Children's Hospital of Philadelphia PolicyLab

Racial and Ethnic Differences in Antibiotic Use for Viral Illness in Emergency Departments

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BACKGROUND AND OBJECTIVES: In the primary care setting, there are racial and ethnic differences in antibiotic prescribing for acute respiratory tract infections (ARTIs). Viral ARTIs are commonly diagnosed in the pediatric emergency department (PED), in which racial and ethnic differences in antibiotic prescribing have not been previously reported. We sought to investigate whether patient race and ethnicity was associated with differences in antibiotic prescribing for viral ARTIs in the PED.

METHODS: This is a retrospective cohort study of encounters at 7 PEDs in 2013, in which we used electronic health data from the Pediatric Emergency Care Applied Research Network Registry. Multivariable logistic regression was used to examine the association between patient race and ethnicity and antibiotics administered or prescribed among children discharged from the hospital with viral ARTI. Children with bacterial codiagnoses, chronic disease, or who were immunocompromised were excluded. Covariates included age, sex, insurance, triage level, provider type, emergency department type, and emergency department site.

RESULTS: Of 39 445 PED encounters for viral ARTIs that met inclusion criteria, 2.6% (95% confidence interval [CI] 2.4%-2.8%) received antibiotics, including 4.3% of non-Hispanic (NH) white, 1.9% of NH black, 2.6% of Hispanic, and 2.9% of other NH children. In multivariable analyses, NH black (adjusted odds ratio [aOR] 0.44; CI 0.36-0.53), Hispanic (aOR 0.65; CI 0.53-0.81), and other NH (aOR 0.68; CI 0.52-0.87) children remained less likely to receive antibiotics for viral ARTIs.

CONCLUSIONS: Compared with NH white children, NH black and Hispanic children were less likely to receive antibiotics for viral ARTIs in the PED. Future research should seek to understand why racial and ethnic differences in overprescribing exist, including parental expectations, provider perceptions of parental expectations, and implicit provider bias.

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