Health Impact Review of SB 5464
Requiring the option of in-person learning unless prohibited by the governor, secretary of health, or a local health officer (2021 Legislative Session)

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Staff contact:
Cait Lang-Perez (she/her/hers)
Phone: (360) 628-7342
Email: Caitlin.Lang@sboh.wa.gov

WASHINGTON STATE BOARD OF HEALTH

HEALTH EQUITY
Governor's Interagency Council on Health Disparities

Full review

The full Health Impact Review report is available at:
https://sboh.wa.gov/Portals/7/Doc/HealthImpactReviews/HIR-2021-13-SB5464.pdf

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SB 5464, Requiring the option of in-person learning unless prohibited by the governor, secretary of health, or a local health officer (2021 Legislative Session)

Evidence indicates that SB 5464 has the potential to increase district provision and student attendance of in-person learning options, which would likely improve educational outcomes and attainment and improve health outcomes for students attending in-person instruction—specific to the COVID-19 pandemic. The impacts on equity are unclear.

BILL INFORMATION

Sponsors: Wilson, L., Braun, Brown, Dozier, Muzzall, Padden, Wagoner, and Wilson, J.

Summary of Bill:

- Restricts a school district from remaining closed for in-person learning for more than 10 consecutive scheduled school days.
- Requires the school district to offer the option of in-person learning to all students unless in-person learning is prohibited by an order, proclamation, or directive by the Governor, Secretary of Health, or a Local Health Officer.

HEALTH IMPACT REVIEW

Summary of Findings:
This Health Impact Review found the following evidence for the provisions in SB 5464:

- **Informed assumption** that requiring school districts (K-12) to offer an in-person learning option for students unless otherwise restricted would result in some number of schools complying and offering an in-person learning option for all students. This assumption is based on provisions in the bill and current law, discussions with Office of Superintendent of Public Instruction (OSPI) staff, and school reopening data during the COVID-19 pandemic.
- **Informed assumption** that school districts offering an in-person learning option for all students would result in some number of students attending in-person instruction. This assumption is based on national survey data and in-person instruction data from OSPI.
- **Strong evidence** that students attending in-person learning options will likely improve health outcomes. This discussion focuses on the current pandemic and risks specific to COVID-19.
- **A fair amount of evidence** that students attending in-person instruction would likely improve educational outcomes.
- **Very strong evidence** that improving educational outcomes would likely improve educational attainment.
- **Very strong evidence** that improving educational attainment would likely improve health outcomes.
- **Unclear evidence** of how the bill would impact educational and health inequities since Washington State is a local control state and it is unclear how requirements specified in the bill would be implemented by school districts. It is also unclear which families would choose

to have children attend in-person instruction, especially as risks may differ depending on the initial crisis prompting school closures.

Introduction and Methods

A Health Impact Review is an analysis of how a proposed legislative or budgetary change will likely impact health and health disparities in Washington State (RCW 43.20.285). For the purpose of this review 'health disparities' have been defined as differences in disease, death, and other adverse health conditions that exist between populations (RCW 43.20.270). Differences in health conditions are not intrinsic to a population; rather, inequities are related to social determinants (e.g., access to healthcare, economic stability, racism). This document provides summaries of the evidence analyzed by State Board of Health staff during the Health Impact Review of Senate Bill 5464 (SB 5464).

Staff analyzed the content of SB 5464 and created a logic model depicting possible pathways leading from the provisions of the bill to health outcomes. We consulted with experts and contacted key informants about the provisions and potential impacts of the bill. We conducted an objective review of published literature for each pathway using databases including PubMed, Google Scholar, and University of Washington Libraries. More information about key informants and detailed methods are available upon request.

The following pages provide a detailed analysis of the bill, including the logic model, summaries of evidence, and annotated references. The logic model is presented both in text and through a flowchart (Figure 1). The logic model includes information on the strength-of-evidence for each pathway. The strength-of-evidence has been defined using the following criteria:

- **Very strong evidence:** There is a very large body of robust, published evidence and some qualitative primary research with all or almost all evidence supporting the association. There is consensus between all data sources and types, indicating that the premise is well accepted by the scientific community.
- **Strong evidence:** There is a large body of published evidence and some qualitative primary research with the majority of evidence supporting the association, though some sources may have less robust study design or execution. There is consensus between data sources and types.
- **A fair amount of evidence:** There is some published evidence and some qualitative primary research with the majority of evidence supporting the association. The body of evidence may include sources with less robust design and execution and there may be some level of disagreement between data sources and types.
- **Expert opinion:** There is limited or no published evidence; however, rigorous qualitative primary research is available supporting the association, with an attempt to include viewpoints from multiple types of informants. There is consensus among the majority of informants.
- **Informed assumption:** There is limited or no published evidence; however, some qualitative primary research is available. Rigorous qualitative primary research was not possible due to time or other constraints. There is consensus among the majority of informants.

- **No association:** There is some published evidence and some qualitative primary research with the majority of evidence supporting no association or no relationship. The body of evidence may include sources with less robust design and execution and there may be some level of disagreement between data sources and types.
- **Not well researched:** There is limited or no published evidence and limited or no qualitative primary research and the body of evidence has inconsistent or mixed findings, with some supporting the association, some disagreeing, and some finding no connection. There is a lack of consensus between data sources and types.
- **Unclear:** There is a lack of consensus between data sources and types, and the directionality of the association is ambiguous due to potential unintended consequences or other variables.

This review was subject to time constraints, which influenced the scope of work for this review. The annotated references are only a representation of the evidence and provide examples of current research. In some cases, only a few review articles or meta-analyses are referenced. One article may cite or provide analysis of dozens of other articles. Therefore, the number of references included in the bibliography does not necessarily reflect the strength-of-evidence. In addition, some articles provide evidence for more than one research question, so are referenced multiple times.

Analysis of SB 5464 and the Scientific Evidence

Summary of relevant background information

- RCW 28A.150.203 defines a "school day" as each day of the school year on which pupils enrolled in the common schools of a school district are engaged in academic and career and technical instruction planned by and under the direction of the school.
- In response to the Coronavirus Disease 2019 (COVID-19) pandemic, the U.S. Secretary of Health and Human Services declared a public health emergency effective January 27, 2020.[1]
- In March 2020, many schools across the U.S. closed in response to COVID-19 and shifted to virtual educational models.[2]
- On March 13, 2020, Governor Inslee issued Proclamation 20-09, ordering the closure of all K-12 schools statewide.[3]
- On April 6, 2020 Governor Inslee issued Proclamation 20-09.1, which extended the school closure order and closed all schools (i.e., public schools, charter schools, private schools) in Washington State for the 2019-2020 school year.[4] The proclamation prohibited in-person instruction, with exceptions for students with disabilities and English Language Learners.[4] School facilities remained available for childcare, nutrition programs, and social services.[4]
- In July 2020, the State Board of Education adopted emergency rules for the 2020-2021 school year "to address activities that may be counted toward the hour requirements to accommodate distance learning necessitated by school building closures and other disruptions anticipated due to the COVID-19 crisis."[5]
- The Centers for Disease Control and Prevention (CDC) has issued guidance for school re-opening. Most recently, on March 19, 2021, CDC issued updated K-12 education guidance revising physical distancing recommendations for at least three feet between students in classrooms and clarifying when a greater distance (e.g., six feet) is recommended.[6]
- On March 25, 2021, the Washington State Department of Health (DOH) issued updated K-12 guidance aligning recommendations with CDC guidance.[7]
- On March 26, 2021, the Governor issued Emergency Proclamation 21-05.1 proclaiming "a State of Emergency exists in all counties of Washington State due to the current status of the mental health and behavioral health of many of Washington's children and youth."[8] The proclamation:
    - Directs "the plans and procedures of the Washington State Comprehensive Emergency Management Plan be implemented. State agencies and departments are directed to utilize state resources and to do everything reasonably possible to assist affected political subdivisions in an effort to respond to and recover from this mental health crisis";
    - Prohibits "all public school districts, including charter schools, in the state from failing to offer all K-12 students the opportunity to engage in both remote/on-line instruction and on-campus/-in-person instruction, otherwise known as a hybrid model of K-12 instruction";
    - Prohibits "all public school districts, including charter schools, in the state of Washington from offering or continuing to offer a remote/online instruction option without also offering an on-campus/in-person instruction option that is

consistent with [DOH] guidance […] and the Department of Labor and Industries' requirements for employee safety as dictated by the School Employer Health and Safety Requirements"; and
    - Directs the "Health Care Authority and [DOH] to immediately begin work on recommendations on how to support the behavioral health needs of our children and youth over the next 6 to 12 months and to address and triage the full spectrum of rising pediatric behavioral health needs."[8]
- Many national organizations, including the American Academy of Pediatrics (AAP), have issued statements advocating for schools to offer in-person learning for students.[9]
- In response to school closures resulting from COVID-19 and the public health emergency, the U.S. Department of Agriculture (USDA) made temporary changes to the National School Lunch and School Breakfast Programs to allow states flexibility to continue school meal service during the pandemic.[10] For example, USDA issued a waiver allowing schools participating in USDA summer meal programs to provide meals at no cost to all students during the school year.[10] Many schools in Washington State are providing free meals to all children 18 years of age or younger during school closures resulting from COVID-19.[11] The federal waiver that allows states this flexibility is set to expire on June 30, 2021 (personal communication, OSPI, February 2021).

Summary of SB 5464

- Restricts a school district from remaining closed for in-person learning for more than 10 consecutive scheduled school days.
- Requires the school district to offer the option of in-person learning to all students unless in-person learning is prohibited by an order, proclamation, or directive by the Governor, Secretary of Health, or a Local Health Officer.

Health impact of SB 5464

Evidence indicates that SB 5464 has the potential to increase district provision and student attendance of in-person learning options, which would likely improve educational outcomes and attainment and improve health outcomes for students attending in-person instruction—specific to the COVID-19 pandemic. The impacts on equity are unclear.

Pathway to health impacts

The potential pathway leading from the provisions of SB 5464 to health inequities are depicted in Figure 1. This review makes the informed assumption that requiring school districts to offer an in-person learning option for students unless otherwise restricted would result in some number of schools complying and offering an in-person learning option for all students. This assumption is based on provisions in the bill and current law, discussions with OSPI staff, and school reopening data during the COVID-19 pandemic. This review also makes the informed assumption that school districts offering an in-person learning option for all students would result in some number of students attending in-person instruction. This assumption is based on national survey data and in-person instruction data from OSPI. There is strong evidence that students attending in-person learning options will likely improve health outcomes.[2,12-17] In addition, there is a fair amount of evidence that students attending in-person learning options will likely improve educational outcomes.[18-22] The literature indicates that improved educational

outcomes are very strongly linked to increased educational attainment,[23-25] which in turn is very strongly associated with improved health.[26-38] The impact on inequities is unclear.

Scope

Due to capacity, for this review, we focused on the most direct connections between the provisions of the bill and health inequities and focused on the potential impacts on students. Additionally, this review focused on the current pandemic and risks specific to COVID-19. We did not evaluate potential impacts related to:

- Enrollment, which drives school funding. In Washington State, overall enrollment is down, and enrollment decreases are particularly large for those in early primary grades (personal communication, OSPI, April 2021). For example, enrollment in kindergarten has decreased by approximately 13% (personal communication, OSPI, April 2021). It is unclear whether the decrease is the result of families choosing to homeschool their children, to enroll in private school, to keep them an extra year in a preschool program, or to keep them at home another year (personal communication, OSPI, April 2021). As kindergarten is not compulsory in Washington, parents can choose to have their child enter 1st grade when age eligible. OSPI anticipates a potentially large bubble of children entering primary grades when the pandemic is over (personal communication, OSPI, April 2021). It is unclear how these changes will impact student readiness for primary grades and affect longer-term educational outcomes.
- Students' parents, families, and communities. A recent guidance document from the AAP stated that, "opening schools generally does not significantly increase community transmission [of COVID-19], particularly when guidance outlined by the World Health Organization (WHO), United Nations Children's Fund (UNICEF), and [CDC] is followed."[9] A survey conducted by CDC evaluating the impact of mode of school instruction and child and parent experiences and well-being found that parents of children receiving virtual-only instruction were more likely to report loss of work (42.7% versus 30.6%), concern about job stability (26.6% versus 15.2%), childcare challenges (13.5% versus 6.8%), conflict between work and childcare (14.6% versus 8.3%), emotional distress (54.0% versus 38.4%), and difficulty sleeping (21.6% versus 12.9%) compared to parents of children receiving in-person learning.[2] These factors may have long-term health implications for parents and children.[2] CDC concluded that, "these findings highlight the importance of in-person learning for children's physical and mental well-being and for parent's emotional well-being."[2]
- School teaching and administrative staff and their families. There were approximately 68,000 classroom teachers in Washington State during the 2020-2021 school year.[39] A report by the National Academies of Science, Engineering, and Medicine stated that, nationally, "a significant portion of school staff are in high-risk age groups or are hesitant to return to in-person schooling because of health risks."[14]

Magnitude of impact

The CDC analyzed data from the COVID Experiences nationwide survey, which was a nationally-representative survey conducted during Fall 2020 of parents and legal guardians of children aged 5 through 12 years attending public or private school.[2] Their analysis found that 45.7% of parents and legal guardians reported their child received virtual instruction, 30.9%

received in-person instruction, and 23.4% received a combination of virtual and in-person instruction.[2]

OSPI's Washington State Report Card showed that 1,094,330 K-12 students were enrolled in Washington State for the 2020-2021 school year.[39] In January 2021, OPSI began reporting weekly school reopening data. For the week of January 18, 2021, 18.6% of all students received in-person instruction on an average day and 22.2% of all students received in-person instruction at some point during the school week.[40] The percentage of students receiving in person instruction has increased each week. For the week of March 29, 2021 (the most current data available), OSPI reported that 46% of all students received in-person instruction on an average day and 54% of students received in-person instruction at some point during the school week.[40] Younger students were more likely to have received in-person instruction. Specifically, 62.8% of elementary school students (grades K-5); 49.1% of middle school students (grades 6-8); and 44.8% of high school students (grades 9-12) received in-person instruction at some point during the school week.[40]

Logic Model

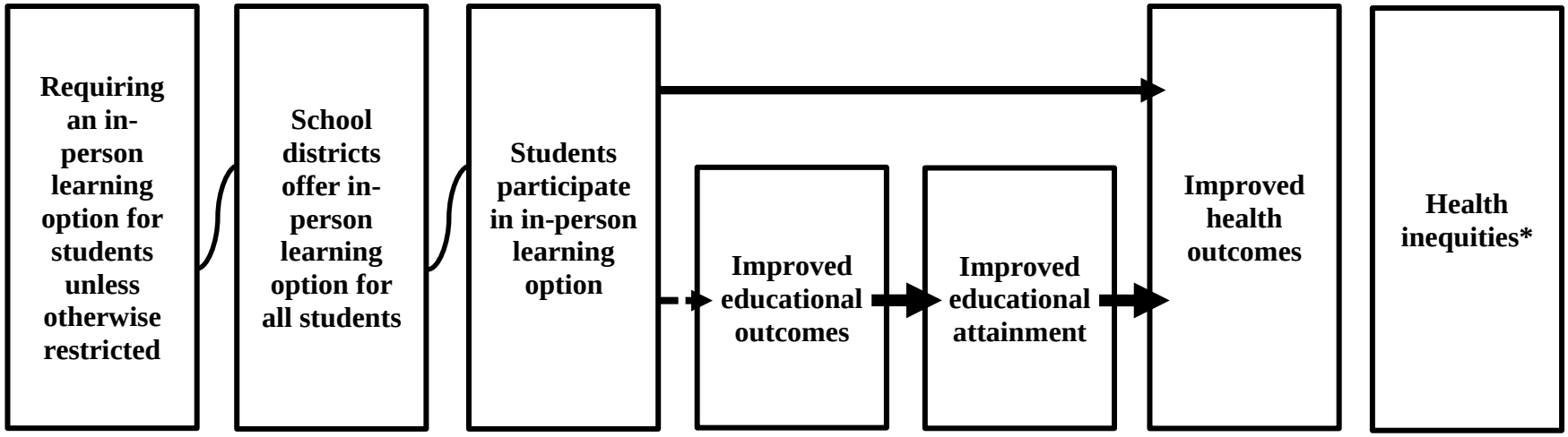

Figure 1:

Requiring the option of in-person learning unless prohibited by the governor, secretary of health, or a local health officer.

