

Children rarely transmit COVID-19, doctors write in new commentary

Schools can reopen in fall, they say, if safety guidelines are observed and community transmission is low

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Summary: A commentary published in the journal *Pediatrics* concludes that children infrequently transmit COVID-19 to each other or to adults and that many schools, provided they follow appropriate social distancing guidelines and take into account rates of transmission in their community, can and should reopen in the fall.

FULL STORY

A commentary published in the journal *Pediatrics*, the official peer-reviewed journal of the American Academy of Pediatrics, concludes that children infrequently transmit Covid-19 to each other or to adults and that many schools, provided they follow appropriate social distancing guidelines and take into account rates of transmission in their community, can and should reopen in the fall.

The authors, Benjamin Lee, M.D. and William V. Raszka, Jr., M.D., are both pediatric infectious disease specialists on the faculty of the University of Vermont's Larner College of Medicine. Dr. Raszka is an associate editor of *Pediatrics*.

The authors of the commentary, titled "COVID-19 Transmission and Children: The Child Is Not to Blame," base their conclusions on a new study published in the current issue of *Pediatrics*, "COVID-19 in Children and the Dynamics of Infection in Families," and four other recent studies that examine Covid-19 transmission by and among children.

In the new *Pediatrics* study, Klara M. Posfay-Barbe, M.D., a faculty member at University of Geneva's medical school, and her colleagues studied the households of 39 Swiss children infected with Covid-19. Contact tracing revealed that in only three (8%) was a child the suspected index case, with symptom onset preceding illness in adult household contacts.

In a recent study in China, contact tracing demonstrated that, of the 68 children with Covid-19 admitted to Qingdao Women's and Children's Hospital from January 20 to February 27, 2020, 96% were household contacts of previously infected adults. In another study of Chinese children, nine of 10 children admitted to several provincial hospitals outside Wuhan contracted Covid-19 from an adult, with only one possible child-to-child transmission, based on the timing of disease onset.

In a French study, a boy with Covid-19 exposed over 80 classmates at three schools to the disease. None contracted it. Transmission of other respiratory diseases, including influenza transmission, was common at the schools.

In a study in New South Wales, nine infected students and nine staff across 15 schools exposed a total of 735 students and 128 staff to Covid-19. Only two secondary infections resulted, one transmitted by an adult to a child.

"The data are striking," said Dr. Raszka. "The key takeaway is that children are not driving the pandemic. After six months, we have a wealth of accumulating data showing that children are less likely to become infected and seem less infectious; it is congregating adults who aren't following safety protocols who are responsible for driving the upward curve."

Rising cases among adults and children in Texas childcare facilities, which have seen 894 Covid-19 cases among staff members and 441 among children in 883 child care facilities across the state, have the potential to be misinterpreted, Dr. Raszka said. He has not studied the details of the outbreak.

"There is widespread transmission of Covid-19 in Texas today, with many adults congregating without observing social distancing or wearing masks," he said. "While we don't yet know the dynamics of the outbreak, it is unlikely that infants and children in daycare are driving the surge. Based on the evidence, it's more plausible that adults are passing the infection to the children in the vast majority of cases."

Additional support for the notion that children are not significant vectors of the disease comes from mathematical modeling, the authors say. Models show that community-wide social distancing and widespread adoption of facial cloth coverings are far better strategies for curtailing disease spread, and that closing schools adds little. The fact that schools have reopened in many Western European countries and in Japan without seeing a rise in community transmissions bears out the accuracy of the modeling.

Reopening schools in a safe manner this fall is important for the healthy development of children, the authors say. "By doing so, we could minimize the potentially profound adverse social, developmental, and health costs that our children will continue to suffer until an effective treatment or vaccine can be developed and distributed, or failing that, until we reach herd immunity," the paper concludes.

Story Source:

Materials provided by **University of Vermont**. Original written by Jeffrey R. Wakefield. *Note: Content may be edited for style and length.*

Journal References:

1. Benjamin Lee, William V. Raszka. **COVID-19 Transmission and Children: The Child Is Not to Blame**. *Pediatrics*, 2020; e2020004879 DOI: 10.1542/peds.2020-004879
2. Klara M. Posfay-Barbe, Noemie Wagner, Magali Gauthey, Dehlia Moussaoui, Natasha Loevy, Alessandro Diana, Arnaud G. L'Huillier. **COVID-19 in Children and the Dynamics of Infection in Families**. *Pediatrics*, 2020; e20201576 DOI: 10.1542/peds.2020-1576

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