

Pediatric ER saw steep drop in asthma visits during spring COVID-19 lockdown

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There was a steep drop in pediatric asthma visits to one ER during COVID-19 lockdown. Credit: ATS

A new study published online in the *Annals of the American Thoracic Society* discusses a steep drop off from prior years in asthma-related emergency department (ED) visits at Boston Children's Hospital during the spring 2020 COVID-19 surge and lockdown.

In "Impact of the COVID-19 Pandemic on Pediatric Emergency Department Utilization for Asthma," Tregony Simoneau, MD, assistant professor of pediatrics, Boston Children's Hospital, and co-authors looked at the medical records of children ages 2-22 who visited the hospital's ED for [asthma](#) treatment between Jan. 5 and May 23 in 2018, 2019 and 2020.

Pediatric asthma flareups frequently result in emergency department visits. Dr. Simoneau and colleagues noticed in their clinic visits with patients with asthma that their symptom control seemed to have improved with the onset of the pandemic. Given this observation, they hypothesized there would also be a decrease in asthma-related ED visits.

Massachusetts Gov. Charlie Baker issued a pandemic-related stay-at-home order—including closure of schools, day care centers and after-school programs—effective March 24, 2020. Due to this shutdown order, the researchers determined they would compare two time periods for each of the three years: Jan. 5-March 21 ("pre-shutdown") and March 22-May 23 ("post-shutdown") to determine whether the number of pediatric asthma ED visits changed year-to-year.

"Our most significant finding was the drastic, sudden drop in ED visits shortly after schools closed and the stay-at-home order went into effect," said Dr. Simoneau. "How this drop was sustained over several months is quite notable."

For the week of March 15-March 21 (pre-shutdown), the rate of ED visits was similar across the three years included in the study. However, the following week (post-shutdown) the rate of ED visits decreased 80 percent and 82 percent in 2020 relative to 2018 and 2019, respectively. This decrease in visits continued through May 23, with an 82 percent reduction from the 2018 rate and 87 percent reduction from the 2019 rate.

The percent of total ED visits due to asthma was lower in 2020 compared with 2018 and 2019. The authors noted that, "This suggests that the effect was not just due to an overall avoidance of the emergency department" during the shutdown.

The researchers also looked at whether hospital admission rates for asthma declined during the shutdown. They found that the number of admissions for asthma declined, while the proportion of asthma-related ED visits that required hospital admission remained similar to previous years.

Dr. Simoneau noted, "We felt this was important to evaluate in order to see whether patients presenting to the ED during the pandemic were

sicker and therefore would have a higher rate of admission. While there are many unmeasured factors that contribute to the decision to admit someone to the hospital, we think that our findings suggest a similar severity when comparing the 2020 ED visits with previous years. We believe this is more reflective of an overall decrease in exacerbations rather than just patients with milder exacerbations being managed at home."

"This study adds to the body of literature that provides reassurance from a pediatric perspective that COVID is not necessarily resulting in an increase in asthma exacerbations," she said. "In fact, the social distancing measures in place seem to have resulted in a significant decrease in exacerbations."

More information:

www.thoracic.org/about/newsroom/visits-and-covid.pdf

Provided by American Thoracic Society

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