SB 5464

Summaries of Findings

Will requiring school districts to offer an in-person learning option for students unless otherwise restricted result in school districts complying and offering an in-person learning option for all students?

This review makes the informed assumption that requiring school districts to offer an in-person learning option for students unless otherwise restricted would result in some number of schools complying and offering an in-person learning option for all students. This assumption is based on provisions in the bill and current law, discussions with Office of Superintendent of Public Instruction (OSPI) staff, and school reopening data during the COVID-19 pandemic.

SB 5464 would amend RCW 28A.335.030 (Emergency school closures exempt from RCW 28A.335.020) so that a school district could not remain closed for in-person learning for more than 10 consecutive scheduled school days. Additionally, the bill would require each school district to offer the option of in-person learning to all students unless in-person learning is prohibited by an order, proclamation, or directive by the Governor, Secretary of Health, or a Local Health Officer. Provisions of SB 5464 would apply to public schools, charter schools (Chapter 28A.710 RCW), and state-tribal education compact schools (Chapter 28A.715 RCW).

Under current law (RCW 28A.150.220), school districts must provide 180-days of instruction and offer at least an average of 1,080 hours of instructional hours in grades 9-12 and at least 1,000 hours in grades 1 through 8. A school district may apply to the State Board of Education (SBE) for a waiver from basic education program requirements (RCW 28A.150.200 through 28A.150.220).[41] Waivers may be granted on the basis that they "are necessary to implement successfully a local plan to provide for all students in the district an effective education system that is designed to enhance the educational program for each student."[41] If a school district does not seek a waiver to provide fewer than 180-days of instruction, then OSPI can withhold apportionment funding (personal communication, OSPI, April 2021).

Washington is a local control state, meaning local school district boards are responsible for determining how they implement state requirements. As SB 5464 does not include language directing OSPI to enforce the provisions outlined in the bill, under current law, the agency would not have the statutory authority to enforce proposed requirements through apportionment funding (personal communication, OSPI, April 2021). If passed, school districts that did not comply with the requirements outlined in the bill would not face any action from OSPI (personal communication, OSPI, April 2021).

In response to the COVID-19 pandemic, on March 13, 2020, the Governor issued Proclamation 20-09, ordering the closure of all K-12 schools statewide.[3] On April 6, 2020, the Governor issued Proclamation 20-09.1, extending the school closure order for all schools in Washington State through the end of the 2019-2020 academic year.[4] The proclamation prohibited in-person instruction, with exceptions for students with disabilities and English Language Learners.[4] In July 2020, SBE adopted emergency rules for the 2020-2021 school year "to address activities that may be counted toward the [instructional] hour requirements to accommodate distance learning necessitated by school building closures and other disruptions anticipated due to the COVID-19 crisis."[5] The emergency rules state, "for the 2020-2021 school year, 'instructional

hours' as defined in RCW 28A.150.205 are not limited to in-person educational services. Local education agencies may count […] those hours of educational activity planned by and under the direction of school district staff that are delivered through learning modalities which may include but are not limited to distance learning, hybrid classrooms, rotating schedules, or other methods that allow for delivery of basic education services during the COVID-19 [pandemic]."[42] The emergency rules are to be revisited at the SBE's July 2021 meeting.[42]

The 2020-2021 academic year began with schools using a variety of learning models. Some school districts, primarily in Eastern Washington, decided to reopen in-person learning (personal communication, OSPI, April 2021). However, most schools opted for some form of distanced learning (e.g., virtual). In January 2021, OSPI began formally tracking public school district, charter school, and state-tribal education compact school reopenings using weekly surveys (personal communication, OSPI, April 2021). In February 2021, the Legislature passed Engrossed Substitute House Bill 1368 (Chapter 3, Laws of 2021), which directed school districts, charter schools, and state-tribal education compact schools to review and update school reopening plans adopted for the 2020-21 academic year and submit updated plans to OSPI by March 1, 2021.[43]

For the week of March 29, 2021 (the most recent data available), approximately 91% of districts surveyed provided self-reported data.[40] The most commonly reported model for delivering instruction at every grade band—elementary school (K-5), middle school (6-8), and high school (9-12)—was partial in-person learning for all students.[40] This model provides some level of in-person instruction for every student, but it may not take place every day.[40] It may include a hybrid structure, and a remote option may be available for families opting out of in-person instruction. Full remote learning was the least commonly reported learning model among all grade bands (range: 1-7 districts).[40] Seventy-seven elementary school districts, with a total of 22,207 enrolled students, reported using a typical/traditional 5 days a week in-person learning model.[40] Just 2,537 enrolled middle school students and 3,344 enrolled high school students reportedly had access to typical/traditional in-person learning (i.e., 5 days per week).[40]

On March 26, 2021, the Governor issued Emergency Proclamation 21-05.1, which requires all school districts to offer at least 30% of average weekly instructional hours as on-campus, in-person instruction for all K-12 students who wish to attend in-person by April 19, 2021.[8] Additionally, school districts must offer at least two days (which may be partial days) of on-campus, in-person instruction per week and continue to work to exceed the initial 30% minimum in-person instructional hours.[8] Since this proclamation is not yet effective, it is unclear how school reopening data may change as a result of the proclamation. However, Since OSPI began tracking this information in January 2021, the percentage of students attending in-person instruction on an average day and receiving in-person instruction at some point during the school week has increased each week. Given the trend toward reopening and the Governor's proclamation, it seems likely that more districts will offer in-person learning options moving forward unless it is necessary to reclose schools to prevent the transmission of COVID-19.

While we do not know whether all school districts would comply, we made the informed assumption that requiring school districts to offer an in-person learning option for students unless otherwise restricted would result in some number of schools complying and offering an in-

person learning option for all students. This assumption is based on the evidence that some schools in Washington began offering in-person options to all students prior to the Governor issuing Emergency Proclamation 21-05.1.

Will offering an in-person learning option for all students result in some number of students attending in-person instruction?

This review makes the informed assumption that if Washington school districts offer an in-person learning option for all students then some number of students would attend in-person instruction. This informed assumption is based on information from national polls and Washington-specific in-person instruction data from OSPI.

National evidence indicates that most, but not all, families with school aged children support a return to in-person learning.[44-46] For example, a nationally-representative poll of 1,002 U.S. parents with at least one child aged 5 to 18 years found that 68% of those surveyed supported a return to in-person learning as soon as teachers are vaccinated.[44,47] Meanwhile, 29% of parents surveyed reported they were likely to continue with remote learning indefinitely.[47] Another random poll of 860 parents of children in grades K-12 found that 79% support in-person schooling.[45] Support for in-school learning was slightly lower (72%) among respondents living in the West Region.[45]

In Fall 2020, the RAND Corporation conducted a survey of the new American School District Panel.[46] Of the 379 public school districts or charter management organizations serving K-12 students participating in the panel, 84% completed the Fall COVID-19 Survey.[46] Results showed "[o]ne in five districts were considering, planning to adopt, or had already adopted a virtual school or fully online option, while about one in ten have adopted or are planning to adopt a blended or hybrid form of instruction."[46] Some district leaders cited parent and student demand as reasons for potentially continuing opportunities for remote instruction beyond the COVID-19 pandemic.[46]

In Washington State, results of OSPI's March 29, 2021 school district reopening survey showed 46% of students attended in-person instruction on an average day.[40] The proportion of students who attended in-person instruction on an average day varied by grade level: 52.6% of elementary students, 34.6% of middle school students, and 30.4% of high school students.[40] Responsive districts also reported that more than half of all students (54%) received in-person instruction at any point during the school week (62.8% of elementary, 49.1% of middle, and 44.8% of high school students).[40]

Therefore, we made the informed assumption that school districts offering an in-person learning option for all K-12 students would result in some number of students attending in-person instruction. Families' decisions to have children return to in-person instruction would likely depend on the on-going risks presented by the emergency (national disaster, disease outbreak, etc.) which prompted initial school closures. Evidence from the COVID-19 pandemic indicates that some families may choose in-person learning options when they become available while others may prefer to wait longer before sending children back to in-person classes or continue virtual or homeschool options.

Will students attending in-person learning options improve health outcomes?
There is strong evidence that students attending in-person learning options will likely improve health outcomes. This discussion focuses on the current pandemic and risks specific to COVID-19. To date, children under 18 years of age have been found to have low risk of serious, long-term consequences or death from COVID-19.[14,48] However, some children that have had COVID-19 have been diagnosed with Multisystem Inflammatory Syndrome in Children (MIS-C), which causes inflammation in various part of the body and can be serious or deadly, though most children have recovered with medical care.[48] According to data from CDC, children under the age of 18 years account for approximately 12% of COVID-19 cases and less than 1% of deaths.[49] Less is known about how easily children contract and transmit COVID-19.[14] Since SB 5464's requirement of an in-person learning option would apply in instances of other local, state, national, or global crises (natural disasters, disease outbreaks, etc.) in which the Governor, Secretary of Health, or Local Health Officer has either not restricted in-person learning or after such an order has expired, risks to student health may differ under other circumstances.

A consensus report from the National Academies of Science, Engineering, and Medicine on reopening K-12 schools during the COVID-19 pandemic stated that, "[school] [d]istricts should weigh the relative health risks of reopening against the educational risks of providing no in-person instruction…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."[14] Additionally, "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."[14] A recent guidance document from the American Academy of Pediatrics (AAP) stated that, "opening schools generally does not significantly increase community transmission [of COVID-19], particularly when guidance outlined by the World Health Organization (WHO), United Nations Children's Fund (UNICEF), and [CDC] is followed."[9] Lastly, a systematic review of 16 studies evaluating the effectiveness of closing schools to control coronaviruses (i.e., SARS; COVID-19; other coronaviruses) found "scarce data relating to the effectiveness of closing schools to control COVID-19" and concluded that school closures may be more effective when transmission is higher among children.[15]

Research has shown that "schools are also an essential source of nonacademic supports in the way of health and mental health services, food assistance, obesity prevention, and intervention in cases of homelessness and maltreatment."[16] Researchers have noted that keeping schools closed may pose other health risks to students, including to physical health, behavioral and mental health, and social emotional health.[14]

Physical
A systematic review of literature evaluating the impact of epidemics (e.g., COVID-19, Ebola, HIV, flu) on the general, developmental, and mental health of children and adolescents under 18 years of age found that social restrictions, shutdowns, and school closures contribute to worse physical health outcomes, including non-communicable diseases, reduced physical activity, sleep difficulties, excessive screen use, and unhealthy diet.[15]

For example, a survey conducted by CDC evaluating the impact of mode of school instruction and child and parent experiences and well-being found that children that received virtual instruction were significantly more likely to report decreased physical activity compared to children that received in-person instruction (62.9% versus 30.3%) as well as decreased time spent outside (58.0% versus 27.4%).[2] CDC concluded that these findings suggest that virtual instruction might increase risks related to some health behaviors, like physical activity, which also supports child and parental physical, mental, and emotional health.[2]

School closures may also put students at risk of unhealthy weight gain and food insecurity.[16] Evidence has shown that families have struggled to access healthy food during the COVID-19 pandemic.[16] In response to school closures resulting from COVID-19, the U.S. Department of Agriculture (USDA) made temporary changes to the National School Lunch and School Breakfast Programs to allow states flexibility to continue school meal service during the pandemic.[10] OSPI's 2020-2021 Washington State Report Card indicated that 43.3% (473,797) of all students in Washington State were eligible to receive free or reduced-price meals.[39] However, many Washington State schools have implemented USDA waivers and are providing free meals to all children 18 years of age or younger during school closures resulting from COVID-19.[11] While these actions, "may help to mitigate the effects of food insecurity on children during the period of school closure…they are unlikely to reach everyone in need."[16]

Behavioral and mental health

A systematic review of literature evaluating the impact of epidemics on children and adolescents under 18 years of age found that social restrictions, shutdowns, and school closures contribute to acute stress disorder, post-traumatic stress, anxiety, and depression as well as risk of development delays, cognitive impairment, and substance use in children.[15] For example, one study found that stress levels were four times higher for children who have been in quarantine compared to children in normal routines.[15] Another systematic review found that during and after pandemics, children and adolescents experienced stress, anxiety, depression, disturbances in sleep and appetite, impaired social interactions, and social and risky behavioral problems (e.g., substance use, suicide, relationship problems, academic issues, and absenteeism from work).[17] Moreover, "it has been indicated that compared to adults, [the COVID-19] pandemic may continue to have increased long term adverse consequences on children's and adolescents' mental health."[17]

A CDC survey found that children receiving virtual instruction were significantly more likely to report worse mental and emotional health compared to children receiving in-person learning (24.9% versus 15.9%).[2] National data also suggested that the COVID-19 pandemic has had negative impacts on children's mental health.[13] Since the start of the pandemic, emergency department visits, including for children, have decreased.[13] A recent report from CDC found that, while the overall number of children's mental health-related emergency department visits decreased, "the proportion of mental health-related [emergency department] visits [among children] increased sharply beginning in mid-March 2020…and continued into October…with increases of 24% among children aged 5-11 years and 31% among adolescents aged 12-17 years, compared with the same period in 2019."[13] The report concluded that the increase in proportion of visits may be due to a number of factors, including stress related to the pandemic, anxiety

about the illness, social isolation and interrupted connectedness to school, or reduced or modified access to mental health services (e.g., through schools).[13]

The Washington Chapter of the American Academy of Pediatrics (WCAAP) reports pediatricians have seen a significant increase in youth with eating disorders, anxiety, and depression with suicidal thoughts or self-harm behaviors since school closures were implemented (unpublished data, WCAAP, April 2021). Physicians and families report long wait times and limited access to mental health services (personal communications, April 2021). Moreover, "a significant number of previously stable youth have experienced now-onset or exacerbated eating disorders, depression, or anxiety, with some requiring increased use of medications, hospitalizations, or other higher levels of care."[8] Sacred Heart Children's Hospital in Spokane, Seattle Children's Hospital, Swedish Medical Center, Mary Bridge Children's Hospital, and the University of Washington Medicine have all reported substantial increases in pediatric patients presenting for behavioral health reasons and/or suicidal ideation or attempt (unpublished data, WCAAP, April 2021).

