

# A1 IFT Guidelines and Protocols

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## **Part A - Minimum Standards for Interfacility Transfers (IFTs):**

### **1. Minimum Staffing, Training Requirements**

Minimum staffing at the Advanced Level requires one Advanced EMT and one EMT-Basic. Minimum staffing at the Paramedic level requires one Paramedic and one Advanced EMT/EMT-Basic, in accordance with 105 CMR 170.305(C)(2).

EMS personnel providing patient care that exceed their regular scope of practice under the Statewide Treatment Protocols during basic and advanced life support (BLS/ALS) IFTs must meet the following requirements as outlined in 105 CMR 170.000 et al:

- a. current certification as an EMT in Massachusetts;
- b. completion of Department approved supplemental training that is specific to and consistent with levels of certification of involved EMTs and includes
  - expanded roles and responsibilities
  - additional, approved treatment modalities, equipment, devices, and technologies; and
  - ambulance service policies and procedures regarding BLS and ALS IFT
- c. has maintained current authorization to practice pursuant to the Affiliate Hospital Medical Director's review of clinical competency.

It shall be the responsibility of the transferring ambulance service to ensure and to verify appropriate training of its IFT EMS personnel. This includes ensuring that all its IFT EMS personnel successfully have successfully completed IFT Initial training, and thereafter, refresher training at a minimum whenever new IFT equipment or medication is approved for use.

### **2. Affiliation Agreements; Medical Control**

An ambulance service must be licensed at an ALS level by the Department to provide ALS IFT care, and it must maintain an affiliation agreement, in accordance with 105 CMR 170.300, with a hospital licensed to provide Medical Control by the Department, pursuant to 105 CMR 130.1501-130.1504 of the Hospital Licensure regulations. Such affiliation agreements must designate an Affiliate Hospital Medical Director (105 CMR 170.300(A)(2) and 105 CMR 130.1502(C)), whose medical oversight functions are defined in 105 CMR 130.1503. Standards for Affiliate Hospital Medical Directors are defined in 105 CMR 130.1504.

### **3. Communications:**

All communications by radio or phone with a Medical Control physician must be recorded.

### **4. Scope of Practice:**

Section 170.360(A) of the EMS Regulations states, "No ambulance service or agent thereof shall transport a patient between health care facilities who is receiving medical treatment that is beyond the training and certification capabilities of the EMTs staffing the ambulance unless an additional health care professional with that capability accompanies the patient..." Depending on the patient's condition, there may be situations in which a physician or another health care professional's presence might be necessary; such determination shall be made by the Medical Control physician in consultation with the physician at the sending hospital.

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# A1 IFT Guidelines and Protocols

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The scope of practice for each EMT level is defined (1) in regulation (105 CMR 170.810, 170.820 and 170.840), (2) by the U.S. Department of Transportation's National Highway Traffic Safety Administration's (NHTSA) National EMS Scope of Practice Model and as used in its National EMS Education Standards, and (3) through established training programs approved by the Department, and through the Statewide Treatment Protocols Appendix A1.

The following are patient condition classifications and corresponding requirements for EMT personnel during ambulance transport:

- a. Stable Patient - Routine, scheduled transport; Patient clearly stable for transport with no requirement for airway management and no device in place that is actively running or requires any maintenance or monitoring and at no risk for deterioration. Patient may have a device in place, but device must be locked and clamped, not require any maintenance, and not be actively running. Such inactive devices may include, but are not limited to, IVs (if disconnected from fluid and on a saline lock during transport), nasogastric tubes, feeding tubes, PICC lines, bladder irrigation, and wound vacs (wound vacs that are self-contained, gravity draining or battery powered can be transported by BLS providers). Running PCA pumps are not inactive and require ALS (for exceptions-see note below).

**Note:** This is the level of care needed for a patient with any device that will NOT require active intervention or management by BLS; unless ALS is otherwise required for patient management. *If the device is being managed by the patient or accompanying caregiver*, the patient or caregiver must have been trained in actually managing the device, NOT merely in its use; for example-the patient or caregiver must have the knowledge and ability to stop a PCA pump, if the line is damaged.

Minimum Staffing: BLS licensed ambulance service; two EMT-Basics.

- b. 1. Stable Patient at low risk of deterioration - Patient clearly stable for transport (as above) who has a "maintenance" IV running without additives; (e.g., cancer patient transported for radiation therapy, with unadulterated crystalloid IV solution running). Advanced EMTs may transport patients with Dextrose-containing IV solutions.

