

## Restarting School, Performing Arts, and Youth Athletics

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As a family physician and a father for the past 20 years, I know that kids need social connections and group activities to stay healthy. Yet parents in my practice are understandably concerned about their children going back to school, restarting youth activities such as music and sports, and increasing their social contacts with peers. These same parents know that their kids' emotional and physical well-being will benefit from these activities, which provide physical and mental exercise, develop teamwork, and build healthy social relationships. Even kids who are home schooled have had to stop sports, camps, and other group activities. Although time with family is extremely valuable, the current situation is imbalanced, and almost every child is missing interactions with peers as well as feeling the burdens in the world around them caused by the fear of covid-19.

I am writing this paper to offer reassurance that the choice to restart school, sports, performing arts, and to increase social contacts is not only good for their quality of life, but also their overall health as well as societal health, even in the presence of covid-19. The success of restarting activities in other countries, with improvement in public health for children and adults, has helped reduce the fear of covid-19 to more realistic levels, even while new cases continue to occur. This has helped the rest of their society adapt and heal as they reopen.

The survival rates in people diagnosed with covid-19 are much higher than most people believe possible. This paper will focus on youth, but similar research data is available for adults, and is covered in more detail in a longer paper referenced below (Irwin, 2020). Young people are over 100 times more likely to die from many other causes, and unfortunately social isolation increases the risk of several of these other more common causes of death. This is one reason pediatric organizations in the US and other countries have advocated for increased social contacts and a return to school for kids and young adults. In children and adolescents the survival rate is much higher for covid-19 than for the regular yearly flu pandemic, a fact that is well documented but rarely discussed.

My longer paper provides a detailed review of eleven research studies which show death rates as low as 1 in 1700 in one major study, and an average fatality rate of about 1 in 500. Numerous sources of bias are reviewed that exaggerate the statistics, only some of which were accounted for in the research. Every study found that most people who test positive for covid-19 have mild or no symptoms, and that almost all of the severe cases occurred in people with multiple underlying illnesses, just as is true of other infections. However, even in this group the rate of survival is higher than expected.

Another factor that impacts survival is the isolation and quarantine of people diagnosed with covid-19, which makes it harder for them to recover. The survival rates would be even higher if the people who do have significant symptoms received normal high quality care. This

problem has been compounded exponentially by staffing crises in long-term care facilities, which have occurred in every country affected by covid-19. This is one reason over half of the deaths worldwide have been in residents of these facilities. People need increased assistance and increased caregiving when they are ill, and this is normally what they would receive, if not for the extra layers of fear and isolation that come with a covid-19 diagnosis.

### **Reduced risks from covid-19 in children and adolescents**

People under age 20 have been almost completely spared by covid-19, which has been a welcome surprise to most public health and infectious disease experts. Young people do get the illness, and there have been some rare severe cases and deaths, but the total number of deaths for people under 18 was only about twenty in the entire world over the first 6 months of the pandemic, an incredibly small number. This is hundreds of times less than the number of youth deaths in the US alone from many other causes during this same time period, and even less than the regular yearly influenza epidemic which costs about 200 lives of children and adolescents each year. Epidemiologist Daniel Halperin discussed this data in the journal, *Global Health: Science and Practice*, and also in an article for the Washington Post, entitled, “The case for reopening schools this fall” (Halperin, 2020a&b).

Many other child health specialists agree that the benefits of social contacts and activities outweigh the risks, including the American Academy of Pediatrics, three associations of French pediatricians, and leaders of Toronto’s Hospital for Sick Children, one of the largest children’s hospitals in North America. All of these groups publicly called for a return to group activities, including for children with health challenges. The Toronto Hospital for Sick Children specifically addressed children with significant health challenges, stating “Children and youth who have medically complex conditions..., are also in a potentially higher risk category. At the present time there is no convincing evidence that the level of risk to these children and youth from (covid-19) is different from other respiratory viruses.” These children are also the ones who often need group activities the most.

These child health advocates make clear that their recommendations are for the health of children, not to help the economy or help their parents return to work. This is stated directly: “the primary impetus for reopening schools is to optimize the overall health and welfare of children and youth, rather than solely to facilitate parent/caregiver return to work or reopening of the economy” (Hospital for Sick Children, 2020). Many other pediatric experts and investigative journalists have made similar recommendations after examining the low risks for youths and the success other countries have had in reopening schools without any increase in covid-19 infection rates (Government of Finland, 2020; Government of Iceland, 2020; Gudbjartsson, 2020; New South Wales Government Health, 2020; van Drujften , 2020; Will, 2020; Zweig, 2020a&b).