School closures have also disrupted school-based health and mental health care, services, and supports as well as access to school nurses, psychologists, counselors, and social workers.[16] Additionally, school personnel are the primary reporting source of suspected child maltreatment, having submitted more than 20% of approximately 4.3 million nationwide reports in 2018.[12] Researchers assessed the impact of COVID-19 school closures on child maltreatment reporting in Florida. Using publicly available county-level data, researchers estimated the number of allegations reported in March and April 2020 following school closures related to COVID-19 were 27% lower than would be expected otherwise.[12] If the rate of substantiated maltreatment allegations made by school personnel remained relatively constant (i.e., 20-22% of all maltreatment allegations in Florida and nationally), then "figures suggest that, nationally, roughly 40,000 additional instances of child maltreatment would have been confirmed were it not for school closures."[12] Previous research shows that children associated with maltreatment investigations experience significantly worse mental health.[12]

Researchers have also suggested that circumstances of the COVID-19 pandemic are recognized as adverse childhood experiences (ACEs) and may negatively impact children's well-being.[15] They stated, "restrictive social and economic reconfigurations, the fear of contagion, illness caused by COVID-19, isolated family life, school closures, the lack of support networks for other adults, the loss of loved ones, the difficulty of combining working from home with full-time childcare, financial challenges, increased exposure to pre-existing vulnerabilities (such as domestic violence, drug use, and mental illness in family members) can result in toxic stress [for the child]" and contribute to ACEs and overall children's health.[15]

Social Emotional

Children also experience social and emotional benefits from in-person learning.[14] The CDC survey showed that children receiving virtual instruction were more likely to report decreased time spent in-person with friends (86.2% versus 69.5%) and decreased time spent virtually with friends (24.3% versus 12.6%), compared to children that received in-person instruction.[2]

Moreover, research has also suggested that pandemic related social restrictions, "where play and leisure activities are only possible within the home environment; where people wear masks and the learning of facial expressions, communication, and language is restricted; and where demonstrating affection is discouraged by many- there is a tendency toward limitations in the formation of certain areas of the brain, including the social brain, with consequent impairments in the acquisition of cognitive, behavioral, social, and communication skills."[15]

Overall, there is strong evidence that school closures and lack of access to in-person learning options negatively impact physical, mental and behavioral, and social emotional health for students. Therefore, SB 5464 will likely improve health outcomes for students attending an in-person learning option.

Will students attending in-person learning options improve educational outcomes?
There is a fair amount of evidence that students attending in-person learning options will likely improve educational outcomes. A nationally-representative survey from July 2020 with 858 parents with children in grades K-12 found that 89.4% of parents were concerned that the quality of their child's education was negatively impacted by the COVID-19 pandemic.[50] While many school districts did not collect academic outcome data for the 2019-2020 school year due to the COVID-19 pandemic,[18] there is evidence showing that school closures resulting from the COVID-19 pandemic have impacted absenteeism, unfinished learning, and completion, and may affect drop-out rates.

Absenteeism
It is well-documented that absenteeism negatively impacts educational outcomes.[18] Data have shown that being absent for 10 days reduces test scores by about a 3% standard deviation (SD) in English language arts and 6% SD in math for elementary school students.[18] Previous research has also shown that absenteeism can have larger impacts for higher grade levels. For example, among high school students, missing 10 math classes reduced test scores by about 7% SD.[18] Additionally, "the detrimental effects of absences in one school year can persist into subsequent grades, suggesting that absences today can have lasting consequences."[18] Chronic absenteeism has been defined in the literature as missing 18 days of school or more, and available evidence from the COVID-19 pandemic suggests that some students may have been absent for long periods (e.g., 50 days), "putting them at the far end of the normal absenteeism spectrum."[18] In Washington State, OSPI reported that student absences increased by 60% for middle school students in January 2021 compared to January 2020.[8]

Many school districts did not collect academic outcome data for the 2019-2020 school year due to the COVID-19 pandemic.[18] OSPI has noted that student assessment data (e.g., student growth, daily attendance, grade readiness) are not available for the 2019-2020 school year.[39] To mitigate these data gaps, one study used data from the 2014-2015 through the 2017-2018 school years from the six largest school districts in California to estimate the impact of absenteeism in grades K-12 on academic outcomes and social emotional outcomes (i.e., self-management, growth mindset, self-efficacy, and social awareness).[18] They found that students in K-12 were absent an average of 7.4 days per school year.[18] Absenteeism rates were higher for students in kindergarten and high school, as well as for students with disabilities (10.3 days); students who are Black (9.6 days); students experiencing homelessness or foster system involvement (9.5 days); and English

Language Learners (8.5 days).[18] They found that, for students in grades 3-8, missing 10 school days resulted in a 5% SD decrease in English language arts and a 8% SD decrease for math.[18] Results showed academic outcomes were most impacted by absenteeism for middle school students.[18] Overall, the authors concluded that, "taken together with evidence that significant numbers of students were absent from virtual school opportunities for longer periods than normal during the COVID-19 pandemic and that absenteeism was highest among students of color and disadvantaged groups, our results suggest that school disruptions brought on by the pandemic will negatively affect both the academic and social-emotional development of students, particularly for students in certain grades [(i.e., middle school students)] and vulnerable subgroups [(i.e., students of color, students eligible for free or reduced price lunch, students with disabilities, students experiencing homelessness, students in the foster care system)]."[18]

Unfinished learning[A]

Evidence indicates that "high-quality remote-learning programs are typically the result of careful planning and deliberate approaches—which were not typical of the COVID-19 transition."[20] An analysis of the potential impact of school closures on high school student learning created statistical models based on academic studies of the effectiveness of remote learning relative to traditional, in-person classroom instruction for students.[20] They considered varying learning quality (i.e., average quality remote learning, lower-quality remote learning, and no instruction) and three epidemiological scenarios (i.e., 'virus contained' and in-classroom instruction resumed in Fall 2020; 'virus resurgence' and schools closed or used part-time schedules through January 2021; and 'pandemic escalation' and schools remained remote throughout the 2020-2021 academic year).[20] Under scenario 2 (in-class learning in January 2021) the model estimated high school students experiencing average quality remote learning may have 3 to 4 months of unfinished learning, while those experiencing low-quality remote learning may have 7 to 11 months of unfinished learning, and those experiencing no instruction may have 12 to 14 months of unfinished learning.[20]

While many school districts did not collect academic outcome data for the 2019-2020 school year, some schools restarted testing in Fall 2020 using both in-person and virtual testing models.[19] One study evaluated how students performed in Fall 2020 MAP Growth reading and math testing results compared to 2019 results for students in grades 3-8 from 8,000 schools.[19] They found that students in grades 3-8 performed similarly in reading in Fall 2020 compared to Fall 2019.[19] However, "the math achievement of students in 2020 was about 5 to 10 percentile points lower compared to same-grade students the prior year."[19] They also evaluated whether students made learning gains since schools physically closed and concluded that, "in almost all grades, the majority of students made some learning gains in both reading and math since the COVID-19 pandemic started, though gains were smaller in math in 2020 relative to the gains students [made in 2019]."[19]

Another study analyzed grade-level placement results from students in winter 2020-2021 compared to the three most recent school years (2017-2018; 2018-2019; and 2019-2020).[21] The

[A] As the COVID-19 pandemic prompted school closures and learning interruptions, this report follows the example of the Curriculum Associates recognizing "teaching and learning remains unfinished rather than lost." [21] Therefore, "the term *unfinished teaching and learning* or *unfinished learning*" is used to describe "where students are not yet prepared for grade-level work" rather than learning loss.[21]

final analytic sample consisted of nearly 1.2 million students in grades 1-8 who completed the Reading Diagnostic in school and nearly 1.3 million students grades 1-8 who completed the Mathematics Diagnostic.[21] Results suggest "the challenges of addressing unfinished learning will be persistent and significant."[21] Specifically, "unfinished learning in reading [was] greater for students in Grades 1-7, particularly in early elementary grades."[21] The percentage of students who were ready for grade-level work decreased 10% for Grade 1, 10% for Grade 2, and 6% for Grade 3 relative to historical averages.[21] Additionally, "the percentage of students who are underprepared for grade-level work […] increased during the 2020-2021 school year relative to the historical average for students in Grades 1-7, while Grade 8 remains flat."[21] Assessment results indicate there was a greater amount of unfinished learning in mathematics for students in all grades, particularly elementary grades.[21] For example, the percentage of Grade 4 students who were ready for grade-level work decreased 16% compared to historical averages.[21] Moreover, "the percentage of students who [were] underprepared for grade-level work […] increased during the 2020–2021 school year relative to the historical average for students across all grades. Grades 2–6 show the greatest increases in unfinished learning [with a decrease of 6-7 percentage points for each grade]."[21] Researchers noted that it was "too early to tell if students are catching up from starting behind in the fall."[21]

Completion and drop-out

Lastly, OSPI reported that 25% of all high school students did not receive credit in at least one course during the 2020-2021 academic year, equating to a 42% increase from the 2019-2020 school year.[22] In response to the significant learning disruptions caused by the COVID-19 pandemic, House Bills 1121 and 1131 (Laws of 2021) authorized the SBE to adopt rules to implement an emergency waiver program to authorize school districts and private schools to waive certain graduation requirements.[51] In March 2021, SBE adopted emergency rules for an emergency waiver programs for students in the graduating Classes of 2020 and 2021.[51]

For students earlier in their high school education, evidence indicates that substantial disruptions in learning may affect future drop-out. For example, students who are chronically absent are at greater risk of "falling behind in school, having lower grades and test scores, exhibiting behavioral issues, and, ultimately, dropping out."[52] Based on data of the effects extended school absences, online-only instruction, and natural disasters have on drop-out rates, one analysis estimated the potential impact of COVID-19 related school closures on drop-out rates.[20] The model estimated an additional 2% to 9% of high school students could drop-out due to pandemic-related school closures.[20]

Therefore, despite limited academic outcome data for the 2019-2020 school year, there is a fair amount of evidence that students attending in-person learning options would likely improve educational outcomes.

Will improving educational outcomes improve educational attainment?

There is very strong evidence that improved educational outcomes are associated with higher educational attainment.[23-25,53] For example, one study found that low grades during primary school were predictive of not having completed a secondary education by age 20 or 21 years.[25] These links are well documented and because this connection is widely accepted, less time was dedicated to researching this relationship. In addition, several measures of educational outcomes

are innately indicative of education attainment (e.g., specific grades are required as a prerequisite for high school graduation—one measure of educational attainment) further supporting the strength-of-evidence for this relationship.

Of note, initial evidence indicates that the COVID-19 pandemic may affect students' pursuit of postsecondary education. According to the National Student Clearinghouse, postsecondary enrollment in Washington State decreased by 13% in fall 2020 compared to fall 2019.[22] As of the end of March 2021, 39% of Washington's high school seniors had completed the Free Application for Federal Student Aid (FAFSA) representing a 5% decrease compared to completion rates in March 2020.[22] Similarly, "[n]ationally, FAFSA completion is 9 percent lower than it was at the same time [in 2020], and the decline is even steeper for Title I schools (down 12 percent) and schools with a higher concentration of students of color (down 15 percent)."[22]

Therefore, based on the literature and specific evidence from the COVID-19 pandemic, there is very strong evidence that improved educational outcomes will likely improve educational attainment.

Will improving educational attainment improve health?
There is very strong evidence that higher educational attainment is associated with better health outcomes. Data collected nationally and in Washington State indicate a correlation between higher educational attainment and positive health outcomes such as decreased rates of diabetes, oral health problems, tobacco use, inactivity, obesity, depression, and coronary heart disease. The correlation between health and education is observed even after controlling for income, which can also serve as a mediating factor.[26-38] Therefore, there is general consensus that improving educational attainment would likely improve health outcomes, and less time was dedicated to researching this relationship.

Will improved health outcomes decrease health inequities?
It is unclear how SB 5464 would impact educational and health inequities since Washington State is a local control state and it is unclear how requirements specified in the bill would be implemented by school districts. It is also unclear which families would choose to have children attend in-person instruction, especially as risks may differ depending on the initial crisis prompting school closures. The following discussion focuses on the current pandemic and risks specific to COVID-19.

The National Academies of Science, Engineering, and Medicine stated that, "issues of equity are among the chief challenges facing stakeholders as they decide whether and how to reopen schools…there is no question that the shuttering of school buildings—and the consequent reliance on remote learning strategies—has meant that students are experiencing even more profound educational inequity than was the case prior to COVID-19."[14] The report acknowledged the intersectionality of inequities in the education system, inequities in health outcomes, and inequities in social and economic determinants of health that have been exacerbated by the COVID-19 pandemic.[14] For example, communities that are at higher risk for COVID-19 disease, hospitalization, and death (i.e. communities of color) are also more likely to live in communities with inadequately resourced schools.[14] The National Academies report

stated that health inequities "arise from social, economic, environmental, and structural disparities that contribute to intergroup differences in health outcomes across different communities. The root causes of health inequities include the forces and structures that organize the distribution of power and resources differentially depending on race, gender, class, and other dimensions of individual and group identity."[14]

Students that experience inequities by socioeconomic status, race/ethnicity, and geography are more likely to be impacted by lack of access to in-person education and to experience health inequities.