Minimum Staffing: ALS-Advanced EMT licensed ambulance service; one Advanced EMT attending to patient care and one EMT-Basic driving

2. Stable patient with low risk of deterioration – Patient with an acute or subacute problem, who is stabilized, with a low potential to become less stable during transport. The patient specifically does not require cardiac rhythm monitoring but may be attached to a monitor for pulse rate monitoring under medical director option in A1. Medication running must be consistent with IFT MDO Protocol Part A1 if in use; i.e. antibiotics not by pump are permissible. Examples may include a patient with a hip fracture and dysrhythmia history who is not experiencing an uncontrolled or unstable dysrhythmia; or a patient with pneumonia and stable vital signs who is receiving IV antibiotics during transport.

Minimum Staffing: ALS-Advanced EMT licensed ambulance service; one Advanced EMT attending patient care, who must be operating with permission under IFT MDO Protocol A1, and one EMT-Basic driving.

- c. Stable patient with medium risk or deterioration – Patient with an acute or subacute problem, who is either completely or, at least, to the best of a facility's ability, stabilized; who has the potential to become less stable during transport. Instrumentation or medication running must be consistent with IFT Guidelines. This is the minimum level for running PCA pumps.

Minimum Staffing: ALS-Paramedic licensed ambulance service; one EMT-Paramedic and one Advanced EMT or EMT-Basic, in accordance with 105 CMR 170.305(C)(2). The EMT with the highest level of certification must attend to patient care.

Protocol Continues

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- d. Patient with high risk of deterioration or unstable - Patient with an acute problem with high potential to become unstable or cannot be stabilized at the sending facility - Critical Care patient. Critical care patients require critical care transport (CCT). See Part B, Determining the Need for CCT.

Minimum Staffing: CCT licensed ambulance service. In the event that CCT is unavailable, the sending facility must send appropriate additional medical personnel (per 105 CMR 170.360(A)) to accompany the patient during transfer and assume responsibility for patient care, in an ambulance staffed with at minimum two paramedics.

- e. Critical Care Transports (see 105 CMR 170.000, for regulatory requirements regarding critical care transport).

**Note:** The sending hospital's medical personnel, such as a nurse, physician, or respiratory therapist (the latter only for ventilator management) accompanying the patient must be able to manage all equipment and instrumentation associated with the patient's care and provide advanced resuscitative measures if needed. Such sending of hospitals additional health care professionals would be responsible for primary patient care of that patient during transport and would receive additional orders from the sending physician, since the care of the patient exceeds what the ambulance and its EMS personnel could provide.

**NOTE:** Under no circumstances shall EMTs function or be assigned to transfers beyond, or potentially beyond, the scope of their training and level of certification. The scope of practice for all EMTs is limited to the levels of EMT certification and training and by licensure level of the ambulance service by which they are employed.

Protocol Continues

# A1 IFT Guidelines and Protocols

Protocol Continued

As a measure of last resort, in exceptional cases where CCT is unavailable **and** sending facility staff is unavailable, **and** the patient has a medical condition requiring time-sensitive intervention, **and** it is approved by the Medical Control physician, the patient may be transferred by any level of certified EMS personnel; provided that all interventions are within the scope of practice of the transporting EMTs and the licensed vehicle. The Medical Control physician and sending physician must be in direct communication if there are any concerning issues prior to patient transport.

In these cases, the sending facility/physician must demonstrate he/she made every effort to secure a CCT-licensed ambulance, and failing that, to send appropriate hospital personnel and the patient condition is such that it is truly time sensitive that the patient be transferred to another hospital for appropriate care. All such cases must be reported to the Affiliate Hospital Medical Director of the ambulance service that provides the transport, for quality assurance review. A hospital may NOT have a policy permitting this type of transport as a standard option. It may only be used as a real-time Medical Control decision, and reported as above.

5. Continuous Quality Assurance/Quality Improvement
  - a. Ambulance services providing ALS IFT shall be required to have continuous quality assurance/quality improvement (CQI/QI) policies specific to ALS IFT in conjunction with both their affiliate hospital medical directors and their ambulance service medical directors, if any, and include at a minimum:
    - review of appropriateness of transfers, denials, and conformance with EMTALA regulations;
    - review of critical skills (e.g., intubations, cardiac arrest management, IV therapy), and other measures of system function as deemed appropriate by the Department;
    - steps for system improvement and individual remediation, available for Department review, of cases found to be deficient in critical interventions

## **Patient ALS Transfer Procedure**

Once an ALS IFT has been deemed appropriate by the transferring ambulance service (see "Scope of Practice" above), paramedic staff, upon arrival at the transferring facility, will:

- receive a report from the staff of the transferring facility
- assess the patient; and
- in cases where the patient's care during the transfer exceeds the standing-order scope of practice for an EMT-Paramedic or is unstable or is likely to become unstable as defined previously (see "Scope of Practice" above) will provide a concise, complete and accurate patient report to an Medical Control physician, according to the EMS service's and the Affiliate Hospital's policies and procedures. When EMS personnel have a concern regarding the safety of the patient being transferred, the Paramedic will contact an Medical Control physician for guidance.