## **Many health experts have reported the lower risk from covid-19, but often come under pressure or criticism**

Several well placed leaders in public health have reported on the low fatality rates from covid-19, including the pediatric organizations mentioned above, professors at the Stanford School of Medicine (Bendavid et al, 2020 a&b), and researchers at the CDC (CDC Covid Planning Scenarios, 2020). Many of them came under pressure to change their stance, even though it was supported by consistent research results. The Toronto children's hospital team initially argued that restarting school should be done as normally as possible, and that strict social distancing is counter-productive. They recommended modest but intelligent infection control measures. While most of their recommendations were maintained, they changed some of them in an update July 29<sup>th</sup>, which was done after discussion with other Canadian health organizations. For example, they originally said that performing arts could be restarted, with extra care regarding ventilation and room space, but in their update they recommended against them. In the original document they advocated that masks be optional for all ages, including teachers, pointing out several problems with masks including questionable efficacy, inhibiting communication, and increasing risk of infection from kids continually touching their faces, as well as from improperly stored or discarded masks. However, in the updated version they stated that middle schoolers, high schoolers, and teachers should wear masks when a 6 foot distance cannot be maintained. They still advocated that elementary school aged kids not be required to wear masks, and this came under heavy criticism from people who appeared unaware of the lower risks from covid-19, including many health experts.

One other likely reason for their advocating against mandatory mask wearing is the climate of fear, which contributes to social isolation. One of the wisest statements to come from any public health organization was offered in their Webinar for the media. The hospital president and CEO, Ronald, Cohn, stressed a healthier perspective of "living with the virus" instead of trying to completely isolate and contain it: *"We now have to mentally and practically move to the next stage... I'm talking about the next stage of changing our thinking and behavior about the pandemic. We have to accept and internalize that this virus will stay with us for a very long time. We have to accept that we will not be able to eliminate the risk of getting infected by the coronavirus. So we have to stop living in fear of the virus, and ... move on with activities of our lives"* (Hospital for Sick Children Advisory Group, 2020).

## **Multiple other causes of death far outnumber the risks from covid-19, and several of these are increased by social isolation and economic hardship**

While any child's death is a tragedy, the current social isolation causes significant emotional and psychological harm and increases the risks of death from several other causes such as suicide and drug and alcohol related injuries. The CDC Weekly Morbidity and Mortality Report from August 14th reported a large survey showing very high rates of adverse mental health outcomes in youth, including that 25% of people between 18 and 24 stated that they were "seriously considering suicide in the past 30 days" (CDC MMWR, 2020). Drug

overdose data also show dramatic increases in the months of covid-19 compared to the same period from the year before (American Medical Association, 2020). In the neighborhood where I live three young men died from alcohol and drug related injuries in the past 3 months, two of whom recently finished high school and one who was going to be a high school senior this fall. Unfortunately, available resources for mental health and suicide prevention have been greatly reduced by the fear-related response to covid-19, and these deaths are almost completely ignored.

An article in the New England Journal of Medicine described youth mortality data in the United States for the year 2016, and there were 12,336 deaths in youths aged 0-19 from injuries, by far the largest cause (Cunningham, 2018). This number is far below the worldwide tragedy of malnutrition related deaths, which number about 8000 children under age five every single day (World Hunger Education Service, n.d.). The top injury related deaths in the US in 2016, in descending order, were motor vehicle accidents (4074), firearm related injuries (3143), suicides (2335 –listed under three different causes depending the method used), drowning (995), and drug overdose (982), all of which could benefit from increased public health efforts.

Suicide is especially heartbreaking, and it increases during periods of social isolation and societal stress, as do alcohol and drug abuse (American Medical Association, 2020, Kerr et al, 2017). The 2335 children who died from suicide in 2016 in the US is by itself more than 100 times the approximately 20 deaths in all countries in the first six months from covid-19. These types of deaths have been sadly ignored while deaths from covid-19 are a major news focus. Once isolation ends, suicides and alcohol abuse are expected to decrease, but car accidents and firearm injuries likely will increase. This more dangerous “surge” is something we all can work mindfully to reduce, just as we can work to help youths get through the usual stresses of life.