Inequities by socioeconomic status

University of Washington Bothell's Center on Reinventing Public Education (CRPE) in collaboration with the RAND Corporation is conducting the American School District Panel project.[54] As part of this work, CRPE conducts surveys with a nationally-representative sample of 477 school districts across the U.S. "to capture a national portrait of how school districts are responding to the COVID-19 pandemic on an ongoing basis."[54] The CRPE survey found that students in districts with the highest concentrations of students living in poverty were less likely to have access to in-person learning.[54] Data from August 2020 found that 41% of districts in the highest poverty quartile planned to offer remote-only instruction, compared to 24% in the lowest poverty quartile.[54] Additionally, "[districts with the highest concentrations of students living in poverty] were much less likely to plan for logistically complex and likely more expensive hybrid learning."[54]

American Community Survey data showed that, in 2018, 26% of children aged 3 through 18 years living in families with low-incomes did not have access to the Internet or only had access through a smartphone, compared to 2% of families with high-incomes.[14] Similarly, "students in lower [socioeconomic status (SES)] groups tend to have less access to the Internet and mobile devices, and therefore, in the case of mandatory online learning, education."[55] In 2019, the Pew Research Center reported that 95% of adolescents had access to a smartphone or computer.[55] However, only 75% of families with lower incomes owned a computer.[55] Moreover, 15% of households with children do not have access to high speed Internet and need to rely on other sources of access (e.g., smartphone hot spots, public Wi-Fi, or neighbors).[55] Lack of access to Internet is more prevalent among low-income, Hispanic and Black families.[55] Additionally, "[e]ven in homes with computers, students may be unable to access them consistently," as one computer may be shared among several children and adults, particularly in families with lower incomes.[55] As such, "[students with lower incomes] are less likely to have access to high-quality remote learning or to a conducive learning environment, such as a quiet space with minimal distractions, devices they do not need to share, high-speed internet, and parental academic supervision."[20]

Results of four linear regression models "demonstrated that students in high-needs districts were significantly more likely to be reported as [not completing] their assignments, while grade level was not a significant predictor."[55] Similarly, data suggest that 60% of low-income students are regularly logging into online instruction, compared to 90% of high-income students.[20] Another analysis found that students from low-income families were significantly more likely that those

from high-income families to receive no remote/online learning during the 2019-2020 academic year.[56]

Inequities by race/ethnicity

CDC analyzed data from a nationally-representative, online survey conducted from July 8-12, 2020 with 858 parents who had children in grades K-12.[50] The intent of the survey was to assess parental attitudes and concerns regarding school reopenings by race/ethnicity.[50] CDC found that white parents were more likely than parents of color to support returning to in-person instruction.[50] Specifically, 62.3% of white parents strongly or somewhat agreed that schools should re-open in Fall 2020 compared to 50.2% of Hispanic parents and 46% of Black parents.[50] Similarly, 67.6% of white parents agreed that "the overall experience of being in school is more important for students, despite ongoing COVID-19 concerns" compared to 53.9% of Hispanic parents and 53.4% parents of other racial/ethnic groups.[50]

In a nationally-representative survey of parents/legal guardians of children aged 5 through 12 years attending public or private schools, CDC found that parents of color were more likely to report that their child was receiving virtual-only instruction.[2] Specifically, 65.9% of Hispanic parents, 64.0% of other/multiracial parents, and 54% of Black parents reported virtual instruction compared to 31.9% of white parents.[2] However, data from the 2018 American Community Survey showed that communities of color were more likely to lack access to the Internet. For example, 30% of American Indian/Alaskan Native families did not have access to the Internet or only had access through a smartphone; 24% of Pacific Islander families lacked access; 21% of Black families lacked access; and 19 percent of LatinX families lacked access, compared to only 7 percent of white families and 4 percent of Asian families that lacked access to the Internet.[14]

Data suggest that engagement rates are also lower in schools serving predominately Black and Hispanic students (i.e., 60-70% of students logging on regularly).[20] Assuming schools remained remote until January 2021, one study estimated, nationally, Black students may fall behind 10.3 months and Hispanic students by 9.2 months, compared to 6.0 months among white students.[20] Therefore, students with the fewest academic opportunities prior to the pandemic are expected to experience the greatest learning loss.[57] Additionally, COVID-19 closures may increase high-school drop-out rates (pre-pandemic: 6.5% for Hispanic, 5.5% for Black, and 3.9% for white students, respectively).[20] Using data on the effects of drop-out rates resulting from extended school absences, online-only instruction, and natural disasters (i.e., Hurricane Katrina [2005] and Hurricane Maria [2017]), one study estimated an additional 2% to 9% of high school students could drop out due to COVID-19 and associated school closures.[20]

The AAP has noted that school closures have exacerbated existing inequities and have had disparate impacts for communities of color.[9] They stated, "for children and adolescents in virtual learning models, educational disparities are widening for Black and Hispanic/Latino students as well as those living in poverty."[9] In Washington State, OSPI reports that the increase in high school students not receiving credit in courses during the 2020-2021 academic year was "most significant for students experiencing poverty, and disproportionately impact students who are American Indian/Alaskan Native, and students who are Latino."[8]

According to the CDC, "people who identify as American Indian/Alaska Native, Black, and Hispanic have borne a disproportionate burden of illness and serious outcomes from COVID-19. These health disparities are evident even among school-aged children, suggesting that in-person instruction might pose a greater risk of COVID-19 to disproportionately affected populations."[6]

Inequities by geography

The CRPE survey data from August 2020 also showed that, "while half of districts across the country will open their buildings to fully in-person instruction, students in the vast majority of our largest school districts, many of which also serve large numbers of vulnerable students, will not."[54] Students in urban communities were less likely to have access to in-person learning, with 9% of urban school districts planning to reopen school for fully in-person learning in Fall 2020 compared to 65% of rural school districts and 24% of suburban districts.[54]

On the other hand, research has shown that approximately 32% of individuals living on tribal lands and 26% of individuals living in rural areas lack access to Broadband coverage, compared to 2% of individuals living in urban areas.[14] Additionally, national survey data has also illuminated gaps in expectations for monitoring student progress during school closures due to COVID-19 between rural and urban school districts.[14] The survey found that "[27%] of rural and small town districts expected teachers to provide instruction, compared with more than half of urban districts. Similarly [43%] of rural districts expected teachers to take attendance or check in with their students on a regular basis compared to [65%] of urban districts. [Additionally,] fewer rural than urban districts required progress monitoring and provided formal grades of some kind."[14] There is mixed evidence and it is unclear how SB 5464 would impact access to in-person learning opportunities by geography.

Living in a low-income household is associated with worse health outcomes and increased risk for mental health concerns across the life course.[58] While the largest number of children living in families with low-incomes are white, African American, American Indian/Alaska Native, and Hispanic or Latino children are disproportionately affected by financial poverty.[58] Longitudinal research has shown that, "compared with children of higher SES, children of low SES experience higher rates of parent-reported mental health [concerns] and higher rates of unmet mental health needs."[58] Among children with low SES who are in need of mental health care, researchers estimate "[less than] 15% receive services, and even fewer complete treatment."[58] While the prevalence of mental health problems among children residing in poverty do not vary significantly by race/ethnicity or geographic residence, "after demographic and family variables are controlled for, there are statistically significant disparities in mental health service utilization across racial and ethnic groups and between children residing in urban and rural areas."[58] Specifically, evidence shows "African American children residing in urban areas and Latino children in both rural and urban areas are less likely to be connected to mental health care than white children."[58] White children living in rural areas are also significantly less likely than white peers living in urban areas to receive mental health services.[58] Lastly, in rural communities, schools are often the only access point for children's mental health services, highlighting the importance of in-person school access for health services.[54] In sum, low SES is associated with increased risk of mental health concerns, and race/ethnicity and geography are associated with significant inequities in mental health service utilization.

Inequities by other student groups

Other student groups disproportionately and uniquely burdened by access to in-person learning options and health inequities include students with disabilities, English Language Learners, youth in foster care, and youth experiencing homelessness (personal communication, OSPI, April 2021).[14]

Proclamation 20-09.1, which extended statewide school closures, included exceptions for students with disabilities and English Language Learners. OSPI data show changes in enrollment and absences among these student populations in 2020-2021 compared to 2019-2020.[59] Specifically, enrollment decreased by nearly 9% for students with disabilities in October through February 2020-2021 compared to the same months during the previous school year.[59] Among students receiving accommodations, aids, and services under Section 504 of the Rehabilitation Act of 1973 (Section 504) enrollment decreased nearly 11% during the same timeframe compared to the 2019-2020 school year.[59] Data from January 18, 2021, when OSPI began tracking school district reopenings, show 48 school districts reported providing targeted small group in-person learning for elementary school students with disabilities and 23 districts reported offering small group in-person instruction for students with a 504 Plan.[40] A greater number of districts reported offering these services at the middle school and high school levels. Specifically, 88 districts reported providing services for students with disabilities in middle and high school and, for students with a 504 Plan, 54 districts reported providing services for middle school students and 56 districts reporting providing services for high school students.[40] Among English Language Learners, OSPI data indicate that the average absences per student increased by nearly 1 day per month in October, November, January, and February during the 2020-2021 school year compared to the same months in 2019-2020.[59] For the week of January 18, 2021, 25 elementary school districts reported offering small group in-person learning for English Language Learners as did 61 middle and 64 high school districts.[40] Again, it is unclear to what degree families chose to have their children participate in these options, due to risks associated with COVID-19. Additionally, remote learning options may not be effective for students with disabilities based on students' unique learning needs (personal communications, April 2021).

The pandemic also created additional challenges for districts to know where students experiencing homelessness are living, to provide them adequate technology to participate in remote learning, and to offer other necessary services (personal communication, OSPI, April 2021). Among students experiencing homelessness in all grades, enrollment declined approximately 19.8% between February 2020 and February 2021.[59] This decline in enrollment is relatively consistent from October 2020 through February 2021 (the data available). Additionally, with the exception of December 2020, students experiencing homelessness have been absent an average of one additional day per month of school during the 2020-2021 academic year compared to the previous school year. [59] Enrollment among unaccompanied youth (i.e. youth not in the physical custody of a parent or guardian) is approximately 28.3% lower across all months of the 2020-2021 academic year (October through February) than during the same months during the 2019-2020 academic year.[59]

Overall, students that experience inequities by socioeconomic status, race/ethnicity, and geography are more likely to lack access to in-person learning options and to experience worse health outcomes. However, Washington State is a local control state, and it is unclear how

requirements specified in the bill would be implemented by school districts. It is also unclear which families would choose to have children attend in-person instruction, especially as risks may differ depending on the initial crisis prompting school closures.

Moreover, evidence suggests that urban school districts, which are more likely to serve families with low-incomes and students of color, are less likely to offer in-person learning options.[54] Parents of color are also less likely to feel schools should reopen and are more likely to be concerned about their children attending in-person options.[50] Therefore, if school districts in urban areas serving families with low-incomes and students of color are less likely to open for in-person instruction, and families of color are less likely to choose for their child to attend in-person instruction, educational and health inequities that currently exist by geography, socioeconomic status, and race/ethnicity in Washington State could worsen.

Therefore, it is unclear how SB 5464 would impact inequities.

Annotated References

1. **Public Health Emergency. 2020; Available at: https://www.phe.gov/emergency/news/healthactions/phe/Pages/2019-nCoV.aspx. Accessed.**
In response to the COVID-19 pandemic, the U.S. Secretary of Health and Human Services declared a public health emergency effective January 27, 2020.

2. **Verlenden J.V., Pampati S., Rasberry C.N., et al. Association of Children's Mode of School Instruction with Child and Parent Experiences and Well-Being During the COVID-19 Pandemic--COVID Experiences Survey, United States, October 8-November 13, 2020.** ***Centers for Disease Control and Prevention, Morbidity and Mortality Weekly Report.*** **2021;70(11):369-376.**
In this MMWR article, authors noted that "changes in mode of instruction have presented psychosocial stressors to children and parents that can increase risks to mental health and well-being and might exacerbate educational and health disparities." CDC conducted a nationwide, representative COVID Experiences Survey between October 8-November 13, 2020 with 1,290 parents and legal guardians of children aged 5 through 12 years old attending a public or private school. Of respondents, 45.7% reported their child received virtual instruction, 30.9% received in-person instruction, and 23.4% received combined virtual and in-person instruction. Virtual instruction was more likely to be reported by parents with children in public schools (47.6%) compared to of parents with children in private schools (20.3%). Virtual learning was also more likely to be reported by parents of color; 65.9% of Hispanic parents, 64.0% of other/multiracial parents, and 54% of Black parents reported virtual instruction compared to 31.9% of white parents. Parents of children receiving virtual or combined educational models reported worse child mental health, physical activity, and parental emotional distress than parents of children receiving in-person instruction. Among 9 indicators of childhood wellbeing, 5 indicators differed significantly by mode of instruction. For example, parents of children receiving virtual instruction were more likely to report that their children experienced decreased physical activity (62.9% versus 30.3%), time spent outside (58.0% versus 27.4%), in-person time with friends (86.2% versus 69.5%), virtual time with friends (24.3% versus 12.6%), and worse mental and emotional health (24.9% versus 15.9%) compared to children receiving in-person learning. Among 8 indicators of parental wellbeing, 6 indicators differed significantly by mode of instruction children received. Parents of children receiving virtual instruction were more likely to report loss of work (42.7% versus 30.6%), concern about job stability (26.6% versus 15.2%), childcare challenges (13.5% versus 6.8%), conflict between work and childcare (14.6% versus 8.3%), emotional distress (54.0% versus 38.4%), and difficulty sleeping (21.6% versus 12.9%) compared to parents of children receiving in-person learning. The authors stated that, "the pandemic is disrupting many school-based services, increasing parental responsibilities and stress, and potentially affecting long-term health outcomes for parents and children alike, especially among families at risk for negative health outcomes from social and environmental factors. These findings suggest that virtual instruction might present more risks than does in-person instruction related to child and parental mental and emotional health and some health-supporting behaviors, such as engaging in physical activity." They concluded that, "these findings highlight the importance of in-person learning for children's physical and mental well-being for parent's emotional well-being."

3. **Inslee Office of Governor Jay. Proclamation by the Governor Amending Proclamations 20-05, 20-06, 20-07, and 20-08: 20-09 Statewide K-12 School Closures. March 13, 2020 ed. Olympia, WA2021.**
Proclamation 20-09 by Governor Inslee amended previous emergency proclamations such that all K-12 schools statewide were subject to school closures in response to the COVID-19 pandemic.

