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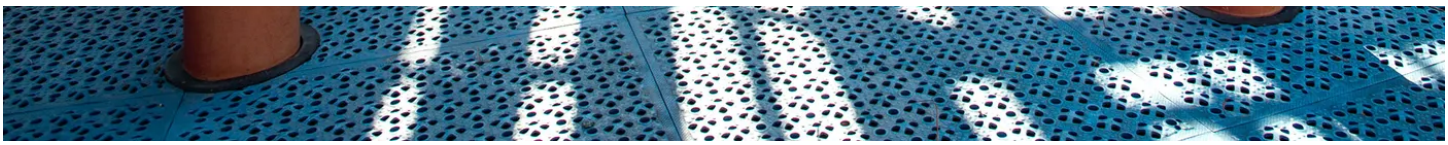
The Kids Are Alright Why now is the time to rethink COVID safety protocols for children — and everyone else.

By David Wallace-Wells



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The kids are safe. They always have been.

It may sound strange, given a year of panic over school closures and reopenings, a year of masking toddlers and closing playgrounds and huddling in pandemic pods, that, according to the CDC, among children the mortality risk from COVID-19 is actually lower than from the flu. The risk of severe disease or hospitalization is about the same.

This is true for the much-worried-over Delta variant. It is also true for all the other variants, and for the original strain. Most remarkably, it has been known to be true since the very earliest days of the pandemic — indeed it was among the very first things we did know about the disease. The preliminary mortality data from China was very clear: To children, COVID-19 represented only a vanishingly tiny threat of death, hospitalization, or severe disease.

Yet for a year and a half we have been largely unwilling to fully believe it. Children now wear masks at little-league games, and at the swimming pool, and when school reopens in the fall they will likely wear masks there, too. But the kids are not at risk themselves, and never were. Now, thanks to vaccines, the vast majority of their parents and grandparents aren't any longer, either.

But first: the kids. Over the course of the pandemic, 49,000 Americans under the age of 18 have died of all causes, according to the CDC. Only 331 of those deaths have been from COVID — less than half as many as have died of pneumonia. In 2019, more than 2,000 American kids and teenagers died in car crashes; each year, according to some estimates, about a thousand die from drowning.

Some of these comparisons aren't so neat, since the data on other diseases and accidents are sometimes unreliable, and because the extraordinary precautions against COVID-19 probably prevented significant additional spread (and also suppressed the spread of other diseases). But, last year, fewer kids died of COVID-19 than of heart disease, "malignant neoplasms,"

suicide, and homicide — not to mention birth defects, which killed hundreds of times more. All told, 600,000 Americans have lost their lives to COVID over the course of the pandemic; just 0.05 percent of those were under the age of 18, a population that represents more than 20 percent of the country's population as a whole.

Risk is a tricky thing, the spread of the Delta variant and the complications of "long COVID" both real concerns, and all parents should assess their own comfort, and those of their children, in making plans and taking precautions. But very few of them, two summers ago, were sending their children to parks and pools and camps in masks out of fear of pneumonia or flu. Probably fewer were keeping them home entirely.

This summer, the calculations are very different than they were even last year, when the virus was still spreading wildly in an entirely unvaccinated population. That's because, in the depths of a pandemic as we were then, individuals are not just individuals but links in a chain of transmission, which is the main reason why, for much of the last 18 months, public-health officials have worried over infections in the young — assuming they would eventually help bring the disease back to those much more vulnerable.

In fact, for all the consternation that the United States responded to the pandemic by abandoning individuals to fend for themselves — a narrative belied by the data, which shows a roughly average level of stringency in our public response and a remarkably generous level of social-welfare spending, as Alex Tabarrok, among others, has noted — this principle of universal and shared burden has guided an enormous amount of our pandemic response: We have treated the disease almost as a uniform threat as a way of encouraging uniform vigilance. The best way to stop deaths was to stop cases, went the thinking, which dovetailed naturally with every parent's intuitive caution and desire to keep their kids healthy and uninfected — and distrust, perhaps, of anyone who suggested that your child would be fine if she got sick.

