

# Should we order a CT for the kid? Why race, ethnicity play a role

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A child's race and ethnicity appear to be determining factors in whether they receive diagnostic imaging in pediatric hospital emergency departments, and this may reflect underuse of imaging for Black and Hispanic children and overuse for white children.

Underuse of testing may result in misdiagnoses, the need for further care and potentially worse clinical outcomes, while overuse may unnecessarily expose children to the radiation risks associated with such imaging, according to a study published in *JAMA Network Open*.

"Something else is going on here that's beyond the clinical, that's beyond the diagnoses," lead author Jennifer Marin, MD, said in a news release.

"Cultural factors that come with people's race, gender, religion, etc., should not be associated with testing," added Dr. Marin, an associate professor of pediatrics, emergency medicine and radiology at Pitt.

The researchers examined records from more than 13 million pediatric ED visits at 44 hospitals in 27 states and the District of Columbia from 2016 to 2019. The patients' average age was 5.8 years, with 52.7% boys and 47.3% girls.

Diagnostic imaging was performed during 28.2% of the visits. After adjusting for relevant confounders, the researchers found that Black children were 18% less likely to get imaging tests as part of their ED visit, compared with white children, and Hispanic children were 13% less likely to have imaging done than white children.

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## Structural factors, bias and anxiety

“These findings were consistent across most diagnostic groups, persisted when stratified by insurance type, and were even more pronounced on analysis of only visits by nonhospitalized children,” the researchers wrote. “Our findings suggest that a child’s race and ethnicity may be independently associated with the decision to perform imaging during ED visits.”

Possible explanations for the findings listed by the researchers included a combination of parental or guardian preferences and anxiety, language barriers, clinician biases and structural factors.

The study adds that clinician biases may be exacerbated in times of stress, which is relevant to emergency physicians and other ED clinicians. Previous research has shown that physicians’ implicit racial bias affects interactions with patients, treatment decisions, patient adherence to treatment decisions and health outcomes.

Structural factors included that Black and Hispanic children may be less likely to have a medical home, which could affect clinician decisions.

## What to do about it

The findings were described in an invited commentary as important but not surprising and “consistent with decades of previous research documenting inequalities in health care delivery” based on race or ethnicity.

“Hospitals across the U.S. do not provide equal care to patients who present for an emergent evaluation; children of color, similar to their parents and grandparents, receive care that is different from what is provided to their non-Hispanic white peers,” Anupam B. Kharbanda, MD, chief of critical care services and a pediatric emergency medicine physician at Children’s Minnesota in Minneapolis, wrote in the commentary.

The differences found in the study “must be examined in the context of inequities within the social framework of a community,” Dr. Kharbanda added.

He described three approaches health systems can take to address the root causes of health inequities and structural racism. They should:

- Recognize that all medical professionals carry bias and even subconscious bias affects how care is delivered.
- Address structural racism that affects the communities they serve. As an example, he cited how Kaiser Permanente works with community partners to give patients nonclinical support.
- Prioritize the employment of a diverse workforce that reflects the population served, and working with medical and nursing schools to recruit a diverse student population.

“Physicians, researchers and health care leaders must partner with the communities they serve to develop and implement interventions to address these substantial inequities in care,” Dr. Kharbanda wrote.