



EDUCATIONAL DISRUPTION AND COVID-19: An Issue Brief from the Reopen Schools Project at Reopen Maryland

Schools across the country have closed since the novel coronavirus, which causes the disease known as COVID-19, emerged in the U.S. But what does the data really say about school closure and reopening related to COVID-19?

DO EXPERTS BELIEVE SCHOOLS SHOULD REMAIN CLOSED?

A recent analysis in the Lancet concluded the evidence for national school closure due to COVID-19 was “[very weak](#)” and would have “[profound economic and social consequences](#)” while providing a relatively minor (2-4%) reduction in overall death rates (Viner et al., 2020). The Centers for Disease Control and Prevention (CDC) recently released [a decision tree](#) suggesting schools should reopen as long as local ordinances allowed it, staff had capacity to screen for COVID-19 symptoms and schools had adequate personal protective equipment for staff who needed it (CDC, 2020c). A [recent discussion](#) among education heads in the European Union concluded that school reopening there had not led to spikes in cases (Daniel & Willsher, 2020).

IS IT SAFE TO REOPEN SCHOOLS?

The [WHO’s chief scientist says](#) children seem “less capable” of spreading coronavirus and are at “very low risk” of illness (British Broadcasting Corporation, 2020). The same scientist reports that no major outbreaks have resulted from school reopening. [Multiple studies have found](#) that, while it remains theoretically possible for children to transmit the virus to adults, it occurs far less frequently than originally feared. Studies of transmission within families found children “unlikely” to have passed the virus to adults in their own households (Boast, Munro & Goldstein, 2020, p.5).

EVEN IF COMMUNITY SPREAD OCCURRED IN SCHOOLS, HOW DEADLY IS COVID-19?

COVID-19 is [far less deadly than originally predicted](#), with the risk of death, for adults, [roughly equivalent to the risk of death from driving a car](#) (Ioannidis, Axfors, & Contopoulos-Ioannidis, 2020). The risk to children is even lower; children accounted for fewer than 2% of total COVID-19 cases [in a large CDC study](#), and of those children who did contract the virus, [a maximum of 2%](#) required hospitalization (CDC COVID-19 Response Team, 2020). In one study, most admissions to pediatric intensive care units [involved children with “significant preexisting comorbidities”](#) (Shekerdeman et al., 2020). While some cases of a [rare inflammatory complication](#) have been reported (European Centre for Disease Control and Prevention, 2020), cases remain uncommon and schools are not closed for similar post-infectious

inflammatory syndromes such as Kawasaki disease. Pediatric deaths from COVID-19 are “[extremely rare](#)” (Boast, Munro & Goldstein, 2020, p.4). In fact, one [study](#) cautioned that far from reducing mortality, closing schools due to COVID-19 might actually increase mortality, increasing absenteeism among the healthcare workforce and thereby placing strain on the healthcare system (Bayham & Fenichel, 2020).

HAVE OTHER COUNTRIES SAFELY REOPENED SCHOOLS?

Some countries such as [Taiwan](#) never closed schools (McFall-Johnsen, 2020), and many others, including 22 European countries, [have reopened](#) without significant spikes in children’s infections (Boffey & Willsher, 2020).

HOW EFFECTIVE IS “SOCIALLY DISTANCED” LEARNING?

Evidence suggests that remote learning can be [less effective than face-to-face learning](#) for many schoolchildren (Robles, 2020), including those with [special education needs](#), as intensive therapies often cannot be delivered remotely (Leone & Cullotta, 2020). In fact, socially distanced learning is likely to cause a “[historic academic regression](#)” that will [particularly disadvantage](#) these students, as well as students from backgrounds of poverty and students learning English (Richards, 2020). In addition, concerns abound about the developmental appropriateness of socially distanced learning [for young children in particular](#) (Silverman, 2020). [Recent guidelines from the CDC](#) for socially distanced school resumption, for example, present recommendations that are challenging to implement in developmentally and socially appropriate ways (CDC, 2020a). These include steps such as universal playground closure, seating that does not allow for collaboration or discussion, and restriction of movement in the classroom.

HOW DO SCHOOL CLOSURES IMPACT ACADEMIC GROWTH?