But whatever we told ourselves in doing so, we didn't pull those kids out of school and put them in masks for their own. We did it for the sake of others.

But on that point mass vaccination in the United States has utterly changed the landscape of the pandemic: not only by protecting those who have received shots, indeed astonishingly well, but by changing the calculus for all those who haven't, by eliminating almost all of the mortality risk of the population at large. All told, 80 percent of American deaths have been among those 65 and above. According to the White House, 90 percent of American seniors are now fully vaccinated. Which means that while more cases are likely and some amount of hospitalization and death, as well, vaccines have eliminated the overwhelming share of American mortality risk, with the disease now circulating almost exclusively among people who can endure it much, much better — kids especially.

The country's whole risk profile has changed. But our intuitions about risk tolerance haven't — at least not yet.

Vaccines have been, in this way, a double gift, at least to the corners of the wealthy world where vaccination has been widespread. The first gift is the most obvious one, the power of conferred immunity, whose strength and durability continues to impress — especially against new variants, and especially in protecting against hospitalization and severe disease. From the early days of the pandemic, we were warned that immunity might quickly wane, and as soon as the vaccines arrived we learned to fear new variants that could evade their protection. Mercifully, as worrying as the spread of Delta is — and it is, making rapid inroads among the unvaccinated — neither scary possibility has come to pass. These vaccines really do work, amazingly well.

But the second gift may be more profound: the way our collective vulnerability has been transformed by vaccination programs focused on the old. The scale of this impact reflects the still under-appreciated fact of the age skew of COVID-19 — even by those who know, vaguely, that the older are more vulnerable. The important question is: How much more vulnerable? According to the CDC, the mortality risk for those 85 and above is 610 times higher than for 18-29 year olds. The number is so large it is almost hard to process. If a given number of infections among 20-somethings would produce just a single fatality, the same number of infections in 85-year-olds would produce 610. Of all the risk factors and comorbidities we read and heard so much about last spring, from race and class to obesity and COPD, each of which should raise ringing alarm bells about inequities in our society and our health system, the effect of age absolutely dwarfs all of them. Somehow, we could barely hear that alarm bell in the panicked pandemic din.

And though the skew is most visible among the very old, the effect is consistent across all age groups, with mortality risk doubling every five years. This means every difference of two decades multiplies risk 16-fold. Three decades and the difference is 64-fold. Those aged 75-84 face a mortality risk from the disease 230 times higher than those in their twenties. Between 65 and 74 you are 95 times more likely to die from a COVID infection than the CDC's 20-something baseline reference group.

And the risk of children is dramatically smaller still than that CDC baseline; according to one, much-cited paper, the infection fatality rate for those aged 5 to 9 is less than 0.001 percent. It suggests that a child of that age, even sick, faces roughly one-ten-thousandth the mortality risk of an 85-year-old. Statistically speaking, if a kid who comes down with a coronavirus infection is facing a threat to her life equivalent to the flu — perhaps significantly less — a 90-year-old who does so is treading in the neighborhood of anthrax, the bubonic plague, and certain lighter outbreaks of Ebola. It was often said, in lamentations of American indifference at the outset of the pandemic, that the country would have taken the disease much more seriously if it hadn't spared the very young. In the year that followed, we mostly pretended it didn't.

A large new study from the U.K. examining the fatality rate among all those under 18 found it only fractionally higher there — 0.005 percent. Overall, 126,000 Brits have died of COVID since the onset of the pandemic; just 26 of those were under the age of 18. Death is not the only scary outcome of COVID-19 infection, of course, and hospitalizations don't skew quite as dramatically as mortality. But an 85-year-old is still, according to the CDC, 15 times likelier to be hospitalized from COVID than a 20-something, who is many times more likely to need that care than a child. Did you know that the WHO doesn't even recommend universal mask-wearing for kids younger than 12?

