

Transportation Protocol

Purpose: To define the decision-making process to be followed by EMS personnel in order to ensure patients are transported to a facility appropriate for their condition.

I. Transportation Procedure

A. Priority 3 patients (medical or trauma): Shall be transported to an appropriate Oakland County Emergency Facility of the patient's or patient's family choice, or closest if no preference (See Appendix 1).

- Patient Priority is defined in the **Patient Prioritization Policy 6-20** for criteria.

B. Priority 1 and 2 (medical) Patients: shall be transported to the closest appropriate Oakland County Emergency Facility, unless one of the following conditions exist:

1. ST Elevation Myocardial Infarction (STEMI) - Acute

Patients with presumed acute myocardial infarction shall be transported to an interventional cardiac facility (see Appendix 2). Notify receiving hospital, as soon as possible, of impending arrival of a "STEMI ALERT" patient and give ETA.

- See **Chest Pain/Acute Coronary Syndrome Protocol 2-5** for STEMI criteria.

2. Return of Spontaneous Circulation (ROSC)

Patients with ROSC, in most circumstances will be transported to an interventional cardiac facility (see Appendix 2). Notify receiving hospital, as soon as possible, of impending arrival of the patient and give ETA.

- See **Cardiac Arrest – Return of Spontaneous Circulation (ROSC) Protocol 2-4** for criteria.

3. Burns

After receiving approval from the medical control hospital, transport to the closest appropriate facility (see Appendix 3). Notify destination hospital as soon as possible of impending arrival of the patient and give ETA.

- See **Burns Protocol 1-5** for criteria.

4. Stroke

If Cincinnati Stroke Scale is abnormal, notify receiving hospital as soon as possible of impending arrival of a "STROKE ALERT" patient, with the time the patient was "last seen normal" and give ETA. Transport to closest appropriate stroke facility (see Appendix 4).

- See **CVA Protocol 1-6** for criteria.

5. Obstetrical

Pregnancy greater than 20 weeks, transport to an OB facility (see Appendix 5).

Notify receiving hospital, as soon as possible, of impending arrival of the patient and give ETA.

- See **Obstetrical Emergencies Protocol 1-12** for criteria.

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6. Pediatrics (medical)

Transport after receiving approval from the closest appropriate facility (see Appendix 1). Notify hospital as soon as possible of impending arrival of the patient and give ETA.

- See associated pediatric protocols for criteria.

C. Priority 1 and 2 (trauma) Patients: Patients meeting any of the trauma criteria in Appendix 6, but not in cardiac arrest, should be transported to a trauma center (see Appendix 6).

- Pediatric trauma patients should be transported to a Pediatric Trauma Center (age ≤ 14 yrs.) (see Appendix 6).
- OB trauma patients must be transported to a trauma center with OB capabilities (see Appendix 6).

Note: Requests for transport to hospitals outside of the Oakland County Medical Control Authority may be honored, if medically appropriate, utilizing online medical control.

II. ALS Intercept Procedure

When a transporting BLS Agency responds to an EMS request and subsequently initiated patient transport to a receiving Hospital, and an ALS Agency has been simultaneously dispatched to the same EMS request, ALS intercept will only occur:

1. When ALS intercept would probably result in an improved patient care outcome.
2. With Medical Control approval.
3. When requested by the transporting BLS Agency.

III. Inter-County EMS Response and Transporting Procedure

In the pre-hospital setting, emergency medical services situations occurring in proximity to a county line are the responsibility of the Medical Control Authority in which the situation occurred. As such, the responding EMS unit will operate under their home MCA protocols.

Appendix 1

Approved Emergency Facilities

The following approved emergency facilities are defined as **appropriate** by the Oakland County Medical Control Authority. Note: Unstable patients are not appropriate for freestanding surgical outpatient facilities or provider-based emergency departments (ED) unless, in the opinion of the EMS personnel or on-line medical control physician, transporting the patient to a further facility could have an adverse effect on the patient's outcome. Priority one patients are not appropriate for freestanding surgical outpatient facilities or provider-based emergency departments (ED). Unstable priority two patients are not appropriate for freestanding surgical outpatient facilities or provider-based emergency departments (ED) unless, in the opinion of the on-line medical control physician, transporting the patient to a further facility could have an adverse effect on the patient's outcome.

- Beaumont – Farmington Hills
- Beaumont – Royal Oak
- Beaumont – Troy
- Children's Hospital-Troy (Freestanding Surgical Outpatient Facility for pediatric patients, only)
- Crittenton Hospital Medical Center
- Genesys Regional Medical Center
- Henry Ford – West Bloomfield
- Huron Valley – Sinai Hospital
- McLaren – Clarkston (provider-based ED)
- McLaren – Oakland Hospital
- Providence – Providence Park Hospital, Novi
- Providence – Providence Park Hospital, Southfield
- St. John Macomb – Oakland Hospital – Oakland Campus
- St. Joseph Mercy Oakland Hospital
- St. Mary Mercy Livonia Hospital

Appendix 2

Approved Interventional Cardiac Facilities

The following approved emergency facilities are defined as **appropriate** by the Oakland County Medical Control Authority for interventional cardiac patients. Receiving hospital may elect to activate the cath lab without transmission of 12 Lead EKG.

Interventional Cardiac Centers (ICC): Hospitals with 24/7 interventional cardiac catheterization labs.

