

POSITION PAPER

NATIONAL ASSOCIATION OF EMS PHYSICIANS

MEDICAL DIRECTION OF INTERFACILITY TRANSPORTS

Steve L. Shelton, MD, Robert A. Swor, DO, Robert M. Domeier, MD, Ray Lucas, MD, for the National Association of EMS Physicians Standards and Clinical Practice Committee

POSITION STATEMENT

Interfacility transport is defined as the movement of a patient from one health care facility to another in a licensed ground or air ambulance. The medical direction of an interfacility transport is a shared responsibility. The following statements should serve as a guide to promote a safe and effective transport of a patient between facilities.

- The transferring physician, by law, has the responsibility of selecting the most appropriate means of transport to include qualified personnel and transport equipment.
- The transport service and its medical director are responsible

for ensuring that their transport personnel can provide quality care within their scope of practice and are skilled in the use of the transport equipment.

- The responsibility of online medical direction during transport should be established prior to the transport based on mutual agreement between the transferring physician, the transport service medical director, and the accepting physician.
- Interfacility transport should be defined by state statute/regulation as a component of the emergency medical services (EMS) system.
- System or service protocols should define the scope of practice of the transport service to ensure an appropriate, safe, and effective transport. Consultation by the transferring physician with the transport service medical director and the accepting physician may be necessary to provide this assurance.
- The EMS system should educate the medical community about interfacility transport standards.

access to such care. The ability to transfer patients between facilities is crucial to society as a whole because it potentially prevents needless duplication of services and decreases cost in the system. It facilitates the existence of an integrated health care system, such as occurs in a trauma system. Transfer of patients was originally identified as one of 15 essential components of EMS system design.¹ Transfers occur with the expectation that potential complications en route may be adequately treated by transporting personnel. For the purposes of this paper, an interfacility transport is defined as the movement of a patient from one health care facility to another health care facility.

Emergency medical services systems and their medical directors are knowledgeable regarding system capabilities, but are unclear of the system's role regarding transfer. Transferring and accepting physicians know the problems and needs of patients requiring transfer, but are not always cognizant of the capabilities of transport services and personnel. As a result, the authority of medical direction for the care of patients during transport is unclear. Several organizations have developed position papers concerning interfacility transports²⁻⁷; however, medical direction of those transports is poorly defined. The objective of this paper is to discuss the roles

Dr. Shelton is in the Department of Emergency Medicine, Palmetto Richland Memorial Hospital, Columbia, South Carolina; Dr. Swor is in the Department of Emergency Medicine, William Beaumont Hospital Royal Oak, Michigan; Dr. Domeier is in the Department of Emergency Medicine, Saint Joseph Mercy Hospital, Ann Arbor, Michigan; and Dr. Lucas is in the Department of Emergency Medicine, George Washington University, Washington, DC.

Approved by the NAEMSP Board of Directors February 27, 2000. Received March 6, 2000; accepted for publication March 6, 2000.

Address correspondence to: Steve Shelton, MD, Department of Emergency Medicine, Suite 350, 3 Richland Medical Park, Columbia, SC 29203. e-mail: <steveshelton@cs.com>. Reprints are not available.

DISCUSSION

The transfer of patients between facilities is a fundamental component of the health care system. It allows access to various levels of care for individuals and communities that may not otherwise have

and responsibilities of medical direction for an interfacility transport.

Medical direction during an interfacility transport should be arranged prior to the movement of the patient. Options for medical direction during the transport include: 1) transferring physician assumes medical direction, 2) medical director of the transport service assumes medical direction, 3) accepting physician assumes medical direction, and 4) a shared pre-defined responsibility with a transferring physician en route.

EMTALA⁸ is the governing authority for the sending physician/hospital concerning the interfacility transfer of patients. Patient care during transport until delivery to the receiving facility is the responsibility of the transferring physician/hospital, unless otherwise specified. An appropriate transfer is defined by four variables. The first variable is the provision of medical treatment within the transferring physician/hospital's capacity that minimizes the risks to the patient or unborn child's health. The second requires an accepting facility that has available space and qualified personnel for treatment of the patient and agrees to accept the patient in transfer. The third requires the medical records from the transferring hospital be sent to the accepting hospital. The fourth requires transport by qualified personnel and transportation equipment, as required, including the use of necessary and medically appropriate life support measures during the transport. The transport personnel must be qualified to handle potential complications or deterioration in the patient's condition that might occur during the transport.

