge the health risks of physically opening schools and to create plans for operating them in ways that reduce transmission of the virus.²⁰

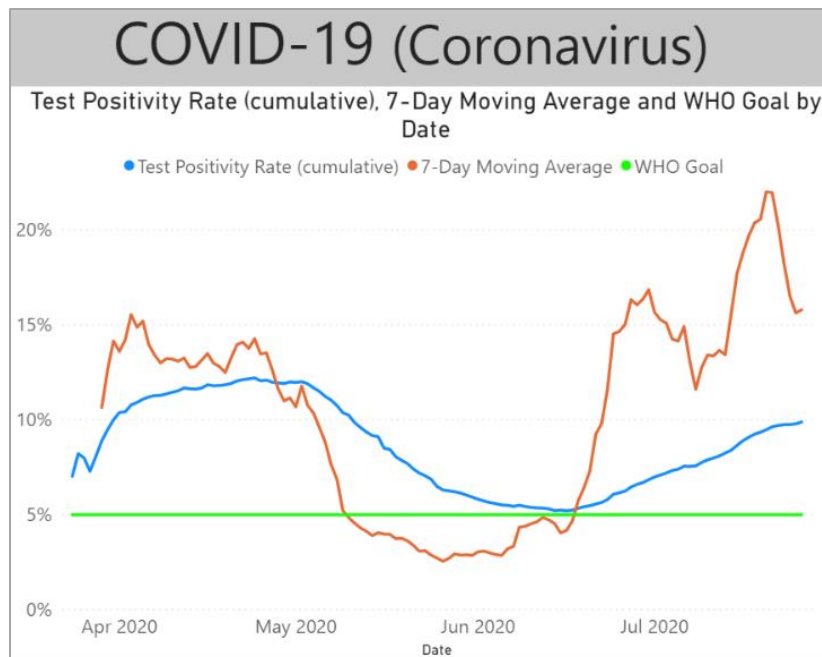
Harvard Global Health Institute, World Health Organization (WHO), and CDC have concluded that a positive test rate of less than 10 percent, and ideally under 3 percent, is needed to control and suppress the spread of a virus in a community.²¹

A 3 percent positivity rate goal means that out of all tests conducted over a 14-day period, only 3 percent would come back positive for the virus. WHO encourages governments to reopen their economies if their positivity rates **are below 5 percent for at least two consecutive weeks.**²² CDC Director Redfield noted that in communities that are “hot spots” or “places where more than 5 percent of coronavirus tests come back positive,” districts may need to adopt remote and distance learning.²³ Elsewhere, the CDC noted, “computer simulations from Europe have suggested that **school reopenings may further increase transmission risk in communities where transmission is already high.**”²⁴

Test Positivity Rates


In the absence of definitive research, one indicator that public health agencies have used to help provide governments with guidance is the **test positivity rate.**

Figure 1. Test Positivity Rates in Nevada, as of July 26, 2020



School districts around the country have started to use and interpret this positive test rate goal (specifically 5 percent) as a threshold for deciding whether it is safe to reopen schools for any level of in-person instruction. As of July 26, 2020, the test positivity rate in Nevada is 9.9 percent. Currently, only two large urban school districts in the U.S. – New York City Schools and Chicago Public Schools – have achieved low test positivity rates.²⁵

Guidance from Public Health Authorities on School Reopening Plans



As school districts begin to develop and finalize school reopening plans, several public health organizations have also released recommendations for reopening schools. The recommendations are largely uniform, and when variations emerge – as will be discussed with respect to acceptable social distancing space – it is largely a difference of form rather than substance. For example, **WHO and AAP recommend that at least three feet of distance between individuals should be observed, while CDC recommends six feet.** Also, several of the organizations balance public health considerations against education and social and emotional considerations, acknowledging the importance of school in a child’s life for developing social and interpersonal skills. Striking a balance between the benefits of in-person instruction (e.g., student learning, minimization of accessibility issues for students that require additional support, social and emotional well-being, etc.) and the potential increase in risk of exposure to the virus by returning to the classroom central to the development of reopening plans.