The report should include, at a minimum, the following information:

- a. Names of transferring and receiving facilities
- b. Patient's diagnosis
- c. Reason(s) for transfer
- d. Brief history of present illness and any intervention(s) which has occurred to date
- e. Pertinent physical findings
- f. Vital signs
- g. Current medications and IV infusions
- h. Presence of or need for additional medical personnel

Protocol Continues

Protocol Continued

- i. Anticipated problems during transport, if any
- j. Anticipated transport time; and
- k. Staffing configuration of the transporting ambulance

NOTE: Complete copies of all pertinent medical records, including X-Rays, CT Scans, consultative notes and ECGs, as available, must accompany the patient to the receiving facility either electronically or in-hand.

When necessary, the Medical Control Physician and paramedic will discuss with the sending physician the orders for maintenance of existing and/or addition of new therapies according to the needs of the patient, within the scope of existing treatment protocols and EMT scope of practice. The Medical Control Physician will be responsible for all actions/interventions initiated by the EMS personnel during transport unless the referring physician accompanies the patient.

If the sending physician is unavailable, or the patient is unstable, the Medical Control Physician may recommend to the sending facility additional therapies prior to the transfer of the patient in the interest of patient safety and quality care.

In some situations, consistent with the intent of EMTALA, the transfer of a patient not stabilized for transport may be preferable to keeping that patient at a facility incapable of providing stabilizing care. If the transferring facility cannot provide appropriate medical care or appropriately trained and experienced personnel to accompany the patient, alternative means of transfer, including a CCT- licensed ambulance service, must be utilized. The use of a local primary ambulance service is strongly discouraged in such a situation. All such responses must be reported by the ambulance service to the Department's Division of Health Care Facility Licensure and Certification for review. It is ultimately the responsibility of the sending physician and Medical Control physician to determine the appropriate method of transferring **any** patient, including an unstable patient who needs interventions not otherwise available.

**NOTE:** An ambulance service may not unilaterally change the level of staffing and care provided. While the service may offer to send a lower level of ambulance staffed in accordance with this Protocol, if a sending physician ultimately requests a paramedic unit, the service must either provide a paramedic unit (or dispatch time frame) or state explicitly that they are unable to do so.

When a facility sends its own staff with the patient during transfer (additional medical personnel) and the patient's condition deteriorates during transport, EMS personnel must contact the Medical Control Physician for appropriate intervention orders and notify the receiving facility of the change in patient status.

If the accompanying staff is an RN s/he will maintain patient care responsibility, functioning within his/her scope of practice and under the orders of the sending physician. The paramedic and the RN will work collaboratively in the provision of patient care. If the patient's condition deteriorates during transport, the paramedic may assume full responsibility in conjunction with their Medical Control Physician for care that exceeds the RN's scope of practice and/or the transferring physician's medical orders. Prior to transfer with an RN, the paramedic will contact the Medical Control Physician to discuss the sending physician's orders and rationale.

If the accompanying staff includes a physician from the transferring facility, that physician shall be in charge of patient care. Prior to transfer, the paramedic will contact the Medical Control Physician to coordinate patient care between the sending physician accompanying the patient, the Medical Control Physician and the paramedic. Clear lines of command and responsibility shall be established prior to transport.

Protocol Continues

Protocol Continued

**Interstate ALS IFT:** During interstate IFTs, paramedics must obtain Medical Control through the normal channels of the ambulance service for which they are working. Appropriate provisions for re-contacting the Medical Control Physician during transport, if necessary, should be made prior to departure from the sending facility. If a transfer originates out of state and no contact with a Medical Control Physician is possible, the transfer should be made at the BLS level only with appropriate additional personnel provided by the sending facility.

## Part A1 – Medical Director Option (MDO) for ALS IFT Staffing:

Advanced EMTs (AEMT) may be specifically trained under the supervision of their ambulance service's Affiliate Hospital Medical Director (AHMD) to add the following skills **for IFT use only**:

1. Application of a 3- or 4-lead cardiac monitor to a patient. The AEMT is **NOT** interpreting the cardiac rhythm: They may acquire recordings, transmit the rhythm strip, or otherwise maintain it for physician evaluation. The pulse rate is to be monitored as a continuous vital sign.
2. Monitoring of running IV antibiotic-containing **ONLY** solutions, not on an infusion pump.

Each service in which MDO has been adopted is responsible to maintain records of such training AND forward them in writing to OEMS, specifying the service, approving AHMD, which AEMTs have been trained, and when, by name. In addition, each service that adopts this MDO must report in writing to OEMS the start date of implementation and must report total number of uses of this MDO at the six-month mark and the one-year mark from implementation. Such records and reports must be submitted to the State EMS Medical Director and OEMS Clinical Coordinator.

