

Docket No. SA-530

Exhibit No. 6C

NATIONAL TRANSPORTATION SAFETY BOARD

Washington, D.C.

Patient Transport Request
Mayo Clinic Triage Guideline for Hospital-to-Hospital Transfers

(8 Pages)

K.B. 90

Triage Guideline for Hospital-to-Hospital Transfers

Effective Date:

Revised: September 14, 2006

Posted: February 22, 2008

Purpose:

- To provide triage criteria and procedures that will ensure the mode of transport and level of care capability will match the needs of the patient, licensing regulations, and resource availability on hospital-to-hospital transfers.
- This policy will assist the ECC call-taker working with the requesting hospital or physician in determining the appropriate level of care and transport mode.

Procedure:

1. For every request to perform a hospital-to-hospital transfer, obtain from the calling facility adequate information to apply the triage criteria below.
2. Provide the requesting agency specific information and feedback about the appropriate mode of transport and level of care needed for this patient based on the triage criteria. Do not automatically accept and subsequently dispatch the requesting agency's determination of need. Recognize that the caller may not understand the different capabilities for each level of care.
3. Whenever necessary, the call-taker should engage and assist the referring (sending) physician if these triage criteria determine a level of response different from that requested.
 - If the receiving physician is available in lieu of the referring physician, inform them of the difference and involve them in the decision process.
4. If differences between the requested level of care or mode of transport and these decision criteria cannot be resolved, engage an MCMT Medical Control physician to resolve the difference.
5. The treatment capability of the crew dispatched should not be less than the known or anticipated treatment needs of the patient.
6. Prior to dispatch, or before the crew goes en route, inform the site's operational leadership, or assigned crew, regarding areas of concern and of any special or unusual patient care needs.
7. Decisions to provide a hospital-to-hospital transfer should not compromise the availability of resources to provide local 911/EMS coverage in the communities we serve.
8. If the level of care or transportation mode determined by this guideline is not available in the requested time frame, attempt to arrange for the transfer using one or more of the following options:
 - A. Estimate when MCMT would be available to provide the service and determine with the requestor if that delay is acceptable.
 - B. Assist the requestor with finding an alternative service provider.
9. Transport may be delayed for any patient until the appropriate level of care is available.

10. If a written transfer agreement exists for either of the hospitals or requesting agencies involved, attempt to provide services in accordance with that agreement if doing so does not place the patient at risk.

BASIC LIFE SUPPORT

Description of the patient's condition and care needs must meet the following criteria:

1. No expected deterioration in patient's condition during transfer
2. Transport is to the same or to a lower level of care (not higher)
3. No urgency to medical condition and no red lights and siren use will be necessary
4. Vital signs have been stable for the past 24 hours
5. Treatments to continue between facilities may include:
 - Basic oxygen administration via a patent airway
 - Oral, nasal, or stoma suctioning
 - I.V. fluids initiated at the hospital at maintenance rates of 125 ml/hr or less
 - Maintenance of bladder and bowel collection systems
 - Maintenance of orthopedic stabilization devices
 - Patient supplied and operated ventilators if patients is long term ventilator dependent
 - OTC medications or MD Rx that the patient supplies and self-administers
 - Other. Call taker should identify and communicate to the transport team any unusual patient needs identified before the crew goes en route.

Treatments not allowed at this level: (Triage as ALS or Critical Care level)

1. IVs that contain medication or blood products administration
2. Medication administration by any route where transport the crew needs to supply
3. ECG, EtCO₂, or any forms of invasive monitoring
4. BP and pulse being supported by medication drips or rapid IV fluid administration

ADVANCED LIFE SUPPORT (ALS)

Description of the patient's condition and care needs must meet the following criteria:

1. No expected deterioration in patient's current condition during transfer
2. Vital signs are stable and in normal ranges for the past 8 hours of hospitalization
3. Treatments to continue between facilities or that need to be available may include:
 - Initiating advanced airways including any intubation and tracheal suction
 - ECG monitoring, or acquiring 12-leads (12-lead availability varies by ALS site)
 - Initiating I.V. fluid infusion, required adjustments, or active monitoring of IVs already running
 - I.V. drip medications running if included in ALS authorized list, but no more than 3 total drips (See: ALS Medication List)
 - I.V. drips of antibiotics and cancer agents initiated at the sending hospital
 - Blood and blood component administration when supplied by the sending hospital
 - Continuation of tube feedings
 - Administration of medications normally carried and authorized for ALS personnel (See: ALS Medication List)
 - Completing the administration of thrombolytics initiated at the sending hospital
 - Cardiac problems that are designated "fast track" or STEMI where ALS transport is allowed by the pre-arranged program in effect

ALS Transports Requiring 2nd Patient Attendant:

The 2nd attendant may be an additional EMT, Paramedic, Respiratory Therapist, RN or MD.

