

Research at a Glance

Association seen between trauma center type and mortality risk for injured youths

What's known:

Trauma is the leading cause of death among children and young adults in the United States, but controversy remains about which treatment location is optimal to meet the needs of injured adolescent patients. Pediatric trauma centers tailor care to children's unique physiological, anatomical, and social needs. Yet, there are variations in the cutoff age used to triage children to either pediatric or adult trauma centers, with the usual decision to triage children to pediatric facilities if they are younger than 14 or 15 and to transport them to adult systems if they are older. A 2015 study found that injured children aged 18 or younger treated at pediatric trauma centers had lower in-hospital mortality.

What's new:

A team led by Children's National Health System researchers examined 29,613 de-identified records for patients aged 15 to 19 years old drawn from the 2010 National Trauma Data Bank to determine associations between the type of trauma center and youths' mortality rates. Some 68.9 percent of injured youths were treated at adult trauma centers (ATCs), while 25.6 percent were seen at mixed trauma centers (MTCs), and 5.5 percent at pediatric trauma centers (PTCs). Mortality was higher among youths treated at ATCs (3.2 percent) and MTCs (3.5 percent) than for adolescents seen at PTCs (0.4 percent), $P < .001$.

The adjusted odds of mortality were higher at ATCs (4.19) and MTCs (6.68) compared with PTCs (0.76). While the research team saw differences in mortality between trauma center type, the study does not provide information about what may account for these differences.

Questions for future research:

- Q:** What is the best method to determine differences in treatment practices between trauma center types to better explain differences in the mortality rates of injured adolescents?
- Q:** Which specific qualities are common to trauma centers that provide optimal outcomes to children, and can quality-improvement initiatives help to identify and replicate those attributes elsewhere?