None of this is new, and, scientifically, none of it was ever disputed, not even during the bitterest and most intense of last year's fights over pandemic policy. Nobody was debating the risk of severe disease in children — in fact whenever a Republican governor, speaking of school kids, made the comparison to the flu, media organizations would dispatch fact-checkers who invariably returned a verdict of "mostly true." What scientists were debating instead was transmission rates — whether children could catch the disease, or spread it, as readily as adults, especially in the classroom settings that became the focal point of the fight.

Studies on these questions have returned a variety of divergent answers, a sign of how complicated it can be to unpack the effects of one variable (like in-classroom learning) from others (local mask-wearing, seroprevalence, rates of social mixing versus social distancing). But one recent eye-opening report was recently highlighted in *Nature*. Among 90,000 in-school pupils learning in North Carolina last fall, researchers would have expected, based on local transmission rates, about 900 cases of COVID. There were, it turned out, only 32. In another study, among 20,000 Nebraska students attending school all year there were, in total, two cases. Even if the numbers were higher, the risk would not have been borne by the kids themselves, but their grandparents and other more vulnerable members of the community — of whom there are many fewer now, thanks to vaccines.

What about the unvaccinated elderly? In truth, there are very few places in the United States with very many of them — that is what it means to have a national vaccination rate of 90 percent for seniors. Zoom in closer, though, and it's still hard to find areas of real concern. No state has administered at least one shot of vaccine to less than 76 percent of its over-65 population. Though there are some counties with rates of elderly vaccination below 50 percent, there aren't too many. At the state level, all but three states have reached 80 percent of their elderly population, and three states (Hawaii, Pennsylvania, and Vermont) have passed 99 percent. It would be better, of course, if every state were at that level — and if every senior who'd gotten one shot went ahead and got a second. But for all the anxiety about low vaccination rates both in the country as a whole (where only 47 percent of the country has been fully vaccinated) and particular pockets of vaccine resistance or skepticism (in Mississippi, the figure is 36 percent), almost everywhere you look the most vulnerable populations are quite well-covered.

How much protection is it, though? The vaccines aren't perfect, and there have been breakthrough infections, though those are to be expected. The Delta variant — which looks considerably more transmissible across the general population, but does not appear to be more dangerous to those infected — has not, despite all the angst, demonstrated in the fully vaccinated signs of dramatic immune escape or meaningfully diminished vaccine efficacy. (If you've only gotten one dose, you are likely more vulnerable.) The result is that while we are seeing some new cases, including among the vaccinated, those cases are, while concerning, considerably less concerning than they would have been six or nine months ago. In Singapore, 100 percent of cases in vaccinated people are, reportedly, mild or asymptomatic. In a study conducted in a Rhode Island prison, only a tiny fraction of fully-dosed prisoners tested positive and all of those positive cases were asymptomatic. (To cite just two studies in a robust growing literature showing the mildness of post-vaccine infections.)

Hanging over all of this is the cloud of long COVID, but precisely how large a cloud — and how darkly it shadows over children in particular — remains very much an open question. The prospect of enduring, sometimes debilitating sickness is, of course, a legitimate concern, for individuals of any age, not just kids. But the reporting has often been anecdotal and studies aiming to document its prevalence have often been so filled with methodological problems — small sample sizes, self-reporting, no non-COVID comparison groups — it's not easy to know which results to trust.

In the U.S., Peter Hotez of Baylor has warned that low mortality rates among children are misleading because severe initial illness might be just the "tip of the iceberg" of the country's long-term coronavirus problem. Certain surveys have shown some alarming numbers, but those finding long COVID in roughly a third or even half of the infected are almost certainly overestimates, and those suggesting 10 percent may well be, too — since some of the symptoms being counted show up at the same rates among those who never got COVID. One large, much-referred-to survey in the U.K. found that between 7 and 9 percent of children who got sick were suffering from at least one symptom some months on, though the same survey also suggested the relative burden of long COVID in children was much smaller than in adults — of about one million people in the country complaining of long-term symptoms, only 3 percent, or 33,000, were kids, who make up more than a fifth of the country's population.

