A significant portion of injuries sustained during extended operations by responders is due to over exertion and exposure. SHCGB has developed and requires training by all levels of care specific to the conditions operational personnel will likely be exposed to, (including potential toxins and their effects), the physiologic implications of the work being done and medical considerations typically associated with working in the specific environment.

**Considerations for Rehab with medical monitoring**

1. Extended or large scale event
2. Environmental factors including temperature extremes
3. Lack of the ability to rotate crews
4. Bottle consumption
5. General impression of the Safety Officer/IC
6. When operations pose a health and safety risk

**Intent**

The practice of medical monitoring shall be viewed as only one method to assist in early identification of personnel requiring treatment and transport to the hospital and not as a means of “medically clearing” personnel for a safe return to physically demanding activities. EMS personnel should not be asked to subjectively determine whether personnel are safe to operate. The following specific objective criteria, in consultation with on-line medical control as needed will be used to make the decision.

**Symptomatics**

Patients with symptomatics, as defined below go directly to MEDICAL MONITORING or TRANSPORT

1. Symptomatics defined (see notes on interpretation of vital signs)
   a. Mental status changes - include confusion, amnesia, poor judgment, and poor regulation of emotions as compared to a known baseline (when available).
   b. Skin condition and color – “hot, dry, red skin” as evaluated in a well lit area
   c. Injury
   d. Complaint
   e. HR above 120
   f. SPO2 below 94%
   g. Temperature (when available)
   h. CP
   i. SOB
   j. Dizziness
   k. Syncope
   l. Nausea / Vomiting
   m. Temperature related illness
   n. Poor general impression by the highest level provider
   o. Blood pressure which does not trend down
2. Vital signs and their limitations

Visual signs and symptoms remain the best method to evaluate members in the rehabilitation area. Vital sign measurements can be used as a baseline and can assist to identify other health or safety concerns.

a. Respiratory rate – By the end of the rehabilitation period the responder should have a respiratory rate between 12 and 20 breaths per minute.

b. Blood pressure – Blood pressures that are too high or too low, or fail to return to normal levels after 20 minutes while in rehabilitation can indicate a medical problem. A member whose blood pressure is greater than 160 systolic and/or 100 diastolic should not be released from rehab.

c. Heart rate – After resting in rehab the provider’s heart rate should return to normal. A provider who has not achieved a heart rate of less than 100 beats per minute by the end of 20 minutes should receive further evaluation. Part of additional monitoring should include orthostatic pulse and blood pressure.

d. Pulse oximetry has significant limitations and should not replace careful assessment. It can help to detect hypoxemia that is otherwise unnoticed.

e. Carbon dioxide monitoring, when appropriate, can be measured with a CO monitor.
   a. CO blood levels of:
      i. 5 to 14% may produce asymptomatic or mild symptoms
      ii. 15 to 29% may produce symptoms of headache, nausea/vomiting, shortness of breath, chest pain, loss of judgement
      iii. 30 to 40% may produce dizziness, weakness, vision problems, confusion, increased HR, increased RR
      iv. Greater than 40% may produce arrhythmias, seizures, coma or death

Note: CO monitoring is a Paramedic level skill.

f. Temperature monitoring (when available)

3. theoretical “sections” (Depending on available resources two or more of these areas may be combined. The functionality of each, however, remains)

REST – may be staffed by non-certified or non-licensed personnel if necessary

i. Rest, hydration

ii. Registration – “check in” – should be staffed by EMS who gets “general impression” which may involve upgrading patient

Following at least 10 min. of time in the REST area patient moves to MEDICAL MONITORING
**MEDICAL MONITORING** must be staffed by an EMT or higher level provider.

In single crew situation staffed by EMS provider who did registration

1. Pulse, resp, BP, temperature, pulse ox, general impression
   “temperature, if available can be valuable for trending however it is
   impractical in the field at this time”
   a. A running vitals log may be used to document this evaluation.
2. IF the conditions outlines in the vital signs section are not met
   i. Moves to TRANSPORT
      NOTE: “vital signs alone cannot be used to determine if a
      provider can return to duty”
3. Otherwise – as needs and eval dictates
   a. Return to REST
   OR
   b. Return to ACTIVE DUTY
   OR
   c. Remains in EVAL for repeat evaluation

4. Symptomatics
   b. Responder goes directly to TRANSPORT section for evaluation by highest level of care for:
      i. Transport out
         OR
      ii. Move to EVAL
         OR
      iii. Move to REST
   c. Documentation
      i. For each patient requiring medical treatment beyond basic first aid and/or transport
         an electronic patient care report must be completed.
         Patients refusing continued medical care in, or transport from, the rehabilitation
         sector should be provided the appropriate advice to make an informed decision. If
         the patient remains adamant in their refusal, they should be asked to sign a
         witnessed refusal form and remanded to the Safety Officer or Incident Commander.
      ii. Providers wishing to deliver any degree of medical treatment in the rehabilitation
         section without an intention to transport the patient to a hospital must contact
         Medical Control for authorization.
5. **TRANSPORT**

Priorities refer to CMED priorities where:

- Priority One is a patient who is in arrest or potentially may arrest
- Priority Two patients are stable/potentially unstable
- Priority Three patients are stable, going for eval

Standby crew will transport on a Priority 1, if alone, and request replacement ambulance
  a. Highest level of care transports with patient
  b. Transport ambulance will be requested for Priority 2 and below patient
  c. Patient may be further stabilized by EMS while waiting for transport per SHCGB guidelines (routine ALS, etc.)

6. In the event of multiple patients causing system overload utilize MCI guidelines. The Service Supervisor must contact the EMS Coordinators VIA CMED to report initiation of MCI.

**NOTE:**

**PROVIDER MUST HAVE DOCUMENTATION OF COMPLETION OF APPROVED SHCGB IN-SERVICE SPECIFIC TO THIS PROTOCOL ON FILE WITH THEIR SERVICE TO UTILIZE THIS PROTOCOL.**
Establish the need for first responder rehab

Create one or more stations to provide areas for:

- Rest and check in
- Medical monitoring

Consider transport or return to monitoring

Symptomatic?

RETURN TO INCIDENT

YES

NO