1. Patient is intubated and breathing supported or required by ventilator or other method of positive pressure ventilation (i.e. BVM, CPAP, BiPAP)
 - ALS ventilator is limited to basic settings of rate and volume. Complicated ventilator settings require hospital ventilator equipment with their technician, or use a Critical Care level.
 - Consider Critical Care level if patient is chemically paralyzed and the transfer is > 20 miles
 - If patient is long term (chronic) ventilator dependant and this is a scheduled transfer for routine care, ALS level with 1 attendant may be used.
2. Requests to intercept with an ambulance from the sending hospital where the need for a second patient attendant is anticipated or requested to manage the care needs of a complicated patient.
 - Examples: combativeness, bariatric, multiple patients, new major/multiple trauma, impending childbirth, or when the appropriate triage level of CC was absolutely not available.

CRITICAL CARE

Any patient whose condition, monitoring or treatment needs are such that the following special care or interventions are in use or are likely to be needed during transfer:

- Invasive monitoring or central lines - CVP, ICP, arterial lines and sheaths, IVP, Swan-Ganz
- Single or multiple vasoactive, antiarrhythmic, and/or anticoagulation medications that may need close monitoring and/or titration en route (See medication and IV drip Triage Tool)
- ATLS procedures are potentially needed. (list ?)
- Intra-aortic balloon pump (Requires trained IABP attendant)
- 4 or more I.V. drip medications (See medication and IV drip Triage Tool)
- Temporary cardiac pacing is in use on patient (transcutaneous, transvenous, or epicardial)
- Frequent AICD firings or malfunctioning -
- Chest tube drainage system or blood auto-transfusion
- Blood or blood product administration when they need to be supplied by transport crew
- Ventilator patients (non-chronic), especially those with need for sedation, paralytics, or specialized / complicated ventilator functions and settings
- High-risk pediatric or obstetric transfers that do not require a specialty team

Call Taker Keys Always consider Critical Care level when any of the following circumstances present:

1. Request follows an air medical turn-down, especially if weight and weather related.
2. Pt. is intubated, on ventilator, or needing PPV support, especially if sedated / paralyzed.
3. Unstable cardiac conditions such as recent post-cardiac arrest or dysrhythmias.
4. Hypotensive or “shocky” states.
5. Hospital wanting to immediately transfer patient ‘stat’ and with RL&S.
6. VS in normal range only when supported by IV drip medications or other critical interventions.
7. Any patient who is being transferred from critical care to another critical care unit or for an emergency intervention.

SPECIAL CARE SITUATIONS

Determine if the patient meets any special conditions or situations and will need any of the following specialty care while en route:

- Obstetrical** Patients for whom delivery is imminent should generally be delivered prior to transfer, even in the case of high-risk pregnancy. Reference and use OB transfer policies.
- Neonatal** Patients newly born, or who are soon to be born, and are being transferred to a neonatal care unit. Includes any infants who will need transport in an isolette or who require en route care of a neonatal specialty RN, RT, or MD.
- Pediatric** Consider utilization of a hospital supplied pediatric specialty team for patients triaged at a Critical Care level if between the age of one month and 13 years. For Mayo One/ Mayo Med Air response sites, see Specialty Team Selection policy to determine if Pediatric Team should be utilized.
- Specialized Devices** Patient is receiving treatment with specialized devices such as IABP (intra-aortic balloon pump), LVAD (left ventricular assist devices), or internal temporary cardiac pacing.

- ❑ **Bariatric Patient** If the patient's weight exceeds 350 pounds (160 kg), inform and involve the site leadership in determining if special bariatric vehicles and equipment or additional personnel will be utilized. Rotor wing is usually not available for patients who exceed 350 pounds.
- ❑ **Chronic Conditions/Routine Care** Patients with serious but chronic medical conditions, who are being transferred for routine care, may be assigned a BLS or ALS level if no critical care equipment or interventions are needed en route and the patient has been vitally stable. Examples: DNR or palliative care status, para/quardriplegic, ventilator dependant.
- ❑ **Organ Transplant** For non-hospitalized patients being transported to potentially receive an organ transplant, an ALS level of care may be used instead of Critical Care.

