Multnomah County and AMR
Clackamas County, Oregon

Emergency Medical Services

Patient Treatment Protocols

Effective: February 1, 2008

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PREFACE

Abbreviations, Symbols and Special Notes

Stars (*)

The protocols identify levels of care based on certification levels.

No star	All levels of out-of-hospital providers are able to provide this level of care, First Responder through EMT-P
One Star *	EMT-B through EMT-P are able to provide this level of care
Two Stars **	EMT-I through EMT-P are able to provide this level of care
Three stars ***	EMT-P is able to provide this level of care

Brackets [***]

A. If not preceded by any stars, provide care at the level of certification.

[***] Be prepared to support ventilation and oxygenation through BVM or ET intubation and manual ventilation.

B. If preceded by any star, the minimum level of certification is identified, and care by a higher level of certification is indicated.

*[**] ***Apply AED*** **[or cardiac monitor],** ***if available, and use the following*** guidelines.

C. The use of brackets may also be used to indicate limitation of a particular level of certification.

***[**] If IV is immediately established, administer atropine **[0.5 mg]** to1.0 mg IV and repeat every 3 to 5 minutes (to a maximum of. . .

Special Notes

EMT Intermediates must complete one of the following to administer medications in list 1:

1. Complete the bridge class approved by the Oregon Department of Human Services EMS or
2. Complete the full EMT Intermediate course which included the medications on list 1 and become certified with the State of Oregon as an EMT Intermediate.

Advance Directives and Do Not Attempt Resuscitation Orders

Purpose:

This EMS system believes in respect for patient autonomy. The patient with decision-making capacity has the right to accept or refuse medical intervention. This includes the right to specify, in advance, patient preferences when the person is no longer able to communicate wishes.

Procedure:

The EMS system shall honor POLST forms, Advance Directives and other Do Not Attempt Resuscitation (DNAR) orders that the EMT sees in writing under the following circumstances:

A. Do Not Attempt Resuscitation: In the pulseless and apneic patient who does not meet the criteria of the ***Death in the Field*** protocol, but is suspected to be a candidate for withholding resuscitation, BLS protocols will be followed until one of the following occurs:

1. The EMT sees a written DNAR, which should be honored, and resuscitation stopped.
2. The patient's physician is contacted and directs the EMTs not to continue resuscitation attempts.
3. The EMTs see a valid Advance Directive or Directive to Physician which directs them not to continue resuscitation.
4. The patient's attorney-in-fact (PAHC or DPAHC) directs the EMTs not to resuscitate the patient.
5. OLMC directs the EMTs not to continue resuscitation.
6. If a person, who is terminally ill, appears to have ingested medication under the provisions of the Oregon Death with Dignity Act (see section F below).

B. Advance Directives: DNAR orders only apply if the patient is in cardiopulmonary arrest. If the patient's PAHC, DPAHC, Directive to Physicians, or other Advance Directive is available to convey the patient's wishes, and the EMTs have seen a copy of the document, the EMTs must honor the treatment preferences as expressed.

C. Physician Orders for Life-Sustaining Treatment: If a POLST form is available, and it clearly expresses the patient's wishes and is signed by a physician, nurse practitioner or physician's assistant, EMTs shall honor the patient's treatment care preferences as documented in the EMS section of the POLST. [Cite: OAR 847-035-030 (7)]

D. If there are questions regarding the validity, or enforceability, of the health care instruction, begin BLS treatment and contact OLMC.

E. It is always appropriate to provide comfort measures as indicated.

F. **Oregon Death with Dignity Act:** If a person who is terminally ill appears to have ingested medication under the provisions of the Oregon Death with Dignity Act, the EMT should:

1. Provide comfort care, as indicated.

2. Determine who called 9-1-1 and why (i.e., to control symptoms or because the person no longer wishes to end their life with the medication).

3. Establish the presence of DNAR orders and/or documentation that this was an action under the provisions of the Death with Dignity Act.

4. Contact OLMC.

5. Withhold resuscitation, if:

a. DNAR orders are present, and
b. There is evidence that this is within the provisions of the Death with Dignity Act, and
c. OLMC agrees.

Definitions:

A. Do Not Attempt Resuscitation Order (DNAR): An order written by a physician stating that **in the event of cardiopulmonary arrest**, cardiopulmonary resuscitation will not be administered. DNAR orders apply only if the patient is pulseless and apneic.