4. **Inslee Office of Governor Jay. Proclamation by the Governor Extending Proclamations 20-08 and 20-09: Proclamation 20-09.1, Statewide K-12 School Closures. April 6, 2021 ed. Olympia, WA2021.**
Proclamation 20-09.1 by Governor Inslee extends and addresses statewide K-12 school closures in response to the COVID-19 pandemic.

5. **Instructional Hours. 2021; Available at: https://www.sbe.wa.gov/faqs/instructional_hours#1.%20What%20is%20the%20basic%20education%20requirement%20for%20minimum%20instructional%20hour%20offerings%20in%20grades%20one%20through%20twelve? Accessed 7 April 2021, 2021.**
This Washington State Board of Education webpage answers frequently asked questions related to required instructional hours.

6. **Operational Strategy for K-12 Schools through Phased Prevention. 2021; Available at: https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/operation-strategy.html#anchor_1616080052257. Accessed 31 March 2021, 2021.**
This guidance document from the Centers for Disease Control and Prevention (CDC) outlines a pathway for schools to provide in-person instruction safely through consistent use of prevention strategies (e.g., universal and correct use of masks, physical distancing). It discusses essential elements for safe school operations; health equity considerations; prevention strategies to reduce COVID-19 transmission in schools; indicators of community transmission; phased prevention; addition prevention strategies; testing; and vaccination for teachers and school staff.

7. **Health Washington State Department of. K-12 Schools 2020-2021 Guidance. Tumwater, WA2021.**
This Department of Health guidance document was updated March 25, 2021, to align with new CDC recommendations. Guidance included is specific to public and/or private schools serving kindergarten through 12th grade (K-12). Schools must use this guidance regardless of their jurisdiction's phase of recovery to inform how to resume in-person instruction.

8. **Inslee Office of Governor Jay. Emergency Proclamation of the Governor Amending Proclamation 21.05 | 21.05.1 Children and Youth Mental Health Crisis. 26 March 2021 ed. Olympia, WA2021.**
This Emergency Proclamation of the Governor issued March 26, 2021, addresses the Children and Youth Mental Health Crisis across Washington State as a result of the worldwide spread of COVID-19. It includes data from children's hospitals within the state demonstrating increases in pediatric patients with behavioral health and mental health diagnoses.

9. **Pediatrics American Academy of. COVID-19 Guidance for Safe Schools. 2021.**

The American Academy of Pediatrics issued guidance about school reopening. They stated that "AAP continues to strongly advocate that all policy considerations for school COVID-19 plans should start with a goal of having students physically present in school." AAP recognizes that "opening schools generally does not significantly increase community transmission, particularly when guidance outlined by the World Health Organization (WHO), United Nations Children's Fund (UNICEF), and Centers for Disease Control and Prevention (CDC) is followed." Specifically, they noted that low transmission rates and mild disease among younger children make in-person learning appropriate. AAP also noted that school closures have exacerbated existing inequities and have had disparate impacts for communities of color. They stated, "for children and adolescents in virtual learning models, educational disparities are widening for Black and Hispanic/Latino students as well as those living in poverty."

10. **Find meals for kids when schools are closed. 2021; Available at: https://www.fns.usda.gov/meals4kids. Accessed 2/9/2021.**
The U.S. Department of Agriculture provides an overview of changes to the school meals program as a result of the COVID-19 pandemic. This webpage includes background information, as well as links to state-specific waivers and information.

11. **Washington State Coronavirus Response (COVID-19): Food Assistance. 2021; Available at: https://coronavirus.wa.gov/information-for/you-and-your-family/food-assistance. Accessed 2/11/2021.**
The Washington State Joint Information Center maintains a website with up-to-date information about the state's response to the COVID-19 pandemic. This webpage provides information about food assistance programs available during the pandemic, including information about school meal programs.

12. **Baron E. J., Goldstein E. G., Wallace C. T. Suffering in silence: How COVID-19 school closures inhibit the reporting of child maltreatment. *J Public Econ.* 2020;190:104258.**
Baron et al. examine the impact of COVID-19 school closures on child maltreatment reporting. Researchers cite evidence that nearly 40% of children experience maltreatment by the time they reach adulthood. Additionally, studies show that "children associated with maltreatment investigations have significantly worse test scores, educational attainment, mental health, and adult earnings." School personnel are the primary reporting source of suspected child maltreatment having submitted more than 20% of approximately 4.3 million nationwide reports in 2018. Authors used publicly available county-level data on the number of child maltreatment allegations made to the Florida Child Abuse Hotline. Data were available for all 67 counties in Florida from January 2004 through April 2020, which allowed researchers to examine changes in reporting around the time schools closed in Florida. In absence of a control group (all schools in Florida and neighboring states closed around the same time), researched use the "monthly data to predict the number of allegations that would be expected in March and April 2020 [the first two months of school closures due to COVID-19] due to seasonal fluctuations and secular trends." They then compared predictions to actual reported allegations. Results find "the number of allegations reported in March and April 2020 were 27% lower than would be expected otherwise." When scaling estimates nationwide, researchers calculated "that approximately 212,500 allegations went unreported during the months of March and April 2020." If the rate of

substantiated maltreatment allegations made by school personnel remained relatively constant (i.e., 20-22% of all maltreatment allegations in Florida and nationally) then "figures suggest that, nationally, roughly 40,000 additional instances of child maltreatment would have been confirmed were it not for school closures." Furthermore, researchers note this is likely an underestimate as "the COVID-19 pandemic has caused an unprecedented amount of sudden financial, physical, and mental stress, and previous studies have shown that child maltreatment is more likely to occur under these circumstances." Authors found the decline in reporting in March and April 2020 closely resembles the decline in allegations when school is out of session (i.e., June, July, and December). Researchers also cite evidence that school personnel are primarily responsible for "initial" child maltreatment allegations (i.e., the first case-specific allegation made to the hotline), and the study shows "the decline in the total number of allegations in March and April 2020 is almost entirely driven by a decline in the number of initial allegations. Finally, counties with "previously higher numbers of staff trained to identify and report child maltreatment (e.g., school psychologists and school nurses) experience a disproportionately larger reduction in the number of child maltreatment allegations in March and April 2020." Researchers note that when schools are not in session family members and neighbors are important sources of maltreatment reporting and government agencies could use social media and online school platforms to distribute information regarding assistance on these matters.

13. **Leeb R.T., Bitsko R.H., Radhadkrishnan L., et al. Mental Health-Related Emergency Department Visits Among Children Aged <18 Years During the COVID-19 Pandemic-- United States, January 1- October 17, 2020.** ***Morbidity and Mortality Weekly Report, Centers for Disease Control and Prevention.*** **2020;69(45):1675-1680.**

Using data from the National Syndromic Surveillance Program (NSSP), CDC compared mental-health related emergency department visits for children under 18 years of age from January 1 to October 17, 2020 to the same time period in 2019. The NSSP dataset includes information from hospitals in 37 states and represents approximately 73% of all emergency department visits in the U.S. However, the authors noted that data is not nationally representative, and may not be generalizable to emergency departments not participating in NSSP. The dataset includes information about "conditions likely to result in [emergency department] visits during and after disaster events (e.g. stress, anxiety, acute posttraumatic stress disorder, and panic)." The authors stated that, "published reports suggest that the [COVID-19] pandemic has had a negative effect on children's mental health." They cited previous research that, during the first month following stay-at-home orders (March to April 2020), emergency department visits decreased 42%; however, over the same time period, visits for psychosocial factors actually increased. Based on their analysis, data showed an initial decrease in children's mental health-related emergency department visits following stay-at-home orders. While the overall number of children's mental health-related emergency department visits decreased, "the proportion of mental health-related [emergency department] visits [among children] increased sharply beginning in mid-March 2020…and continued into October…with increases of 24% among children aged 5-11 years and 31% among adolescents aged 12-17 years, compared with the same period in 2019." They stated, "many mental disorders commence in childhood, and mental health concerns in these age groups might be exacerbated by stress related to the pandemic and abrupt disruptions to daily life associated with mitigation efforts, including anxiety about illness, social isolation, and interrupted connectedness to school." They explained that the increase in the proportion of visits

may be due to pandemic-related stress, to reduced or modified access to mental health services (e.g. through schools), or to a decrease in the number and proportion of other types of emergency department visits (e.g. asthma, musculoskeletal injury). The authors noted that these increases may overestimate visits to the emergency department, but under-estimate mental health needs overall. The data may over-estimate the increase in the proportion of children's mental health-related emergency department visits since visits decreased overall; mental health-related visits account for a small percentage of pediatric visits (i.e. 1.1% in 2019 and 1.4% in 2020); and NSSP data are not nationally-representative. However, data may also under-estimate mental health needs as the NSSP only captures a small-range of mental health concerns following a disaster and do not account for mental health visits outside emergency department settings.

14. **National Academies of Science Engineering, and Medicine. Reopening K-12 Schools During the COVID-19 Pandemic: Prioritizing Health, Equity and Communities. 2021.** The National Academies of Sciences, Engineering, and Medicine authored a consensus study report providing guidance on the reopening and operation of elementary and secondary schools for the 2020-2021 school year. Consensus study reports are "subjected to a rigorous and independent peer-review process and [represent] the position of the National Academies on the statement of task." For this consensus report, the authors used expert oral testimony (collected from three open sessions with experts) and published literature. Each chapter includes multiple references. The report contains findings, conclusions, and recommendations. The report also provided summary information about COVID-19 transmission among children and equity considerations. The report noted the intersectionality of inequities in the education system, inequities in health outcomes, and inequities in social and economic determinants that have been exacerbated by the COVID-19 pandemic.

15. **Araujo L. A., Veloso C. F., Souza M. C., et al. The potential impact of the COVID-19 pandemic on child growth and development: a systematic review. *J Pediatr (Rio J)*. 2020.** de Araujo et. al. conducted a systematic review of literature published before April 2020 that evaluated the impacts of epidemics (e.g. COVID-19, Ebola, HIV, flu) or social restriction on the general, developmental, and mental health of children and adolescents under 18 years of age. They identified 172 studies, and included 9 studies that met inclusion criteria. They summarized that social restrictions, shutdowns, and school closures contribute to acute stress disorder, post-traumatic stress, anxiety, and depression as well as risk of development delays, cognitive impairment, substance use, and non-communicable diseases in children. They stated that, "epidemics or pandemics, such as COVID-19, produce potential risks to child development due to risk of illness, protective confinement, social isolation, and the increased stress level of parents and caregivers." They noted that "there are several factors that influence the physical and mental health of children and adolescents experiencing the stress inherent in a pandemic, such as isolation itself, school shutdown, reduced social life and physical activities, changes to routine, sleep difficulties, exposure to disharmony at home, excessive screen use, unhealthy diet, and others." One study found that stress levels are four times higher for children who have been in quarantine compared to children in normal routines. Moreover, the authors noted that circumstances of the COVID-19 pandemic are recognized as adverse childhood experiences (ACEs) and may negatively impact children's well being. They stated, "restrictive social and economic reconfigurations, the fear of contagion, illness caused by COVID-19, isolated family life, school closures, the lack of support networks for other adults, the loss of loved ones, the

difficulty of combining working from home with full-time childcare, financial challenges, increased exposure to pre-existing vulnerabilities (such as domestic violence, drug use, and mental illness in family members) can result in toxic stress [for the child]" and contribute to ACEs. Research has also suggested that pandemic related social restrictions, "where play and leisure activities are only possible within the home environment; where people wear masks and the learning of facial expressions, communication, and language is restricted; and where demonstrating affection is discouraged by many- there is a tendency toward limitations in the formation of certain areas of the brain, including the social brain, with consequent impairments in the acquisition of cognitive, behavioral, social, and communication skills." They cited one systematic review of 16 studies evaluating the effectiveness of closing schools to control coronaviruses (i.e. 10 evaluating SARS; 5 evaluating COVID-19; 1 evaluating a different coronavirus epidemic). The review found "scarce data relating to the effectiveness of closing schools to control COVID-19" and that schools closures may be more effective when transmission is higher among children. A modeling study concluded that, "although there may e a decrease in COVID-19 mortality due to a reduction in cases as a result of school closures, loss of children's access to school healthcare workers may result in an increase in mortality."

16. **Hoffman J. A., Miller E. A. Addressing the Consequences of School Closure Due to COVID-19 on Children's Physical and Mental Well-Being.** ***World Med Health Policy.*** **2020.** Hoffman and Miller provide a summary of evidence related the impact of schools on children's physical and mental health. They stated that, "schools are also an essential source of nonacademic supports in the way of health and mental health services, food assistance, obesity prevention, and intervention in cases of homelessness and maltreatment." Moreover, "children who are most vulnerable to school closures include children who rely on school-based health and mental health care, children from households that are food insecure and children who are obese, children who are at risk of abuse and neglect at home, and children who are homeless." School closures have disrupted school-based health and mental health care, services, and supports as well as access to school nurses, psychologists, counselors, and social workers. The authors noted that school closures may also put students at risk of unhealthy weight gain or impact food security. They note that districts that implemented USDA's waiver allowing all children under 18 to receive free meals "may help to mitigate the effects of food insecurity on children during the period of school closure; however, they are unlikely to reach everyone in need." Levels of domestic violence and child abuse have risen during school closures.

17. **Meherali Salima, Punjani Neelam, Louie-Poon Samantha, et al. Mental Health of Children and Adolescents Amidst COVID-19 and Past Pandemics: A Rapid Systematic Review.** ***International Journal of Environmental Research and Public Health.*** **2021;18(7).** Meherali et al. conducted a systematic review of literature evaluating the impact of pandemics (e.g. COVID-19, Equine Influenza, H1N1 influenza, Ebola) on the mental health of children aged 5 through 18 years mental health. They identified 18 articles that met the inclusion criteria. Overall, they found that during and after pandemics, children and adolescents experienced stress, anxiety, depression, disturbances in sleep and appetite, impaired social interactions, and social and risky behavioral problems (e.g., substance use, suicide, relationship problems, academic issues, and absenteeism from work). Moreover, "it has been indicated that compared to adults, this pandemic may continue to have increased long term adverse consequences on children's and adolescents' mental health."