Mode of Transport Criteria

Ground

Ground transport can be configured for any level of care and should be utilized when ever:

1. The patient's condition and treatment needs are such that they will not be jeopardized by any additional time required for ground transport.
2. A specific condition precludes the use of rotor wing. (e.g. Patient weight, haz-mat contamination)
3. The out of hospital time and distance involved in the transfer are such that no time savings are needed or will be realized by using an air medical mode.
4. Air medical is indicated but not available within the needed time frame.
5. The transfer is to a lower level of care or the time to destination is not crucial.

Ground Intercept

Dispatch of a ground ambulance to intercept with an ambulance en route from the sending facility may be utilized when:

1. Time is crucial to patient outcome and the intercept crew can provide the needed level of care.
2. Critical care is needed and air transport is not available or would not result in time savings.
3. The original ambulance has a vehicle or equipment malfunction.
4. The patient's condition changes to where the patient care needs cannot be met by the original transporting crew.

Rotor Wing

Utilize when patient's out-of-hospital time needs to be minimized and rotor wing transport will potentially reduce the time to crucial interventions en route or at the destination. Rotor wing is primarily used for critical care but may be utilized when ALS is not available in the needed time frame.

Rotor Wing Intercept

Rotor wing intercept of a ground ambulance en route from the sending facility may be utilized when air intercept will significantly reduce the time to providing immediately needed, life-saving interventions.

Fixed Wing

Fixed wing is primarily used for distances beyond the range of rotor wing or when weather precludes rotor wing or ground transport. Consider fixed wing for all scheduled long distance transfers.

Crew Level Configurations

Basic Life Support - BLS

- Staffing is generally two EMT-Bs.
- In some situations, an RN or MD can substitute for an EMT-B as the patient attendant.

Advanced Life Support – ALS

- Minnesota and Wisconsin licensing require a minimum of one paramedic to attend the patient and one EMT-B as driver.
- For the ALS level in Wisconsin, an RN or MD who is trained and authorized for ground ambulance transport may substitute for the paramedic attendant.
- The addition of a specialty technician, who is not a transport critical care RN, does not change the ALS crew to a Critical Care level. Technicians include RTs, IABP technicians, etc.

Critical Care - CC (MMT Guidelines)

- Requires two patient attendants with a minimum of one Critical Care Transport RN.
- The 2nd attendant can be Critical Care Paramedic, a second Critical Care Transport RN, or an Emergency Medicine (EM) resident trained in flight.
- Additional MMT staffing in the RW or FW environment, such as MD, CRNA, RT or other special procedure technicians, must be authorized by the Transportation Nurse Manager, Team Lead, or Director of Air Operations. A respiratory therapist may be used in the FW according to policy.

Mayo Clinic Medical Transport
Triage Tool: Hospital-to-Hospital Transfers
 Version: May 28, 2007

Objective: Determine the appropriate level of care (licensing) and the type and number of attending crew required for patient care during hospital-to-hospital transfers.

Instructions:

1. Check all care needs and conditions that apply.
2. Whenever a CC care level is circled, this becomes the 1st level of crew choice.
3. If no CC or ST items identified, determine if ALS level of care is appropriate.
4. If no CC, ST, or ALS items are identified, BLS should be considered the appropriate level.

Treatment or Conditions to Identify	Care Level	Special Consideration
A. Overall Condition - Check Only One		
1. VS normal and condition <u>stable</u> for the past 24 hours	All	
2. Within the past 24 hours: <ul style="list-style-type: none"> • VS unstable or condition required critical intervention • Condition has deteriorated or may decline during transfer 	ALS	
	CC	
3. Pt. is DNR status <u>and</u> designated to only receive supportive/palliative care, regardless of VS or condition.	BLS	
	ALS	

B. Routine Care En Route - Check all that apply		
Basic O2 administration / pt. has no airway concerns	All	
Oral, nasal, or neck stoma suctioning (excludes intubated pt.)	All	
I.V. fluids at maintenance rates of 125 ml/hr or less	All	
Maintenance of bladder and bowel collection systems	All	
Maintenance of orthopedic stabilization devices	All	
OTC meds or Rx that patient supplies & self administers	All	
Other:		
Other:		