This section reviews the school reopening guidance from the Centers for Disease Control and Prevention (CDC), World Health Organization (WHO), and the American Academy of Pediatrics (AAP) (See Table 3, page 8). Subsequent sections will discuss how current district reopening plans are using these recommendations as guidelines for reopening. See Appendix A for the full explanation of the recommendations each public health authority is making.

Safeguards for COVID-19 Transmission

Given that both students and adults alike can contract COVID-19, a related question is how to limit the transmission of the virus. Unfortunately, many studies examine COVID-19 in clinical or hospital settings. There are few studies that address how to limit the spread of the virus in community settings. And because COVID-19 is so recent and much is still unknown, research regarding similar diseases is often referenced to inform current public health practices. For example, severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS) are also coronaviruses that are often compared to COVID-19. Because SARS was first identified in 2002 and MERS in 2012, more time has passed, allowing for research to better understand how to combat a coronavirus.²⁶

A selection of relevant studies is presented below. Fortunately, the guidance from public health agencies and the research are aligned: social distancing, face masks, and regular cleaning and disinfection are important strategies to reduce transmission of COVID-19 (and other coronaviruses).

Table 3. Summary of Guidance from three public health organizations

Guidance Regarding	Center for Disease Control and Prevention (CDC)	World Health Organization (WHO)	American Academy of Pediatrics (AAP)
Use of Masks	For in-person instruction, use of face masks for individuals over the age of two (unless there is an underlying condition that prevents this use).	Use of masks should be required. No specification on age students should have to wear masks.	Use of masks should be required. No specification on age students should have to wear masks.
Social Distancing Metric	Social distancing should be required – at least six feet of distancing should be observed between all individuals, even on buses.	Social distancing should be required – at least one meter of distance (a little over 3 feet) should be observed between all individuals.	Social distancing should be required. Districts should consider using less than six feet, as three feet may approach the benefits of six feet of space, if students are wearing face masks and asymptomatic.
Social Interactions Should Be Limited	Drop-off and pick-up times for various cohorts of students should be staggered.	Social interactions between students should be as limited as possible.	No explanation of how social interactions should be limited.
Additional Safety Precautions	Students should eat lunch in classrooms and all desks should face the same way.	No explanation of additional safety precautions.	Staff should maintain six feet of space as much as possible.
Stance on risk of in-person instruction vs. harms for students if full-time virtual learning is implemented	Full-time virtual education provides the lowest risk of transmission of COVID-19 in a school setting. Does not acknowledge challenges that are posed by school closures for students and families.	Fall reopening plans should consider the harm that might occur due to school closures (e.g. disparity in educational attainment, limited access to meals, lack of childcare).	Fall reopening plans should start with a goal of having students physically present in school, due to loss of emotional skills, meals, mental health support if they move to full-time virtual model.



Social Distancing and Exposure

As noted above, guidance related to social distancing differs between the CDC and WHO. According to the CDC, when outside of the home, individuals should “put six feet of distance between yourself and people who don’t live in your household.”²⁷ However, the WHO (as well as AAP) suggests individuals should “maintain at least one meter [slightly more than 3 feet] distance between yourself and others.”²⁸ This lack of agreement regarding social distancing guidelines has raised the questions as school districts develop reopening plans. Decreasing social distancing to three feet would allow additional students in each classroom. This is an important consideration in Nevada when preparing for the transition to in-person instruction. Since many school districts are facing teacher shortages while they consider reducing class sizes, maintaining in-person instruction could require school districts to hire additional classroom substitutes and/or stagger in-person instruction for students.

In a meta-analysis of 172 studies investigating the transmission of COVID-19, SARS, and MERS, researchers concluded that social distancing was an effective means of preventing the spread of COVID-19. Specifically, the study found **1 meter (approximately 3 feet) was effective at reducing the transmission of COVID-19, with 2 meters (approximately 6 feet) likely being even more effective.** Additionally, the study concluded that face masks provide additional safeguards against contracting the disease. However, the study concludes that maintaining social distance, as well as wearing a face mask in public, will not provide absolute protection against contracting the coronavirus.²⁹

