

Transferring trauma patients may take longer than 2 hours -- but not for the most serious injuries

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Many trauma patients in Illinois who are transferred to another facility for care are not transported within the state-mandated two-hour window, but the most seriously injured patients appear to reach care more quickly, according to a report in the December issue of *Archives of Surgery*.

"Trauma systems have been designed to optimize the outcomes of injured patients by encouraging providers to triage patients to appropriate levels of care, defining pre-hospital and interhospital transport patterns and educating [caregivers](#) in the recognition of actual and potentially life-threatening injuries that may exceed the capabilities of local resources and require transfer for definite care," the authors write as background information in the article. "Long delays in the transfer of injured patients to higher levels of care are felt to be undesirable and associated with suboptimal outcomes." The Illinois state trauma system defines a two-hour window in which patients who need to be transferred should reach definitive care (recommended treatment).

Marie L. Crandall, M.D., M.P.H., of Feinberg School of Medicine, Northwestern University, Chicago and colleagues analyzed data from the state trauma registry from 1999 to 2003. This registry includes data from 64 trauma centers in Illinois. Over the study period, there were 22,447 transfers between facilities—a transfer rate of about 10.4 percent. Information about the time to transfer was available for between 50

percent and 60 percent of the cases each year.

Overall, the median (midpoint) time to transfer was approximately two hours and 21 minutes. About 20 percent (4,502) of the transfers occurred within two hours. For all years studied, the Injury Severity Scores were significantly higher and same-day operations were more common among patients transferred within two hours than for those whose transfers took longer. Patients who were transferred within two hours were also more likely to die, whereas death rates among patients transferred after more than two hours were similar to those for all trauma patients.

Patients with head injuries and orthopedic injuries were the most commonly transferred. In general, the proportion of patients who were self-paying was greater among those transferred in the first two hours vs. other same-day transfers or all [trauma patients](#).

"This study demonstrates that in a state trauma system where transfer of patients thought to require a higher level of care is mandated to occur within two hours, the majority of transfers do not comply with this time standard. Despite this, the most seriously injured patients do appear to be reaching definitive care within that two-hour time frame," the authors write.

"These data suggest that, in this system, provider-determined transfer time that exceeds two hours has no adverse effect on patient outcome," they conclude. "It appears to accomplish recognition and rapid transport of the most seriously ill. This may obviate the need for onerous system mandates that are not feasible or have poor compliance."

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