

JEFFERSON COUNTY FIRE AND EMS OPERATIONAL GUIDELINES

JEFFERSON COUNTY, WV

OG 16-018

A. Purpose

The guideline is to provide Jefferson County Fire and EMS personnel and Incident Commanders with direction on the implementation and use of Firefighter rehabilitation at the scene of fires, other emergency incident scenes, and during training, per NFPA 1594 (2008). It shall provide direction as to what activities are to be undertaken by each component of the fire ground and the EMS providers assigned to work in the rehab sector. These guidelines include when to restrict members from returning to duty for medical reasons and when to transport for additional treatment. It shall also provide guidance to those members reporting to rehab as to what their responsibilities are, and what to expect of the process. It is the intent of this Standard to ensure the safety and accountability of those providing fire and EMS services within Jefferson County.

B. Standard for Rehabilitation Establishment

- Formal Rehabilitation should be established on all incidents in which one or more of the following are present:
 - Operational period greater than forty-five (45) minutes.
 - Greater than twenty (20) Operational Personnel on scene.
 - Any incident in which an area (sector) has been determined Immediately Dangerous to Life and Health (IDLH).
 - At the discretion of the Incident Commander or commanding officer.

Note: Company/Unit officers shall monitor members under their command and members shall also monitor themselves and each other even without the formality of a rehabilitation program. Members should request rehab from their company/unit officer if they feel they are in need (illnesses, injuries, or other conditions). Company/Unit officers should request rehab be established if they feel their company member(s) are in need. Illnesses, injuries, or other conditions are to be reported immediately.

C. Standard for Personnel Reporting to Rehab

- All personnel operating within an area that is deemed as IDLH **must** report to rehab within the confines of the incident operations period, and preferably immediately upon exiting the IDLH.
- Any personnel completing one (1) hour of SCBA use should report to rehab.
- It is the responsibility of the Incident Commander, and the unit officer to ensure all personnel have reported to rehab.
- The Rehab Officer or Medical Group Supervisor must ensure appropriate tracking and documentation of all personnel reporting to rehab.

D. Standard for Location of Rehab

- The Incident Commander, Medical Group Supervisor or Rehab Officer shall choose a suitable rehab location based on expected needs. The Rehab area should accommodate most of the following, as applicable:
 - i. Be away from smoke or other irritant and provide comfortable breathing conditions removed from the hazards of the incident scene including smoke, vehicle exhaust, and excess noise.
 - ii. Be completely segregated from media and spectators.
 - iii. Provide protection from weather extremes (direct sun, rain, etc).
 - iv. Be accessible to emergency medical transport vehicles.
 - v. Be of a size large enough to facilitate the expected number of personnel - including members working in the rehab area.
 - vi. Have a separate area for doffing and storing PPE, and replacing air bottles.
 - vii. Have an adequate supply of drinking water, sports drinks for electrolyte replacement and food for calorie replacement - especially during incidents longer than three hours.

E. Standard for Minimum Rehab Resources

- The Incident Commander, Medical Group Supervisor or Rehab Officer shall ensure the Rehab location provides for the following elements:
 - Medical monitoring – At a minimum, the rehab facility shall provide a Lifepack 15 and/or the ability to monitor the blood pressure, pulse, SP02, respirations, and CO of a firefighter.
 - Emergency Medical Care and Transport – At minimum, the rehab location will provide general care and treatment tools for the treatment of basic medical emergencies and traumatic injuries (AED, trauma dressings, Oxygen, etc).
 - Immediate access to an Ambulance.
 - Hydration to replace lost fluids - Members should drink at least 8-16 oz. water or electrolyte sports drink in the 20 minutes they are in rehab.
 - Cooling and/or Warming capabilities.
 - Relief from weather extremes (heat, cold, direct sun, rain, snow, wind)
 - Food shall be provided during incidents lasting in excess of 3 hours.
 - Accountability - Individual units are to report to rehab as a group, and are to remain together during rehab. All personnel reporting to rehab should be documented for accountability purposes.

F. Standard for Rehab Monitoring

- The Incident Commander, Medical Group Supervisor or Rehab Officer shall ensure the EMS providers facilitating rehab provide the following monitoring:
 - Members shall be checked into rehab by EMS workers in the rehab sector and shall have their department, unit, name, and the time of entry recorded on the EMS REHAB FORM.