Social distancing is only one safeguard. Preliminary research suggests that proximity to an infected person increases the likelihood of transmission, but so too is the amount of time an individual is exposed to the disease. One such study of a SARS outbreak in Canada suggested that **both the time spent in proximity of an infected person, as well as the proximity of the infected individual, predicted disease contraction.** The greatest risk was for individuals that spent at least 30 minutes with the infected individual at less than one meter (approximately three feet). Accordingly, most of the contacts that met this definition were household interactions. Underscoring the research presented in the previous section, older individuals (those 55 years of age and older) were more likely to contract SARS. Among the 3,493 cases where an individual was located in the same room as an individual infected with SARS for more than 30 minutes, while maintaining a distance of at least one meter (as would occur in a school setting with social distancing), only 18 individuals contracted the disease (0.5 percent). This is compared to 41 of the 647 cases (or 6.5 percent) that were exposed to an infected individual for greater than 30 minutes at a distance less than one meter.³⁰ In sum, the percentage of individuals that became infected with SARS after being in the same room as an individual already infected with SARS for greater than 30 minutes is significantly higher in settings where individuals did not maintain a distance of at least one meter (6.5 percent) than in settings where individuals maintained a distance of at least one meter (0.5 percent).

A similar, but broader, study of Japanese COVID-19 cases concluded that the **odds that an individual would contract the disease from**



a closed-environment (where air flow is reduced) is 18.7 times more likely than in an open-air environment.³¹ The study did not account for the distance maintained between individuals; however, this study would likely apply to schools as individuals likely would not be aware of an asymptomatic individual sitting in the same classroom. The findings of this study echo the importance of increased ventilation and appropriate cleaning methods, in addition to social distancing and hand washing, as preventative measures for school reopening plans.³²

Similarly, a study of COVID-19 transmission in health care settings suggests that many of the health care workers that tested positive for the coronavirus had prolonged contact with the patient and were present during treatments that included a nebulizer (producing aerosolized particulates in the room).³³ The results suggest that maintaining social distancing practices (of at least three feet), increasing ventilation, and limiting the amount of time individuals are in contact with one another could reduce the incidence of COVID-19.

Face Masks and Hand Washing

As schools consider reopening plans, many students, teachers, and school staff will be reliant on homemade, cloth masks and/or single-use surgical masks. Studies of other respiratory illnesses suggest the surgical and N95 masks had a similar effectiveness in preventing SARS and MERS infection.³⁴ However, there is a major caveat to these findings. Most studies analyzing the effectiveness of face coverings include only medical professionals who are trained on how to properly put on and remove a mask. If masks are worn incorrectly and not properly

disposed of after use, individuals may increase their risk of contracting COVID-19.³⁵

Studies of community mask use suggest that both surgical masks and cloth masks provide better protection than non-mask usage but the protection is not absolute.³⁶ If given the choice, surgical masks are likely to provide better protection than a cloth mask.³⁷ The effectiveness of the cloth mask is also greatly impacted by the type of cloth and number of layers of fabric it includes.³⁸ Still, **mandatory face mask policies have been estimated to decrease the daily COVID-19 growth rate** in 15 states and the District of Columbia by two percentage points after 21 days of implementation.³⁹

In another study of SARS infections, researchers analyzed various risk factors that were present in those who contracted the disease and those that did not. In analyzing community-based transmission, specifically for those cases where an individual contracted SARS but did not have a history of contact with another confirmed SARS patient, researchers found that going out to restaurants more than once a week and using public transportation increased the likelihood of contracting the disease. However, those who always wore a face mask experienced an approximate 70 percent lower risk of contracting SARS than non-mask wearers. Moreover, even those who used masks intermittently reduced their risk by 60 percent. In addition, consistent hand washing also reduced an individual's risk of contracting the disease.⁴⁰ This study suggests that increased contacts within a community increases the likelihood that an individual could contract an infectious disease – and reopening schools would qualify as increased contact. However, the study suggests that the **risk of contracting the infectious disease is**

significantly reduced if individuals always use face masks when in public and wash their hands frequently.

The research in this section suggests that the following measures, when implemented collectively, can help reduce the spread of the coronavirus: social distancing guidelines that require at least 3 feet of distance between individuals, limiting the time individuals are together; mandatory use of face masks; frequent hand washing; and regular cleaning and disinfecting of the classroom and school.