Spring 2020 closures are projected to place students 30-50% behind where they would otherwise have been, with more significant [loss in math](#) (Kuhfeld et al., 2020). Some students will have lost [almost a full year](#) of growth from spring alone (Christakis, 2020), with any fall closures increasing this gap. Numerous [experts agree](#) school closure poses significant academic risks (Christakis, 2020). In addition, options for partial or staggered school reopenings may impact students’ academic progress and well-being in yet-unquantified ways.

HOW DO SCHOOL CLOSURES IMPACT STUDENTS WHO NEED ADDITIONAL SUPPORT?

School closure and related interruptions to learning [hit](#) academically vulnerable students hardest (Kuhfeld et al., 2020). Those with disabilities [cannot access needed services](#) and often receive developmentally inappropriate and ineffective online learning in place of the intensive personal therapies they need (Adely, 2020). Additionally, a recent *Lancet* article predicted COVID-19 related school closures are likely to “[exacerbate food insecurity](#)” and “[widen the learning gap](#)” for students from backgrounds of poverty (Van Lancker & Parolin, 2020, p.1).

HOW DO SCHOOL CLOSURES IMPACT STUDENTS' SAFETY?

Abuse cases, including [some reported fatalities](#), have been on the rise since school closure and lockdown orders. Teachers are often the first to report suspected child abuse, and [states have reported a drop in these referrals](#) since COVID-19 related school closures (Richardson, 2020). In fact, researchers estimated that [over 200,000 claims of child abuse](#) across the nation may have gone unreported in March and April 2020 due to school closures (Barron, Goldstein & Wallace, 2020). While not all claims of abuse are substantiated or suggest imminent harm, it is certain that children in dangerous or vulnerable home situations are left without needed support when schools are closed. Additionally, reports indicate that the COVID-19 shutdowns have [increased the risk of substance abuse as well as mental health issues](#), with adolescents being particularly vulnerable to addiction (Panchal et al., 2020).

HOW DO SCHOOL CLOSURES IMPACT STUDENTS' MENTAL HEALTH?

There is widespread agreement that school closure is [harmful to children's mental health](#), with parents reporting increased depression, stress, anxiety and suicidal ideation (Kamenetz, 2020). A [recent study](#) of child mental health during China's lockdown found increased symptoms of anxiety and depression, for example (Xie, Xou & Zhou, 2020). Another study found 83% of young people with mental health needs [reported their conditions worsening](#) during the pandemic (Lee, 2020).

HOW DO SCHOOL CLOSURES IMPACT THE ECONOMY?

The economic impact of school closure and interruptions to learning are substantial and harmful. One analysis, for example, found extended [school closure for pandemic illness can reduce Gross Domestic Product \(GDP\) by over \\$100 billion dollars](#) (Lempel, Hammond & Epstein, 2009). School closure wastes school system resources and causes [workforce disruptions](#) (Lempel, Epstein, & Hammond, 2009), affecting [16-30% of the workforce](#), with higher impact in healthcare (Sadique, Adams & Edmunds, 2008). Concerns are [now being raised](#) about heightened risks for school dropout among adolescents whose education has been interrupted (Torres, 2020). Those who drop out of high school are [far less likely to find employment](#) (Bureau of Labor Statistics, 2019) and far more likely to [become involved with the correctional system](#) (Berger-Gross, 2020).

WHAT KIND OF MEASURES SHOULD WE TAKE TO REOPEN SCHOOLS?

Schools and districts will need to identify ways to protect vulnerable teachers and staff through flexible scheduling and staffing, and schools and districts will likewise need to make provisions for medically vulnerable students to continue to learn with appropriate health protections or remote accommodations. Within schools, some common-sense measures have been proposed, such as frequent [handwashing](#) (Mineo, 2020), [screening students and staff for illness, and meticulous cleaning](#) (CDC, 2020b). Such steps are minimally disruptive to adopt. However, recent guidance from the CDC [presents recommendations whose scope is far more than minimally disruptive](#), such as closing playgrounds, requiring masks for children over 2, cancelling extracurricular activities, and restricting movement in the classroom (CDC, 2020a). Such practices have uncertain basis in the literature while being likely to have significant impact on students' academic, socioemotional and neurological development. Recent research found that [teachers expressed significant concerns](#) about feasibility of practices such as canceling recess, restricting student movement in the classroom, and staggering days (Uscher-Pines et al., 2020). The CDC's recommendation to [restrict attendance to students from certain localities](#) (CDC, 2020a) presents significant legal challenges with respect to charter school and magnet program students, those attending out-of-area vocational or English language programs, and (in particular)

students with special education needs who require specialized instruction in highly supported programs outside their neighborhood schools. In general, recommendations for social distancing within schools must be evaluated in light of their developmental appropriateness and impact on academic and socio-emotional growth, especially given the minimal risk that COVID-19 appears to pose to children.

