EARLY ACTIVATION OF AN AIR MEDICAL HELICOPTER
And
AUTO LAUNCH RECOMMENDATIONS

Position Statement of AAMS

Approved by AAMS Research Committee; May, 2005
Approved by AAMS Standards Committee; March, 2006
Approved by the Association of Air Medical Services; June 2006

Co-endorsed by Date

BACKGROUND

Minimizing time to definitive care is a fundamental tenet of trauma care that has been recognized for almost a century.[1-3] Most fatal motor vehicle crashes occur in rural areas with substantially higher death rates attributed, in part to longer notification response and transport intervals.[1,4,5] Current literature has demonstrated that an increase use of air medical services can result in a decrease in mortality and reduction of disabilities.[1,6] Auto launch and early activation are complements which initiate air medical services before primary EMS assessment.[1,7]

Medical helicopter programs offer a variety of protocols to improve response time. Significant literature has been published concerning improved outcomes in patients with diagnosis that require expedient treatment or access to definitive care, such as trauma, stroke and acute myocardial infarction.[1,4,8-15] Response time, as defined by activation to lift, of a medical helicopter can range from 5-15 minutes. This time delay could prove detrimental to a patient in a rural area that is unable to access specialty services in a timely fashion without the aid of air medical services.

When the scene is greater than 20 miles from the hospital, one of the most efficient ways to transport a critical patient to the hospital is to dispatch the helicopter before the ground EMS arrives to the scene. Helicopter dispatch can be done simultaneously with the ground unit, immediately after the 911 call. [16] Alternatively, the ground EMTs while on their way to the scene can do it.

POSITION STATEMENT

- AAMS defines "***Early Activation***" as departing for the requested scene prior to arrival of the first responders, based on a high index of suspicion that specialty services will be necessary. This is initiated by the request of the first responders.

- AAMS defines ***"Auto Launch"*** as the simultaneous dispatch of air and ground resources through a 9-1-1 request for EMS based upon pre-designated trauma and and/or medical criteria set up by local or regional EMS systems.

- AAMS supports both an ***Early Activation*** protocol and an ***Auto Launch*** protocol for areas that have a fly distance greater than 10 minutes or 29 miles and/or the patient is further than 20 miles from a specialty hospital and patient criteria is critical in nature. This would include, but is not limited to:
    1. prolong extrication time
    2. multiple victims
    3. ejection from vehicle
    4. pedestrian struck
    5. multi victim crash with at least one dead at scene
    6. critical burns >10%
    7. vital sign instability
    8. stroke

- AAMS supports ***Early Activation*** and ***Auto Launch*** with the understanding, that it does not obligate the primary responding agency to send the patient by air if the clinical condition does not require air medical services**.**
- AAMS does not support the use of strategies such as ***Early Activation*** or ***Auto Launch*** as a marketing tool and or for competitive advantage.
- AAMS does not support ***Auto Launch*** without 911 communication and support.

RATIONALE:

Even though Branas[20] claims that 84% of the population live within 60 minutes of a Level I or II trauma center. Two thirds of serious trauma occurs distant from the residence[i]. Furthermore, as Davis & Wish[21] contend, Branas' assertion of simultaneous dispatch and 3.5 minutes to airborne is not valid. Literature demonstrates that areas with lower population densities tend to have longer notification and response intervals, which leads to a corresponding increase in mortality. [1,8-15] The motor vehicle crash fatality rate is higher on rural roads, due in part to an increase time to definitive care. [1,4,13] Early Activation and Auto Launch can substantially reduce time to definitive care in rural areas or locales of inhospitable terrain potentially resulting in improved patient outcomes. [1,19]

Acknowledgements

Carolyn Nieman was the principal author of this document.