Class Size

Public health agencies have not offered specific guidance on class size. However, a summary of experiences from other countries found that many countries reduced class size (to 10-15 students) or reduced half of the capacity of classrooms. Other countries (e.g., Israel, Sweden, Taiwan, Vietnam) did not reduce class size, but instead relied on other measures to reduce transmission including closing schools and using desktop dividers.⁴¹ In the U.S., Massachusetts has limited class size to 10 students.

Experiences of Other Countries

This section summarizes the experiences of a select number of countries that reopened schools in recent months.

Australia: Schools reopened only to be closed again in a matter of weeks. In Victoria, schools reopened amidst high community infection rates. Secondary school students attended large classes (each with 20-30 students) and teachers were advised not to wear masks while teaching.

Belgium: The country will reopen in September. Students 12 years or younger will return full-time to the classroom with no social distancing guidelines. If current infection rates hold steady, students 12 and older will attend school four days a week, with an additional half-day of virtual schooling.

Denmark: Denmark, the first European country to reopen childcare centers and schools for children ages 2-12, organized students in self-contained pods (no more than 12 students). Each pod of students remained with one teacher in one classroom and ate lunch at desks in the classroom. Schools staggered the return of students, with younger students (under age 12) returning first based on their lower health risk and need for more supervision than older students. Officials remarked that there were no “negative effects from the reopening of schools.”⁴² Initially, Denmark did not have a mandatory mask order but reversed course in early July. The country initially required six feet of distance between students, but reduced the requirement at least three feet in May, except for special circumstances such as singing.

Israel: In May, Israel reopened schools with staggered schedules, mask mandates and social distancing rules. Soon thereafter, COVID-19 cases surged, and several hundred schools closed again. Analysts have posited that insufficient testing capacity and contact tracing efforts, and the inability to identify and quarantine those infected contributed to rise in COVID-19 cases.⁴³ Additionally, when schools reopened, students were organized in small groups or pods of 15 or fewer students, but soon thereafter they returned to regular class sizes.

Japan: Japan reopened schools amidst low community infection rates. In general, students attend class in person on alternate days, so that classrooms are operating at half capacity. Students follow social distancing measures even when eating lunch, and students undergo daily temperature checks. At the end of June, Japan's test positivity rate was 5.5 percent.

Norway: Norway reopened their schools in regions with low infection rates starting with younger students (ages 6-11); older students continued remote education. Schools adopted robust sanitizing procedures and limited class sizes (less than 15), keeping children in small groups at recess and putting space between desks.⁴⁴ Wearing masks has been optional.

Sweden: Sweden never closed its schools. However, students 16 years and older received full-time online instruction. Social distancing and mask wearing in schools remained optional. While COVID-19 cases among children remain low, government officials do not yet have data on "how the disease may have affected teachers, parents and other adults in schools."⁴⁵ Of the 70,000 COVID-19 cases in Sweden (as of July 21, 2020), only 1,000 (or 1.4 percent) of those involved children and young adults.

Uruguay: Uruguay, which closed its borders immediately and has maintained a low community infection rate, was one of the first countries to send its students back to school using a staged approach. In April, Uruguay reopened schools in rural areas, where the student population is small. In June, vulnerable student groups, which were struggling to access online learning, and high school seniors returned to schools, followed by all students in non-urban areas. In late

June, more than 250,000 students in urban areas returned to school with an alternating schedule of in-person and virtual instruction. Schools are closed each Wednesday for deep cleaning.

Collectively, the experience from other countries suggests that the reopening of schools has been (relatively) safer in communities with low COVID-19 transmission rates (or test positivity rates). That said, a recent summary of the research arrived at the following conclusions:

- There is a lack of scientific consensus about the impact of school closures and re-openings on community transmission of [COVID-19.]
- Most countries that have reopened schools have instituted some degree of staggering the start, stop, and break times within the school.
- Several countries have "reopened schools only for younger or older students in order to accommodate the increase in resources (classroom space, teachers, etc.) required for smaller class sizes. More countries have reopened only for younger students than have re-opened only for older students."⁴⁶

This last finding is echoed by the recent National Academies of Sciences, Medicine and Engineering report, *Reopening K-12 Schools During the COVID-19 Pandemic: Prioritizing Health, Equity, and Communities*, which provides the following recommendation: "Districts should weigh the relative health risks of reopening against the educational risks of providing no in-person instruction in Fall 2020. Given the importance of in-person interaction for learning and development, districts should prioritize reopening with an

emphasis on providing full-time, in-person instruction in grades K-5 and for students with special needs who would be best served by in-person instruction.”