School and other activities are not all rosy, and there will be times when kids struggle. Some will have difficulty finding like-minded peers, and their social isolation will continue even when surrounded by kids their own age. In sports a mistake may cost their team, or maybe they will not make the team at all. In performing arts they may not be selected for a role they want, or they may forget their lines under pressure. Sometimes kids will be bullied, and sometimes they will bully others. But even with these negative experiences, their lives will be better overall when they have meaningful contact with peers. We can be on the lookout for these problems and offer support so they get through them in as healthy a way possible. Moving through and processing these challenges will prepare them to face future challenges that continue as they move through the cycle of life.

### **Teachers and students will be safe after restarting school and youth activities**

Teachers and parents are not only concerned about the kids, they are also concerned about covid-19 affecting them. Many teachers and parents also have family members, friends, and neighbors with health challenges, and are appropriately concerned about spreading the illness. However, as schools have reopened around the world there have not been increased covid-19 rates in adults or children. This has been credited to children’s natural resistance to the

illness, but adults also have stronger immune systems than most people realize. As will be discussed in more detail below, estimated fatality rates for adults have been lowered dramatically in the past few months as data has accumulated.

Denmark and Norway reopened schools in April, then in May Finland, New Zealand, Australia, France, Vietnam, Switzerland, Japan, Germany and the Netherlands reopened, among many others (Halperin, 2020a&b; van Drujiten, 2020; Will, 2020; Zweig, 2020a&b). Although they had differing levels of social distancing, with several countries not recommending masks in children or teachers and allowing kids to socialize more normally, none of these countries had increased rates of covid-19. This finding was widely studied and reported, at least initially, but then quickly forgotten. An article May 29<sup>th</sup> discussed the success of reopening in Denmark and Finland: “You cannot see any negative effects from the reopening of schools,” Peter Andersen, doctor of infectious disease epidemiology and prevention at the Danish Serum Institute said. In Finland, a top official announced similar findings on Wednesday, saying nothing so far suggested the coronavirus had spread faster since schools reopened in mid-May” (Mortensen & Skydsgaard, 2020).

After reopening, many people continued to test positive, including some students and teachers. Just as in the US, many of these tests came from expanded testing ability. Usually the positive cases caused anxiety and sometimes individual school closings. However, further inspection showed that cases were generally mild and the schools reopened after short periods. For example, a well-known case in Israel caused a school to close, but further study showed that more than half of the children were asymptomatic (57%) and that no students or teachers were even hospitalized (Toronto Hospital for Sick Children, 2020). Because countries with mild social restrictions did as well as those with strict ones, it is wise to choose a milder system which allows a healthier social and educational environment.

Denmark was the first country in Europe to reopen schools, starting on April 15<sup>th</sup>. They did not recommend masks for students or teachers and allowed children to have normal play, but in smaller groups. An interview with the director of a Danish school, Sandi Mackenzie, provides specifics: “The Danish government has not recommended wearing masks. Mackenzie said he told students and staff that if they want to wear one, they can, but nobody has.” The director also stated that kids were allowed to play in smaller groups; “We can’t expect children to behave like adults,” Mackenzie said. “We still expect them to play” (Will, 2020). Denmark authorities recommended milder social distancing partly because of the very good results from Iceland, a country with whom they have extremely strong cultural ties. Iceland kept their schools open throughout the pandemic, with milder social restrictions and only 10 deaths as of July 5<sup>th</sup>, despite estimating well over 5000 cases of covid-19 in the country. In Iceland masks are also not worn by children or adults, and their Ministry of Health states simply, “The Icelandic authorities have not recommended that the public wears any sorts of face masks or cloths, and such practices are extremely rare in Iceland” (Government of Iceland, 2020).

The Toronto Hospital for Sick Children considered the above data carefully, and published recommendations on June 17<sup>th</sup> calling for full time school in September, specifically

mentioning these positive outcomes in other countries (Hospital for Sick Children, 2020). The criticism they received ignored the positive outcomes from other countries, and also ignored the low mortality in children. They published an update on July 29<sup>th</sup>, still maintaining their basic stance that all kids go full time in person back to school, but weakening some of their other recommendations. Both documents stress that if physical distancing is possible and is practiced appropriately masks should only be optional, saying “As it is difficult to wear a mask for a prolonged period of time, efforts should be made to ensure distancing in the classroom such that they do not need to be worn constantly”. One reason for limited mask use, in addition to comfort and questions about efficacy, is that “facial expression is an important part of communication which children should not be deprived of.”

