

Michigan
System Protocols
INTER-FACILITY PATIENT TRANSFERS
CRITICAL CARE PATIENT TRANSPORTS (OPTIONAL)

Date: September 2004

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Inter-facility Patient Transfers

Purpose: The purpose of this policy is to establish a uniform procedure for inter-facility transfers.

1. Responsibility:
 - a. Patient transfer is a physician-to-physician referral. The transferring physician is responsible for securing the acceptance of the patient by an appropriate physician at the receiving facility prior to the transportation. The name of the accepting physician must be included with the transfer orders.
 - b. It is the responsibility of the transferring facility to:
 - i. Perform a screening examination
 - ii. Determine if transfer to another facility is in the patients best interest
 - iii. Initiate appropriate stabilization measures prior to transfer.
 - c. During transport, the transferring physician is responsible for patient care until arrival of the patient at the receiving facility.
 - d. If unanticipated events occur during patient transport, and contact with the transferring physician is not possible, then on-line Medical Control will serve as a safety net.
 - e. It is the transferring physician's responsibility to know and understand the training and capabilities of the transporting EMS personnel.
2. Transportation
 - a. Pre-transport
 - i. Care initiated by the transferring facility may need to be continued during transport. The transferring physician will determine the method and level of transport and any additional treatment(s), if any, that will be provided during the course of transport.
 - ii. Orders for treatment, including medications for ALS transfers, or other orders shall be provided in writing to the EMS personnel prior to initiation of the transport by the transferring Physician.
 - iii. For ALS transfers, ordered medications not contained within the EMS System Medication Box/Bag must be supplied by the transferring hospital.
 - iv. EMS personnel must be trained in all the equipment being used in the patient's care or appropriately trained staff must accompany the patient.
 - v. Should the patient require care and/or equipment above and beyond the normal scope of practice and training of the EMS personnel, the transferring facility shall provide appropriate staff or consider other appropriate means of medical transportation.
 - vi. The paramedic has the right to decline transport if he/she is convinced patient care is outside their scope of practice and training or, alternatively, to insist a hospital staff member accompany them on the transfer.

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- vii. If additional staff accompanies the patient, the transferring physician is responsible for ensuring their qualifications. This staff will render care to the patient under the orders of the transferring physician. It will be the responsibility of the transferring facility to provide arrangements for the return of staff, equipment, and medications.
 - viii. The following information should accompany the patient (but not delay the transfer in acute situations):
 - 1. Copies of pertinent hospital records
 - 2. Written orders during transport
 - 3. Any other pertinent information including appropriate transfer documents.
- b. During Transport
- i. If applicable, hospital supplied medications not used during transport must be returned to the originating facility or appropriately wasted and documented in compliance with FDA guidelines at the receiving facility.
 - ii. If applicable, the concentration and administration rates of all medications being administered will be documented on the patient care record.
 - iii. Interventions performed en-route, and who performed them, will be documented on the patient care record.
 - iv. In the event that a patient's condition warrants intervention beyond the written Physician orders provided by the transferring Physician, the EMS personnel will contact the transferring Physician. If that is not possible, the EMS personnel will follow local Medical Control Protocols and initiate contact with the on-line Medical Control Physician from either the sending or receiving facility or, if not able to contact those facilities, the closest appropriate on-line Medical Control facility.

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Critical Care Patient Inter-Facility Transport (OPTIONAL) Additional Requirements

Purpose: To provide hospital facilities, physicians, and medical transport personnel with guidelines to facilitate inter-facility transportation of critically sick and injured patients within Advanced Life Support vehicles.

1. Vehicle and Staffing Policy
 - a. MDCIS Vehicle License. All vehicles conducting Critical Care Inter-Facility Patient Transports must be licensed as transporting Advanced Life Support (ALS) vehicles.
 - b. Equipment. The following is the minimum equipment that will be carried by an ALS vehicle while it is providing Critical Care Inter-Facility Patient Transport, in addition to the equipment required by Part 209, P.A. 368 of 1978, as amended, and local medical control authority protocols:
 - i. Pulse Oximeter
 - ii. Portable Ventilator or staff capable of providing ventilatory support
 - iii. Portable Infusion Pump(s)
 - iv. Pressure infusion bag(s)
 - c. Staffing
 - i. All ALS vehicles that conduct Critical Care Inter-Facility Patient Transports will be staffed in accordance with local medical control requirements with at least one (1) paramedic trained in the Critical Care Inter-Facility Patient Transport curriculum. The trained paramedic must be in the patient compartment while transporting the patient.
 - ii. The above requirement for staffing does not apply to the transportation of a patient by an ambulance if the patient is accompanied in the patient compartment of the ambulance by an appropriate licensed health professional designated by a physician and after a physician-patient relationship has been established as prescribed...(PA 368, Section 20921(5)).
2. Critical Care Inter-Facility Patient Transport Physician Director/Quality Improvement
 - a. Ambulance services that utilize this protocol must designate a Critical Care Inter-Facility Patient Transport Physician Director.
 - b. The Critical Care Inter-Facility Patient Transport Physician Director will be responsible for:
 - i. Oversight of a quality improvement program for Critical Care Inter-Facility Patient Transports
 - ii. Oversight of the training curriculum for EMS personnel trained under this protocol.
3. Critical Care Inter-Facility Patient Transport Curriculum