References

1. Wish JR, Davis D, Auto Launch/Early Activation: A survey of AAMS Members and Literature Review. Air Medical Journal. 2005;24:283-88.
2. Cannon WB, Traumatic shock. New York: Appleton; 1923.
3. Regal G, Stalp M, Lehman U, Seekamp A. Prehospital care, importance of early intervention on outcome. Acta Aneasthesiol Scand Suppl 1997; 110:71-6.
4. Rogers FB, Shackford SR, Osler TM, Vane DW, Davis JH. Rural trauma: the challenge for the next decade. J Trauma 1999;47:802-9.
5. Meislin H Criss EA, Judkins D, et al. Fatal trauma: the modal distribution of time to death is a function of patient demographics and regional resources. Jtrauma 1997;43:433-40.
6. Garthe EA, Mango NK. Under triage in Massachusetts (in progress)

7. Berns KS, Caniglia JJ, Hankins DG, Zietlow SP. Use of auto launch method of dispatching a helicopter. Air Med J 2003; 22:35-41.
8. **Adams HP Jr, Adams RJ, Brott T, et al. Guidelines for early management of patients with ischemic stroke. Stroke 2003;34:1056-83.**
9. Barsan WG, Brot TG, Broderick JP, Haley EC, Levy DE, Marler JR, Time of hospital presentation in patients with acute stroke. Arch Intern Med 1993;153:2258-61.
10. Smith MA, Doliszny KM, Shahar E, McGovern PG, Arnett DK, Luepker RV. Delayed hospital arrival for acute stroke: the Minnesota stroke survey. Ann Intern Med 1998;129:190-6.
11. Pell JP, Sirel JM, Marsden AK, Ford I, Cobbe SM, Effect of reducing ambulance response times on deaths from out of hospital cardiac arrest: cohort study. Br Med J 2001;322:1385-8.
12. Andersen HR, Nielson TT, Rasmussen K, et al. A comparison of coronary angioplasty with fibrinolytic therapy in acute myocardial infarction. New Engl J Med 2003;349:733.
13. Sampalis JS, Lavole A, Williams JI, Mulder DS, Kaline M. Impact of on-site care, prehospital time, and level of inhospital care on survival in severely injured patients. J Trauma 1993;34:252-61.
14. Feero S, Hedges JR, Simmons E, Irwin L. Does out-of-hospital EMS time affect trauma survival? Am J Emerg Med 1995;13:133-5.
15. Sampalis JS, Denis R,Lavole A, et al. Trauma care regionalization: a process-outcome evaluation. J Trauma 1999;46:565-81.
16. Diaz MA,Hendey GW,Bivins HG. When is the Helicopter Faster? A comparison of Helicopter and Ground Ambulance Transport Times. J Trauma 2005;58:148-153.
17. Champion HR, Augenstein JS, Blatt AJ, Cushing B,Flanigan MC, Hunt RC, Lombardo LV, Seigel JH. Reducing deaths and disabilities by improving emergency care with URGENCY software (I process). Available at www.nhtsa.dot.gov/cars/problems/studies/acns/champion.htm. Accessed on December 6, 2004 and on April 5, 2005
18. Spaite DW, Tse DJ, Valenzuela TD, et al. The impact of injury severity and prehospital procedures on scene time in victims of major trauma. Ann Emerg Med 1991;20:1299
19. Flanigan M, Blatt A, Maile M, Pirson B, Lombardo L, Mancuso D. The Atlas and Database o Air Medical Services (ADAMS): a tmely safety & security system link. In: Proceedings of the Intelligent Tansportation System Safety and Security Conference, Miami Beach, FL March 24-25, 2004. Available at www.adamsairmed.org/pubs/ITS ssc.pdf. Accessed on December 6, 2004 and on April 5, 2005.

[20] Branas, C, MacKenzie E, Williams J, Teter H, Flanigan M, Blatt A, ReVelle Charles, Access to Trauma Centers in the United States, JAMA, June 1,2005; 293;21: 2626

[i] Injury Facts, 2005-2006 edition, National Safety Council

[21] Davis D. and Wish J. Letter to Editor, JAMA October 12, 2005