

# Determining risk factors for preventable pediatric hospital admissions

September 16 2016, by Allison Huseman

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A preventable hospital admission is defined by the Agency for Healthcare Research and Quality as one that might have been prevented with timely access to primary care or improvements to social determinants of health. Using this definition, a study by researchers at Baylor College of Medicine was published today in *Hospital Pediatrics* examining the specific characteristics associated with potentially preventable pediatric admissions to Texas hospitals.

In this study, hospitalizations for five conditions were potentially preventable: asthma, perforated appendicitis, complications of diabetes, gastroenteritis and [urinary tract infection](#). To study the risk factors of preventable admissions in these five conditions, Dr. Laura Medford-Davis, assistant professor in emergency medicine at Baylor, and colleagues identified 747,040 pediatric admissions of children aged 0 to 17 between 2005 to 2008.

These admissions resulted in an average of 71,444 hospitalization days per year, with 14 percent being potentially preventable. The costs for these visits totaled \$304 million dollars in hospital charges per year in Texas alone.

## The characteristics of preventable admissions

Medford-Davis found that the highest risk factors associated with preventable pediatric admissions in these five conditions included

younger age (0-4 years), male sex, African American race and Hispanic ethnicity, lower income, comorbid substance abuse disorder, [private insurance](#) and admission on a weekend or to a critical-access hospital.

"The most surprising results of our study were that privately insured patients and very young patients were at the highest risk for preventable admissions," said Medford-Davis. "This could be an indicator of overuse of private insurance, which will require additional research in the future to determine the extent to which this is occurring and why. As for the age factor, we think that this risk may be due to the fact that these young children cannot yet effectively communicate with their caregivers to let them know that there may be a health issue until it has progressed to show more serious signs."

In addition to further studying possible overuse of private insurance, Medford-Davis also stressed that future research is necessary in order to understand solutions for preventable pediatric admissions as a result of the five studied conditions.

## Combating preventable admissions

"To see a decrease in the number of preventable admissions among pediatric patients, we need to expand access to [primary care](#) and strengthen education efforts for parents about childhood illnesses. The best way to reduce these types of preventable admissions is to seek primary care quickly, when the child is still early in the sickness," said Medford-Davis.

Admissions that are potentially preventable represent a high burden of time and costs for the pediatric population, and strategies to reduce them have to be tailored to each diagnosis, as their associated [risk factors](#) vary across all conditions.

**More information:** Factors Associated With Potentially Preventable Pediatric Admissions Vary by Diagnosis: Findings From a Large State. *Hospital Pediatrics* Sep 2016, hpeds.2016-0038; [DOI: 10.1542/hpeds.2016-0038](https://doi.org/10.1542/hpeds.2016-0038)

Provided by Baylor College of Medicine

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