

Medical Helicopter Operations in Rural Areas

Joint Commission on Health Care
Subcommittee on Healthy Living & Health Services

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Medical Helicopter Operations in Rural Areas

► Objectives

- Define the role of medical helicopters
- Report on issues facing medical helicopter teams in rural areas
- Report on the role of medical helicopters in reducing morbidity & mortality
- Report on safety improvements and initiatives for medical helicopters

The Role of Medical Helicopters

HEMS (Helicopter EMS) involves the air transportation of a person or persons requiring specialized medical crew and rapid transport due to a medical illness or traumatic injury –the initial air medical care can occur on the side of the road or in a community hospital.

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Considerations of Medical Helicopters in Rural Areas

- ▶ Decreased definitive care/fewer hospital resources in rural areas
- ▶ Extended ground transport times w/conventional ground EMS
- ▶ Increased numbers of volunteer rescue/fire agencies
 - Longer notification & response intervals
 - Decreased numbers of ALS personnel, thus necessitating helicopter transport
- ▶ Increased chronic illness patterns & need for higher levels of care
- ▶ Need for expeditious treatment of acute medical conditions such as stroke & heart attacks – evolving aggressive treatment options
- ▶ Trauma care
 - The Golden Hour
 - ▶ Given the reduction in trained advanced life support EMS personnel AND the limitations of health care facilities in the rural setting, response times to the initial call for help may be delayed.

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Considerations of Medical Helicopters in Rural Areas

- ▶ Flexible & fast facility to provide medical expertise to the remotely located patient
- ▶ Terrain
- ▶ Non-consistent weather reporting across the region, esp. in rural areas.
- ▶ Limited communications systems
- ▶ Rising cost of medical helicopter operations (Urban and Rural).

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Considerations of Medical Helicopters in Rural Areas

- ▶ Decreased funding
 - Clinics and Care Sites
 - Training funds for EMS personnel
 - Reimbursement for Medicaid patients
- ▶ *The community's expectations of clinical outcomes are not changed when living in the rural setting.*

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Morbidity & Mortality – How HEMS Operations can Reduce M&M



**Air Medicine: Accessing
the Future of Health Care**

A Public Policy Paper by the
FARE
FEDERATION OF AIR RESCUE EMERGENCY SERVICES



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Morbidity & Mortality – The Rural Impact

- ▶ A greater number of communities, **particularly those in rural areas**, are finding themselves cut-off from access to emergency care because of recent changes in the health care delivery system in this country:
 - ▶ Emergency departments in community hospitals have declined from just over 5,000 in 1992 to approximately 4,600 in 2002, a trend that is expected to continue.³²
 - ▶ The number of the most sophisticated trauma centers has declined in the same time period.
 - ▶ Specialty care and specialists are increasingly housed in urban specialty centers and are less available in non-urban settings.
 - ▶ Overcrowding of hospital emergency departments and the lack of critical care and specialty beds often causes hospitals to divert EMS patients.
- ▶ Due to the above factors, AMS, and especially HEMS, is becoming the health care safety net and access point for many non-urban individuals and communities.

<http://www.fareonline.org/english.pdf>

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Morbidity & Mortality – The Rural Impact

- ▶ In the early 1980's, the first analytical attempts to determine the life-saving impact on mortality by HEMS response to injury scenes began to appear, largely demonstrating reductions in mortality compared with ground systems.^{18-20, 38}
- ▶ Since the '80's, there have been many published medical studies which have attempted, through a variety of means, to assess HEMS' impact on trauma mortality and morbidity for both scene and inter-facility flights. Overall, these studies have demonstrated the power of HEMS to affect improvements in trauma-related mortality and morbidity.^{39, 40}

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Benefits Of HEMS

- ▶ Patients severely injured enough to require inter-facility transfer were four times more likely to die after the HEMS serving that area was discontinued. ⁴⁶
- ▶ HEMS reduced injury mortality by 24% in a multi-center study with some 16,000 patients in Boston. ⁴⁷

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Role of HEMS in Rural Settings

- ▶ In rural and frontier areas, HEMS and fixed wing aircraft play a particularly important role. ⁵⁵
 - ▶ Where the nearest ground ambulance is further, by travel-time, from the scene of injury than the nearest HEMS, the air medical service may be the primary ambulance for critically ill and injured patients in that area.
 - ▶ Where the nearest ALS-capable medical facility is further, by travel-time, from the scene of the injury than is a HEMS or a fixed wing provider, the air medical service may be the primary ALS provider for critically ill or injured patients in that area.
 - ▶ Where blood supplies or availability of other medical supplies or equipment are limited or non-existent, jeopardizing the care of the patient, the air medical service can bring these resources to the hospital with the patient.
- ▶ The air medical service can transport specialized medical staff (surgical, emergency medicine, respiratory therapy, pediatric, neonatal, obstetric, and specialized nursing staff) to assist with a local mass casualty event or to augment the rural/frontier hospital's staff in stabilizing patients needing special care before transport.

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Need for Policy Support

- ▶ It is essential that public policy and funding sustain AMS as a critical part of the medical and emergency preparedness safety net in our communities. Maintaining the readiness to respond is as essential as the actual care delivered by AMS.

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Focus on Safety of HEMS Operations

- ▶ Aviation safety decisions are separate from medical decisions.
- ▶ NTSB Most Wanted List
 - Improve safety of EMS flights
- ▶ NTSB Public Hearing
 - February 3-6, 2009
 - Goal – Learn more about helicopter EMS operations so the NTSB can better evaluate the factors that lead to accidents.
- ▶ VA State Medevac Committee
 - Proactive Approach
 - ▶ Utilization Review
 - ▶ Safety & Weather Reporting
 - ▶ Communications

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Summary

- Defined the role of medical helicopters
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- Reported on the role of medical helicopters in reducing morbidity & mortality
- Reported on safety improvements and initiatives for medical helicopters