

Air ambulance transport

Eric Sy MD MPH, Terrance Ross MD

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1 Air ambulances make access to care and health outcomes in rural communities more equitable

In Ontario, air ambulances link remote First Nations communities to specialized hospital services, with 9.2 to 9.5 air transports per 100 on-reserve population annually, compared with 7.5 ground transports per 100 population for the whole province.¹ Transportation by air ambulance has been shown to reduce the mortality rate from rural trauma in Nova Scotia compared with ground ambulances,² and plays a crucial role in integrating health care services in remote Canadian communities.

2 Team composition matters

Adult trauma patients transported by air ambulance are more likely to survive when accompanied by nurses or paramedics with advanced critical care training compared with standard paramedic crews.³ In some provinces, air ambulance teams are supported by transport physicians with emergency medicine or critical care training who can accompany the patient.⁴

3 Contraindications to transport include patient-related and technical factors

Patients who weigh more than 120 kg or are more than 69 cm wide may not meet aircraft and stretcher capacity requirements.⁵ Inclement weather limits the safe operation of air ambulances. Being in active cardiac arrest or active labour, having an untreated pneumothorax, or being aggressive or uncooperative may make a patient ineligible for air transport. Indications and contraindications are described in Appendix 1, available at www.cmaj.ca/lookup/doi/10.1503/cmaj.210354/tab-related-content.

4 Faster is better, but speed is not the only consideration

For time-sensitive situations, such as ST-segment elevation myocardial infarction, stroke and trauma, air transport has been associated with better outcomes and lower costs.^{2,6} However, providers should also consider travel distance, travel time and human resources (e.g., unstable patients transported by ground may need to be accompanied by the community's only physician or nurse), when determining transportation mode, in consultation with a transport physician.

5 Pretransport preparation is important

Providers should consider using a pretransport checklist, adapted to local needs (Appendix 1). Ornge provides a checklist (<https://www.ornge.ca/healthcare/transporting-a-patient>), and the STARS website has resources on landing zone preparation (<https://stars.ca/education-and-training/landing-zone-training>).

References

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Affiliations: College of Medicine (Sy, Ross), University of Saskatchewan; Department of Critical Care (Sy), Saskatchewan Health Authority; Shock Trauma Air Rescue Service (STARS) (Sy, Ross); Department of Emergency Medicine (Ross), Saskatchewan Health Authority, Regina, Sask.

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Correspondence to: Eric Sy, ers728@usask.ca