Any adverse event that occurs during a transport using this IFT MDO protocol **MUST be reported within 48 hours by email to the State EMS Medical Director and the OEMS Clinical Coordinator**. Adverse events include, but are not limited to, needing a paramedic intercept; needing to change hospital destination en route for a clinical reason; patient deterioration, or patient death. Any result of transport other than an uneventful IFT is typically an adverse event.

Protocol Continues



# A1 ALS Interfacility Transfer Protocols

## Part B- Determining the need for CCT

Protocol Continued

### B1 – Pediatric Patients (14 years of age or younger and/or weighing no more than 40kg)

- **Any neonate (30 days or younger) requiring transfer for evaluation and/or treatment of an UNSTABILIZED acute condition.**
- Any pediatric patient with critical illness or injury.  
**NOTE:** Medical Control should be involved in determining whether pediatric patients require critical care.
- Any pathology associated with the potential for imminent upper airway collapse and / or obstruction (including but not limited to airway burns, toxic inhalation, epiglottitis, retropharyngeal abscess, etc.). If any concerns whether patient falls into this category, contact Medical Control.
- **Any pediatric patient requiring acute ventilatory support (NIV, high flow NC, ventilator, etc.) who requires an interfacility transfer.**
  - For patients 2 months or older, Paramedic transport may be indicated in place of CCT for patients requiring hi flow nasal cannula if the patient is receiving an FiO2 <50% or less and has an SpO2 of ≥ 92% and is stable on such settings for 20 minutes. Such transport must be agreed to by sending physician and Medical Control.
- All conditions that apply to adult medical patients also require CCT for the pediatric patient.  
**NOTE:** Medical Control should be involved in determining whether pediatric patients require critical care.

### B2 – ADULT PATIENTS

- Unless approved by Medical Control, patients requiring more than three (3) medication infusions by IV pump, not including maintenance fluids must be transported by CCT.
- Unless approved by Medical Control, any patient receiving more than one IV medication being actively titrated to affect heart rate or blood pressure must be transported by CCT.
- Any patient who is being actively paced (either transvenous or transcutaneous) must be transported by CCT.
- Patients being transferred due to an issue with a ventricular assist device that may require active monitoring or management.
- Patients with an intra-aortic balloon pump.
- Any patients with a pulmonary artery catheter.

**NOTE:** Central lines may be transported by ALS IFT

A-line monitoring on an uncomplicated stable patient can be transported by a paramedic level IFT crew. All paramedics doing so must be properly trained in this skill, and the AHMD must approve of the training and skill use. All such instances also must be reviewed by the AHMD for quality assurance purposes. **Patients with high potential for being unstable must be transported by CCT and not IFT.**

- Any patient with an intracranial device requiring active monitoring.  
**NOTE:** Except for chronic use devices, such as ventriculoperitoneal shunts, etc.
- Any pathology associated with the potential for imminent upper airway collapse and / or obstruction (including but not limited to airway burns, toxic inhalation, epiglottitis, retropharyngeal abscess, etc.).  
**NOTE:** If any concerns about whether patient falls into this category, contact Medical Control.
- Any patient being artificially ventilated for ARDS or Acute Lung Injury.

Protocol Continues



# ALS Interfacility Transfer Protocols

## General Protocols for ALS IFT Care

A1

Protocol Continued

### Part C – General Protocols for ALS IFT Care

- Vital signs should be obtained and documented every ten (10) minutes, unless otherwise required by protocol.
  - If clinically indicated, patients will have continuous monitoring of electrocardiogram (ECG) and / or pulse oximetry (SpO<sub>2</sub>).
  - All artificially ventilated patients (and all other patients where it is clinically indicated) will have continuous monitoring of waveform capnography.
- The recommended route for medication infusions in the ALS IFT setting is the peripheral intravenous (IV) line. Intraosseous (IO) lines may also be used.
  - Medications may also be administered through any central venous catheter
  - Paramedics may administer medication boluses, infusions and fluids through administration sets connected by the sending facility to subcutaneous devices (e.g., Port-a-Cath)
- ALS IFT patients should have IV access, if possible.
  - Paramedics should attempt to establish IV access if no attempts have been made at the sending facility.
  - Paramedics are authorized to establish IO access if warranted by the patient's condition.
- All monitoring and therapy will be continued until care is transferred to the receiving medical staff.
- Paramedics may not accept any medications from the sending facility for the purposes of bolus administration during transport.
- Any patient who qualifies for spinal immobilization in accordance with Protocol 4.8 Spinal Chord and Column Injuries who has not been cleared by CT scan or appropriate physician assessment must be properly immobilized for transport. If there is identification of a clinical concern of thoracic or lumbosacral spine injury, the patient should be immobilized with a long board and log roll precautions used at all times.
  - If any confusion arises regarding the need for spinal immobilization Medical Control will be contacted and the Medical Control physician and the sending physician should be in direct communication.
- Paramedics must be familiar with the treatments and interventions instituted at sending facility.
- Patient care documentation should include, at a minimum:
  - Patient's diagnosis / reason for transfer
  - Brief history of present illness / injury
  - Brief overview of interventions performed by sending facility
  - Pertinent physical examination findings and recent vital signs
  - Current medications and IV infusions
  - Presence of or need for additional medical personnel
- For all patients being transferred to an emergency department, who are critically ill, unstable, or have a change in clinical status, EMTs should notify receiving emergency department via CMED prior to arrival. If local CMED is unavailable, entry notes should be made by telephone (on a recorded line, if possible).
- Paramedics will contact Medical Control for:
  - Any intervention(s) that exceed the standing order scope of practice as defined by the current version of the Massachusetts Pre-Hospital Statewide Treatment Protocols for a Paramedic.
  - Any patient that is unstable or is likely to become unstable.
  - When there is any concern regarding the safety of the patient being transferred.
  - Any significant patient care related questions or issues prior to transfer or enroute.
- Paramedics can facilitate communication between the Medical Control and sending physician if there are any concerning issues prior to patient transport.

