Study finds racial and ethnic designation inaccuracies in children's medical records may impede equity efforts

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Leaders at three Michigan hospitals aiming to address equity issues for pediatric patients wanted to start with inspecting data key to identifying

potential inequities.

What they learned: Much of those data are inaccurate.

A study from the Michigan Child Health Equity Collaborative, or Mi-CHEC, found substantial errors across the three health systems in racial and ethnic designations in their electronic medical records. Accuracy of these designations are important to clinical care improvement efforts, yet error rates of race in electronic medical records ranged from 22% to 59% while errors in ethnicity ranged from 5% to 35%, according to findings in *JAMA Network Open.*

"The goal of MI-CHEC is to identify inequities affecting children's health and implement improvement strategies to address them. But if the data regarding race and ethnicity are wrong, there's a real risk of missing some inequities and even trying to correct inequities that may not exist," said lead author and Mi-CHEC founder Gary L. Freed, M.D., M.P.H., professor in the department of pediatrics at the U-M Medical School.

"This is the first step to better understanding the misattribution in racial and ethnic designations in medical records. There are no perfect data. However, if we don't know the degree of accuracy in the race and ethnicity of our patient populations, we are truly flying blind when we and others are assessing equity and disparity."

The study reflects the first published data from Mi-CHEC, which comprises the state's three largest pediatric hospitals, including U-M Health C.S. Mott Children's Hospital, Children's Hospital of Michigan and Corewell Health Helen DeVos Children's Hospital.

Expanded designation choices associated with greater errors

Researchers compared the specific racial and designations made by more than 3,400 parents to what was listed in their children's medical records in outpatient clinics, emergency departments and [hospital](#) units across health systems between 2023 and 2024.

Reasons for the discrepancies are still being assessed, but authors point out associations between errors in designations and the evolving range and number of potential categories used by health systems for racial and ethnic attribution.

Options for race designation across hospitals ranged from six at one system to 49 in another, while options for ethnicity ranged from two to 10.

Some health systems have chosen consistency with the U.S. Census Bureau designations, Freed notes, while others have expanded the choices available for patients as part of inclusivity programs.

Additionally, hospitals rarely verify the accuracy of racial and ethnic attribution in secondary data or health records, especially for children.

"There have been significant, well-intentioned efforts over the last several years at many institutions to expand the choices for patients to designate their own race or ethnicity to promote inclusion among our patient populations," Freed said. "However, we found that a greater number of choices may lead to greater error in the electronic medical record."

It's important to understand how these errors may affect quality improvement efforts when working to identify health inequities or disparities for children with such conditions as asthma, obesity, diabetes and other health issues, Freed notes.

"Error rates of this magnitude influence the reliability of studies focused on inequities and disparities," he said. "If we don't know which children are which race or ethnicity, we won't know if there's a problem and if efforts to fix the problem are successful or not."

"This may undermine strategies to improve care."

Freed adds that similar errors may be prevalent at other hospitals across the country, and collaborative members hope to encourage other systems to assess their own data accuracy as well.

Mi-CHEC will also be working on quality improvement efforts to both correct current error rates within the collaborative's health systems and prevent future errors from occurring, he says. In the interim period, teams have developed statistical correction factors to improve accuracy in the collaborative's assessments of inequities.

"These findings help us understand the limitations of our data and how we can account for those limitations as we continue our work to address inequities and disparities affecting pediatric patients and their families," Freed said.

More information: Error Rates in Race and Ethnicity Designation Across Large Pediatric Health Systems, *JAMA Network Open* (2024). DOI: 10.1001/jamanetworkopen.2024.31073

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