B. Health Care Instruction: A document executed by a person to indicate the person's instructions regarding health care decisions.

C. Advance Directive: A document that contains a health care instruction or a power of attorney for health care.

D. Living Will: A document that may confirm an Advance Directive or Directive to Physician informing her/him that if the patient has a terminal illness and death is imminent, the patient would not wish to be placed on artificial life support that will only prolong the process of dying. **In general, the traditional Living Will document alone is not helpful in the out-of-hospital setting because of its multiple restrictions and lack of clarity on when it should take effect**.

E. Attorney in Fact: An adult appointed to make health care decisions for a person.

F. Power of Attorney for Health Care (PAHC): Power of attorney document that authorizes an attorney-in-fact to make health care decisions for a person when the person is incapable.

G. Physician Orders for Life-Sustaining Treatment (POLST): The POLST is a voluntary form, which was developed to document and communicate patient treat ment preferences across treatment settings.

1. It includes a section for documentation of DNAR orders and a section communicating patient preferences for EMS care.
2. While these forms are most often used to limit care, they may also indicate that the patient wants everything medically appropriate done.
3. **Read the form carefully!**
4. When signed by a physician (MD or DO), nurse practitioner or physician's assistant, the POLST is a medical order and EMTs are directed to honor it in their Scope of Practice.

Death in the Field

Procedure:

A. Determining death in the field (DIF) without initiating resuscitative efforts should be considered under the following conditions:

1. Patient qualifies as a Do Not Resuscitate (DNR) or Do Not attempt Resuscitation (DNAR) patient (See ***Advance Directives and Do Not Attempt Resuscitation Orders*** protocol).
2. A pulseless, apneic patient in a Mass Casualty Incident or Multiple Patient Scene where the resources of the system are required for the stabilization of living patients.
3. Decapitation.
4. Rigor Mortis in a warm environment.
5. Decomposition.
6. Skin discoloration in dependent body parts (dependent lividity).

NOTE:
If a bystander, family or first responder has started BLS these conditions may still be used to determine DIF without OLMC consultation.

B. Medical Cardiac Arrest:

1. Patients with persistent/refractory Ventricular Fibrillation should be transported, except when Advance Directives, DNAR orders, or other withholding resuscitative efforts apply. If in doubt, contact OLMC.
2. Patients with Pulseless Electrical Activity (PEA) who have not responded to Advanced Cardiac Life Support for PEA may be determined to be dead in the field (if End Tidal CO_2 <20) after consultation with OLMC.
3. When a patient's cardiac rhythm deteriorates to asystole or an agonal rhythm despite appropriate cardiac resuscitative measures (including establishing an effective airway, administering epinephrine and/or vasopressin and 3 mg atropine, adequate CPR and checking the rhythm in at least 3 leads at full amplitude) the PIC may determine that the patient is DIF.
4. If the patient's ECG strip shows asystole or agonal rhythm upon initial monitoring (and after confirming in six leads) and if the patient, in the Paramedic's best judgment, is not a candidate for resuscitation efforts, the PIC may:
   - **a.** Determine DIF, notify the Medical Examiner and law enforcement; **OR**
   - **b.** Begin BLS procedures, and contact OLMC with available patient history, current condition, and with a request to discontinue BLS resuscitation.

C. Traumatic Cardiac Arrest:

Traumatic cardiac arrest is a difficult situation with no easy answers. Response time, mechanism of injury, safety, and proximity to hospital care are all factors that merit consideration.

At a trauma scene the EMT should consider the circumstances surrounding the incident, including the possibility that a medical event (cardiac dysrhythmia, seizure, hypoglycemia) preceded the accident. When a medical event is suspected, treat as a medical cardiac arrest.

1. A victim of trauma should be determined to be dead at the scene if:

a. The patient is a victim of trauma (blunt or penetrating) and has no vital signs/ signs of life (pulseless, apneic, fixed pupils) when the EMT arrives at the scene.

b. If opening the airway does not restore vital signs/signs of life, the patient should NOT be transported unless there are extenuating circumstances. (See: Cardiac Monitor).

2. Cardiac monitor may be beneficial in determining death in the field:

a. A narrow complex rhythm (QRS less than 0.12) may suggest profound hypovolemia, which may respond to fluid resuscitation,

b. Ventricular fibrillation should raise the index of suspicion for a medical event,

c. Asystole, or an agonal rhythm, is not compatible with life.

