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## White parents more likely to use age-appropriate car seats than non-whites

Race of parents remains a key predictor of whether children will be placed in the right safety seat, according to new U-M study

**Ann Arbor, Mich.** — White parents reported higher use of age-appropriate car seats for one- to seven-year-old children than non-white parents, according to a new University of Michigan study published today in *Pediatrics*.

The new study showed that the race of the parents is a significant predictor of whether a child is placed in the right safety seat for his or her age, even after adjusting for parental education, family income and information sources, says lead author Michelle L. Macy, M.D., M.S., an emergency medicine physician at the University of Michigan's [C.S. Mott Children's Hospital \(http://www.mottchildren.org\)](http://www.mottchildren.org).

The study, conducted in two Michigan emergency departments, also showed that the proportions of non-white parents who prematurely transitioned their children to booster seats and seat belts were almost triple those of white parents.

Each year, more than 130,000 children younger than 13 are treated in U.S. emergency departments after motor-vehicle collision-related injuries. Macy says that overall, research has shown that age-appropriate car seat use is sub-optimal in the United States and that children of minority parents are more likely to be placed in the wrong seat.

"But previous studies have not accounted for socioeconomic factors. We thought the racial differences would be modified if those were taken into account, but this study indicated otherwise," Macy says.

Children who are unrestrained or sitting in the front seat face the greatest risk for death in motor vehicle collisions. Age-appropriate child safety seat use reduces injury risk by 50 to 75 percent and provides increased protection over seat belts in crashes.

The study was conducted by faculty from the [U-M Medical School \(http://medicine.umich.edu/medschool/\)](http://medicine.umich.edu/medschool/), [School of Public Health \(http://www.sph.umich.edu/\)](http://www.sph.umich.edu/) and the [U-](#)



Dr. Michelle Macy buckles a child into a passenger safety seat.

[M Injury Center \(http://www.injurycenter.umich.edu/\)](http://www.injurycenter.umich.edu/).

The age-appropriate restraint use outcome was defined by Michigan Child Passenger Safety Law, which states that children aged four must use a car seat and children aged four through seven years must use a car seat or booster seat unless they are 4 feet, 9 inches tall.

The American Academy of Pediatrics advises parents to keep their toddlers in rear-facing car seats until age 2 or until they reach the maximum height and weight for their seat. It also advises that most children will need to ride in a belt-positioning booster seat until they have reached 4 feet 9 inches tall and are between 8 and 12 years of age.

The study was conducted at the [University of Michigan C.S. Mott Children's Hospital](http://www.mottchildren.org)

[\(http://www.mottchildren.org\)](http://www.mottchildren.org) pediatric emergency department, located in Ann Arbor, Mich., and the Hurley Medical Center emergency department located in Flint, Mich. The U-M location serves a predominantly white, privately insured population and the Flint

location has a higher proportion of African American patients covered by Medicaid compared with U-M.

The study is based on responses of 601 parents who arrived in the emergency departments of the two hospitals. They were asked if their child sits in the front seat and if their child ever used a passenger restraint. Parents who answered yes were provided sketched image examples of child passenger restraints and asked to select the restraint(s) they use for their child.

Parents also were asked to provide demographic information including education level attained, household income and information about how they learned about car seat safety.

Significantly higher proportions of white parents reported their 1- to 3-year-old and 4- to 7-year-old children always used the age-appropriate restraint compared with non-white parents (85.3% vs 61.3% and 88.5% vs 69.1%).

White parents maintained significantly higher odds (3.86) of reporting age-appropriate restraint use compared with nonwhite parents after adjusting for education, income, parent age, parent seat belt use, information sources, and study site.

“The fact that race persists as a predictor of age-appropriate restraint suggests that there are factors not measured in our study, such as parental knowledge, motivation, barriers, and socio-cultural norms that

are contributing to disparities,” Macy says.

Parents who remembered receiving child passenger safety information at their child’s last checkup also were more likely to report age-appropriate restraint use. Yet only one-quarter of the study participants recalled receiving such information. The American Academy of Pediatrics recommends discussing of child passenger safety practices at every clinic visit.

“We know that clinicians caring for children have the potential to influence child passenger safety practices, and this study reinforces that efforts should be directed at eliminating racial disparities through culturally appropriate interventions,” says Macy.

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**About C.S. Mott Children’s Hospital in the University of Michigan Health System:** Since 1903, the University of Michigan has led the way in providing comprehensive, specialized health care for children. From leading-edge heart surgery that’s performed in the womb to complete emergency care that’s there when you need it, families from all over come to the University of Michigan C.S. Mott Children’s Hospital for our pediatric expertise. In 2013, C.S. Mott Children’s Hospital was ranked eighth in the nation in Parents Magazine’s 10 Best Children’s Hospitals ranking. [www.mottchildren.org](http://www.mottchildren.org) (<http://www.mottchildren.org>)

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