

## Interfacility Transport and Emergency Medical Services

Emergency medical services (EMS) has traditionally focused on providing an emergent response to crises occurring outside of hospitals and other health care facilities and then providing patient care during transport to a receiving facility, usually a hospital emergency department (ED). The role of EMS providers and EMS agencies in transporting and caring for patients transported from one health care facility to another has received relatively less attention despite serving a critical role in health care systems and constituting a substantial proportion of patient transports.

The ready availability of high quality interfacility transport (IFT) resources is a critical component of strategies for the regionalization of care for acutely ill or injured patients. The closest available facility may be most appropriate initial destination for an EMS agency, but there may be a subsequent need to transfer the patient for definitive care. Challenges exist in both the prompt availability of transport resources and the consistency of high quality care during IFT. In system planning assumptions are frequently made that, once the decision to transfer a patient from a primary receiving facility to a destination facility is made, that IFT resources are readily available and the transfer will occur promptly. In reality, transfers can frequently be delayed due to limited availability of IFT resources, particularly when patient care needs exceed Paramedic scope of practice. Delays in transfer may significantly impact the ability to achieve optimal time windows for patient management in time-critical illness and injury. The ability of a primary receiving facility to readily transfer a patient can influence destination decision making for the initial EMS agency: is transport to a closer facility worth the risk of a patient being “marooned” there if the need for transfer for definitive care is identified? The growth of free-standing ED’s has intensified some of these issues as any patient at such a facility requiring admission requires transfer. Although satellite facilities can provide benefits for EMS agencies in terms of shorter transport and turn-around times, the risk of long delays in transfer to an admitting facility may be less well appreciated and less than optimal for patient care. While transferring physicians and facilities are often acutely aware of the delays involved in transferring patients, the available resources and the quality of the transferring agency is often less well understood. In many cases any IFT resource is viewed as acceptable when the treating physician is faced with long delays in transfer. Interfacility transport services are more frequently provided by commercial EMS agencies than EMS agencies providing emergent pre-hospital care. The Emergency Medical Treatment and Active Labor Act (EMTALA) describes the responsibilities of transferring hospitals and physicians, including ensuring that the patient’s assessed needs will be adequately met during transfer.

The majority of interfacility transports are performed by EMS providers, supervised by medical directors with expertise in emergency medicine and pre-hospital

care, and employed by agencies that are licensed and configured much like agencies that provide traditional “911” responses. However, the spectrum of patients encountered is significantly different than that encountered in field responses. This group of patients represents a set of patients selected for higher acuity, requiring transfer to a higher level of care. This set of patients frequently requires a provider skill set and technology that is markedly different than that encountered during the training and practice of typical prehospital care. Examples of therapies initiated at the referring facility that would require maintenance during IFT include thrombolytic drug infusions, mechanical ventilation, muscular paralysis, continuous intravenous sedation, parenteral blood pressure control, and blood product administration. While those skills may lie within the scope of practice for Paramedics in the state in which they practice, achieving an acceptable quality of care may require significant training and credentialing above training focused on pre-hospital care. In rural areas long transport times between facilities may require management of complex patient care scenarios for much longer time periods than typical pre-hospital transports. Additionally, rural areas may face challenges in the availability of inter-facility transport resources and transports may be accomplished using local “911” assets, in some cases augmented by hospital staff pressed into service and unfamiliar with care outside of the hospital. Relying on traditional EMS agencies for inter-facility transports may result in compromises in care, for example lack of IV infusion pumps or mechanical ventilators. Training for Critical Care Paramedics has been developed, but a standard curriculum and certification pathway has not been identified, and credentialing varies from state to state.

Air medical services have been relatively more visible in their role in providing interfacility transport of acutely ill or injured patients than ground-based agencies. In most states the majority of air medical flights are for interfacility transfers rather than scene responses. Air medical services have a justified reputation for providing excellent patient care during transfers and they are frequently better supported than many ground-based agencies in providing urgent interfacility transfers. Air medical programs are also more likely to be staffed by crews including both EMS certified personnel, typically Paramedics, and nurses or other allied health providers with critical care expertise. Air medical programs are generally a limited resource in a given area and their availability may be limited by demand and operational factors such as weather. Air medical programs have also received increased scrutiny recently for their safety records and for their cost, which can be many times that of a ground-based agency providing similar care.

Other more specialized services have evolved to meet the needs of particular patient populations. A particularly visible example are newborn emergency transport services (NETS). These services provide a team with a skill set and technology that is not generally available for interfacility transfers. NETS teams are frequently composed of certified EMS providers, usually Paramedics, and nursing staff with specific training and experience working in a specialized transport unit.

Although we usually envision ED's as the source of interfacility transfers, many originate from units outside the ED, e.g. labor and delivery, intensive care units, or hospital floors that may have less appreciation for the complexities of interfacility transfer. Although emergency physicians typically have at least a basic knowledge of EMS systems and providers, physicians and staff in other units of the hospital may have very limited familiarity with EMS systems, the EMS scope of practice, and the demands of interfacility critical care transfers.

#### Recommendations:

Transfers between health care facilities are inevitable and increasingly important as our health care system increases in complexity and specialization. Planning for resources to effect transfers should be incorporated from the beginning of system design for any health care system that envisions developing or acquiring new outlying facilities and/or developing expanded clinical services. In planning systems of regionalized care the availability and quality of interfacility care should be recognized as one of the foundations of a successful system. Relying on existing resources may be inadequate, particularly if demand is expected to increase and specialized care, skills, and/or technology may be required. Transferring facilities should actively engage in planning and establish an on-going relationship with the agencies providing IFT services and may need to invest resources to ensure the prompt availability of high quality services. State and regional EMS systems leadership should recognize and plan for IFT as part of their overall system design, including both air and ground resources, and a range of care levels from basic to critical care transport.

Transferring physicians and other providers should have access to intra-mural resources to assist them in planning patient transfers. Resources with expertise in EMS operations can usually be identified among ED staff members to serve as an institutional resource for transferring patient care units and providers. Transferring facilities should establish a quality improvement program to review transfers. In addition to evaluating the appropriateness of out-going transfers, the appropriateness of the modality of the transfer should also be part of a quality improvement program involving the ED as well as other units that originate interfacility transfers.

Receiving institutions need to consider transfer resources as an integral component of their referral system and should be actively engaged in ensuring readily available, high quality interfacility transfer resources for the acutely ill or injured patients that they expect to receive.

State EMS regulators should work toward developing credentialing pathways and a scope of practice for EMS providers and endorsements for EMS agencies providing interfacility transfer services that recognize that the demands of interfacility transfers may not be adequately addressed in traditional EMS training programs and endorsements that primarily focus on pre-hospital care. Consideration should be given to establishing a national standard curriculum and certification level for Critical Care Paramedics.

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