

EMS Committee: Interfacility Resource Document

Interfacility patient transfers often involve a complicated set of medical decisions. Referring facilities must ensure that patients receive appropriate care during interfacility transfer and upon discharge. Emergency medical service providers deliver a wide range of transport medical services. The specific types of skills and medicines that can be administered during transport depend upon established statewide protocols, clinical guidelines, and staffing. This document is intended to assist referring and receiving physicians and other hospital staff with determining which type of transport is best suited to an individual patient's need. The Pennsylvania Department of Health currently licenses ambulances at the basic life support (BLS), advanced life support (ALS), critical care transport (CCT), and air medical transport levels. Each tier of transport medical care is authorized to administer specific medications and perform particular skills.

Basic Life Support (BLS)

A BLS ambulance is staffed by at least one emergency medical technician and an EMS Vehicle Operator (EMSVO). EMTs, in general, provide non-invasive monitoring of vital signs. EMTs are trained to administer oxygen, control bleeding and stabilize fractures. EMTs do not provide intravenous or intraosseous therapy. BLS transports are indicated for stable patients who do not require medications or cardiac monitoring.

Intermediate Advanced Life Support (IALS)

Advanced Emergency Medical Technicians (AEMTs) provide basic EMS and a limited set of ALS. AEMTs perform all the BLS skills listed above as well as use of Alternative Rescue Airways, suctioning, placement of a saline lock IV, IO placement, obtaining but not interpreting a 12 Lead ECG, blood glucose monitoring. IALS transports are indicated for stable patients who do not require medications or monitoring.

Advanced Life Support (ALS)

ALS ambulances are staffed with at least one paramedic, prehospital nurse, or prehospital advance practice provider (e.g. physician's assistant). ALS personnel are trained to perform and interpret 12-lead ECGs, administer intravenous fluids, administer specific infusions, and provide cardiac monitoring.

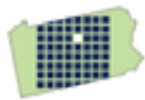
Critical Care Transport (Paramedic)

State approved CCT programs staff ambulances with two ALS providers in addition to an EMSVO, of which one must be trained in an expanded scope of critical care transport. The State of Pennsylvania requires the presence of a PHRN for certain medications, but a CCT licensed paramedic ambulance provides additional services beyond the regular ALS scope of practice under a set of expanded statewide protocols. CCT crews transport patients requiring some forms of mechanical ventilation and certain infusions not routinely carried on an ALS ambulance.

Critical Care Transport (PHRN/Paramedic)

Critical Care Transport provided by licensed agencies provide air or ground transport with an expanded scope of practice determined by agency-specific protocols (air ambulance agencies) approved through the Department of Health. These teams are staffed with at least two advanced personnel (most commonly prehospital nurses or paramedics) trained as critical care providers. Capabilities of these critical care teams include the administration of paralytics and additional infusions based on an expanded scope of practice. An air ambulance CCT team may transport patients with advanced modes of mechanical ventilation or who are receiving blood products. The CCT staffed with an on board PHRN is best suited to interfacility transfers involving critically ill patients requiring vasoactive medications.

DISCLAIMER: This document is not intended to supplant clinical judgement or guide policy decisions. It is intended to serve as a resource to emergency medicine and other acute care clinicians who are tasked with arranging or managing interfacility patient transports. The document incorporates the latest updates from the Pennsylvania Department of Health with respect to the current EMS Scope of Practice.

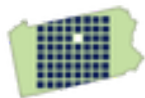


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Capabilities of Various Transport Levels of Care

	BLS (Emergency Medical Technician)	IALS (Intermediate Advanced Life Support)	ALS (Advanced Life Support)	Critical Care Transport (Expanded Scope Paramedic)	Critical Care Transport with agency specific protocols (PHRN, PHP, PHPE)	Specialty Care Transport (Neonatal⁵, Pediatric⁵, ECMO)
Monitoring (Vitals and SpO2)	Yes	Yes	Yes	Yes	Yes	Yes
Cardiac monitoring	No	No	Yes	Yes	Yes	Yes
Cardiac pacing, transvenous	No	No	No	No	Yes	Yes
Bilevel Positive Airway Pressure	No	No	No (CPAP permitted)	Yes	Yes	Yes
Vasopressors	No	No	Yes (Limited and not titrated)	Yes	Yes	Yes
Antibiotics	No	No	Yes	Yes	Yes	Yes
Blood and blood products	No	No	No	No	Yes	Yes
Mechanical Ventilation	No	No	Yes (Limited to volume control modes and no anticipated need for adjustment)	Yes (Limited to volume control modes and no anticipated need for adjustment)	Yes (All modes approved by agency medical director, titration of settings)	Yes
Sedation and Paralysis	No	No	No (Limited to sedation)	Yes* (Limited sedation; may include paralysis when risks>benefits or CCT appropriately trained)	Yes (Sedation and paralysis)	Yes (Sedation and paralysis)
Chest tube to suction or water seal	No	No	No	Yes	Yes	Yes

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Air medical Transport Considerations:

Consultation with a transport medicine / EMS physician is recommended when considering the interfacility transport of a patient in need of critical care

Consider aeromedical transport when:

1. Air medical transport confers a significant, time saving benefit to the patient
2. Air medical crews can perform a skill or deliver a therapy beyond the capabilities of the local EMS agency/ground crews
3. Specialty care resources needed but otherwise unavailable (Neonatal transport, ECMO, balloon pump)
4. Local EMS resources are not sufficient to meet patient needs. (No available ambulances, planned interfacility transport would leave a community without EMS coverage, etc)
5. Neonatal and Pediatric transports require specialty team care when the patients are exceed the resources available by the local EMS provider. A pediatric transport system should be capable of rapidly delivering advanced pediatric critical care to the patient's bedside at the referring hospital and of maintaining that level of care during transport to the receiving hospital. This includes using a transport device appropriate for the child's condition, specialized needs, size and the mode of transport (including pediatric restraint systems, spinal immobilization systems, encapsulating warmers and isolettes).

Additional Resources

The following documents contain additional information about the scope of practice of emergency medical services providers:

1. [Pennsylvania Department of Health Bulletin: Scope of Practice for Emergency Medical Services Providers](#)
2. [Pennsylvania Department of Health Bulletin: Scope of Practice for Critical Care Transport Emergency Medical Services Providers](#)
3. [Pennsylvania Department of Health Bulletin: Approved and Required Medication List for Emergency Medical Services Agencies and Emergency Medical Service Providers](#)

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