Protocol Continues

IFT Protocols, Part C

# A1 ALS Interfacility Transfer Protocols

## Part D1 – Aortic Dissection

Protocol Continued

- It is recommended that central access and / or two large bore IV lines are in place prior to transport.
  - Care during transport:
    - Administer high-flow supplemental oxygen
    - Continuous cardiac monitoring
    - Heart rate, blood pressure, neurologic evaluations documented every 5 – 10 minutes
      - Target heart rate = 60 – 80 bpm
      - Target systolic blood pressure = 90 – 100 mm Hg
      - Continually assess mentation.
      - If patient is outside of these parameters, contact Medical Control.
    - Administer **fentanyl** for analgesia, per Protocol 2.13 Pain & Nausea Management Adult & Pediatric or by orders.
  - If not approved by Medical Control prior to transport, you must contact Medical Control to adjust all medication infusions:
    - Adjust vasoactive medications initiated at sending facility (until systolic blood pressure is less than 100 mm Hg and/or MAP is less than 60 mm Hg):
      - If **labetalol** infusion has been initiated by sending facility, **increase by 2 mg / minute every 10 minutes** (to a maximum of 8 mg/minute)
      - If **esmolol** infusion has been initiated by sending facility, **increase by 50 mcg / kg / minute every 4 minutes** (to a maximum of 300 mcg / kg / minute)
      - If **nitroprusside** infusion has been initiated by sending facility, **increase by 0.5 mcg / kg / minute every 5 minutes** (to a maximum of 4 mcg / kg / minute)
      - If **nicardipine** has been initiated by sending facility;
        - Increase by 2.5 mg / hour every 5 minutes** (to a maximum of 15 mg / hour).
- Discontinue drip and contact Medical Control for instructions if:
- Systolic blood pressure < 90 mm Hg, or;
  - Heart rate < 60 bpm
  - If no medication infusion has been initiated to control blood pressure and / or heart rate, Medical Control may order the administration of **metoprolol** 5 mg IV every 5 minutes to a maximum of 15 mg.

Protocol Continues

# ALS Interfacility Transfer Protocols

## Part D2- Blood Transfusion Reaction

A1

Protocol Continued

### Symptoms of a Transfusion Reaction

#### Acute Hemolytic Reaction

Fever, hypotension, flushing, wheezing, dark and / or red colored urine, oozing from IV sites, joint pain, back pain, chest tightness

#### Nonhemolytic Febrile Reaction

Fever, chills, rigors, vomiting, hypotension

#### Allergic Reaction

Urticaria, hives (usually without fever or hypotension)

#### Anaphylactic Reaction

Dyspnea, wheezing, anxiety, hypotension, bronchospasm, abdominal cramps, vomiting, diarrhea

#### Volume Overload

Dyspnea, hypoxia, rales, tachycardia, jugular vein distention

#### Transfusion-Related Acute Lung Injury (“TRALI”)

Dyspnea, hypoxia, rales (usually without fever or signs of pulmonary edema)

- STOP the infusion if any of the above symptoms are discovered!
- Start infusion of normal saline
- Contact Medical Control
- Treat hypotension and anaphylactic reaction with standing orders (Statewide Treatment Protocols)
- If minor allergic reaction (urticaria / wheezing) administer diphenhydramine, 50 mg IV
- If SpO2 is below 90% or patient experiences wheezing / rales, administer high-flow supplemental oxygen and consider positive pressure ventilation. If significant signs of volume overload, consider furosemide, 40 mg IV.
- Notify issuing hospital's blood bank of any suspected reaction.