CONCLUSION

In many respects, school-aged children have borne the brunt of our social response to the coronavirus pandemic. While not often at direct risk of harm from the virus itself, students have seen their educational trajectories significantly disrupted, with undeniable academic, physical, social and mental health impact. Alternatives being proposed for fall, such as remote or hybrid learning, hold little promise to rectify these disastrous impacts or provide any sense of stability to America's schoolchildren. If anything, options such as hybrid instruction, "socially distanced" classes with desks six feet apart, and school days with minimal social contact all promise to further disrupt students' learning and undermine the sense of stability that is critical to healthy child and adolescent development. In the face of increasingly clear research on the impact of school closure, we must seriously consider the question of competing harms. Closures offer uncertain and relatively minor benefits in overall pandemic control, but their harms to children and society at large are known and significant.

As we emerge from this period of national crisis, reopening schools can prove an effective way to help repair our strained social fabric. School helps to guarantee educational access and equal opportunity. School helps to facilitate students' cognitive and academic development, to support social and emotional connection, and to re-establish valuable routines for children and adults alike. For the well-being of our nation's children and our society at large, it is critical that decision-makers immediately prioritize children's timely return to school so that all of our nation's children can access the high-quality, developmentally appropriate educational experience that they undeniably deserve.

The Reopen Schools Project at Reopen Maryland has the goal of furthering equitable, effective and data-based policies and programming for students within Maryland and across the country in the wake of coronavirus-related school closures. Long-term closures have disrupted educational access and well-being for millions of children and adolescents, creating potential for significant and lasting social, economic and educational damage. The Reopen Schools Project advocates for evidence-based decision-making that incorporates an accurate understanding of all relevant variables, including health and epidemiological considerations, mental health, social and physical development, educational equity, academic growth, and social stability.

REFERENCES

- Adely, H. (2020, April 23). 'No one to help me': Special education families struggle with coronavirus school closures. *USA Today*.
<https://www.usatoday.com/story/news/education/2020/04/23/coronavirus-special-education-students-disability-school-closures/3008234001/>
- Barron, J., Goldstein, E. G., & Wallace, C. T. (2020, May 14). Suffering in silence: How COVID-19 school closures inhibit the reporting of child maltreatment. Social Science Research Network.
<https://poseidon01.ssrn.com/delivery.php?ID=455104081101119064117088124084102023001073052003031050086126095005008114113125077109036030058033030004038073003110101099020105114008047023021092070030027107021125015055030010065125101015068114116065096122122124067101126069093095113089113073082101064082&EXT=pdf>
- Bayhem, J., & Fenichel, E. (2020, Apr. 3). Impact of school closures for COVID-19 on the US health-care workforce and net mortality: a modelling study. *The Lancet*. doi: [https://doi.org/10.1016/S2468-2667\(20\)30082-7](https://doi.org/10.1016/S2468-2667(20)30082-7).
- Berger-Gross, A. (2020, January 27). From school to prison: The criminal justice outcomes of youth with disabilities in North Carolina. North Carolina Commerce.
<https://www.nccommerce.com/blog/2020/01/27/school-prison-criminal-justice-outcomes-youth-disabilities-north-carolina>
- Boast, A., Munro, A., & Goldstein H.(2020). An evidence summary of Paediatric COVID-19 literature. Don't Forget the Bubbles.
<http://doi.org/10.31440/DFTB.24063>
- British Broadcasting Corporation. (2020, May 17). Children 'seem less capable of spreading virus'.
https://www.bbc.com/news/av/health-52695995/children-seem-less-capable-of-spreading-virus?fbclid=IwAR2ndGCUu7KcXkOar0q6lXoayCzD_0dyWGWZykolxtciQFdxQXB0TmnpMpc
- Bureau of Labor Statistics, U.S. Department of Labor (2019). 44.6 percent of high school dropouts and 72.3 percent of college graduates employed in August 2019.
<https://www.bls.gov/opub/ted/2019/44-6-percent-of-high-school-dropouts-and-72-3-percent-of-college-graduates-employed-in-august-2019.htm>.
- Centers for Disease Control and Prevention (CDC) (2020a). CDC activities and initiatives supporting the COVID-19 response and the president's plan for opening America up again.
<https://www.cdc.gov/coronavirus/2019-ncov/downloads/php/CDC-Activities-Initiatives-for-COVID-19-Response.pdf#page=53>
- Centers for Disease Control and Prevention (2020b). Considerations for schools.
https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/schools.html#anchor_1589931996560
- Centers for Disease Control and Prevention (CDC) (2020c). Schools during the COVID-19 pandemic.
<https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/Schools-Decision-Tree.pdf>
- Centers for Disease Control and Prevention COVID-19 Response Team. (2020, April 10). Coronavirus disease 2019 in children — United States, February 12–April 2, 2020. *MMWR Morb Mortal Wkly Rep* 2020;69:422–426.
<http://dx.doi.org/10.15585/mmwr.mm6914e4>.