### **Continued evidence that adults are also safer than most people believe possible**

While the weaker nature of covid-19 may surprise many people, scientific studies have consistently shown much lower risks for all ages than originally reported, because extremely large numbers of people with mild covid-19 were not counted in early estimates. Recent surges in cases in the United States have been primarily due to increased testing of people who are mild or asymptomatic. When these mild cases were quantified by quality research, the fatality rate was found to be between 1 in 1700, and 1 in 200, depending on the study, as reviewed in more detail in my larger paper (Irwin, 2020). The highest rate, 1 in 200, occurred in New York where the nursing home and long-term care crisis was particularly severe. The CDC published age based data that were similar to this, with estimated fatality rates of 1 in 2000 for people under age 50, a remarkably low number (CDC Covid-19 Planning Scenarios, 2020). Although the estimated death rates for older ages were higher, they were still lower than most people would expect, and would be even lower not for issues such as the quarantine and long-term care crisis.

I have been a hospice medical director since 2004, and have been making weekly visits to long-term care facilities for over 16 years to visit hospice patients. I have never witnessed anything like the crisis caused by the fear of covid-19. The fear of spreading the virus has led to increasing isolation regulations: no visits from family, friends, social workers, chaplains, or volunteers, and in some facilities not even visits from a hospice nurse are allowed. At the same time the facilities have all become severely understaffed. Some staff test positive, and some are kept out while waiting for test results, but many stay away from work, or simply quit their jobs, purely due to fear of the virus and fear of spreading it to their family and friends. The resulting drop in care and loss of staff is not due to character flaws, but is rather a natural human response to the exaggerated fears of covid-19. Thus the very people supposedly being protected, vulnerable elderly residents with pre-existing health conditions, suffer the worst from the covid-19 social isolation policies.

In many facilities around the world there were not enough staff left, and all the residents had to be evacuated. Details of a few of these cases are provided in my longer paper (Irwin, 2020). The staff still coming to work are asked to cover more hours and extra duties, and it is impossible to give normal care, even for these dedicated staff. In the past few months the

anxiety has reduced somewhat, because the facilities have learned about the many mild and asymptomatic cases. These are revealed when all residents and staff are tested at the same time. One example was a local facility where 20 residents and 17 staff tested positive all at once. Despite the residents being extremely high risk, only one of them had a severe illness, but her symptoms matched a different diagnosis; she had been hospitalized for a bacterial infection in her urine that spread throughout her body, called urosepsis, before her covid-19 diagnosis. She never had any respiratory symptoms such as cough or shortness of breath, and was not even placed on oxygen in the hospital, but her death was sent to the health department as a covid-19 death because she had tested positive. A more typical patient in that facility was Mrs S. She had started hospice care in February after almost dying when she fell, broke her leg badly, and needed surgical repair. After the surgery she stabilized, but remained in hospice due to her weakened state, advanced age of 90, and moderate dementia. When she tested positive for covid-19 on July 10<sup>th</sup> she had no change in her symptoms, with no sign of any acute illness. She has remained asymptomatic until September 3<sup>rd</sup>, the time of this writing, much to the surprise of staff at her facility, and came out of quarantine when she tested negative in late August.

The CDC's own website presented the low mortality from covid-19, but removed it when the webpage was updated July 10<sup>th</sup>, perhaps due to criticism similar to what other researchers have received when reporting low death rates. I have provided an image of the original table at the end of this paper, before the references. The CDC fatality rates were consistent with the research studies previously discussed, but dramatically lower than people expect, and they divided them into age ranges: a rate of 1 in 2000 for people under age 50, 1 in 500 for people between the ages of 50 and 64, and 1 in 77 for people over age 65. These rates were listed as their "current best estimates" in Table 1 on the CDC webpage entitled, *Covid-19 Pandemic Planning Scenarios* (2020). A large number of deaths could have been prevented if normal care was maintained, perhaps even more than half of them, so the more optimistic scenarios in the CDC table below are likely the most accurate. These are "Scenario 1" and "Scenario 2", with fatality rates of 1 in 5000 for people under 50, 1 in 1000 for people between 50 and 64, and 1 in 167 for people over age 65. Needless to say, these rates, even the "current best estimates", are significantly lower than people expect, and one can begin to see why deaths in people under age 20 are more than 100 times more likely from car accidents and suicide than from covid-19.