**CRITICAL CARE PATIENT INTER-FACILITY TRANSPORT
CURRICULUM**

COURSE OUTLINE

1. Ventilator patient concerns (4 hours total)
 - a. Types of ventilators
 - b. IPPB, SIMV, PEEP, CPAP
 - c. Use of transport ventilators
 - d. Complications
 - e. Use of Pulse Oximeter/Capnography

2. Chest Tubes and Pleurovac (1 hour)
 - a. Principles of pleural cavity evacuation
 - b. Maintaining chest tubes
 - c. Review various systems
 - d. Pleurovac Practical Lab

3. Maintenance of invasive lines (2 hours)
 - a. Types of hemodynamic monitoring
 - i. Various equipment
 - ii. Insertion sites
 - iii. Maintaining infusions
 - iv. Complications

4. Equipment Training Videos (1 hour)
 - a. IV Pumps
 - b. Ventilator
 - c. 12 Lead Monitoring

5. Thrombolytics (1 hour)
 - a. Indications, contraindications, adverse effects, and administration
 - i. Streptokinase
 - ii. tPa
 - iii. Retavase
 - iv. TNKase
 - v. Heparin
 - vi. Lovenox

6. Interpreting blood gases (1 hour)
 - a. The use of ABGs in ventilator managements

7. Blood products (1 hour)
 - a. Whole blood/Packed RBCs/Plasma

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8. Cardiac Enzymes (1 hour)
 - a. Cardiac physiology and the meaning of enzyme abnormalities

 9. Vasoactive drugs (2 hours)
 - a. Indications, contraindications, adverse effects, and administration
 - i. Dopamine
 - ii. Epinephrine
 - iii. Dobutamine
 - iv. Levophed
 - v. Amrinone/Milrinone
 - vi. Nitroglycerin
 - vii. Nitroprusside
 - viii. Esmolol
 - ix. Labetolol

 10. Critical Care Patient Transport Protocol Review (1 hour)
 - a. Protocol review and miscellaneous drugs
 - i. Indications, contraindications, adverse effects, and administration
 1. Aminophylline
 2. Mannitol
 3. Phenytoin
 4. Insulin
 5. Propofol
 6. Oxytocin and related drugs

 11. Paralytics (1 hour)
 - a. Indications, contraindications, adverse effects, and administration
 - i. Non-depolarizing neuromuscular blockers
 - ii. Sedatives during paralytic maintenance
 - iii. RSI indications during critical care patient transport
 - b. Administer with Medical Control

 12. Practical Lab (1 hour)
 - a. IV Pumps
 - i. Various tubing
 - ii. Maintaining a drip while changing to the pump
 - b. Ventilator
 - c. 12 Lead
 - d. CO2 detector

 13. Cardiac Physiology/12-Lead ECG (4 hours)
 - a. Cardiac physiology and cardiac drug review
 - i. Indications, contraindications, adverse effects, and administration
 1. Lidocaine/Procainamide
 2. Potassium

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3. Morphine
 4. Cardizem
 5. Amiodarone
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14. 12-Lead AMI Recognition (2 hours)
 15. High Risk Pregnancy (1 hour)
 - a. Indications, contraindications, adverse effects, and administration
 - i. Magnesium Sulfate
 - ii. Pitocin
 16. Antibiotics (1 hour)
 17. Pediatrics (4 hours)
 - a. Pediatric Airway and Ventilation management including Ventilator Dynamics and Chest Tube Monitoring and pneumothorax recognition and treatment (1 hour)
 - b. Pediatric fluid requirements including maintenance and bolus therapies (1 hour)
 - c. Pain management (1 hour)
 - d. Case studies, trauma specific (1 hour)
 18. Critical Care Patient Transport Charting (1 hour)
 19. Critical Care Patient Transport Call: Start to Finish (1 hour)
 - a. General considerations
 - b. Staffing and quality management considerations
 - c. When to refuse a call
 20. Critical Care Patient Transport Case Presentations (1 hour)
 21. Daily Quizzes
 - a. Ventilators, chest tubes, invasive lines
 - b. Thrombolytics, ABGs, blood, enzymes, pressors, paralytics
 22. Written and Practical Exam (4 hours)