The requirement of qualified personnel and equipment may create the greatest challenge, especially for a transferring physician not familiar with the local EMS community and the scope of practice of

their personnel. The transport service can range from a basic emergency medical technician (EMT) in a basic ambulance to a physician in a fixed-wing aircraft. The level of training required of the transport personnel depends on the severity of illness of the patient. Paramedics and EMTs transport the vast majority of all interfacility transports, the largest share of these being stable patients.⁹ Specially trained paramedics¹⁰ and nurses¹¹⁻¹⁶ provide the majority of staffing for critically ill patients. The need for physicians during transports has been questioned and is probably limited to the most serious patients requiring frequent interventions.^{11,17-21} Brink notes that an increasingly popular solution for crew composition is to select from a diverse pool of personnel available to meet the specific transport need.²² Boyko has developed a chart to aid in crew selection based on the transport needs.¹⁶

The transferring physician/hospital is responsible for choosing the most appropriate means of transport. It is accepted that the level of care provided at the time of transfer be continued while en route and be adequate to respond to the anticipated complications during the transport. Case law has established that "qualified personnel and equipment" may be a higher level of care than is generally available on most routine EMS transport vehicles. *Burditt v U.S. Department of Health and Human Services*²³ was the result of a transfer of a pregnant patient who delivered in the ambulance during the transport. The transfer was found to be inappropriate, because a physician and a fetal heart monitor (which were available at the sending facility) did not accompany the patient.

The transferring physician is responsible for the order to transfer and for the treatment orders to be followed during the transport.

This implies online medical direction is also available with the transferring physician. However, state statutes may be conflicting. In some states, only an authorized medical direction physician may give orders to EMS personnel. Under those circumstances, the transporting service's medical director or an approved online medical direction physician becomes responsible for orders.

EMTALA does not reference the transport service and its medical director. Out-of-hospital emergency medical care is regulated by each state, and there is considerable variability from state to state. However, all states require some type of physician medical direction. This physician has overall responsibility for the quality of care. This responsibility includes implementation of patient care protocols, provision of online medical direction, and evaluation of care rendered.

The Commission for Accreditation of Medical Transport Services (CAMTS) has established standards for providing quality patient care in a safe transport environment.²⁴ Those standards include the roles of the medical director. The medical director is to be actively involved in the quality management program; the administrative decisions affecting medical care for the service; the hiring, training, and continuing education of all medical personnel; and orienting physicians providing online medical direction to the policies, procedures, and protocols of the service. In addition, the medical director ensures that the mode of transport is appropriate and safe for the patient's specific disease process/needs. The medical director also sets policy that ensures compliance with EMTALA regulations, which prevents any diminution in level of care from bedside to bedside.

Accepting these standards, the transport service and its medical director assume the role as a safety

net for the transferring physician. The medical director of the transport service and the EMS system medical director (if not the same individual) should establish policy defining the scope of practice for providers and procedures for the providers to follow if asked to provide care outside their abilities. While the transport service will not be violating EMTALA if it transports a patient outside its scope of practice, it is subject to being sued for negligence. The transferring physician/hospital, however, may be found in violation of EMTALA under these circumstances.

It is incumbent upon the transport service's medical director to understand not only the legal scope of practice for paramedics in his or her state, but also to understand the curriculum under which they were taught. Certain skills useful in the interfacility transport environment, such as ventilator management, utilizing electronic intravenous pumps, accessing central intravenous catheters, and administering or monitoring certain medications, may not be part of the standard paramedic curriculum. If those more advanced skills will be part of the paramedic's duties during interfacility transports, the medical director must ensure initial training and assurance of skills maintenance for these items.

The accepting physician may serve as the medical director for the transport. This is usually not standard practice and should be agreed upon by all physicians involved prior to the transport. A hospital-owned transport service would create an environment for the accepting physician to assume liability for the patient. A hospital-owned transport service retrieving a patient from a transferring hospital creates a unique relationship. EMTALA views a hospital-owned transport service as an extension of the hospital. Therefore, the actual patient transfer to the accepting

facility occurs when the patient is moved from the transferring facility's bed to the transport service's stretcher. At that point, EMTALA views the accepting hospital as the responsible party for the patient. The medical direction of the transport would then be the responsibility of the hospital-owned transport service medical director or the accepting physician. Again, this relationship should be established prior to the transport.

The transport of a patient can have many potential adverse physical effects on that patient.^{9,25-29} These adverse effects result in a 4-5% complication rate requiring advanced life support intervention during the transport.^{9,27} The transport crew must have a physician they can contact for online direction at all times during the transport in the event the patient becomes unstable and transfer orders or service protocols do not address the crisis. The method of online communication should also be agreed upon prior to the transport. It is often a factor of communication capabilities. If only one physician can maintain direct communication with the transport vehicle during transport, medical direction should be with that physician. If more than one physician has communication capabilities, it is appropriate to assign medical direction based on mutual agreement of the transferring physician, the accepting physician, and the transport service medical director. This agreement should be made with an understanding of state laws/regulations governing communications with an EMS provider. Some states define or certify who is qualified to give orders to an EMS provider.

CONCLUSION

Medical direction of the interfacility transport is a shared responsibility. Medical direction should be arranged prior to the movement of the patient. We have reviewed the

roles and responsibilities of those involved in the medical direction of an interfacility transport, and how regulations and accreditation affect them.

