## Science says: 'Open the schools'

To stop COVID-19 dead in its tracks, many governors, mayors and superintendents are threatening to keep schools closed this fall, failing to consider the greater harm that comes from refusing to open them.

"We have to make sure kids are safe, family members are safe, educators are safe, staff is safe," says New York City Mayor Bill de Blasio. "If for any reason we are not confident of that, then you can just stick with the pure online learning." Similarly, teacher unions insist that comprehensive testing, tracing and distancing are essential if reopening is to be done safely.

The irony in such language is that children are safe at school already. The Centers for Disease Control and Prevention (CDC) states that of the first 68,998 U.S. deaths from COVID-19, only 12 have been in children under age 14 — less than 0.02 percent. Nor is coronavirus killing teenagers. At last count, the fatality total among children under 18 without an underlying condition is one; only ten of the 16,469 confirmed coronavirus deaths in New York City were among those under the age of 18. That's similar to the fatality rate for those under 20 in France, estimated at 0.001 percent, and in Spain.

The death of even one child is tragic, of course. Yet, it must be kept in mind that as many as 600 children in the United States died from seasonal influenza in 2017-18, according to CDC estimates, while the CDC's estimate for COVID-19 fatalities number just 12. A just-released JAMA Pediatrics study flatly states: "Our data indicate that children are at far greater risk of critical illness from influenza than from COVID-19." If the COVID-19 hazard sets the new standard for health safety, the country will need to close its schools each year from November until April to guard against influenza.

What about the new threat similar to Kawasaki disease, recently sensationalized as a COVID-19 association? In fact, the association is extremely low, and the incidence of the disorder is itself rare, affecting only 3,000 to 5,000 children in the United States each year. Importantly, the syndrome is typically treatable and never has been regarded previously as a risk so serious that schools must be shuttered.

While public attention is focused on exceptional rarities, learning is in free-fall. In Boston, only half of students are showing up for online instruction on any given day; 20 percent of them have never logged on to the designated website. "This situation is going to be like what is often called the summer slide [in student achievement], but on steroids," says Virginia's state school superintendent.

Low-income students are suffering the most. Many lack WIFI, computer tablets, software and other paraphernalia of the affluent. Nor are they as likely to have access to equivalent mentors at home as those with better educated parents. Robin Lake at the Center for Reinventing Public Education says that "elementary students [in urban districts] may have lost 30 percent of their reading skills."

Closure will endanger the health of our children, too. Already, more than half of America's children are not receiving needed vaccinations. Further, schools are the place where many learn that they need glasses or a hearing aid, or, if seriously ill, are guided by the school nurse

to the doctor's office for prompt medical attention.

In addition, children are being denied opportunities for social and emotional development that come with play, exercise, sports and socialization. Reports already indicate that suicide rates among the young are on the increase. More certain is the loss in human capital that lasts a lifetime: Closing schools this past spring translates into a 3 percent or more cut in lifetime earnings for those whose education is being sidelined. Clearly, closing schools does not benefit those whom schools are supposed to serve.

But what about the adults — the teachers, guidance counsellors, bus drivers and kitchen staff? No one wants to endanger the health of educators but, fortunately, risks to adults in schools are much less than those encountered in grocery stores, pharmacies and other essential businesses. As is shown across the world, including Switzerland, Canada, the Netherlands, France, Iceland, the UK, Australia and now Ireland, children seldom if ever transmit the disease to adults, even to their parents. Several epidemiologists recently denounced the widely cited April publication that erroneously concluded that children can transmit COVID-19 just as readily as adults. Its author, German virologist Christian Drosten, previously had been featured as a COVID-19 hero, abetting the panic to close schools.

No less important, COVID-19 mainly targets the elderly and those with underlying conditions. For people under 60, COVID-19 fatality rates are so low that they are less than or equal to those associated with the seasonal flu, according to data from France, Spain and the Netherlands, as well as the CDC. Certainly, adults at high risk or who are fearful should take precautions, and by now they understand how to social-distance for their own protection. But teaching is a young person's occupation. Teachers' median age is 41; more than 80 percent are under the age of 55, the age at which most become eligible for a retirement pension.

If opening day should come sooner, how should schools open?

Unfortunately, it is rapidly becoming conventional wisdom that students should be asked to attend half-days, wear masks, skip recess, spread themselves six feet apart and spend half their time in front of a computer — all in the name of social distancing. But how can classrooms hold students spread apart by six feet? How can you practice phonics with your mouth covered? How can you learn if it is time to return home just as you have settled into your seat? How can you develop socially and emotionally if you must remain distant from friends at recess? How can teachers instruct with masks on their faces?

All of this borders on the absurd, when we now know that social distancing and face coverings for children are completely unnecessary.

Never have schools subjected children to such an unhealthy, uncomfortable and antieducational environment, so science cannot precisely define the total harm it will cause. But science does tell us that risks from COVID-19 are too minimal to sacrifice the educational, social, emotional and physical well-being – to say nothing of the very health – of our young people.

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