- Christakis, D. (2020, May 13). School reopening—the pandemic issue that is not getting its due. *JAMA Pediatrics* published online May 13, 2020. <https://jamanetwork.com/journals/jamapediatrics/fullarticle/2766113>
- Daniel, B., & Willsher, K. (2020, May 18). Schools reopening has not triggered rise in Covid-19 cases, EU ministers told. *The Guardian*.
<https://www.theguardian.com/world/2020/may/18/french-minister-tells-of-risks-of-missing-school-as-more-pupils-return-covid-19>
- DiSilva, C. (2020, Mar. 23). Texas hospital says two preschoolers died of suspected child abuse in one day--and it could be linked to the coronavirus outbreak. *Newsweek*.
<https://www.newsweek.com/texas-hospital-says-death-two-preschoolers-could-linked-coronavirus-outbreak-1493810>.
- European Centre for Disease Prevention and Control. (2020, May 15). Rapid risk assessment: Paediatric inflammatory multisystem syndrome and SARS -CoV-2 infection in children.
<https://www.ecdc.europa.eu/en/publications-data/paediatric-inflammatory-multisystem-syndrome-and-sars-cov-2-rapid-risk-assessment>
- Ioannidis, J. P.A., Axfors, C., & Contopoulos-Ioannidis, D. G. (2020, May 5). Population-level COVID-19 mortality risk for non-elderly individuals overall and for non-elderly individuals without underlying diseases in pandemic epicenters.
<https://www.medrxiv.org/content/10.1101/2020.04.05.20054361v2>
- Kamenetz, A. (2020, May 14). With school buildings closed, children's mental health is suffering. NPR.
<https://www.npr.org/2020/05/14/855641420/with-school-buildings-closed-children-s-mental-health-is-suffering>
- Kuhfeld, M., Soland, J., Tarasawa, B.,...Liu, J. (2020). Projecting the potential impacts of COVID-19 school closures on academic achievement. (EdWorkingPaper: 20-226). Annenberg Institute at Brown University. doi: 10.26300/cdrv-yw05
- Lee, J. (2020, April 14). Mental health effects of school closures during COVID-19. *The Lancet*.
[https://www.thelancet.com/journals/lanchi/article/PIIS2352-4642\(20\)30109-7/fulltext](https://www.thelancet.com/journals/lanchi/article/PIIS2352-4642(20)30109-7/fulltext).
- Lempel, H., Epstein, J. M., & Hammond, R. A. (2009). Economic cost and health care workforce effects of school closures in the U.S. *PLoS currents*, 1, RRN1051. <https://doi.org/10.1371/currents.rrn1051>
- Lempel, H., Hammond, R. A., & Epstein, J. M. (2009, September 30). Costs of school closure. Brookings Institute.
https://www.brookings.edu/wp-content/uploads/2016/06/0930_school_closure_presentation.pdf
- Leone, H., & Cullotta, K. A. (2020, April 27). Coronavirus school shutdown has been particularly tough on kids with special needs: 'It's not just a disruption. We're going to see kids who actually go backward.' *Chicago Tribune*.
<https://www.chicagotribune.com/coronavirus/ct-coronavirus-special-education-students-schools-20200427-epnf2m4ur5cltowaigqdx3zify-story.html>
- McFall-Johnsen, M. (2020, May 13). School closures may not help prevent the spread of the coronavirus, and some experts say they may do more harm than good. *Business Insider*.
<https://www.businessinsider.com/school-closures-may-not-prevent-coronavirus-spread-experts-say-2020-5>
- Mineo, L. (2020, March 5). How to reduce the spread of coronavirus. *The Harvard Gazette*.
<https://news.harvard.edu/gazette/story/2020/03/preventing-the-spread-of-coronavirus-starts-with-basic-hygiene/>
- Panchal, N., Kamal, R., Orgera, K., ... Chidambaram, P. (2020, April 21). The implications of COVID-19 for mental health and substance use. KFF.
<https://www.kff.org/coronavirus-covid-19/issue-brief/the-implications-of-covid-19-for-mental-health-and-substance-use/>.