Takeaways

Based on the experiences of other countries, we identify the following questions that could inform local discussions about reopening schools in Nevada, and Clark County School District specifically.

- ☑ What is the test positivity rate for COVID-19 in the district?
- ☑ Does the school district (or county) have sufficient testing capacity?
- ☑ Does the school district (or county) have sufficient contact tracing capacity?
- ☑ Does the school district (or county) have a plan should someone in the school building test positive for COVID-19?
- ☑ Will students be organized in small pods or cohorts? To what extent will these pods be self-contained during the school day?
- ☑ Does the school district have sufficient personal protective equipment (PPE) (e.g., masks) for students, staff, and teachers?

Summary of Current District Reopening Plans

School districts across the country have finalized or are in the process of finalizing plans to reopen schools this fall. The National Academies of Science, Engineering and Medicine recently released a report in which the authors conclude that research is needed in the following areas in order for school districts to make informed decisions about

school reopenings: children and transmission of COVID-19, role of reopening schools in contributing to the spread of COVID-19 in communities, role of airborne transmission of COVID-19, and the effectiveness of different mitigation strategies.⁴⁷

In the absence of sufficient peer-reviewed research, school districts must make informed decisions based on the guidelines and information put forth by the CDC, WHO, and AAP. Some school districts are considering full-time virtual instruction, others are proposing a hybrid of in-person and on-line instruction, and a few are contemplating a full-time return to in-person classrooms. Amidst these district reopening plans, President Donald Trump and U.S. Secretary of Education Betsy DeVos are urging schools to reopen for full-time instruction. In Massachusetts, the Education Commissioner has required desks to be three feet (not six feet) apart, although Boston Public Schools will adhere to the six feet guideline.⁴⁸ This section outlines current reopening plans proposed by the nation’s largest districts to situate Nevada’s districts in comparative context.

New York City Public Schools



The nation’s largest school district, New York City Public Schools, has not approved a reopening plan for the fall semester, but Mayor Bill de Blasio announced in early July that there likely will be a hybrid model of learning for the district (i.e., students will receive a combination of in-person and virtual instruction).⁴⁹ It is anticipated that students will receive in-person instruction between one to three days each week. Additionally, Governor Cuomo stated that the state could only reopen schools in September if the

regional infection rate is below 5 percent over a two-week period. Currently, none of the state's regions have an infection rate over 2 percent.⁵⁰

If schools reopen, the preliminary plan for New York City Public Schools is to mandate face masks for all individuals and to allow a maximum of 12 people in a classroom, including teachers and aides. Additionally, schools may have three different scheduling options available, based on the number of students at a school. In one option, two cohorts of students would alternate in-person attendance. The second option, for schools with larger enrollments, would have three or more cohorts of students, attending school one or two days a week. The third option, for those schools with small class sizes and large buildings, would permit students to attend school every day of the week.⁵¹

Los Angeles Unified School District



In July 2020, Los Angeles Unified School District Superintendent Austin Beutner announced that campuses will not reopen for in-person classes at the start of the fall semester. District officials had hoped to conduct a hybrid model of learning for students. However, given that local COVID-19 infection rates (test positivity rates) have reached 10 percent, Superintendent Beutner asserted that online learning is currently the safest option for students, families, and faculty.⁵² Superintendent Beutner noted that the school district does not have the funding to provide adequate health and safety procedures such as weekly COVID-19 tests or robust contact tracing.⁵³ Superintendent Beutner used the 5 percent infection rate threshold as a guideline for his decision to move online.⁵⁴ The superintendent announced

that the district will begin to offer in-person check-in and support services for small groups of students. They will eventually transition to a hybrid learning model when local infection rates have decreased and public health authorities have implemented adequate testing and contact tracing systems.⁵⁵