Another, perhaps more rigorous recent study in pre-print, looking at NHS data in the U.K., found that among more than one million patients diagnosed with COVID, only 3,000 registered long COVID — well under one percent. We don't yet have anything like that scale of study considering similar cases in American kids, but a subset of long-COVID research linking the severity of disease to the likelihood of enduring symptoms implies that the risk may be considerably smaller in children than in the population at large.

All of this suggests that, given American vaccination rates and the age skew of the disease, we might stop worrying so much about cases — stop treating them as a proxy for the severity of the pandemic at any time, and stop believing they tell us something obvious about near-future deaths. In countries like this one, with mass vaccination of the elderly already behind us, we could track the course of the disease instead through hospitalizations or deaths, which now have a very different relationship to case numbers than they did a year ago. When we built our mental models of the pandemic last spring and summer, a certain number of new cases told us one kind of story, and we learned to extrapolate from a certain rising rate of case growth an

inevitable rise in death rates a few weeks later. But we are living in a very different world now, in which both the lion's share of mortality risk has been eliminated through vaccination targeted at the elderly, and in which a much larger share of the ongoing transmission of the disease is producing much milder cases.

In the rest of the world, where vaccination rates are much lower and the elderly remain very much at risk, of course, the pandemic looks much more like it did a year ago, indeed even scarier given how much more transmissible Delta is. This is another reason, if we needed one, to be outraged at the geopolitics of vaccines: protecting the vulnerable in those countries could be done efficiently, too. Many countries in the developing world don't need 80 percent of their populations vaccinated to eliminate the lion's share of their own mortality risk, but just a fraction of that — often, due to the age structure of those populations, a much smaller fraction than was required to do it here in the U.S.

In parts of Europe where the vaccination rates remain low, near-vertical rates of case growth, driven by Delta, remain concerning; case growth elsewhere in the world, likely more so. But in the well-vaccinated U.K., where the rise of the Delta variant has generated widespread anxiety about a national "reopening" scheduled for July 19, the ratio of case growth to hospitalization rates has fallen more than fivefold. The infection fatality rate has fallen perhaps 20-fold and, even focusing just on Delta, at least tenfold: to 0.2 percent compared with 1.9 percent for the original, "Alpha" strain. Which helps explain why, even amidst widespread worry about flatlining vaccination rates and rapid spread of Delta, there are now those, like Amesh Adalja of Johns Hopkins, taking the opportunity to mark "the end of the acute phase of the public health emergency in this country," and others, like Monica Gandhi of University of California, San Francisco, suggesting, reasonably, we might think about downgrading from "epidemic" to "endemic."

In the U.K., even the University of Edinburgh's Devi Sridhar, long the country's most vocal advocate for a no-tolerance, total-suppression approach known as "zero COVID," has lately been wondering, "Can we now live with the coronavirus?"

A few months ago, a wave of articles and essays appeared reconsidering the pandemic with the benefit of a year's vantage, and focusing on the matter of aerosol spread. Namely, the fact that it took public-health authorities, in the U.S. and around the world, an excruciatingly long time to recognize and then publicize that the coronavirus spread primarily through the air — and not just through large droplets produced by sneezing and coughing, but small droplets produced by breathing. This was a major failing, especially when the science became clear to those looking closely — not immediately, but within the first few months.

But in my view, the basic disregard for the age skew of the disease looks in retrospect like the bigger oversight, in part because there was no scientific dispute. And still, painfully little was done to address it in policy. "Shouldn't we have been celebrating the fact that it doesn't affect children that much?" Gandhi asked me. "Like, shouldn't that be something that we celebrate? I mean, it is kind of weird. You just have to look at the CDC websites to see that kids are not very much at risk."

I first wrote about the subject early last May, in an essay with the headline "COVID-19 Targets the Elderly. Why Don't Our Prevention Efforts?" At the time, I was told, by many people who'd know better than me, that the country simply lacked the capacity to meaningfully protect the elderly during the first spring wave — a mark both of how casually we disregard the humanity of the country's old and how poorly prepared we were to scale up medical production and provide tests and PPE to those who could benefit the most from them.