18. **Santibañez Lucrecia, Guarino Cassandra M. The Effects of Absenteeism on Academic and Social-Emotional Outcomes: Lessons for COVID-19. *Educational Researcher.* 2021.**

Santibanez et al. used data from the six largest school districts in California to estimate the impact of absenteeism in grades K-12 on academic outcomes and social-emotional outcomes (i.e. self-management, growth mind-set, self-efficacy, and social awareness). The authors stated, "it is well established in the literature that absenteeism negative affects academic outcomes." Data has suggested that being absent for 10 days reduces test scores by about a 3% standard deviation (SD) in English language arts and 6% in SD in math for elementary school students. Previous research has also shown that absenteeism can have larger impacts for higher grade levels. For example, among high school students, missing 10 math classes reduced test scores by about 7% SD. Additionally, "the detrimental effects of absences in one school year can persist into subsequent grades, suggesting that absences today can have lasting consequences." Chronic absenteeism is defined as missing 18 days of school or more, and the authors stated that available evidence from the COVID-19 pandemic suggests that some students may have been absent for long periods (e.g. 50 days) "putting them at the far end of the normal absenteeism spectrum." Additionally, they cited research from Los Angeles showing that "participation in online learning of middle and high school students between March 16 and May 22, 2020, never reached 100% and was lower for students in particular subgroups such as low-income, [English learners}, students with disabilities, and homeless and foster youth." Since many school districts did not collect academic outcome data for the 2019-2020 or 2020-2021 school years due to the COVID-19 pandemic, the authors evaluated data from the 2014-2015, 2015-2016, 2016-2017, and 2017-2018 school years to estimate the impact of absenteeism during the pandemic. They found that students in K-12 are absent an average of 7.4 days per school year. Absenteeism rates are higher for students in K and high school, as well as for students with disabilities (10.3 days); students who are Black (9.6 days); students experiencing homelessness or foster system involvement (9.5 days) and English learners (8.5 days). They found that "absenteeism hurts both academic and social-emotional outcomes with variation by grade and subgroup, as well as in the cumulative effect of different degrees of absence." For students in grades 3-8, missing 10 school days resulted in a 5% decrease in SD in English language arts and a 8% decrease in SD for math. They found that academic outcomes were most impacted by absenteeism for middle school students. Additionally, "the negative effects of absenteeism are substantial for all students and are the most pronounced for students classified as [free or reduced-price lunch, students with disabilities, and homeless or foster care youth]." They also found that being absent 20 or more days from school is statistically significantly associated with negative impacts on all for social-emotional outcomes, including self-management, growth mind-set, self-efficacy, and social awareness. Middle school students experience the greatest negative impact on social-emotional outcomes. Overall, the authors concluded that, "taken together with evidence that significant numbers of students were absent from virtual school opportunities for longer periods than normal during the COVID-19 pandemic and that absenteeism was highest among students of color and disadvantaged groups, our results suggest that school disruptions brought on by the pandemic will negatively affect both the academic and social-emotional development of students, particularly for students in certain grades [(i.e. middle school students)] and vulnerable subgroups ([i.e. students of color, students eligible for free or reduced price lunch, students with disabilities, students experiencing homelessness, students in the foster care system)]."

19. **Kuhfeld M., Soland J., Tarasawa Beth, et al. How is COVID-19 affecting student learning? Initial findings from Fall 2020. *Brookings: Brown Center Chalkboard*2020.**
In this report from the Brookings Institute, Kuhfeld et al. present data related to the impact of school closures on student learning and achievement. They assumed, "based on historical learning trends and prior research on how out-of-school time affects learning, we estimated that students would potentially begin fall 2020 with roughly 70% of the learning gains in reading relative to a typical school year. In mathematics, students were predicted to show even smaller learning gains from the previous year, returning with less than 50% of typical gains." Schools restarted testing in Fall 2020, using both in-person and virtual testing models. Kuhfeld et al. evaluated how students performed in Fall 2020 relative to 2019 using Fall 2020 MAP Growth reading and math testing results from students in grades 3-8 from 8,000 schools. They found that students in grades 3-8 performed similarly in reading in Fall 2020 compared to Fall 2019. However, "the math achievement of students in 2020 was about 5 to 10 percentile points lower compared to same-grade students the prior year." They also evaluated whether students made learning gains since schools physically closed. They found that, "in almost all grades, the majority of students made some learning gains in both reading and math since the COVID-19 pandemic started, though gains were smaller in math in 2020 relative to the gains students [made in 2019]." The authors stated that, "it was widely speculated that the COVID-19 pandemic would lead to very unequal opportunities for learning depending on whether students had access to technology and parental support during the school closures, which would result in greater heterogeneity in terms of learning gains/losses in 2020. Notably, however, we do not see evidence that within-student change is more spread out this year relative to the pre-pandemic 2019 distribution." The authors noted that schools participating in the sample had slightly larger enrollment, a lower percentage of low-income students, and a higher percentage of white students compared to all public schools in the U.S., and so results may not be generalizable across all schools or students.

20. **Dorn E., Hancock B., Sarakatsannis J., et al. COVID-19 and student learning in the United States: The hurt could last a lifetime: New evidence shows that the shutdowns caused by COVID-19 could exacerbate existing achievement gaps. McKinsey & Company; 2020.**
Dorn et al. created statistical models to estimate the potential impact of school closures on high school student learning. They based models on academic studies of the effectiveness of remote learning relative to traditional, in-person classroom instruction for students (average quality remote learning; lower-quality remote learning; and no instruction). Researchers also modeled three epidemiological scenarios: 1) "virus contained" and in-classroom instruction resumes in fall 2020; 2) "virus resurgence" in which schools are closed or using part-time schedules through January 2021; and 3) "pandemic escalation" in which the virus is not controlled without vaccines and schools are remote throughout the 2020-21 school year. Under scenario 2, enrolled students may lose 3-4 months of learning with average remote instruction, 7-11 months of learning with lower-quality remote instruction, and 12-14 months if they do not receive any instruction. Authors cite evidence that learning loss will likely be greater for low-income, Black, and Hispanic students. Authors also estimate the economic impact of learning loss and dropping out for individuals and U.S. gross domestic product (GDP). For example, authors estimate that "white students would earn $1,348 a year less (a 1.6 percent reduction) over a 40-year working

life, the figure is $2,186 a year (a 3.3 percent reduction) for Black students and $1,809 (3.0 percent) for Hispanic [students]." They also estimate a GDP loss of $173 billion to $271 billion a year (0.8% to 1.3%). While estimated losses are not inevitable, authors recommend serious investment in programs to increase student engagement, learning opportunities, etc.

21. **What We've Learned about Unfinished Learning: Insights from Midyear Diagnostic Assessments. Curriculum Associates; March 2021 2021.**

This Research Brief from Curriculum Associates used *i-Ready Diagnostic's* criterion-referenced grade-level placement data (i.e., from over 9 million students enrolled in public, private and charter schools) and compared student achievement from winter 2020-2021 to what would typically be expected during a typical school year. Researchers conducted a historical average of typical performance for students in grades 1-8 across the three most recent school years (2017-18, 2018-19, and 2019-20). For consistency, school level data were matched so that the current sample consisted of students in the same schools as historical samples. Authors decided to use assessment data taken in-school only (excluding remove assessment data) to have the closest "true" comparison to achievement measures pre-pandemic. Assessment data were collected between November 16, 2020 and March 2, 2021 and represents students from 49 states, plus DC, and the final analytic sample for Reading consisted of 1,159,733 students in grades 1-8, and the Math sample consisted of 1,291,018 students in Grades 1-8. "The winter assessment data indicates [that after 12 months of school interruptions] there [were] fewer students ready to access grade-level work and more students underprepared to access grade-level work, compared with historical benchmarks—validating educators' concerns about unfinished learning." Specifically, mid-year results suggest early elementary students, and those historically underserved, were most impacted. However, authors stated it was too soon to know whether some students were catching up from starting behind in fall. Unfinished learning in reading was greater for students in Grades 1–7, particularly in early elementary grades (grades 1, 2, and 3). Additionally, the percentage of students underprepared for grade-level work (i.e., two or more grade levels below) increased during the 2020-2021 school year relative to historical averages for students in grades 1-7. In mathematics, there was a greater amount of unfinished learning across all grades with the greatest amount of unfinished learning among students in grades 1-6. Furthermore, "the percentage of students who are underprepared for grade-level work has increased during the 2020–20201school year relative to the historical average for students across all grades. Grades 2–6 show the greatest increases in unfinished learning." Curriculum Associates also found that "unfinished learning [was] greater for students in schools serving a majority of Black and Latino students, compared to a majority of White students, and unfinished learning [was] most stark for students underprepared to access grade-level work." For Grade 3 students who are underprepared for grade-level work, data showed a "larger increase in unfinished learning in Reading for students in schools serving a majority of Black students (11 percentage points) and Latino students (9 percentage points) compared to students in schools serving a majority of White students (5 percentage points)." These compound historical inequities that predate the COVID-19 pandemic. Similarly, "students attending schools in lower-income zip codes [were] also experiencing greater unfinished learning than students attending schools in higher-income zip codes." For example, the Grade 3 decline in Reading relative to the historical average was "a little lower for students in schools where the income [was] greater than $75,000 (4 percentage points) than the decline for students in schools where the income [was] less than $50,000 (7 percentage points) or $50,000 to $75,000 (6 percentage points)."

Meanwhile, declines were relatively stable for mathematics across all three income groups. The research brief also includes information about ways to address unfinished learning to improve educational outcomes.

22. **Kwakye I. , Kibort-Crocker E. . Facing Learning Disruption: Examining the Effects of the COVID-19 Pandemic on K-12 Students. Olympia, WA: Washington Student Achievement Council; March 2021 2021.**
This report by the Washington Student Achievement Council (WSAC) presents insights about the impact of education disruptions on student learning. Authors discuss available national and Washington-specific data that indicate the pandemic's impact on student learning overall and among specific student subgroups (i.e., students of color, English Language Learners, low-income students, and students with disabilities). Authors also reviewed evidence addressing potential long-term implications of the pandemic's impact on learning. Finally, they considered how Washington can effectively measure and track the pandemic's impact on learning in order to inform policies and programs to effectively respond to the learning disruptions by providing appropriate academic supports for students to be successful in future academic and professional pursuits.

23. **Lucio R, Hunt E, M Bornovalova. Identifying the necessary and sufficient number of risk factors for predicting academic failure. *Developmental Psychology.* 2012;48(2):422-428.**
Lucio et al. analyzed data from the Educational Longitudinal Study: 2002 which includes a national sample of 14,796 students. The authors used a 5-step process to identify which factors contribute to academic 'failure'—a grade point average (GPA) of less than 2.0 which is the minimum GPA needed to graduate from high school. They found that a number of academic outcomes impact a student's GPA and therefore their ability to attain a high school diploma. Many of these are academic outcomes that other research has found to be impacted by skipping breakfast such as academic engagement, grade retention, and behavior among students. The authors also found that the odds of passing decreased with each additional risk factor: "For each risk factor that is added, there is a 47% increased likelihood of failing."

24. **Melby J. N., Conger R. D., Fang S. A., et al. Adolescent family experiences and educational attainment during early adulthood. *Developmental psychology.* 2008;44(6):1519-1536.**
Melby et al. analyzed data from a longitudinal study of two-biological-parent intact families in Iowa. They had a sample size of 451 families. The researchers conducted modeling to determine what factors impact educational attainment and found level of academic engagement was strongly correlated with later educational attainment.

25. **Winding T. N., Nohr E. A., Labriola M., et al. Personal predictors of educational attainment after compulsory school: influence of measures of vulnerability, health, and school performance. *Scandinavian journal of public health.* 2013;41(1):92-101.**
Winding et al. analyzed data from a 2004 questionnaire completed by a cohort of adolescents born in 1989 (n=3053) in Denmark (83% response rate) and linked 2010 educational attainment data from Statistics Denmark. This allowed for a follow-up of 6.5 years. The authors found that low grades during primary school was predictive of not having completed a secondary education

by age 20/21 (odds ratios between 1.7 and 2.5). For students with low math grades this association was even stronger. The authors cite two additional studies which have also found an association between school performance and later educational attainment.

26. **Health of Washington State: Mental Health. Washington State Department of Health; 2008.**
Washington Behavioral Risk Factor Surveillance System (BRFSS) data from 2004-2006 indicate that American Indians and Alaska Natives and non-Hispanic black individuals reported significantly higher rates of poor mental health compared to other groups. These relationships persisted after adjusting for additional factors such as age, income, and education. Washington BRFSS data also show an association between lower annual household income and poor mental health, a relationship that was also shown with education. It is well understood that mental health is also closely related to other areas such as employment opportunities, physical health, substance abuse. This report also highlights a Washington state study from 2002 that reveal that 16% of individuals in the state who were receiving publicly funded mental health services had at least one felony conviction, a rate over twice that of the general population.

27. **Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System Prevalence And Trends Data: Washington-2014. 2014; Available at: http://apps.nccd.cdc.gov/brfss/page.asp?cat=XX&yr=2014&state=WA#XX. Accessed August 16, 2016.**
Behavioral Risk Factor Surveillance System (BRFSS) 2014 data from Washington state show significant correlations between lower income and a number of health indicators including: worse overall self-reported health, depression, asthma, arthritis, stroke, oral health, tobacco use, women's health indicators, health screening rates, physical activity, and diabetes. Data also show that as educational attainment increases income level also increases.

28. **Christensen Trevor, Weisser Justin. Health of Washington State Report: Tobacco Use. Washington State Department of Health; 2015.**
Christensen et al. report Washington state Behavioral Risk Factor Surveillance System (BRFSS) data from 2012 to 2014 indicate that prevalence of smoking decreases as income and levels of education increase. Further, American Indians and Alaska Natives (AI/AN) and Native Hawaiian/Other Pacific Islander populations have significantly higher smoking rates than white, black, Hispanic, and Asian populations.

29. **Kandel Denise B., Griesler Pamela C., Schaffran Christine. Educational attainment and smoking among women: Risk factors and consequences for offspring. *Drug and Alcohol Dependence.* 2009;104:S24-S33.**
Researchers examined United States data from four national data sets and found that, among women, lower levels of education are associated with greater risk of being a current smoker, smoking daily, smoking heavily, being nicotine dependent, starting to smoke at an early age, having higher levels of circulating cotinine (a metabolite of nicotine) per cigarettes smoked, and continuing to smoke in pregnancy. In addition, lower levels of maternal education were linked to increased risk of antisocial behavior among offspring.

30. **Kemple Angela. Health of Washington State Report: Diabetes. Washington State Department of Health; 2016.**
Kemple presents data from Washington regarding diabetes in the state. Washington data from the Behavioral Risk Factor Surveillance System (BRFSS) from 2012-2014 show that among adults, the percentage of persons with diabetes increased as household income decreased. This relationship was also true for education. Further, BRFSS data also show that age-adjusted diabetes prevalence is highest among those who are Hispanic, American Indian/Alaska Native, and black.