Chicago Public Schools



On July 23, 2020, following a five week decline in the number of COVID-19 cases, Governor J.B. Pritzker announced that schools in Illinois could reopen for in-class instruction this fall. While Chicago Public Schools has not released its school reopening plan yet, it is expected to return to in-class instruction. According to the state's guidelines, everyone over five years old is required to wear a face mask, social distancing of six feet is required for all students and adults, no more than 50 people can gather in one space, staggered arrivals will be implemented, and everyone entering school buildings will receive temperature checks.⁵⁶ Illinois' guidelines follow CDC recommendations for maintaining six feet of distance and requiring face masks for students over the age of five.⁵⁷

School Districts in Florida



Florida is home to five of the 10 largest school districts in the nation. In order of size, they are: Miami-Dade County Public Schools, Broward County Public Schools, Hillsborough County Public Schools, Orange County Public Schools, and the School District of Palm Beach County. Florida Education Commissioner Richard Corcoran ordered brick-and-mortar schools to fully reopen for the 2020-2021 school year, allowing students to return to school for the full five-day school week. The reason underlying the emergency order is to “ensure the quality and continuity of the educational

process, the comprehensive well-being of students and families and a return to Florida hitting its full economic stride.”⁵⁸ The order does not prevent districts from offering online instruction; instead, it mandates that schools must offer a full-time, in-person educational option.⁵⁹

- Miami-Dade County Public Schools Superintendent stated that if COVID-19 cases continue to increase in the community, it would not be safe to reopen schools for any form of in-person instruction. In July, Miami’s daily test positivity rate, or the percentage of tests that are positive for COVID-19, was approximately 20 percent.⁶⁰ The current reopening plan, which consists of a hybrid model (e.g., in-person and online instruction) uses guidance from the CDC.
- Broward County Public Schools does not have an official reopening plan to date, but the district plans to follow CDC guidelines in crafting its plan. At its July 22, 2020, board meeting, the superintendent stated he will recommend “100 percent” virtual education unless the community’s increasing COVID-19 rates begin to decline.⁶¹
- Hillsborough County Public Schools recently indicated they may delay the start of the school year by two weeks to provide additional time to plan how to best reopen schools.⁶²
- Orange County School District is considering an alternative approach by allowing students to enroll in their home school but participate in classes virtually, either by using a webcam in a classroom or by completing assignments independently.⁶³

- Palm Beach County School District is contemplating a delayed start to the school year. The district is also considering offering virtual-only instruction due to concerns over the current prevalence of COVID-19 in its community.⁶⁴

Houston Independent School District 

The Houston Independent School District, which released its reopening plan on July 15, 2020, will begin the school year with all students engaging in virtual education for the first six weeks of school. At that point, the district will review the data and, assuming it is safe to do so, will resume full-time, in-person instruction. Parents and students will also be provided the option of virtual instruction for the first semester or for the entire school year. When in-person classes resume, all students and staff will be required to undergo a temperature screening, and classrooms will be capped at one teacher for every ten students. Additionally, social distancing of six feet (as recommended by the CDC) will be required, as will hand washing and face masks.⁶⁵

About the Guinn Center

The Guinn Center is a 501(c)(3) nonprofit, nonpartisan, independent policy institute that seeks to advance evidence-based policy solutions for Nevada through research, public engagement, and partnerships.

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Appendix A

Centers for Disease Control and Prevention

The CDC has not taken an official position as to whether schools should reopen or not. However, it has provided considerations for schools and interim guidance that districts might consider when reopening. On its website, the CDC notes, “The more people a student or staff member interacts with, and the longer that interaction, the higher the risk of COVID-19 spread.” The CDC observes that full-time virtual education provides the lowest risk of transmission of COVID-19 in a school setting. A higher risk of transmission is possible if small classes are allowed back in schools, even if those classes are self-contained (i.e., students do not travel between classes), six feet of social distancing is observed, and supplies are not shared. The highest risk is for full-time, regular instruction with traditional class sizes. For districts that do return to a form of in-person instruction, the CDC also encourages the use of face coverings/masks for all individuals that are older than two years old and do not have an underlying condition that would prevent their use. Additionally, students are encouraged to eat lunch in their classrooms to further limit their contact with other students, desks should all face the same way, social distancing should be maintained on buses, and drop-off and pick-up times for various cohorts of students should be staggered to limit the number of contacts students have with one another. Even with these recommendations, the CDC notes they are meant to supplement, not replace, any state or local regulations that may be in effect in each jurisdiction.⁶⁶

World Health Organization

Like the CDC, guidance from the World Health Organization stresses social distancing, the use of masks, and limiting the interactions of students. However, a substantial difference between the two is with the social distancing guidelines. The World Health Organization encourages at least one meter of distance – just over three feet – instead of the six feet recommended by the CDC.

