

Mode of Transport & Mortality Benefit

for

TRAUMA PATIENTS

Rotor-wing vs. Ground Transport



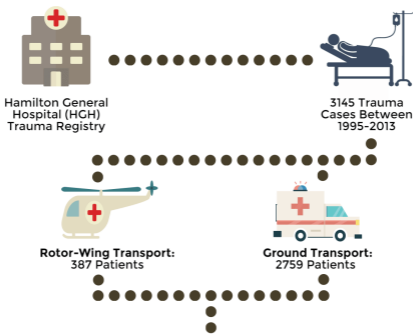
- Crew consists of two Critical Care Paramedics (CCPs)
- Dispatched for severe injuries and/or long distances



- Crew consists of two Primary Care Paramedics (PCPs)
- Constitutes the majority of trauma patient transport

Is there a relationship between mode of transport and patient mortality?

A Historical, Observational Cohort Study



Calculate predicted survival of each modality (using the TRISS-L analysis to control for heterogeneity)

The Selection Process

Inclusion Criteria	Exclusion Criteria
<ul style="list-style-type: none">Age > 18 yearsTrauma team activation	<ul style="list-style-type: none">Death prior to transportInjury severity index score < 12Chemical paralysis> 30% missing dataMixed modes of transportIndirect scene-to-hospital transport

The Results

Ground Transport:



Rotor-Wing Transport:



Predicted Mortality

Actual Mortality

Points of Interest

- TRISS-L scores calculate a predicted mortality via a logistic regression function based on Glasgow Coma Scale, systolic BP, Injury Severity Score, and age
- Median total pre-hospital time for rotor-wing transport was greater at 73 minutes compared to 45 minutes for ground
- Rotor-wing patients were younger on average and had more severe injuries

Conclusions

- Air transport patients had a lower mortality rate than their TRISS-L adjusted predicted mortality. Ground transport patients by contrast, had a higher mortality rate than expected.
- The cause of this difference is unclear, and more prospective studies focused on elucidating reasons for these differences are needed.

References:

- Buchanan, I.M., Coates, A., Sne, N. Does Mode of Transport Confer a Mortality Benefit in Trauma Patients? Characteristics and Outcomes at an Ontario Lead Trauma Hospital. CJEM. 2016;1-7
- Patient Silhouette icon made by Freepik from www.flaticon.com



This infographic was created by Simon Huang for the CanadiEM website and CJEM with editing from Teresa Chan, Lynsey Martin & Rohit Mohindra