Protocol Continues

IFT Protocols, Part D2

# ALS Interfacility Transfer Protocols

## Part D3 – CVA Post tPA

Protocol Continued

- ❑ Seizures (either generalized motor or nonconvulsive) should be quickly controlled.
  - After assessing airway, breathing, and applying high-flow oxygen:
    - Follow Seizure protocols: Protocol 2.15A Seizures – Adult and 2.15P Seizures - Pediatric
- ❑ For an ischemic CVA, if a tPA (tissue plasminogen activator) infusion will be continued during the transport, follow these guidelines:
  - Sending facility staff should withdraw excess tPA from the bottle, so that the bottle will be empty once the full dose has infused.
 

**Example:** 100 mg bottle of tPA contains 100 mL of fluid when reconstituted; if the total dose being administered is 70 mg, then the facility should remove 30 mL of fluid from the bottle before departure.
  - When the pump alarm indicates that the bottle is empty, you should take the following steps to ensure that the drug contained within the administration tubing is administered to the patient:
    - Remove the IV tubing from the tPA bottle and spike a bag of 0.9% NS and restart the infusion; the pump will stop infusing when the preset volume has been administered.
- ❑ If systolic blood pressure is found to be greater than 180 mm Hg or diastolic blood pressure is found to be greater than 105 mm Hg consult Medical Control, then:
  - Adjust antihypertensive medications initiated at sending facility:
  - If labetalol has been initiated by sending facility;
    - ✓ **Increase by 2 mg/minute every 10 minutes** (to a maximum of 8 mg/minute) until systolic blood pressure is less than 180 mm Hg and/or diastolic blood pressure is less than 105 mm Hg
    - ✓ Discontinue drip and contact Medical Control for instructions if the reduction in MAP is greater than 30% of initial BP or SBP < 140 mm Hg, DBP < 80, or heart rate < 60 bpm
  - If nicardipine has been initiated by sending facility;
    - ✓ **Increase by 2.5 mg / hour every 5 minutes** (to a maximum of 15 mg / hour) until systolic blood pressure is less than 180 mm Hg and/or diastolic blood pressure is less than 105 mm Hg
    - ✓ Discontinue drip and contact Medical Control for instructions if the reduction in MAP is greater than 30% of initial BP or SBP < 140 mm Hg, DBP < 80, or heart rate < 60 bpm
- ❑ For any acute worsening of neurologic condition (e.g., acutely worsening neurological deficits, development of severe headache, acute hypertension, vomiting, etc.):
  - If patient is receiving tPA, discontinue the infusion.
  - Contact Medical Control for further instructions, including possible change in destination.
  - Contact receiving hospital emergency department with an update on patient's condition and an estimated time of arrival.

Protocol Continues

# ALS Interfacility Transfer Protocols

## Part D4- Post-Arrest Targeted Temperature Management (TTM)

# A1

Protocol Continued

- If post-arrest targeted temperature management (TTM) therapy in progress at the time of ALS IFT arrival, it should be continued during the transport per Protocol 3.7 Targeted Temperature Management
- Pre-transport temperature should be documented, and temperature should be monitored with vital signs every five minutes.
- The temperature target for post-arrest targeted temperature management (TTM) is 32°C – 36°C (89.6°F – 96.8°F).
- If pre-transport or inter-transport temperature is less than or equal to 36°C:
  - Maintain temperature with cold packs placed in the groin, axillae, and on the chest and sides of neck.
- If pre-transport or inter-transport temperature is greater than 36°C:
  - Continue cooling with cold packs placed in the groin, axillae, and on the chest and sides of neck.
- Temperature should be monitored if possible for transport times longer than 20 minutes. Patients should be handled gently (due to risk of arrhythmias).
- ALS IFT crews will not discontinue TTM unless ordered to do so by Medical Control.
- If patient temperature is less than 31°C, contact Medical Control and utilize any external warming devices (blankets, etc.) to actively rewarm patient until the temperature is greater than 31°C.
  - If ordered by Medical Control and available, consider infusion of 250 mL IV boluses of warmed normal saline solution, until the temperature is greater than 31°C.
- If hemodynamically significant dysrhythmias or bradycardia of any type develop, or if the patient develops significant bleeding, TTM should be stopped, Medical Control contacted, and active rewarming pursued.

