

# Pediatric emergency visits, hospitalizations down sharply during pandemic: study

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Amid the COVID-19 pandemic, children's hospitals across the United States have seen significant reductions in the number of children being treated for common pediatric illnesses like asthma and pneumonia, according to a new multicenter study led by Monroe Carell Jr. Children's Hospital at Vanderbilt.

Researchers at Children's Hospital found that 42% fewer children were being seen and hospitalized at 44 children's [hospital](#) across the U.S. for both respiratory and non-respiratory illnesses, with the most significant reduction seen in children under age 12. Hospitals saw a decline in the number of children seen or hospitalized for respiratory illness by 62%, while there was 38% reduction for non-respiratory illnesses.

The trend, they believe, is likely linked to [public health measures](#) instituted during the COVID-19 pandemic—masking, social distancing and handwashing—as well as reduced school and extracurricular activities among children and adolescents.

The study, "The COVID-19 Pandemic and Changes in Healthcare Utilization for Pediatric Respiratory and Non-Respiratory Illnesses in the United States," published in the *Journal of Hospital Medicine*.

"We found substantial decreases in health care encounters for respiratory and non-respiratory illnesses at children's hospitals across the U.S. The declines were larger for respiratory than non-respiratory illnesses," said lead study author James Antoon, MD, Ph.D., assistant professor of Pediatrics in the Hospital Medicine Program at Children's Hospital.

"This likely reflects reduced transmission of common respiratory pathogens resulting from pandemic response measures. For example, we found striking reductions in ED visits and hospitalizations for common pediatric illnesses such as asthma, pneumonia and influenza. Respiratory illnesses are the most common cause of ED visits and hospitalizations in children," Antoon added.

The large multicenter study evaluated emergency department visits and hospitalizations for respiratory and non-respiratory illness at 44 U.S. children's hospitals during the 2020 COVID-19 pandemic.

Using data reported to the Pediatric Health Information System database maintained by the Children's Hospital Association, researchers looked at children ages 2 months to 18 years who had been discharged from an ED or inpatient setting with a non-surgical diagnosis between Jan. 1 and Sept. 30, comparing encounter volumes in 2020 with average volumes for 2017-19.

During the study period when COVID was widespread (May-September), researchers found the overall reductions for ED visits/hospitalizations for each respiratory [illness](#) across all age groups

varied by type: asthma-related encounters dropped by 76%; pneumonia dropped by 81%; croup by 84%; influenza by 87%; and bronchiolitis by 91%.

When comparing age groups, the study found that adolescents had smaller reductions in both respiratory and non-respiratory illnesses compared to younger children.

"The changes in health care visits varied by age," Antoon said. "Adolescents had smaller reductions in both respiratory and non-respiratory illnesses compared to younger children, and their rates of respiratory illnesses increased at the end of the study period. Our findings suggest that the adolescent population is an important target for community-based prevention efforts to limit the spread of future [respiratory illnesses](#)."

Researchers say that further study is needed to continue to understand the reasons why fewer [children](#) went to the ED or had to be hospitalized and to evaluate if families sought treatment in alternative care settings such as telehealth visits.

**More information:** James W Antoon et al. The COVID-19 Pandemic and Changes in Healthcare Utilization for Pediatric Respiratory and Nonrespiratory Illnesses in the United States *J Hosp Med*. Published Online First March 8, 2021. [DOI: 10.12788/jhm.3608](https://doi.org/10.12788/jhm.3608)

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