31. **McCarty C. A., Mason W. A., Kosterman R., et al. Adolescent school failure predicts later depression among girls.** ***The Journal of adolescent health : official publication of the Society for Adolescent Medicine.*** **2008;43(2):180-187.**
McCarty et al. conducted a prospective longitudinal cohort study with a sample of 808 youth followed from ages 10 to 21. The researchers discovered that adolescent school 'failure' (meaning being suspended, expelled, or dropping out of high school early) predisposed girls to depression in early adulthood.

32. **McLaren L. Socioeconomic status and obesity.** ***Epidemiologic Reviews.*** **2007;29:29-48.**
McLaren et al. conducted a meta-analysis exploring the relationship between obesity and SES among adults. A total of 333 studies published internationally met the inclusion criteria. In highly developed countries, the majority of the studies found higher body weights among women with lower education attainment. Nearly 50% of the studies in highly developed countries found the same relationship for men.

33. **Mersky JP, AJ Reynolds. Educational success and adult health: Findings from the Chicago longitudinal study.** ***Prevention Science.*** **2009;10(2):175-195.**
Mersky and Reynolds analyzed data from a Chicago prospective cohort study that followed 1,539 individuals. Results indicate that high school completion was significantly and inversely associated with tobacco smoking, frequent substance use, depression, and no health insurance coverage. In addition, middle school reading performance was inversely related to depression and student's expectation to attend college was negatively associated with frequent drug use.

34. **Mezuk B, Eaton WW, Golden SH, et al. The influence of educational attainment on depression and risk of type 2 diabetes.** ***American Journal of Public Health.*** **2011;98(8):1480.**
Researchers analyzed adult survey data collected in the Baltimore Epidemiological Catchment Area and then conducted follow-up interviews with the survey cohort. Mezuk et al. found a statistically significant association between type 2 diabetes and lower educational attainment. In addition, the data indicate that depression was associated with type 2 diabetes, but each year of education attained decreased the risk of type 2 diabetes for those experiencing depression.

35. **Poel A. Health of Washington State Report: Mortality and Life Expectancy. Data Update 2015. Washington State Department of Health; 2015.**
Poel presents Washington state data on mortality and life expectancy. The data show that age-adjusted death rates were higher in Washington census tracks with higher poverty rates. The state data also show that American Indian/Alaska Natives, Native Hawaiian/Other Pacific Islanders,

and black residents had the highest age-adjusted death rate and shortest life expectancy at birth compared to other groups in the state.

36. **Serafin M. Health of Washington State Report: Self-reported Health Status. Data Update 2016. Washington State Department of Health; 2016.**
Serafin presents data from Washington state on self-reported health status. The data show that after accounting for age, education, race and ethnicity, household income was a strong predictor of self-reported health status. Health status varied by race and ethnicity, with close to 35% of Hispanics, 30% of American Indian/Alaska Natives, and 20% of Native Hawaiian/Other Pacific Islanders reporting fair or poor health. Washington Behavioral Risk Factor Surveillance System (BRFSS) data from 2012-2014 also show that education was a strong predictor of self-reported fair or poor health after adjusting for age.

37. **Skodova Z., Nagyova I., van Dijk J. P., et al. Socioeconomic differences in psychosocial factors contributing to coronary heart disease: a review. *Journal of clinical psychology in medical settings.* 2008;15(3):204-213.**
Skodova et al. conducted a meta-analysis of the literature addressing the relationships between SES, coronary heart disease (CHD), and psychosocial factors contributing to coronary heart disease. Researchers identified 12 studies that met their inclusion criteria. They found that higher levels of education are associated with lower rates of CHD, and that decreasing education is associated with factors that are linked to CHD such as depression, anxiety, hostility, and a lack of social supports.

38. **Steptoe A., Hamer M., Butcher L., et al. Educational attainment but not measures of current socioeconomic circumstances are associated with leukocyte telomere length in healthy older men and women. *Brain, behavior, and immunity.* 2011;25(7):1292-1298.**
Steptoe et al. analyzed data collected from 543 male and female London-based civil servants of white European origin. All participants were between the ages of 53 and 76 and healthy. Researchers looked at blood samples to determine telomere length and telomerase activity. Telomere shortening is associated with aging. Short telomeres are also associated with increased risk of premature heart attack and mortality. Researchers found that lower educational attainment was associated with shorter telomere length after controlling for biological and behavioral covariates. This association remained significant even after adjusting for current SES. Researchers speculated that low educational attainment may be an indicator of long-term lower SES, and may be associated with accumulated stress resulting in telomere shortening. They also postulate that education may promote problem-solving skills leading to reduced responses to stress, thereby impacting aging.

39. **Instruction Office of Superintendent of Public. Washington State Report Card 2020-2021. 2021.**
The Office of Superintendent of Public Instruction publishes the Washington State Report Card summarizing data and information about each school year. The Washington State Report Card 2020-2021 states that 1,094,330 K-12 students were enrolled in the state. OSPI has noted that, as a result of school closures to prevent the spread of COVID-19, student assessment measures are not available for the 2019-2020 school year, including data for: Assessment; Student Growth;

English Learner Assessment; Kindergarten Readiness; Discipline Rate; Exclusion Day Rate; Regular Attendance; and Ninth Grade on Track.

40. **School Reopening Data: School Facility Reopening Information by Week. 2021; Available at: https://www.k12.wa.us/about-ospi/press-releases/novel-coronavirus-covid-19-guidance-resources/school-reopening-data. Accessed 4/1/2021.**
The Office of Superintendent of Public Instruction presents school facility reopening data weekly for public school districts, state-tribal education compact schools, and charter schools. The information is self-reported, and it is unclear what the response rate is and how reflective the schools reporting are of the state as a whole. For the week of 3/29/2021 (the most recent data available), approximately 46% of all students in Washington State were in-person instruction on an average day and 54% of students were receiving in-person instruction at some point during the school week. This is an increase from previous weeks. Since OSPI began tracking this information in January 2021, the percentage of students attending in-person instruction on an average day and receiving in-person instruction at some point during the school week has increased each week. In January 2021, 18.6% of all students in the state were receiving in-person instruction on an average day and 22.2% were receiving in-person instruction at some point during the week. Younger students were more likely to receive in-person instruction at some point during the school week. Data discussed below are for the week of March 22, 2021, the most recent data available. At that time, 62.8% of elementary school students (grades K-5); 49.1% of middle school students (grades 6-8); and 44.8% of high school students (grades 9-12) received in-person instruction at some point during the school week. Among elementary schools, 30 districts did not respond to OSPI's survey. Among responding districts, 1 district reported full remote learning; 5 repored targeted small groups of students were receiving in person instrcution and the majority of students participating in remote learning; 25 districts reported a phase-in approach in which specific grade-levels/bands are in-person (fully or partially) in a phased approach while other students receive instrucion remotely; 181 districts reported a partial in-person option for all students (e.g., hybrid or A/B structure) with full remote learning for families who opt out of in-person instruction; and 77 districts reported a typical/traditional in-person model (5 days per week, in-person), a remote option may be available for families opting out of in-person instruction. Among middle schools, 30 districts did not respond to the survey; 3 reported 100% remote; 28 reported small groups and remote learning; 18 used a phase-in approach; 175 offered partial in-person learning for all students; and 65 had typical/traditional in-person instruction. Among high schools, 30 districts did not respond; 4 were 100% remote; 30 used small groups and remote learning; 21 had a phase-in model; 152 offered partial in-person instruction for all students; and 82 had typical/traditional in-person learning. Compared to the previous week, more school districts reported offering partial in-person or typical/traditional in-person learning options across all grade levels. Districts at the middle and high school levels were more likely to report targeting small groups for in-person learning (e.g., students with disabilities, English Language Learners, students with a 504 Plan, students experiencing homelessness, students in foster care, students experiencing poverty, students who are migratory, students with inadequate internet connectivity).

41. **Waivers. 2021; Available at: https://www.sbe.wa.gov/our-work/waivers. Accessed 7 April 2021, 2021.**

This Washington State Board of Education webpage answers frequently asked questions related to Board rules for waivers (i.e., waivers of minimum 180-day school year requirements and waivers of credit-based high school graduation requirements).

42. **Emergency rules for the 2020-2021 school year. In: Education WSBo, ed. Olympia, WA2020.**
In July 2020, the State Board of Education adopted these emergency rules to address the COVID-19 pandemic's impact on instruction. The emergency rules temporarily amend WAC 180-16-200 (Total instructional hour requirement). The Board is set to revisit this rule no later than its regularly scheduled July 2021 Board meeting.

43. **ESHB 1368 COVID-19--Federal Funding, Chapter 3, Laws of 2021 Revised Code of Washington, §12 (2021).**
Section 12 of Chapter 3, Laws of 2021 appropriates funds to the Office of the Superintendent of Public Instruction for the Elementary and Secondary School Emergency Relief Fund.

44. **Ipsos. Parents welcome additional, post-COVID educational support for their kids. Coronavirus | Education 2021; Available at: https://www.ipsos.com/en-us/news-polls/parents-welcome-educational-support. Accessed 5 April 2021, 2021.**
This Ipsos webpage presented findings of the NPR/Ipsos coronavirus education poll. Based on a nationally-representative probability sample of U.S. parents with at least one child ages 5 to 18 years (n=1,002), the poll was conducted in English and Spanish. Participants selected who did not already have internet access were provided a tablet and internet connection at no cost to the panel member. "As a result of [the] recruitment and sampling methodologies, samples from KnowledgePanel cover all households regardless of their phone or internet status and findings can be reported with a margin of sampling error and projected to the general population." Researchers weighted the data to adjust for gender by age, race/ethnicity, education, Census region by metropolitan status, household income, and language proficiency. "The margin of sampling error among the total sample is plus or minus 3.4 percentage points at the 95% confidence level."

45. **Gallup. Amid Pandemic, 79% of K-12 Parents Support In-Person School. Education 2021; Available at: https://news.gallup.com/poll/336173/amid-pandemic-parents-support-person-school.aspx. Accessed 5 April 2021, 2021.**
This Gallup poll was conducted February 14-21, 2021 using self-administered web surveys. Respondents consist of a random sample of 860 adults, aged 18 and older, who are parents of students in grades K-12 and are members of the Gallup Panel and who were recruited using a probability-based, random sampling methods. "Gallup weighted the obtained samples to correct for nonresponse. Nonresponse adjustments were made by adjusting the sample to match the national demographics of gender, age, race, Hispanic ethnicity, education and region. Demographic weighting targets were based on the most recent Current Population Survey figures for the aged 18 and older U.S. population. For results based on any individual sample, the margin of sampling error is ±5 percentage points at the 95% confidence level. Margins of error for subgroups are higher." Gallop also noted that "question wording and practical difficulties in conducting surveys can introduce error or bias into the findings of public opinion polls."

46. **Schwartz H.L. , Grant D., Diliberti M. , et al. Remote Learning Is Here to Stay: Results form the First American School District Panel Survey. RAND Corporation; 15 December 2020 2020.**
This research report by the RAND Corporation presented data on the first survey of the American School District Panel (ASDP) conducted from September 15, 2020 through November 11, 2020. The sample consists of 379 K-12 public school districts and charter management organization (CMOs) in the U.S. Of those, 319 completed the first survey (84% completion rate). Topics covered in the "ASDP Fall COVID-19 Survey" include: areas where districts need additional resources or guidance; anticipated challenges for the 2020-2021 school year; staff-related challenges; professional development; institutions, agencies, and personnel providing input and influence on plans for the 2020-2021 school year; and approaches taken for the 2020-2021 school year. Authors discuss findings specific to 'focus districts' that have "a student population that is at least 50[%] Black or Hispanic/Latino or where at least 50[%] of students qualify for free or reduced-price lunch" or 'nonfocus districts' which fall below these thresholds.

47. **Kamenetz A. . NPR/Ipsos Poll: Nearly One-Third of Parents May Stick with Remote Learning. 5 March 2021, 2021.**
This report presents results of an NPR/Ipsos Poll conducted February 3-10, 2021, using the probability-based KnowledgePanel®.

48. **COVID-19 in Children and Teens. 2021; Available at: https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/children/symptoms.html. Accessed.**
The Centers for Disease Control and Prevention (CDC) provides up-to-date information about COVID-19 in children and teens. Information was last updated on March 17, 2021.

49. **COVID Data Tracker: Demographic trends of COVID-19 cases and deaths in the U.S. reported to CDC. 2021; Available at: https://covid.cdc.gov/covid-data-tracker/#demographics. Accessed.**
The Centers for Disease Control and Prevention (CDC) provides up-to-date data about COVID-19 cases and deaths in the U.S. Data are provided by race/ethnicity, age, and sex. Data are updated daily.

50. **Gilbert L.K., Strine T.W., Szucs L.E., et al. Racial and Ethnic Differencs in Parental Attitudes and Concerns About School Reopening During the COVID-19 Pandemic--United States, July 2020. *Morbidity and Mortality Weekly Report, Centers for Disease Control and Prevention.* 2020;69(49):1848-1852.**
In this Morbidity and Mortality Weekly Report, the Centers for Disease Control and Prevention (CDC) analyzed data from a nationally-representative, online survey conducted from July 8-12, 2020 with 858 parents who had children in K-12 grades. The intent of the survey was to assess parental attitudes and concerns regarding school reopenings by race/ethnicity. The survey showed that 89.4% of parents were concerned that the quality of their child's education was negatively impacted by the COVID-19 pandemic. CDC found that white parents were more likely than parents of color to support returning to in-person instruction. Specifically, 62.3% of white parents strongly or somewhat agreed that schools should re-open in Fall 2020 compared to 46% of Black parents and 50.2% of Hispanic parents. Similarly, 67.6% of white parents agreed

that “the overall experience of being in school is more important for students, despite ongoing COVID-19 concerns” compared to 53.9% of Hispanic parents and 53.4% parents of other racial/ethnic groups. Overall, 86% of white parents and Hispanic parents were very or somewhat concerned about schools opening safely compared to 98.8% of parents of other race/ethnicities and 93.5% of Black parents. Black parents were also more likely than white parents to be concerned about their child contracting COVID-19 or transmitting COVID-19 to other family members from attending school. In sum, compared to white parents, parents of color “were less likely to feel that schools should reopen for all students and were more concerned about adherence to mitigation strategies, schools reopening safely, their child contracting COVID-19, and their child bringing home COVID-19.” The authors noted that, “families’ concerns also highlight the need for flexible education plans and equitable resource provisions so that youth education is not compromised.”

