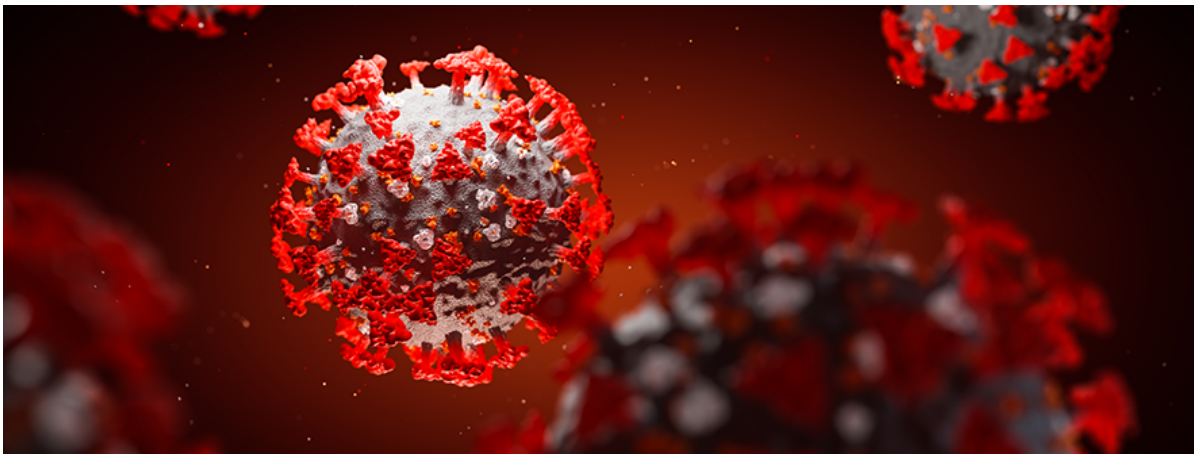
AAP Journals BLOG



Why Vaccinating Children Matters: COVID-19 Transmission in Households as a Function of Age

February 23, 2022

David E. Myles, MD, MS, Editorial Board Member, Pediatrics

Article type: Pediatrics Blog

Topics: Epidemiology, Infectious Diseases

In this timely and important article being early released this week in *Pediatrics*, McLean et al examine how COVID-19 transmission varies as a function of age among patients positive with PCR-confirmed COVID-19 in Tennessee and Wisconsin. From April 2020-April 2021, over 200 cases of COVID-19 were followed prospectively for 14 days to assess for self-reported symptoms and secondary infection risk (10.1542/peds.2021-054178).

The primary/index cases were mostly White and lived in single-family homes where masking was uncommon. Close to two-thirds (58%) of household contacts became infected following the index case—most acutely among index cases 65+ years old. The second-highest group (53%) who developed a secondary infection was among children between 5-11 years of age. The most commonly reported symptoms were upper respiratory that lasted a median of 8 days for all participants.

What is most interesting is that these investigators observed higher household transmission than had been previously reported and found similar rates of transmission between child and adult household contacts. The authors suspect that this difference may be attributable to differing methods of determining COVID-19 infection status coupled with possible delayed/reduced testing of asymptomatic and/or mildly symptomatic contacts.

The authors make salient the implied assumption that secondary infections came from the index household contact, as opposed to from someone else in the community. They also highlight that their sample is racially

homogeneous with relatively low household density. Finally, this study was conducted prior to the spread of Delta (and later Omicron) variants of COVID-19. The latter two shortcomings may suggest even more robust household transmission among larger households—particularly when more infectious variants (Omicron and Delta) are circulating.

Despite some (including some pediatricians) advocating against vaccinating “healthy” children, this article adds to the chorus of voices demonstrating the price society pays for failing to prioritize the vaccination of the youngest among us. Additionally, this article reminds us of the urgent need to work with our patients, families, and local jurisdictions to get all eligible children immunized as soon and as safe as possible, while keeping in mind that (at the time of this writing) children less than 5 still unfortunately remain ineligible for vaccination. To end this pandemic, we will need to sure that every eligible person is immunized, regardless of their age or where they live.