- Vitals shall be recorded on the EMS REHAB FORM.
 - Vital signs and assessments made will include blood pressure, pulse, SP02/CO, and Temp. Presence of any trauma and/or other conditions will be noted on the form, and appropriate care established.
- EMS providers will perform a basic medical and trauma assessment on all personnel entering rehab, and document any findings.
- The Medical Group Supervisor or Rehab Officer shall collect the documentation from the EMS providers, and will complete a single ePCR within “ESO” to document the Rehab completion. The forms utilized in the completion of Rehab will be scanned and attached to the ePCR.
 - *NOTE: In the event a firefighter is transport from the scene, a ePCR must be completed for the transport, and a separate ePCR for the rehab operations.*

G. Standard for “Treat and Release” per the Medical Director

- Per the Medical Director, Paramedics have the authority to begin IV therapy to personnel in Rehab, without the requirements to transport under the following conditions:
 - i. The firefighter is able to orally hydrate simultaneously to the IV NS.
 - ii. After 1L NS is administered, the firefighter conditions have improved.
- Per the Medical Director, EMS providers can provide personnel in rehab Oxygen and certain Over-The-Counter (OTC) medications without the obligation to transport.
 - i. OTC medications such as Tylenol or Motrin for the treatment of minor aches and pains.
 - ii. Oxygen for the treatment of minor respiratory issues, with an improvement in vitals following administration.

H. Standard for Denial of Return to Duty

- The Medical Group Supervisor, Rehab Officer or EMS Provider, with the authority of the Incident Commander, shall remove any firefighter from active duty if any of the following are determined:
 - Vomiting, diarrhea, heat exhaustion
 - Large open wounds
 - Insulin dependent diabetic has not eaten in 4 hours
 - Wheezing/congestion, unimproved by oxygen
 - Pulse above 120 per minute after 20 minutes of rest.
 - Respirations over 20 per minute after 20 minutes of rest.
 - Blood Pressure above 160 systolic or 100 diastolic after 20 minutes rest.
 - CO level of >5% in nonsmokers or >10% in smokers after 20 minutes of rest.
 - SP02 less than 94% after 20 minutes of rest.
 - Other conditions as appropriate, at the discretion of Medical Group Supervisor, Rehab Officer or EMS Provider.
- Reference the attached “Medical Criteria Flow Chart” for additional direction.
- In the event any of the above signs/symptoms are present, the MBR shall have vitals/assessments re-assessed every 5 minutes to determine appropriate additional actions.

- Any member not meeting specific health criteria shall not be permitted to return to the incident and will be further monitored or transported.

I. Standard for Return to Duty

- All Members will be required to maintain a presence in rehab for 20 minutes of monitoring, or until emergency operations have ceased, whichever is sooner. Reference the attached “Medical Criteria Flow Chart” for additional direction.
- If after a 20 minute monitoring period the member exhibits appropriate signs and symptoms, they shall be released to return to full duty:
 - Pulse less than 120 beats per minute.
 - Respirations greater than 10, less than 20 per minute.
 - Blood Pressure less than 160 systolic and 100 diastolic.
 - SPO2 greater than 94%
 - CO level of <5% in nonsmokers or <10% in smokers

J. Standard to Transport to Hospital for Evaluation, Automatic Transport Criteria (ATC)

- The Medical Group Supervisor, Rehab Officer or EMS Provider, with the authority of the Incident Commander, shall direct the transport of any firefighter from the scene to a Emergency Department if any of the following are determined:
 - Symptoms of heat stroke or hypothermia
 - Continued Shortness of Breath or Trouble Breathing
 - Abnormal lung sounds or extremely low SPO2 or high CO readings
 - Syncope, altered mental status, confusion, disorientation
 - Irregular pulse and/or persistent pulse above 180
 - Significant injury (fracture, uncontrolled bleeding, etc.)
 - Chest pain or severe headache
 - **No improvement in other noted vitals or signs/symptoms after 20 minutes.**