Public health is much more than prevention of illness. Good public health involves promotion of wellness and supporting people's own healing systems, which is partly done by simply providing quality education and accurate information. Unfortunately this has been sadly lacking from leaders of most public health organizations and the media, who feel obligated to report tragic cases as much as possible and avoid any information that would reassure people and thus encourage increased social contacts. As data has been collected over the past few months, however, the lower risks from covid-19 have been repeatedly revealed. Applying this knowledge will allow healthy activities for children and adults to resume, and will also allow better caregiving for people diagnosed with covid-19, no matter their age, which will improve health outcomes. Fortunately, children and adolescents have been a group where quality care

remained high, even in the early days of the pandemic, which is one reason their healing systems have been so strong. In this their parents and other caregivers have been their best allies. By encouraging them to re-establish social ties and reconnect to the world around them, including supporting them through the challenges that they will encounter, the children as well as the adults who interact with them will be strengthened even further.

Table 1 (CDC Covid-19 Pandemic Planning Scenarios, 2020) prior to July 10 update

Parameter	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5: Current Best Estimate
<b>R<sub>0</sub></b> Source: Preliminary COVID-19 estimates, ASPR and CDC	2	2	3	3	2.5
<b>Symptomatic Case Fatality Ratio, stratified by age in years</b> Source: Preliminary COVID-19 estimates, CDC	0-49: 0.0002	0-49: 0.0002	0-49: 0.001	0-49: 0.001	0-49: 0.0005
	50-64: 0.001	50-64: 0.001	50-64: 0.006	50-64: 0.006	50-64: 0.002
	65+: 0.006	65+: 0.006	65+: 0.032	65+: 0.032	65+: 0.013
	Overall: 0.002	Overall: 0.002	Overall: 0.010	Overall: 0.010	Overall: 0.004

### References

American Medical Association. (2020, August 14). Issue brief: Reports of increases in opioid-related overdose during COVID pandemic. *AMA Advocacy Resource*. <https://www.ama-assn.org/system/files/2020-08/issue-brief-increases-in-opioid-related-overdose.pdf>

- Bendavid, E., & Bhattacharya, J. (2020a, March 24). Is the Coronavirus as Deadly as They Say? *Wall Street Journal*. Retrieved from <https://www.wsj.com/articles/is-the-coronavirus-as-deadly-as-they-say-11585088464?ns=prod/accounts-wsj>
- Bendavid, E., Mulaney, B., Sood, N., Shah, S., Ling, E., Bromley-Delfano, R., . . . Tedrow, J. (2020b, April 11). *COVID-19 Antibody Seroprevalence in Santa Clara County, California*. Retrieved from <https://www.medrxiv.org/content/10.1101/2020.04.14.20062463v1.full.pdf>
- CDC Covid-19 Pandemic Planning Scenarios (2020). Coronavirus Disease 2019. Retrieved June 29, 2020, from <https://www.cdc.gov/coronavirus/2019-ncov/hcp/planning-scenarios.html>
- CDC MMWR. (2020, August 14). Mental Health, Substance Use, and Suicidal Ideation During the COVID-19 Pandemic. *Morbidity and Mortality Report*, 69(32). <https://www.cdc.gov/mmwr/volumes/69/wr/pdfs/mm6932a1-H.pdf>
- Cunningham, R., Walton, M., & Carter, P. (2018). The Major Causes of Death in Children and Adolescents in the United States. *New England Journal of Medicine*, 379(25). <http://mediad.publicbroadcasting.net/p/michigan/files/201812/NEJMSr1804754.pdf>
- Government of Finland. (2020, June 11). Coronavirus epidemic continues to slow down in Finland. *Finnish Institute for health and Welfare*. <https://thl.fi/en/web/thlfi-en/-/coronavirus-epidemic-continues-to-slow-down-in-finland?redirect=%2Fen%2Fweb%2Fthlfi-en>
- Government of Iceland. (2020, May 6). *News update: Iceland eases restrictions - all children's activities back to normal*. Retrieved from <https://www.government.is/news/article/2020/05/06/Iceland-eases-restrictions-all-childrens-activities-back-to-normal/>
- Gudbjartsson, D., Helgason, A., Jonsson, H., Magnusson, O., Melsted, P., Norddahl, G., & Sigurdsson, A. (2020, April). Spread of SARS-CoV-2 in the Icelandic Population. *New England Journal of Medicine*. <https://doi.org/10.1056/NEJMoa2006100>
- Halperin, D. (2020, May 29). The case for reopening schools this fall. *Washington Post*. <https://www.washingtonpost.com/opinions/2020/05/29/case-reopening-schools-this-fall/?outputType=amp>
- Halperin, D. (2020, June). Coping With COVID-19: Learning from Past Pandemics to Avoid Pitfalls. *Global Health: Science and Practice*, 8(2).

