

Appendix

E

**Pennsylvania Department
of
Health Operations,
Rehabilitation at Fire/ Incident
Scene Statewide BLS Guideline**

REHABILITATION AT FIRE/ INCIDENT SCENE STATEWIDE BLS GUIDELINE

Criteria:

- A. The intent of rehabilitation (Rehab) is to provide a structured, consistent method for the evaluation and remediation of common ailments associated with the activities at fire / hazardous materials and incident scenes; including but not limited to overexertion, dehydration, metabolic disturbances, and exposure to temperature extremes.
 1. This guideline may be used by EMS agencies when requested to operate within an established rehabilitation area/sector at the scene of a working fire / hazardous materials, other comprehensive emergency incident, or extended training exercise.
 2. If a Rehab area has not been established at an incident scene, this guideline may still be used when providing medical monitoring to fire or other emergency personnel at an incident scene.

Procedure:

A. Primary EMS responsibilities

1. The primary responsibility of EMS personnel during Rehab is to provide medical monitoring, remediation of hypothermia/hyperthermia and emergency medical care.
2. Based on local practice/policy, EMS personnel may be involved in the other aspects of Rehab outside of their primary responsibility or other duties as assigned by the Incident Command (IC) or EMS Operations, but not to the extent which they interfere with medical monitoring and/or emergency medical care.

B. Emergency medical care

1. At any point in their Rehab period, personnel with any significant complaints (e.g. chest pain, respiratory distress, altered mental status, or trauma) should be treated using the applicable Statewide EMS protocol.
2. Medical treatment provided during Rehab must be in accordance with applicable Statewide EMS Protocol(s).
3. Appropriate notification should be made, following the Incident Command System (ICS) structure, regarding any personnel transported from the incident, refusing to cooperate with the Rehab process, returning to duty without meeting criteria for medical clearance, or who have successfully completed rehab but will not return to duty at the incident.
4. If any personnel refuse a medical assessment, treatment and/or medical advice as offered in Rehab, advise the appropriate line officer (IC, Safety Officer, etc), and follow Statewide BLS Protocol #111: **Non-Treatment and/or Non-Transport Refusal of Treatment/Transport.**

C. Equipment

1. Rehab should have the necessary EMS equipment/supplies to accommodate the nature/size of the operation. Suggested minimum equipment available should include:
 - a. Standard BLS equipment, including stethoscope, sphygmomanometer, thermometer (electronic, digital, non-tympanic), hot/cold packs, oxygen, bandages, dressings, AED, pulse oximeter (if available), and CO measuring device (co-oximeter or breath meter) (if available).
 - b. Clipboards, personnel accountability/log in sheets, tags, or other appropriate accountability and/or documentation forms.
 - c. If indicated by risk of incident, at least one ambulance (with staff) available to transport patients from the Rehab area.

D. Medical monitoring

1. Upon arrival at the scene, EMS providers should report to the IC, Rehab Officer, or other appropriate entity as designated by the ICS and confirm the EMS expectations based on the nature/scope of the incident.
2. EMS providers may be tasked with providing personnel accountability (via their documentation) within the Rehab area.
3. All personnel entering Rehab should have their initial vital signs assessed after a brief relaxation period (approximately 5 min.) (including pulse, respirations, blood pressure, and oral temperature). [See “Vital Signs Parameters” table below for range of vital signs considered to be normal for return to duty.] EMS providers should carefully monitor personnel for signs of heat stress (e.g., altered level of consciousness, abnormal vital signs, elevated temperature) and significant medical complaints (i.e., chest pain, dyspnea).
4. At any point during their Rehab period, personnel with “abnormal” vital signs should receive additional monitoring in Rehab and should not be released for further activity until their vital signs are within “normal” parameters. Personnel with continued abnormal vital signs after 20 minutes in Rehab should be **considered a patient and** treated per applicable protocol which may include transport to the Emergency Department.
 - a. **Appropriate disposition for such patients should include transportation to a hospital and/or documented consultation with Medical Command for alternative disposition should the patient not be treated or transported to the hospital.**
5. At the conclusion of their Rehab period (generally lasting at least 20 minutes in duration), personnel with “normal” vital signs and no serious signs or symptoms may be permitted to return to normal activity.
6. All vital signs and Rehab assessments should be documented. EMS agencies may choose to use a log, tag, or other means of appropriate documentation [See Emergency Scene Rehabilitation Tag in Appendix R-5]. An EMS PCR must be completed as required (e.g. for every patient transported by ambulance and every patient refusing treatment or transport).
Suggested Vital Signs Parameters