- Richards, E. (2020, April 13). 'Historic academic regression': Why homeschooling is so hard amid school closures. <https://www.usatoday.com/story/news/education/2020/04/13/coronavirus-online-school-homeschool-betsy-devos/5122539002/>
- Richardson, R. (2020, May 15). School closures affect rates of reported child abuse. *Standard-Examiner*. https://www.standard.net/news/local/school-closures-affect-rates-of-reported-child-abuse/article_91b1fafd-9efb-583a-a59f-3e7a124138c7.html
- Robles, Y. (2020, March 3). Amid coronavirus fears, the CDC told schools to plan for remote learning. That's harder than it sounds. Chalkbeat.org. <https://www.chalkbeat.org/2020/3/3/21178677/amid-coronavirus-fears-the-cdc-told-schools-to-plan-for-remote-learning-that-s-harder-than-it-sounds>
- Sadique, M. Z., Adams, E. J., & Edmunds, W. J. (2008). Estimating the costs of school closure for mitigating an influenza pandemic. *BMC public health*, 8, 135. <https://doi.org/10.1186/1471-2458-8-135>.
- Shekerdeman, L.S., Mahmood, N.R., Wolfe, K., Riggs, B.,... Burns, J. (2020). Characteristics and outcomes of children with coronavirus disease 2019 (COVID-19) infection admitted to US and Canadian pediatric intensive care units. *JAMA Pediatrics*. Published online May 11, 2020. doi:10.1001/jamapediatrics.2020.1948
- Silverman, A. (2020, May). Play, child development, and relationships: A preschool teacher in China shares her virtual teaching experience. *Teaching Young Children*. <https://www.naeyc.org/resources/pubs/tyc/apr2020/play-child-development-and-relationships>
- Torres, S. (2020, April 30). After coronavirus, expect high school dropout wave. 9/11 was the trigger for my sisters. *USA Today* 30 April 2020. <https://www.usatoday.com/story/opinion/2020/04/30/coronavirus-school-closings-lifelong-consequences-teens-column/3047910001/>
- Uscher-Pines, L., Schwartz, H. L., Ahmed, F., Zheteyeva, Y., Tamargo Leschitz, J., Pillemer, F., Faherty, L., & Uzicanin, A. (2020). Feasibility of Social Distancing Practices in US Schools to Reduce Influenza Transmission During a Pandemic. *Journal of Public Health Management and Practice*. doi: 10.1097/PHH.0000000000001174.
- Van Lancker, W., & Parolin, Z. (2020). COVID-19, school closures, and child poverty: a social crisis in the making. *The Lancet. Public health*, 5(5), e243–e244. [https://doi.org/10.1016/S2468-2667\(20\)30084-0](https://doi.org/10.1016/S2468-2667(20)30084-0).
- Viner, R. M., Russell, S., Croker, H., ... Booy, R. (2020). School closure and management practices during coronavirus outbreaks including COVID-19: a rapid systematic review. *The Lancet*, 4(5). [https://doi.org/10.1016/S2352-4642\(20\)30095-X](https://doi.org/10.1016/S2352-4642(20)30095-X)
- Xie, X., Xue, Q., & Zhou, Y. (2020, April 24). Mental health status among children in home confinement during the coronavirus disease 2019 outbreak in Hubei Province, China. *JAMA Pediatrics* published online April 2020. <https://jamanetwork.com/journals/jamapediatrics/fullarticle/2765196>.