3. In instances prior to transport where the patient declines to the point that no vital signs (i.e., no pulse or respiration) are present, the cardiac rhythm should be reassessed. A viable rhythm (narrow complex with QRS <0.12), especially in patients with penetrating trauma may reflect hypovolemia or obstructive shock (tamponade, tension pneumothorax) and aggressive care should be continued.

Documentation:

A. All patient care provided should be documented with procedure and time.

B. When a cardiac monitor is used, the patient's rhythm should be recorded and attached to the Prehospital Care Report.

C. All conversations with attending physicians or OLMC should be fully documented with physician's name, times, and instructions.

D. If resuscitation of a person found in asystole is not attempted based on paramedic judgment, the reason resuscitation was not attempted must be clearly documented on the Prehospital Care Report.

NOTES:

A. ORS allows a lay person, EMT, or Paramedic to determine "Death in the Field."

B. The EMT is encouraged to use OLMC if any doubt exists about the resuscitation potential of the patient.

C. A person who was pulseless or apneic, or has received CPR, and has been resuscitated, is not precluded from becoming a candidate for solid organ donation (i.e., kidney, heart, liver, etc.).

D. $ETCO_2$ may be a useful adjunct with regard to the decision to terminate resuscitation with PEA. An $ETCO_2$ of 10 or less in patients in PEA after 20 minutes of ACLS resuscitation does not correlate with survival.

E. The probability of survival from trauma arrest is low, but not completely zero.

Medical Control for Drugs and Procedures

Policy:

If a patient receives a procedure or medication; is conscious (or regains consciousness); and refuses transport, every effort shall be made to encourage transport of the patient. If the patient persists in refusing transport, see the ***Non-Transport*** procedure.

These protocols contain Category A and B drugs and procedures. Before using any Category B drug or procedure you **must** contact OLMC. If the EMT is unable to contact OLMC, Category B drugs or procedures should be administered as indicated in the protocol. If a Category B drug or procedure is used without OLMC contact, **a written report must be sent to the Medical Director or Physician Supervisor.** Continued attempts must be made to reach OLMC en route.

Category A:

Drug or procedure will be used at the EMT's discretion in accordance with the standing orders.

Drugs:

* Activated Charcoal (ASA & APAP)
** Albuterol
*** Adenosine (Adenocard®)
Ammonia Inhalant
* Aspirin
** Atropine Sulfate
** Amiodarone
*** Calcium Gluconate (Cardiac Arrest & Hyperkalemia)
** Dextrose 50%, IV
** Diphenhydramine (Benadryl®)
*** Dopamine
*** Droperidol (Inapsine®)
* Epinephrine
*** Etomidate (Amidate®)
Advanced airway training required
** Glucagon
Glucose, Oral
** Fentanyl (Sublimaze)
** Furosemide (Lasix®)
*** Hydroxocobalamin (Cyanokit®)
** IV Solutions
** Ipratropium (Atrovent®)
** Lidocaine (Xylocaine®)
*** Magnesium Sulfate: In cardiac arrest
*** Methylprednisolone (Solu-Medrol): In resp. distress
*** Midazolam (Versed®
** Morphine
** Naloxone (Narcan®)
** Nitroglycerin
*** Ondansetron (Zofran®)
Oxygen
*** Sodium Bicarbonate
*** Sodium Thiosulfate
*** Succinylcholine: Advanced Airway Training Required
** Vasopressin
*** Vecuronium: Advanced Airway Training Required
*** Xylocaine, Viscous

Category A:
Procedures:

* Use of the Combi-tube
*** Chemical Patient Restraint
* End-Tidal CO2 Monitoring
*** Endotracheal Intubation
** Intraosseous Infusion
* King LT-D/LTS-D Airway Device
*** NeedleCricothyrotomy
*** Quick-Trach® (type device)
*** Paralytic Intubation: Advanced Airway Training Required
Physical Patient Restraint
Self-Care Instructions
Pelvic Wrap
*** Synchronous Cardioversion
a. Unstable V-Tachycardia, OR
b. SVT, unstable patient with BP less than 90 mm/Hg
Taser barb removal
*** Tension Pneumothorax Decompression
*** Transcutaneous Pacing

Category B:

Drug or procedure, not included in Category A, shall be initiated by request from EMT to OLMC. Confirmation of dosage or procedure will be obtained directly from a Physician on Duty at OLMC.