	Pulse	Respiration	Blood Pressure	Oral Temperature	Oxygen Saturation ⁶ (SpO2%) (Optional)	Carbon Monoxide Saturation ⁷ (CO%) (Optional)
Normal	>60 or ≤100	>12 or <20	Systolic: < 160 Diastolic: < 90	< 99.5°F <37.5°C	≥ 95%	Non-smoker: < 5% Smoker: < 10%
Abnormal	>100	<12 or > 20	Systolic: <90 or >160 Diastolic: >90	≥ 99.5°F ≥37.5°C	< 95%	≥ 12% (w/assoc. signs & symptoms of CO poisoning)

Appendix A: Supporting Information - Rehab Plan Development**A. Pre-Event Planning**

1. The development a comprehensive Rehab plan should be a collaborative effort between the affected emergency services agencies (i.e., law enforcement, fire/rescue, hazardous materials response teams and emergency medical services) using established national standards, including National Fire Protection Association (NFPA) Standard 1584, or Emergency Incident Rehabilitation – Federal Emergency Management Agency.
2. When possible, EMS agencies should consider assisting responder agencies in recording baseline resting vital sign measurements on active crew members that they may routinely encounter while providing Rehab. This process could assist in the overall health well-being/prevention goals of the participating agencies and strengthen inter-agency relations.
3. Responder health information may be stored in a secure manner on an ambulance or other emergency vehicle, in a manner which ensures confidentiality, until accessed for Rehab purposes.
4. Access to baseline vital signs would assist EMS providers involved in Rehab in determining abnormal deviations from patient specific “normal” values.

B. Incident Command System (ICS)

1. When circumstances/conditions warrant, the Incident Commander (IC) is responsible to ensure that a Rehab Area (Sector/Group/Unit) is established, including adequate EMS resources.
2. An individual with appropriate knowledge and experience should assume the role of Rehab Officer (position titles may vary) and follow the chain of command established by the IC. Rehab generally falls under the Logistics Section but may operate under the Operations Section in a limited ICS structure.

C. Rehab Area Logistics

1. When possible, the Rehab Area should be located in an area:
 - a. Away from hazardous conditions including smoke, run-off, and vehicle exhaust (uphill and upwind), media, and spectators.
 - b. Large enough to accommodate the expected number of personnel.
 - c. That provides adequate shelter from adverse environmental conditions (i.e. warmth in winter and shade in summer).
 - d. In close proximity to both the self-contained breathing apparatus (SCBA) exchange station and the ambulance staging area.
 - e. With access to or in close proximity to potable water (either running or bottled) and rest rooms if possible.
2. The Rehab Area should be established with a consideration for the optimal flow of personnel.

D. Rehab Operations

1. Rehab should provide a means for responder accountability during the Rehab period; all personnel entering should be logged in/out (i.e. firefighters may surrender their accountability tag on entry).
2. Personnel entering Rehab should remove excess outer clothing to extent possible to allow for passive cooling (i.e. removal of helmet, hood, turnout coat). Limit level of undress when operating in extreme cold conditions.
3. EMS personnel providing Rehab may facilitate the following:
 - a. Crew rest: all personnel should remain in Rehab for at least 20 minutes. Ideally, Rehab should contain adequate seating so personnel can rest comfortably.

- b. Rehydration: water and/or electrolytes replacement solution (i.e. sports drink) should be available to ensure **at least** sixteen (16) ounces per person, per visit. Carbonated and caffeinated beverages should be avoided.
- c. Nourishment: calorie replacement should be provided for prolonged incidents (i.e. more than 2 hours activity).

E. Rehab Specific Equipment

1. Additional Rehab specific equipment/supplies that may be of benefit may include, but is not limited to:
 - a. Tarp/tent/awning or other protection from the elements, chairs/adequate seating, towels.
 - b. Means for cooling in hot conditions (e.g., air-conditioned vehicle or building, misting fans, forearm immersion chair, etc.); means for warming in cold conditions (heated vehicle or building, blankets, auxiliary heater).
 - c. Potable water, electrolyte replacement solutions.
 - d. Calorie/carbohydrate replacement snacks.
 - e. Broth, soup, or other more significant nourishment for prolonged incidents.
 - f. Means for washing hands and face; either antibacterial soap and water or pre-moistened towelettes.