1. Oakland County ICC
 - Beaumont – Farmington Hills
 - Beaumont – Royal Oak
 - Beaumont – Troy
 - Crittenton Hospital Medical Center
 - Genesys Regional Medical Center
 - Henry Ford – West Bloomfield
 - Huron Valley – Sinai Hospital
 - Providence – Providence Park Hospital, Novi
 - Providence – Providence Park Hospital, Southfield
 - St. Joseph Mercy – Oakland
 - St. Mary Mercy Livonia Hospital

Appendix 3

Approved Burn Centers

The following approved emergency facilities are defined as **appropriate** by the Oakland County Medical Control Authority for burn patients meeting the criteria and with medical control.

Out-of-County

Adult Burn Centers

- DMC Detroit Receiving Hospital
- University of Michigan – Ann Arbor
- Hurley Medical Center

Pediatric Burn Center

- Children’s Hospital of Detroit

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Appendix 4

Approved Stroke Facilities

The following approved emergency facilities are defined as **appropriate** by the Oakland County Medical Control Authority for stroke patients meeting the criteria and with medical control.

- Beaumont – Farmington Hills
- Beaumont – Royal Oak
- Beaumont – Troy
- Crittenton Hospital Medical Center
- Genesys Regional Medical Center
- Henry Ford – West Bloomfield
- Huron Valley – Sinai Hospital
- McLaren – Oakland
- Providence – Providence Park Hospital, Novi
- Providence – Providence Park Hospital, Southfield
- St. John Macomb – Oakland Hospital – Oakland Campus
- St. Joseph Mercy Oakland Hospital
- St. Mary Mercy Livonia Hospital

Appendix 5

Approved OB Facilities

The following approved emergency facilities are defined as **appropriate** by the Oakland County Medical Control Authority for non-traumatic **Obstetrical** patients meeting the criteria and with medical control.

- Beaumont – Farmington Hills
- Beaumont – Royal Oak
- Beaumont – Troy
- Crittenton Hospital Medical Center
- Genesys Regional Medical Center
- Henry Ford West Bloomfield
- Huron Valley – Sinai Hospital
- Providence – Providence Park Hospital – Novi
- Providence – Providence Park Hospital – Southfield
- St. Joseph Mercy Oakland Hospital
- St. Mary Mercy Livonia Hospital

Appendix 6

I. Trauma Criteria

Criteria for Transport to Level 1 and 2 Trauma Centers Only:

Vital Signs

- Glasgow coma scale ≤ 13
- Systolic blood pressure < 90 mmHg
- Respiratory rate < 10 or > 29 breaths per minute: Infant < 20 ; aged < 1 year, or need for ventilatory support

Anatomy of Injury

- All penetrating injuries to head, neck, torso and extremities proximal to elbow or knee
- Chest wall instability or deformity (e.g., flail chest)
- Two or more proximal long bone fractures
- Crushed, degloved or mangled, or pulseless extremity
- Amputation proximal to wrist or ankle
- Pelvic fractures
- Open or depressed skull fractures
- Paralysis

Criteria for Transport to a Level 1, 2 or 3 Trauma Center

Mechanism of Injury

- Falls
 - Adults >20 feet (one story is equal to 10 feet)
 - Children >10 feet or two to three times the height of the child
- High-risk auto crash
 - Intrusion, including roof: >12 inches occupant site; >18 inches on any site
 - Ejection (partial or complete) from the automobile
 - Death in the same passenger compartment
 - Vehicle telemetry data consistent with a high risk of injury
- Auto vs. pedestrian/bicyclist thrown, run over, or with significant (>20 mph) impact
- Motorcycle crash >20 mph

Special Considerations

- Older adults:
 - Risk of injury/death increases after 55 years
 - SBP <110 might represent shock after age 65 years
 - Low impact mechanisms (e.g. ground level falls) might result in severe injury.
- Children:
 - Should be triaged preferentially to pediatric-capable trauma centers
- Anti-coagulation and bleeding disorders
 - Patients with head injury are at high risk for rapid deterioration

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- Burns
 - Without other trauma mechanism: triage to a burn facility
 - With trauma mechanism: triage to a trauma center
- Pregnancy >20 weeks (with OB/Neonatal Capabilities)
- EMS provider judgment

Note: The patient will be transported to the closest appropriate Trauma/Specialty Centers. EMS personnel, taking into account distance, weather, construction or time of day will determine destination.

II. Approved Trauma Facilities

The following approved emergency facilities are defined as **appropriate** by the Oakland County Medical Control Authority for trauma patients.

Trauma Centers (A hospital verified ACS 1 or 2)

1. Oakland County Trauma Center
 - Beaumont – Farmington Hills
 - Beaumont – Royal Oak
 - Beaumont – Troy
 - Genesys Regional Medical Center
 - McLaren – Oakland
 - Providence—Providence Park Hospital, Novi (Provisional Level 2)
 - Providence – Providence Park Hospital, Southfield
 - St. Joseph Mercy Oakland
 - St. Mary Mercy Livonia Hospital

Trauma Centers (A hospital verified ACS 3)

- Crittenton Hospital Medical Center
- Henry Ford-West Bloomfield

Pediatric Trauma Center

1. Oakland County Trauma Center
 - Beaumont – Royal Oak
2. Out-of-County Trauma Centers
 - Hurley Hospital – Flint
 - Children’s Hospital – Detroit
 - St. John Hospital and Medical Center - Detroit
 - University of Michigan – Ann Arbor

Trauma Center with Neonatal capability

1. Oakland County Trauma Center
 - Beaumont – Royal Oak
2. Out-of-County Trauma Centers
 - Hurley Hospital – Flint
 - Children’s Hospital – Detroit
 - St. Joseph – Ann Arbor
 - University of Michigan – Ann Arbor