It's Time to Go Back to School. Do No Harm.

By Chuck Dinerstein, MD, MBA — January 25, 2021

Whatever you might think of our educational system, there can be no doubt that almost a year of remote “learning” will turn out to be disastrous. That's especially true for those already educationally disadvantaged. The science increasingly says that schools, especially elementary schools, are not superspreader sites. Are we willing to follow the science?

COVID-19 seems to be less of a problem for children, with far lower hospitalizations and deaths than for any other age group. So why are they not back in school or daycare? In part, there is a fear amongst teachers and other more susceptible adults working in these facilities that they will get COVID-19 from children who are asymptomatic carriers. And to be fair, it is difficult to know the true prevalence of COVID-19 in children because we don’t do much testing in that group. A new study in JAMA Pediatrics may let science light a path forward.
The researchers investigated 4964 pairs, a parent and child, the child between the ages of 1 and 10, both living in the same household, in various cities in one region of Germany. The study was conducted when the overall prevalence of COVID-19 was low and lockdowns in place so that playdates were not happening. Participants had to be PCR negative at the beginning of the study, and all underwent PCR testing and confirmation by two serum antibody testing.

PCR tests come with false positives and negatives, and that was why confirmation was done with two different blood tests. The reason for the two serology tests? Because even these different techniques, an ELISA and immunofluorescence test looking for evidence of COVID-19’s presence, have their false findings. As we are about to see, three tests may be better than one.

- Only one parent-child pair were PCR positive (0.04%)
- While the vast majority of serology was negative, there were 60 cases where both serology tests were positive and the PCR negative. With further testing, the number of positives increased to 70 overall.
- 94% of those 70 positives also had neutralizing antibodies – which explains the lack of symptoms

The analysis then focuses on those 70 positives.

- Positivity increased with age, 0.8% in those 1 to 5, 1% in those 6 to 10, and 1.9% in the parents – children were 3-fold less likely to have COVID-19 than their parents
- 23% of the children attended daycare; their positivity was 0.5% - no different than those at home
- 14 parent-child pairs were both seropositive
- The combination of a seropositive parent and a seronegative child was 4.3 times greater than a seropositive child, and seronegative parent – children, were not acting as transmitters.

Several findings are of critical importance. The reported prevalence of COVID-19 depends a great deal on what test you do, but we already knew that. The study clarifies that to dig down and get a better number, we need to test the samples with more than one methodology. The serology tests by themselves were often incorrect, but when a combination of techniques was utilized, the false positives and negatives tended to cancel out, and a clearer or more accurate picture emerged. The study also demonstrated that children were not the little asymptomatic transmitters we feared. It is difficult to claim that teaching involves more direct contact than the parent experiences with the child living together in one household. Moreover, the positivity of children kept at home was no better than children in daycare.

"With this large seroprevalence study demonstrating yet again what we have suspected for several months,... we must prioritize the reopening of childcare facilities and elementary schools to full time, in-person learning without exception.”

From their mouths to the teacher’s and their union’s ears. There are 1.8 million elementary school
teachers, even with our current vaccination rate, elementary schools could re-open in a month. Surely, science and vaccination should calm the troubled waters of teacher’s concerns.


To Spread or Not to Spread SARS-CoV2 – Is that the Question? JAMA Pediatrics (editorial)

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