Drugs:

* Activated Charcoal
*** Epinephrine (Asthma and COPD greater than 40 yrs.)
** Glucagon (Beta-blocker OD)
*** Magnesium Sulfate (OB/GYN and asthma)
*** Sodium Bicarbonate (Cyclic antidepressant OD)

Procedures:

*** Automatic Implantable Cardio-Defibrillator Deactivation (AICD)
*** Synchronous Cardioversion
A. SVT, unstable patient, with BP greater than 90 mm/Hg

Required Multnomah County Medications

- ❒ **Activated Charcoal, 50 Gm -- 2 (1)**
  Earliest Expiration Date:_____
- ❒ **Adenosine, 6 mg, 12 mg**
  Earliest Expiration Date:_____
- ❒ **Albuterol, 2.5 mg/3 cc --5 (2)**
  Earliest Expiration Date:_____
- ❒ **Amiodarone, 150 mg/3ml --6 (4)**
  Earliest Expiration Date:_____
- ❒ **Aspirin, 81 mg tablets -- 1 btl. (8 tabs)**
  Earliest Expiration Date:_____
- ❒ **Atropine, 1 mg/10 cc-- 6 (3)**
  Earliest Expiration Date:_____
- ❒ **Calcium Gluconate, 4 (2)**
  Earliest Expiration Date:_____
- ❒ **Dextrose**
  - ❒ **50%, 50 cc -- 4 (2)**
    Earliest Expiration Date:_____
  - ❒ **Oral, 30 Gm --2 (1)**
    Earliest Expiration Date:_____
- ❒ **Diphenhydramine, 50 mg/1 cc -- 2 (1)**
  Earliest Expiration Date:_____
- ❒ **Epinephrine:**
  - ❒ **1:1,000, 30 cc -- 2 (1)**
    Earliest Expiration Date:_____
  - ❒ **1:1,000, 1 mg/1 cc -- 2 (1)**
    Earliest Expiration Date:_____
  - ❒ **1:10,000, 1 mg/10 cc -- 10 (4)**
    Earliest Expiration Date:_____
- ❒ **Etomidate (Amidate®), 40 mg (2 mg/ml) 4 (2)**
- ❒ ***Fentanyl (Sublimaze), 100 mcg/2ml 10 (5)**
- ❒ **Furosemide, 40 mg/4 cc -- 4 (2)**
  Earliest Expiration Date:_____
- ❒ **Glucagon, 1 mg/1 cc -- 2 (1)**
  Earliest Expiration Date:_____
- ❒ **Droperidol, 2.5 mg/1 cc -- 4 (2)**
  Earliest Expiration Date:_____
- ❒ **Dopamine, 400 mg/10 cc -- 2 (1)**
  Earliest Expiration Date:_____
- ❒ **Ipatropium, 500mcg/2.5cc -- 5 (2)**
  Earliest Expiration Date:_____
- ❒ **Lidocaine**
  - ❒ **2%, 100 mg/10 cc -- 6 (3)**
    Earliest Expiration Date:_____
  - ❒ **2%, Viscous Jelly -- 2**
    Earliest Expiration Date:_____
- ❒ **Magnesium 10%, 2 Gm/20 cc, -- 4 (2)**
  Earliest Expiration Date:_____
- ❒ **Methylprednisolone, 125 mg/2 ml -- 4 (2)**
  Earliest Expiration Date:_____
- ❒ ***Midazolam, 10 mg/2cc -- 4 (1) * 11-1-99**
  Earliest Expiration Date:_____
- ❒ **Naloxone, 2 mg/2 cc -- 9 (3)**
  Earliest Expiration Date:_____
- ❒ **Nitroglycerin**
  - ❒ **Spray, 0.4 mg -- 2 (1)**
    Earliest Expiration Date:_____
  - ❒ **Tablets, 0.4 mg** -- 2 (1)
    Earliest Expiration Date:_____
- ❒ **Ondansetron, 4 mg/2 ml -- 2 (1)**
  Earliest Expiration Date:_____
- ❒ **Sodium Bicarb, 50 mEq/50cc -- 3 (2)**
  Earliest Expiration Date:_____
- ❒ **Succinylcholine, 500 mg; -- 2 (1)**
  Earliest Expiration Date:_____
  [9-1-1 Responding Units Only]
- ❒ **Vasopressin, 20 U/cc - 4 (2)**
- ❒ **Vecuronium, 10 mg- powder; -- 2**
  Earliest Expiration Date:_____
  [9-1-1 Responding Units Only]

* **must be locked and counted at each shift change**