Protocol Continues

IFT Protocols, Part D4

# ALS Interfacility Transfer Protocols

## Part D5 – Pregnancy Related

Protocol Continued

- Patients who are in labor with concern for imminent delivery must be accompanied by sending facility staff.
- In high-risk situations, a physician / registered nurse will accompany the patient for transport.
- If any confusion arises regarding the need for additional OB staff Medical Control will be contacted and the Medical Control physician and sending physician should be in direct communication.
- In addition to the documentation standards listed in the General ALS IFT Care Guidelines, when transporting an obstetrical patient, the following should be documented:
  - The presence of a fetal heart rate before and after transfer
  - Estimated date of confinement, maternal history of any complications
  - Condition of membranes, dilation
  - Gravida / Para
  - Timing and nature of contractions
  - Fetal Position
- Patients should be transported in a left-lateral position or sitting upright, if possible.
- Document that the fetal heart rate was evaluated prior to transport and upon arrival.
- If patient should develop eclamptic seizures:
  - After assessing airway, breathing, and applying high-flow oxygen:
  - Administer **magnesium sulfate** 2-4 grams over 5 minutes IV/IO.

Follow Protocol 2.15A – Seizures-Adult and the Protocol 2.10 Obstetrical Emergencies

Protocol Continues

# ALS Interfacility Transfer Protocols

## Part D6- ST-Segment Elevation MI (STEMI)

A1

Protocol Continued

- Paramedics should be familiar with the care and treatment the patient has received.**  
Confirm medications administered prior to arrival.
- Consider discontinuing or avoiding all medication infusions (except for basic IV fluids) to expedite transfer.**
- Receiving facility should be contacted to ensure rapid transfer to cardiac cath lab.
- Patients should receive appropriate supplemental oxygen therapy, only if SpO2 <94% or dyspnea, in accordance with 1.0 Routine Patient Care.
- All other interventions per the Statewide Treatment Protocols, if not already administered:
  - **Aspirin**, 324-325 mg PO
- If patient continues to experience chest discomfort:
  - **Nitroglycerine** (if systolic blood pressure is greater than 120 mm Hg), 0.4 mg SL tablet or spray; may be repeated in 5 minute intervals for a total of three (3) doses
  - **Fentanyl**, 1 mcg/kg slow IV/IO/IM/IN (initial dose) to a max. of 150mcg; if needed, may repeat up to two additional doses, 5-minutes apart, not to exceed a total max dose of 450mcg (including initial dose.)

Protocol Continues

IFT Protocols, Part D6



# A1 ALS Interfacility Transfer Protocols

## Part E1- General Guidelines for Medication Administration

Protocol Continued

- The transport paramedic must be familiar or become familiar through consultation (i.e., with a drug reference or discussion with hospital staff) on the following attributes of each drug the patient has received prior to and will receive during transport:
  - The type and name of medication being administered.
  - The indication and contraindications for administration of the medication.
  - The correct dose, rate, and mixture of medication.
  - Any titration indications or instructions.
  - Any specific Medical Control instructions.
  - Any patient-specific information
  - Any adverse effects of the medication being administered.
  - The seven rights of medication administration should always be considered, even when transporting patients between facilities.
    - ✓ Right patient, drug, dose, route, time, outcome, documentation.
- Paramedics may not accept any medications from the sending facility for the purposes of bolus administration during transport.

Protocol Continues

# ALS Interfacility Transfer Protocols

## Part E2 Approved Medications and Classes

A1

Protocol Continued

Any of the following medications or medication classes, not currently part of the Paramedic Statewide Treatment Protocols, may be maintained if initiated at the sending facility, and can only be titrated through specific IFT protocols **and** by Medical Control.

- Aminophylline
- Analgesics
- Anticonvulsants
- Antidotes
- Antidysrhythmics
- Antihypertensive agents
- Anti-infectives (e.g., antibiotics, anti-sepsis)
- Benzodiazepines
- Blood products
- Chemotherapeutic agents
- Electrolyte infusions
  - ✓ Potassium, limited to 10 mEq / hour
  - ✓ Magnesium, maintenance infusion limited to 2 g / hour
- Glycoprotein IIb / IIIa inhibitors
- Heparin
- 3% Hypertonic Saline
- Insulin infusions
- Intravenous steroids
- Inhaled or nebulized medications
- Mannitol infusions
- Octreotide
- Paralytics
- Parenteral nutrition
- Proton Pump Inhibitors
- Sedatives
- Standard IV infusion fluids (including 10% Dextrose)
- Thrombolytic agents
- Vasodilators (including all forms of Nitroglycerin)
- Vasopressors

**NOTE:** All medication infusions other than standard crystalloids and blood products must be administered by IV infusion pump.