<https://www.ghspjournal.org/content/ghsp/early/2020/06/19/GHSP-D-20-00189.full.pdf>

Hospital for Sick Children Advisory Group. (2020, June 17). COVID-19: Recommendations for School Reopening. *Special Report*. <http://www.sickkids.ca/PDFs/About-SickKids/81407-COVID19-Recommendations-for-School-Reopening-SickKids.pdf>

The Hospital for Sick Children leaders also offered a webinar which has less details, but gives more information about them and is an excellent complement to the printed recommendations:

<https://www.youtube.com/watch?reload=9&v=Fe2I0wlrqMM&feature=youtu.be>

Irwin, M. (2020, June 29). *A Rapidly Changing View of Covid-19* [Unpublished working paper]. <http://www.drmattirwin.com/covid-19.html>

Kerr, W., Kaplan, M., Huguet, N., Caetano, R., Giesbrecht, N., & McFarland, B. (2017). Economic Recession, Alcohol, and Suicide Rates: Comparative Effects of Poverty, Foreclosure, and Job Loss. *American Journal of Preventive Medicine*, 52(4), 469-475. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5362282/>

Kolbert, E. (2020, June 1). How Iceland Beat the Coronavirus. *The New Yorker*. <https://www.newyorker.com/magazine/2020/06/08/how-iceland-beat-the-coronavirus>

Mortensen, A., & Skydsgaard, J. (2020, May 29). Reopening schools in Denmark did not worsen outbreak, data shows. *Reuters*. Retrieved from <https://www.reuters.com/article/us-health-coronavirus-denmark-reopening/reopening-schools-in-denmark-did-not-worsen-outbreak-data-shows-idUSKBN2341N7>

New South Wales Government Health. (2020, April 26). COVID-19 in schools – the experience in New South Wales. *National Center for Immunisation Research*. [http://ncirs.org.au/sites/default/files/2020-04/NCIRS%20NSW%20Schools%20COVID\\_Summary\\_FINAL%20public\\_26%20April%202020.pdf](http://ncirs.org.au/sites/default/files/2020-04/NCIRS%20NSW%20Schools%20COVID_Summary_FINAL%20public_26%20April%202020.pdf)

Sullum, J. (2020a, April 3). What We Should Have Learned From Iceland's Response to COVID-19. *Reason Magazine*. Retrieved from <https://reason.com/2020/04/03/what-we-should-have-learned-from-icelands-response-to-covid-19/>

van Drujijten, L. (2020, May 22). How Dutch schools reopened with no pupil distancing. *Tes: The Times Educational Supplement*. <https://www.tes.com/news/coronavirus-how-dutch-schools-reopened-no-pupil-distancing>

Will, M. (2020, June 10). How Schools in Other Countries Have Reopened. *Education Week*. <https://www.edweek.org/ew/articles/2020/06/11/how-schools-in-other-countries-have-reopened.html>

*World Hunger Education Service* (n.d.) Retrieved March 28, 2020, from <https://www.worldhunger.org/world-child-hunger-facts/>

Zweig, D. (2020, May 11). The Case for Reopening Schools: Lots of other countries have decided that it's time to take this step. Why is the US holding back? *Wired*. <https://www.wired.com/story/the-case-for-reopening-schools/>

Zweig, D. (2020, June 24). It's Ridiculous to Treat Schools Like Covid Hot Zones. *Wired Magazine*. <https://www.wired.com/story/its-ridiculous-to-treat-schools-like-covid-hot-zones/>