

Where children live linked to delayed access to surgical care

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A new study from Ann & Robert H. Lurie Children's Hospital of Chicago found that children from less resourced neighborhoods were at increased odds of presenting with complicated appendicitis, an indicator

of delayed access to surgical care. This is the first pediatric study to link many neighborhood-level factors that influence health—such as quality of schools, housing, safety, and economic opportunity—to timely surgical care access. Findings are published in the journal *JAMA Network Open*.

"Timely access to pediatric [surgical care](#) may help reduce the need for [emergency surgery](#), long hospital stays, or admission to the [intensive care unit](#)," said co-author Fizan Abdullah, MD, Ph.D., Division Head of Pediatric Surgery at Lurie Children's and Professor of Surgery at Northwestern University Feinberg School of Medicine. "Most importantly, our findings may help in developing policies and programs to increase community opportunity and ensure that all children, no matter where they live, gain equitable access to surgical care."

For the retrospective, cohort study, the researchers examined the association between neighborhood factors and the odds of presenting with complicated appendicitis, as well as the likelihood of unplanned visits or readmissions to the emergency department with either simple or complicated appendicitis. Neighborhood-level social determinants of health (SDoH) were measured by the Child Opportunity Index (COI), a validated Zip code-level index score derived from 29 independent indicators that are known to affect children's health and development.

The study examined 67,489 patients age 18 and younger who had appendicitis. The results showed that children from lower COI [neighborhoods](#) had up to 28 percent increased odds of presenting with complicated appendicitis compared to those from the highest COI neighborhoods. There was no significant association between neighborhood opportunity levels and the odds of unplanned post-discharge healthcare utilization.

"Several large insurance companies have already started addressing the

effect of these social determinants of health through direct investments in neighborhoods, and this study helps inform the allocation of these investments to increase children's access to care," said senior author Hassan M.K. Ghomrawi, Ph.D., MPH, Research Scientist at Lurie Children's and Associate Professor of Surgery, Medicine, and Pediatrics at Northwestern University Feinberg School of Medicine.

"The lack of association between neighborhood-level factors and unplanned post-discharge hospitalizations and Emergency Department visits suggests that once patients have established care, they are connected to a pediatric resource that can support families after discharge, regardless of the patient's neighborhood," said lead author Megan Bouchard, MD, MPH, fourth year surgical resident at Georgetown University Hospital and former post-doctoral research fellow at Lurie Children's.

Provided by Ann & Robert H. Lurie Children's Hospital of Chicago

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