

Helicopters save lives

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Patients transported to hospital by helicopter have a better chance of surviving traumatic injuries than those transported by ground ambulance despite having more severe injuries and needing more surgical interventions, states a study published in the *Canadian Journal of Surgery*.

Researchers from the Departments of Surgery at the Columbus Regional hospital, Atlanta Medical Center and Emory University in Atlanta, Georgia, and at the University of Calgary conducted a 10-year study comparing the injuries, [surgical interventions](#) and outcomes of [patients](#) transported to hospital by air or ground ambulance. The types of injuries investigated ranged from [motor vehicle crashes](#) to falls to all-terrain vehicle accidents.

The researchers found that patients brought to hospital by ground ambulance more often died in the emergency room than patients brought by air: 585 versus 43 deaths, respectively. The authors state that this improved survival may be explained by the availability of more advanced monitoring and equipment and more medications as well as the presence of a flight nurse and paramedic in the air ambulance.

"This American-based study has considerable applicability to Canadian patients," says Chad Ball, the study author from the University of Calgary. "Given that so many of our patients are located in geographically remote locations, timely transport to trauma centres is a persisting concern. We also know that patients who live in rural areas carry a higher risk of death after injury than their urban-based

counterparts. Appropriate air ambulance transport is one potential method to shorten transfer times to definitive care and therefore decrease this risk."

The debate over outcome differences between patients transported to hospital by air and those transported by ground ambulance has continued for more than two decades, but there is general consensus that severely injured patients transported by air have a better chance of survival. The controversy is whether helicopter transport is necessary for particular cohorts of patients.

"The improved outcomes in our study indicate that appropriate helicopter transport, even with the associated cost and safety risk, is beneficial to severely injured patients," the authors state.

The authors note that the cost of air ambulance services, at least in the United States, has been concerning to third-party payers as well as patients. They state the dramatic difference between charge and reimbursement is often borne by the patients and their families.

Although cost–benefit analyses are warranted, the authors indicate that "air ambulance transport for [injured patients](#) is vitally important given increasing patient volumes, the limited number of trauma centres and inadequate subspecialty coverage in nontrauma hospitals."

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