References

1. Boyd DR. The history of emergency medical services (EMS) systems in the United States of America. *Systems Approach to Emergency Medical Care*. Norwalk, CT: Appleton-Century-Crofts, 1983.
2. American College of Emergency Physicians. Interfacility transportation of the critical care patient and its medical direction. ACEP Policy Statement. Dallas, TX: ACEP, 1999.
3. American College of Emergency Physicians. Appropriate interhospital patient transfer. *Ann Emerg Med*. 1993;22:766-7.
4. Emergency Nurses Association. Interfacility transport of the critically ill or injured patient. *Emergency Nurses Association Position Statement*. Des Plaines, IL: ENA, 1997.
5. Society of Critical Care Medicine. Guidelines for the transfer of critically ill patients. *Crit Care Med*. 1993;21:931-7.
6. American Academy of Pediatrics Task Force on Interhospital Transport. Guidelines for Air and Ground Transport of Neonatal and Pediatric Patients. Ed. 2. Elk Grove Village, IL: American Academy of Pediatrics, 1999.
7. Interhospital Transfer and Agreements. In: *American College of Surgeons. Resources for Optimal Care of the Injured Patient*. Chicago, IL: ACS, 1998.
8. The Emergency Medical Treatment and Active Labor Act (EMTALA), Pub. L. No. 99-272, Title IX, § 9121(b), 100 Stat. 164 [codified as amended at 42 U.S.C. § 1395dd (1995)].
9. Wuerz R, Meador S. Adverse events during interfacility transfer by ground advanced life support services. *Prehosp Disaster Med*. 1994;9:50-3.
10. Domeier RM, Hill J. The development and evaluation of a paramedic-staffed mobile intensive care unit for interfacility patient transport. *Prehosp Disaster Med*. 1996;11:37-43.
11. Macnab AJ. Optimal escort for interhospital transport of pediatric emergencies. *J Trauma*. 1991;31:205-9.
12. Pristas LR, Rausch T. Transport considerations for the critically ill child. *Crit Care Nurs Q*. 1997;20(1):72-80.
13. Johnson CM, Gonyea MT. Subspecialty clinics: pediatrics, transport of the critically ill child. *Mayo Clin Proc*. 1993;68:982-7.

14. Edge WE, Kanter RK, Weigle CG, Walsh RF. Reduction of morbidity in interhospital transport by specialized pediatric staff. *Crit Care Med.* 1994;22:1186-91.
15. Pon S, Notterman DA. The organization of a pediatric critical care transport program. *Pediatr Clin North Am.* 1993;40:241-61.
16. Boyko SM. Interfacility transfer guidelines: an easy reference to help hospitals decide on appropriate vehicles and staffing for transfers. *J Emerg Nurs.* 1994;20(1):18-23.
17. McCloskey K, King WL, Byron L. Pediatric critical care transport: is a physician always needed on the team? *Ann Emerg Med.* 1989;18:247-9.
18. Crippen D. Interhospital transport of critically ill patients: problems and pitfalls. *Internet J Emerg Intensive Care Med.* 1997;1(4).
19. McCloskey KA. Emergency interhospital critical care transport for children. *Curr Opin Pediatr.* 1996;8:236-8.
20. Rubenstein JS, Gomez MA, Rybicki L, Noah ZL. Can the need for a physician as part of the pediatric transport team be predicted? *Crit Care Med.* 1992;20:1657-60.
21. McCloskey KA, Johnston C. Critical care interhospital transports: predictability of the need for a pediatrician. *Pediatr Emerg Care.* 1990;6:89-92.
22. Brink LW, Neuman B, Wynn J. Air transport. *Pediatr Clin North Am.* 1993;40:439-56.
23. *Burditt v U.S. Department of Health and Human Services*, 934 Federal 2nd District Court 1362, 5th circuit, 1991.
24. Commission on Accreditation of Medical Transport Services. Accreditation Standards of the Commission on Accreditation of Medical Transport Services, Fourth Edition. Anderson, SC: CAMTS, 1999.
25. Braman SS, Dunn SM, Amico CA, Millman RP. Complications of intrahospital transport in critically ill patients. *Ann Intern Med.* 1987;107:469-73.
26. Andrews P, Piper I, Dearden N, Miller JD. Secondary insults during intrahospital transport of head-injured patients. *Lancet.* 1990;335:327-30.
27. Kanter R, Tompkins J. Adverse events during interhospital transport: physiologic deterioration associated with pretransport severity of illness. *Pediatrics.* 1989;84(1):43-8.
28. Katz V, Hansen A. Complications in the emergency transport of pregnant women. *South Med J.* 1990;83(1):7-9.
29. Martin G, Cogbill T, Landercasper J, Strutt PJ. Prospective analysis of rural interhospital transfer of injured patients to a referral trauma center. *J Trauma.* 1990;30:1014-20.