C. Blood and Blood Component Administration - Check Only if Applicable		
1. Supplied or already started by sending facility.	ALS	Both ALS and CC can initiate or hang additional units en route.
	CC	
2. Blood needs to be brought/provided by transfer crew	CC	Not carried by ALS level

D. Monitoring and Interventions En Route - Check All That Apply			
ECG monitoring or 12-lead acquisition	ALS	12-lead availability varies by site – see resources list.	
	CC	All MCMT air medical have 12-lead	
Frequent AICD firings or malfunctions possible en route -	CC	ALS OK if device turned off.	
Cardiac Pacing - Temporary device needed or in use: transcutaneous, transvenous, or epicardial	ALS	ALS allowed only if short (<20 mi.) distance/duration and using our transcutaneous pads.	
	CC		
Cardiac problems that are designated “fast track” or STEMI or suspected active AMI	ALS	Only if CC not available in needed time-frame.	
	CC	CC preferred if available	
Intra-aortic balloon pump (IABP)	CC	Flight RNs are IABP technicians	
Invasive monitoring or central lines - CVP, ICP, arterial lines and sheaths, IVP, Swan-Ganz, i-Stat blood gas analysis	CC	Flight RNs can insert central lines	
Chest tube drainage running or blood auto-transfusion	CC		
Incubator / Isolette (high-risk newborns)	CC/ST	Use NICU Specialty Teams	
Labor contraction & Fetal Heart Tone monitoring (high-risk OB)	CC	Air medical has FHT & contraction monitors	
LVAD with complications, problem, or failure	CC		
Other:			

E. IV Drip Medications - Check All That Apply				
ALS authorization limited to list below. CC can administer any other drips not listed.		Carried vs. Hospital Supplied	Care Level	
Lidocaine	Carried by ALS and CC	<p>ALS No more than 3 of the drip medications listed</p> <p>CC 4 or more listed drips are needed</p> <p><i>Note: If a medication drip is not listed, contact CC medical crew to assist with level of care decision.</i></p>		
Nitroglycerine	Carried by ALS and CC			
Magnesium Sulfate	Carried by ALS and CC			
Dopamine (Intropin)	Carried by ALS and CC			
Heparin	Hosp. must supply ALS			
Procainamide (Pronestyl)	Hosp. must supply ALS			
Integrilin (eptifibatide)	Hosp. must supply ALS			
Cardizem (diltiazem)	Hosp. must supply both ALS & CC			
Amiodarone (cordarone)	Hosp. must supply ALS			
Potassium Chloride (KCl)	Hosp. must supply ALS			
Mannitol (Osmitrol)	Hosp. must supply ALS			
Morphine sulfate or PCA pump	Hosp. must supply both ALS & CC			
Antibiotic	Hosp. must supply both ALS & CC			
Cancer Chemo-therapy	Hosp. must supply both ALS & CC	<p>CC or ALS <i>May require local Level 1 Cardiac or STEMI program.</i></p>		
Thrombolytics admin. en route: TNKase, Retaplast, tPA, Activase	Hosp. must supply both ALS & CC			

F. Ventilation and Advanced Airway - Determine All That Apply *

	Advanced Airway (initiating or maintaining)	* Generally, patients being transferred from or to critical care settings, or requiring sedation, paralytics, or complicated vent. settings will require CC level transport. Exceptions are noted below.	
	Endotracheal tube - ETT (oral or nasal)	ALS/CC	
	LMA (laryngeal-mask airway)	CC	
	Combitube	ALS/CC	
	Tracheostomy (neck access or surgical airway)	CC	
	Paralytic or Sedation Needed for Airway (or RSI) List agents:	ALS/CC	
	Ventilator – Acute setting / Non-chronic Requires 2 attendants en route for most transfers – if ALS used, add 2 nd attendant (RT, RN, MD or another paramedic.)	ALS	ALS w 1 attendant allowed at some sites for short duration/distance transfers only.
		CC	Complicated ventilator settings and functions only available on CC / air medical ventilators.
	Ventilator - Chronic ventilator dependant / non-critical setting / basic settings	ALS	If ventilator supplied and operated by hospital or patient - can usually use ALS level.
	CPAP (Constant Positive Airway Pressure) Non-ventilator, mask type	ALS	ALS provides non-ventilator “mask CPAP” only.
	BiPAP (Biphasic Positive Airway Pressure) or CPAP via ventilator	CC	ALS CPAP can be used instead of BiPAP for short distance/duration transfers. ALS can provide “mask CPAP” only – not BiPAP or CPAP for intubated pts.