Protocol Continues

IFT Protocols, Part E2

# A1 ALS Interfacility Transfer Protocols

## Part E3 Blood and / or Blood-Product Administration

Protocol Continued

- Infusion/bloodbank documentation must be transported with the patient.
- Paramedics will not initiate a blood product infusion.
- At least one additional IV line should be in place.
- Paramedic will not administer any medications through an IV line which is being used to infuse blood or a blood product.
- Ensure the blood and / or blood products are infusing at the prescribed rate.
- Monitor and record the patient's vital signs every 5 – 10 minutes.
- **If any signs and symptoms of transfusion reaction, proceed immediately to D2-Blood Transfusion Reaction of this protocol.**
- When the transfusion has finished:
  - ✓ Record transfusion end-time and post-infusion vital signs.
  - ✓ Disconnect infusion set tubing from primary line.
  - ✓ Flush primary line with normal saline only.
  - ✓ Place any used supplies into a clean biohazard marked container or bag.
  - ✓ Deliver all empty transfusion bags and tubing to the receiving facility with the patient.

Protocol Continues

## Part F1- Mechanical Ventilation

Protocol Continued

- All artificially ventilated patients must be transferred on a ventilator.
- Consider sedation/analgesia; remember that **paralysis is not sedation**.
- All ventilators must be able to meet the demands of the patient's condition, taking into consideration all settings and features described or stipulated by the sending facility and / or physician.
- Ventilators may not be full control mode only and must be capable of meeting the patient's ventilatory needs. Ventilator settings must be documented on Patient Care Report.
- **Unless the transfer is time sensitive** in nature (e.g., STEMI, aortic dissection, acute CVA, unstable trauma, etc.), the following requirements apply to ventilator use and / or adjustment:
  - Patients must be observed, by the sending facility, for a minimum of 20 minutes after any adjustment in ventilator settings.
  - Patients should be on the transport ventilator for 20 minutes prior to departure.
  - Medical Control may waive 20 minute rule based on patient condition and needs. If waived, reason must be documented on Patient Care Report.
- Medical Control is required for any instance when adjustment of the ventilator settings is needed.

Protocol Continues

Protocol Continued

Paramedics who operate at the ALS IFT level are expected to have a thorough understanding of the functions and operations of the infusion pump they will utilize (whether property of the ambulance service or sending facility).

Paramedics are expected to not only control the basic functions of the pump, but also be able to dynamically troubleshoot pump issues. Prior to transport, paramedics must be proficient at the following:

- How to turn the pump on and off.
- How to load and safely eject the administration set into pump.
- The importance of having spare tubing.
- How to suspend pump operation.
- How to adjust the infusion rate, if necessary.
- How to clear air bubbles from the tubing.
- How to troubleshoot problems (e.g., occlusion alarms).
- How the specific service addresses low battery or power issues.

**It is strongly recommended that paramedics be trained and practiced on the infusion pump they will be using in the field.**

Protocol Continues

## Part F3 Pleural Chest Tube Monitoring

Protocol Continued

- Obtain and document the indication for placement of the pleural chest tube.
- Ensure that the chest tube is secured to the patient, and that the drainage system remains in an upright position and below the level of the patient's chest at all times.
- Regularly evaluate lung sounds and vital signs.
  - Signs and symptoms of a tension pneumothorax include: Dyspnea, tachypnea, decreased / absent lung sounds on affected side, hypotension, tachycardia, jugular venous distention, tracheal deviation (late sign)
- Tubes and connections should be evaluated following any movement of the patient to ensure leak-proof operation and chest tube patency.
- Check the following initially and after moving the patient:
  - Ensure the dressing remains dry and occlusive.
  - Ensure there are no kinks or dependent loops (e.g., a loop or turn in the tubing that forces the drainage to move against gravity to reach the collection chamber) in the tubing.
  - Amount of water in the water seal chamber; if the water level appears low ask a staff member if it requires refilling prior to departure.
- Monitor the following items after routine assessment of patient's vital signs:
  - Drainage (document the appearance and amount of fluid, at the start and at the conclusion of transport)
  - Bubbling in the water seal chamber
  - Gentle rise and fall of the water level, which corresponds with the patient's respirations is called "tidalling" and indicates that the system is functioning properly.
- Troubleshooting / problems
  - ✓ **Abnormal bubbling in the water seal chamber**
    - Remember, gentle rise and fall of the water level, which corresponds with the patient's respirations is called "tidalling" and indicates that the system is functioning properly.
    - Continuous air bubbling confirms a constant air leak from a tube connection or from the patient's chest (e.g., unresolved pneumothorax).
    - Intermittent bubbling confirms an intermittent air leak from the patient's chest.
    - No air bubbling confirms no air leak from the patient's chest and no air leak from a tube connection.
  - ✓ **If the entire chest tube is removed from the chest:** Cover with a three-sided dressing and contact Medical Control.
  - ✓ **If the chest drainage system tips over and spills:** Contact Medical Control; you may be instructed to clamp tube.
  - ✓ **If the chest drainage system is crushed or broken open, or the chest drain becomes detached from the chest tube:** Contact Medical Control immediately, do not reconnect; you may be instructed to place the end of the chest tube in a bottle of sterile water to create a seal.

Protocol Continues