The other major difference between the CDC and WHO is that the latter acknowledges the challenges that could be posed by school closures and recommends these considerations be part of the overall discussion:

Additional factors to consider in deciding how or when to partially close or reopen schools include assessing what harm might occur due to school closure (e.g. risk of non-return to school, widening disparity in educational attainment, limited access to meals, domestic violence aggravated by economic uncertainties etc.), and the need to maintain schools at least partially open for children whose caregivers are ‘key workers’ for the country.⁶⁷

Regardless of how a jurisdiction decides to provide educational services in the fall, the World Health Organization advises for an evaluation of the effects of reopening strategies on educational objectives and learning outcomes. While this evaluation will likely only be possible after the risk of COVID-19 has been minimized, it is important to

stress that any future evaluations will need to be considered now to ensure the proper data is collected for such an evaluation (e.g., standardized and/or formative assessments, student portfolios, etc.). Any studies that are completed will assist school districts in the future if/when another public health crisis emerges that will impact how education is delivered.

American Academy of Pediatrics

The American Academy of Pediatrics (AAP) has issued a statement on “Guidance for Re-Entry”⁶⁸ as well as a subsequent joint statement with the American Federation of Teachers (AFT), the National Education Association (NEA), and the School Superintendents Association.⁶⁹

In the guidance for re-entry, the AAP “strongly advocates that all policy considerations for the coming school year should start with a goal of having students physically present in school.”⁷⁰ The organization cited the negative consequences of closing schools in the spring: lost learning, food insecurity, and the social impact of isolation.

Acknowledging that social distancing is important for any reopening plan, the AAP also suggested that districts consider social distancing options that are less than the six feet recommended by the CDC, “Evidence suggests that spacing as close as three feet may approach the benefits of six feet of space, particularly if students are wearing face coverings and are asymptomatic. Schools should weigh the benefits of strict adherence to a six-foot spacing rule between students with the potential downside if remote learning is the only alternative.”⁷¹ However, the AAP does recommend staff maintain six feet of social distance as much as possible. A subsequent section in this report considers the

research on social distancing, but research does support AAP’s claim about 1 meter (approximately 3 feet) providing protection from the disease.

In the joint statement with the AFT, NEA, and School Superintendents Association, the support for in-person returning in the fall was present but softened: “Educators and pediatricians share the goal of children returning safely to school this fall. Our organizations are committed to doing everything we can so that all students have the opportunity to safely resume in-person learning.” Citing reasons why the organizations hope to get back to school, the organizations stated similar concerns as the World Health Organization and the initial AAP statement:

We recognize that children learn best when physically present in the classroom. But children get much more than academics at school. They also learn social and emotional skills at school, get healthy meals and exercise, mental health support and other services that cannot be easily replicated online. Schools also play a critical role in addressing racial and social inequity. Our nation’s response to COVID-19 has laid bare inequities and consequences for children that must be addressed. This pandemic is especially hard on families who rely on school lunches, have children with disabilities, or lack access to Internet or health care.⁷²

However, the organizations also recognized that safely reopening schools will require significant resources and ask the federal government to cover these costs.

Finally, the organizations noted that there are different realities the various districts encounter related to COVID-19. Some school districts are located in areas that have seen recent surges in COVID-19 cases, while others have experienced relatively few cases. In acknowledging this, the organizations leave the possibility of virtual instruction – based on the guidance of local public health officials.

Local school leaders, public health experts, educators and parents must be at the center of decisions about how and when to reopen schools, taking into account the spread of COVID-19 in their communities and the capacities of school districts to adapt safety protocols to make in-person learning safe and feasible. For instance, schools in areas with high levels of COVID-19 community spread

should not be compelled to reopen against the judgment of local experts. A one-size-fits-all approach is not appropriate for return to school decisions.⁷³



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