The argument grew less plausible by summer, when the U.S. was basically leading the world in testing and had already produced a stockpile of unused rapid tests that could've been deployed in nursing homes and other eldercare facilities, and when the federal government could've

easily been mailing such tests (and masks) to everyone on the AARP mailing list. It grew even less so last fall and winter, when, despite how you may remember the course of the disease, the majority of American deaths actually occurred. By that point, almost certainly, a program launched in the spring, with the expectation of a second or third wave, could have been offering considerable at-home support for the elderly who hoped to self-isolate, or at least limit their contact with those they couldn't trust were COVID-negative.

It wasn't until this spring, even, that an easy-to-use, COVID-risk calculator appeared — this one, on *The Economist*'s website. For a while, at the beginning of the pandemic, the age skew of the disease was treated as a form of COVID-denier, right-wing propaganda — as though the inevitable implication was indifference towards deaths among the very old. But only a sociopath would draw that conclusion, as opposed to its opposite: that a portion of the American public desperately needed support and protection. By and large, they didn't get it. Even given the age skew of the disease, the average number of years of life lost by those who have died from COVID-19 was 16.

So what does this mean for the remainder of the pandemic? First, we should do what we can to actually, finally, process the basic, astounding fact of the pandemic age skew — to try to put aside our reflex to shield children from any threat of infection, to put aside the additional fear we've all felt, all year, because of the simple novelty of this disease, and to instead endeavor to see clearly the real scale of the direct threat to kids, which is and always has been minimal.

Second, we should try to understand just what mass vaccination of the elderly really means for the rest of us — that it dramatically limits, if not quite eradicates, the possibility of collateral damage from any present infections in the relatively young and healthy. Rather than worrying whether "vaccines alone" will stop community transmission, we should adjust our understanding of what community transmission means, in a country, like ours, with perhaps one-tenth the mortality risk it had a year ago.

And third, we should channel those feelings of mutual obligation, which governed so much of our pandemic behavior over the last 18 months, less into the project of stopping transmissions than vaccinating more and more Americans, to bring the possibility of that collateral damage close to zero. Until we do, there will be some latent mortality risk out there, which means the possibility of more deaths when the disease spreads. But it is simply a different scale of collective risk than we were facing at any point last year. If you want to keep your kids at home, or in their pods, or in their masks, that is up to you — but it *is* up to you, because the science is quite clear. And if you've spent the last months enraged at vaccine skeptics and their effect on the national immunity level, know that focusing on the need to protect children for

their own sake is a form of risk-of-harm inflation, too — if one with considerably less collateral damage at stake.

Lastly, we should understand that, even without new vaccination momentum, the pandemic really has reached its final chapter here in the U.S., at least when it comes to coronavirus deaths. We are not going to reach herd immunity, at least anytime soon, which means that there will continue to be not just cases but hospitalizations and deaths — which the vaccinated will likely regard, cruelly, as a form of partisan comeuppance. But how many will there be? A few weeks ago, when reports circulated that the global COVID-19 death toll this year had already surpassed last year's total, the fact was largely attributed to the horrific, short-sighted, painfully slow developing-world rollout of vaccines hoarded in the global North. I thought to myself, at the time, the U.S. wasn't far off that distressing benchmark, having tabulated 350,000 official COVID deaths in 2020, and about 250,000 in 2021. If the fall was anything like last fall, when the country saw roughly 25,000 deaths each month from August through October, about 40,000 in November and about 80,000 in December, it would be easy to imagine our 2021 total surpassing last year's — even if those numbers were cut in half, the country would still top last year's total this year.

Thankfully, barring major surprises, it won't — there just aren't enough vulnerable people left. Which means it's not just the vaccinated who can breathe easier, now, but their kids and grandkids, too.

An earlier version of this story compared one estimate of the infection fatality rate of COVID-19 with another estimate of the case fatality rate of the flu without noting the distinction. It was also edited to remove a comparison to RSV, and to accurately characterize the size of a study of disease spread among North Carolina students and teachers.

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