51. **Emergency Graduation Rules, Waivers. FAQs 2021; Available at: https://sbe.wa.gov/faqs/emergency_graduation_rules. Accessed 9 April 2021, 2021.**
This SBE webpage answers frequently asked questions regarding the Emergency Graduation Rules, Waivers for the Classes of 2020 and 2021.

52. **García E., Weiss E. COVID-19 and student performance, equity, and U.S. education policy: Lessons from pre-pandemic research to inform relief, recovery, and rebuilding. Washington, DC: Economic Policy Institute; 10 September 2020 2020.**
This report from the Economic Policy Institute reviewed the relevant literature on educational settings that have features in common with how education is occurring during the COVID-19 pandemic and emerging evidence on opportunity gaps. As there are not direct comparisons to past events or trends to the COVID-19 pandemic, authors considered specific aspects of the crisis that have been studied in other contexts (e.g., the loss of learning time and use of alternative learning modes). Findings were only partially applicable to the context of the COVID-19 pandemic. Authors cite evidence that "[o]n average, students advance in their academic performance by between about 0.3 standard deviations (SD) and 0.5 SD to 0.7 SD per year, depending on their age and subject/skill." Lost high-quality instructional time (e.g., weather-related cancellations) has been shown to negatively impact student performance. Research also indicated that "there is a large variation in summer learning among students, and on the fact that gaps between students of differing socioeconomic status (SES)—specifically high- and low-SES students—widen." Additionally, research on chronic absenteeism has shown that missed days of school by 9th graders was associated with a decline in the probability of graduating from high school. Similarly, missed school has also been associated with lower performance scores. Specifically, "students who are chronically absent are at serious risk of falling behind in school, having lower grades and test scores, exhibiting behavioral issues, and, ultimately, dropping out." Additionally, evidence related to remote and alternative learning indicates that certain conditions are necessary for successful teaching (e.g., appropriate training and supports) and learning (e.g., student tools [i.e., computer or other device, internet] and experience). The abrupt crisis of the COVID-19 pandemic did not allow schools and families to prepare for the shift to remote and alternative learning. The pandemic also interrupted the development of socioemotional or noncognitive (e.g., creativity, tolerance, persistence, empathy, resilience, self-control, and time management). Authors highlight lessons learned from other disasters that show emergencies generally strain existing resources compounding challenges

which can affect student success. For example, "by the end of the school year following the devastation that Hurricanes Katrina (August 2005) and Rita (September 2005) brought to New Orleans, the performance of students who were displaced dropped by 0.07 to 0.22 standard deviations relative to what their performance would have been without the hurricanes."

53. **Ou Suh-Ruu, Reynolds Arthur J. Predictors of educational attainment in the Chicago Longitudinal Study. *School Psychology Quarterly.* 2008;23(2):199-229.**
Ou and Reynolds analyzed data from the Chicago Longitudinal Study, using a sample size of 1,286 youth in order to investigate predictors of high school completion and total educational attainment. They found that, among other factors, school absences, grade retention, and youth's educational expectations all influenced educational attainment.

54. **Gross B., Opalka A., Gundapaneni P. Getting Back to School: An Update on Plans from Across the Country. University of Washington Bothell, Center on Reinventing Public Education; 2020.**
University of Washington Bothell's Center on Reinventing Public Education in collaboration with the RAND Corporation is conducting the American School District Panel project. As part of this work, CRPE conducts surveys with a nationally-representative sample of 477 school districts across the U.S. "to capture a national portrait of how school districts are responding to the COVID-19 pandemic on an ongoing basis." In this report, they presented data from August 2020 related to school district plans to reopen. They found large differences by geography and student demographics. Overall, 49% of districts sampled intended to reopen school fully for in-person learning in Fall 2020, 26% would be fully-remote, and 12% would have a hybrid model. Eighty-five percent of districts reported that parents would have the option of fully-remote instruction. However, "while half of districts across the country will open their buildings to fully in-person instruction, students in the vast majority of our largest school districts, many of which also serve large numbers of vulnerable students, will not." Students in urban communities were less likely to have access to in-person learning, with 9% of urban school districts planning to reopen school for fully in-person learning compared to 65% of rural school districts and 24% of suburban districts. Students in districts with the highest concentrations of students living in poverty were also less likely to have access to in person learning, with 41% of districts in the highest poverty quartile planning to offer remote-only instruction, compared to 24% in the lowest poverty quartile. The authors noted that, "urban districts are far more likely to start the school year fully remote, and are also the districts with the highest concentrations of students living in poverty."

55. **Catalano Amy J., Torff Bruce, Anderson Kevin S. Transitioning to online learning during the COVID-19 pandemic: differences in access and participation among students in disadvantaged school districts. *The International Journal of Information and Learning Technology.* 2021;38(2):258-270.**
Catalano et al. examine the extent to which vulnerable students, particularly those in high-needs districts, and students with disabilities and English Language Learners (ELLs) access and participate in online learning. Researchers cite evidence that "there appears to be no statistically significant difference between the effectiveness of online vs face-to-face instruction, although there is not enough evidence to determine the effectiveness of online learning for students with disabilities or ELLs." Authors noted that "the ability to read and comprehend written language can be a barrier to instruction when learning online." Surveys of special education directors

across New York State found not all schools are adequately prepared to deliver online instruction to students with disabilities; students with severe disabilities are not being served; there is a lack of communication, funding, and staff capacity to meet the needs of all students with disabilities; and curriculum needs to be revised for accessibility. For example, curriculum should use closed captioning, be readable by a screen reader, and use of tools like alt text for images. Although evidence suggests that teachers are often willing to learn to design accommodating lessons online and use the necessary technology and tools, they generally lack the training opportunities to do so. "No research has examined the impact of online learning on ELLs' achievement or any other educational outcomes." Researcher conducted an anonymous online survey of 300 teachers (PreK-12; predominantly employed in public schools) in New York State in mid-April of 2020 (i.e., 6 weeks after the transition to online learning began). The survey consisted of 18 questions related to demographics (i.e., grade, subject, high-needs status of district), level of confidence teaching online, online tools and platforms used, accommodations for special learners, percentage of students regularly not completing work, reasons for not completing work, and level of concern about educational outcomes for general education, students with disabilities, and ELLs. Respondents taught high school (39.4%), middle school (33.1%), elementary school (71), and prekindergarten (2.3%). Three respondents taught special education in grades K-12. "Most participants taught in general education settings (n=5236; 78.1%), with 54 (17.9%) in working in special education and 10 (3%) employed teaching English as a new language (i.e., teachers who teach ELLs)." Most respondents reported being comfortable or very comfortable teaching online (mean=6.97; scale: 0-10). Reported accommodations for students with disabilities included "one-on-one via phone or video conferencing (53%; n=159); 46% reported providing different levels of learning materials (n=126) and 38% provided learning materials in different modalities (n=115)." Nine percent (n=28) reported not employing any accommodations. "Respondents reported that distance-learning assignments had not been completed by 29.59% of students overall, including 28.14% of general-education students, 30.18% of [students with disabilities] and 30.45% of ELLs." Those working in high-needs districts reported 36.35% of students were not completing work compared to 20.43% in low-needs districts (i.e., 58% more problematic in high-needs districts; statistically significant difference). Researchers found "this pattern of results was similar for the three student populations analyzed separately." Results of four linear regression models "demonstrated that students in high-needs districts were significantly more likely to be reported as failing to complete their assignments, while grade level was not a significant predictor." Among the general-education population, students not completing their assignments was 70% higher in high-needs districts. Among students with disabilities, students not completing their work was 60% higher in high-needs districts relative to peers in wealthier communities. Finally, among ELLs students not completing their work was more than 100% higher for those educated in high-needs districts compared to low-needs districts. "When asked to report their level of concern with respect to the academic progress of students during the transition to online learning, teachers reported being "very concerned" about 22.2% of general-education students (n=276), 52% of SWD (n=279) and 53% of ELLs (n=258)." Technology related barriers to completion of online assignments included no or limited access to a device/computer (28% overall) and no or limited Internet access (31% overall). Researchers noted in families with lower-income, "a single computer might be shared among several children and adults […] Even in homes with computers, students may be unable to access them consistently." Especially in early grades, where parental support is necessary for distance learning to be effective, "parental support for the transition to distance learning depends in part

on income level, placing lower income families at a disadvantage." Moreover, "since students with disabilities and ELLs are disproportionately likely to attend schools in disadvantaged communities, they are more likely to lack access to the technologies needed to participate fully in distance learning."

56. **Becker S. P., Breaux R., Cusick C. N., et al. Remote Learning During COVID-19: Examining School Practices, Service Continuation, and Difficulties for Adolescents With and Without Attention-Deficit/Hyperactivity Disorder. *J Adolesc Health.* 2020;67(6):769-777.**

Becker et al. examine remote learning practices, family financial burden, learning difficulties, parent confidence in remote learning, and parent difficulties with learning support and home-school communication in a large sample of adolescents with and without ADHD. Data were collected from May 16, 2020, to June 15, 2020, when in-person learning was prohibited, and social distancing recommendations were in effect. The study sample consisted of 238 adolescents (132 males; aged 15.64-17.99 years) enrolled in grades 9-11 during the 2019-2020 academic year in the Southeaster and Midwestern U.S. Of the sample, 118 were diagnosed with DSM-5 ADHD (85 Predominantly Inattentive Presentation; 33 Combined Presentation), and 120 participants comprised a comparison sample without ADHD. Participants were mostly white (80.3%) and non-Hispanic/Latinx (94.5%). Results found that "adolescents from low-income families were significantly more likely than adolescents from high-income families to receive no remote/online learning ($\chi 2$=6.28, p=.012) and significantly less likely to engage in class meetings online ($\chi 2$=8.78; p=.003)." Additionally, families with incomes below the U.S. median were more likely that families with incomes above the median to incur a financial burden. Fifty-nine percent of school services received before COVID-19 were maintained during remove learning. The most common of which were extended time to complete work (72%), meals provided by school (70%), and modified assignments or examinations (60%). Meanwhile, 35% of students continued receiving school counseling, and 39% continued receiving tutoring during COVID-19 remote learning. Among parents of adolescents with ADHD with an IEP/504 Plan 31% "reported finding it very challenging to have schooling moved to remote learning, compared with 18% of parents of adolescents with ADHD without an IEP/504 Plan and 4% of parents of adolescents with neither ADHD nor an IEP/504 Plan." Results showed "ADHD status significantly moderated the association between adolescent difficulty concentrating because of COVID-19 and remote learning difficulties. Difficulties concentrating were associated with more remote learning difficulties for adolescents with ADHD, but not for adolescents without ADHD."

57. **Dorn E., Hancock B., Sarakatsannis J., et al. COVID-19 and learning loss—disparities grow and students need help. McKinsey & Company; 2020.**

This article by Dorn et al. examined assessment data from fall 2020 following COVID-19 related school closures. Data show that "students, on average, started school about three months behind where we would expect them to be in mathematics. Students of color were about three to five months behind in learning; white students were about one to three months behind." Estimates were based on data from the Curriculum Associates i-Ready platform. Assessment data from students who had returned to the classroom showed students in the sample learned "67% of the math and 87% of the reading that grade-level peers would typically have learned by the fall." Among schools that predominately served students of color, scores were 59% of the historical math average and 77% of the historical reading average. Results for reading were "more positive,

with students starting school just a month and a half behind historical averages." Authors estimated students, on average, were likedly to lose 5-9 months of learning by the end of the 2020-21 academic year (6-12 months for students of color compared to 4-8 months for white students). Therefore, students with the fewest academic opportunities prior to the pandemic are expected to experience the greatest learning loss. Authors estimated about 60% of K-12 students started the 2020-21 school year full-time remote, 20% in a hybrid model (remote and in-person classes), and 20% in-person full-time. Evidence indicates that Black (estimated 69%) and Hispanic (71%) students are more likely to be learning remotely than white peers (49%).

58. **Hodgkinson S., Godoy L. , Beers L.S. , et al. Improving Mental Health Access for Low-Income Children and Families in the Primary Care Setting. *Pediatrics.* 2017;139(1):e20151175.**

In their report, funded by the National Institute on Minority Health and Health Disparities of the National Institutes of Health, Hodgkinson et al. discuss the impact of poverty on mental health, barriers to care, and integrated behavioral health care models that may improve access and outcomes for children and families residing in the contexts of poverty. Authors note disparities in financial poverty rates depending on age, race/ethnicity, family structure, and geographic location. Evidence indicates that Black/African American, American Indian/Alaska Native, and Hispanic or Latino children are disproportionately affected by financial poverty. For example, 2013 data show that African American and Hispanic children were approximately 3 times more likley than white and Asian children to be poor. Additionally, "Longitudinal research indicates that, compared with children of higher socioeconomic status (SES), children of low SES experience higher rates of parent-reported mental health problems and higher rates of unmet mental health needs." Specifically, a gradient exists in which "children from families across the spectrum of lower income levels incur some risk for adverse health outcomes, with children from families facing the greatest poverty experiencing the greatest risk." Evidence also shows that "more extended exposure to [financial] poverty and exposure during childhood have been linked with [worse mental health] outcomes." Authors cited evidence estimating that less than 15% of children experiencing poverty who are in need of mental health care receive services, and even fewer complete treatment. "Although there is no significant difference in the prevalence of mental health problems among children residing in poverty by race or ethnicity or geographic residence, after demographic and family variables are controlled for, there are statistically significant disparities in mental health service utilization across racial and ethnic groups and between children residing in urban and rural areas." For example, studies "generally found lower mental health service utilization among African American and Hispanic children compared with white children." Additionally, "African American children residing in urban areas and Latino children residing in both rural and urban areas are less likely to be connected to mental health care than white children", and "white children in rural areas are significantly less likely to receive metnal health services than thier counter parts in urban areas." Results remain statistically significant after controlling for income, family composition, and health insurance status. Low-income families and children face multiple barriers in accessing and maintaining compliance with mental health treatments. For example, families in rural areas often face long travel distances to access appropriate care. Lack of insurance, limited coverage, or insurance-barriers may limit access to mental health care. Clinic related barriers to care include long-wait times, multiple appointments, and business hours that may not accommodate those employed in low-wage shift jobs. Stigma associated with mental health care as well as a general mistrust of

the mental health care system may also affect families' decision to seek treatment for their child. Authors go on to discuss options

59. **Monthly Enrollment and Absences Display. Data & Reporting 2021; Available at: https://www.k12.wa.us/data-reporting/data-displays/monthly-enrollment-and-absences-display. Accessed 8 April 2021, 2021.**
This OSPI webpage analyzes enrollment data and changes between the 2019-2020 and 2020-2021 school years.