K. Attachments:

- Fire Scene Rehabilitation of Firefighters Flow Chart – Training Aid
- Assessment of Firefighter in Rehab Flow Chart- Training Aid
- Medical Criteria Flow Chart
- EMS REHAB FORM

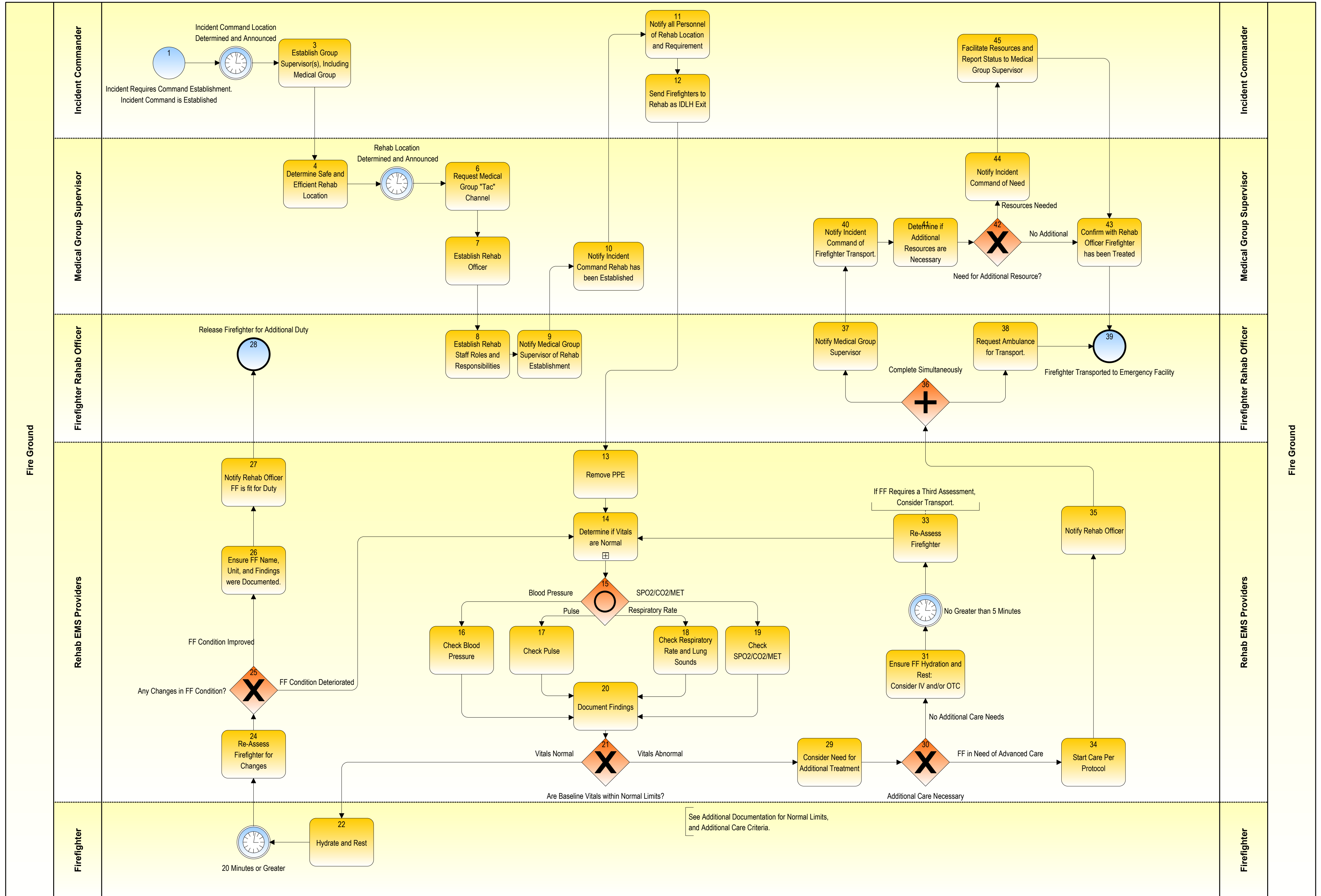
At no time should this guideline supersede the local EMS protocols or directive from the Squad Medical Director

X

Chairman of the Chief's Committee

Approved Date:

Rehab Training Aid

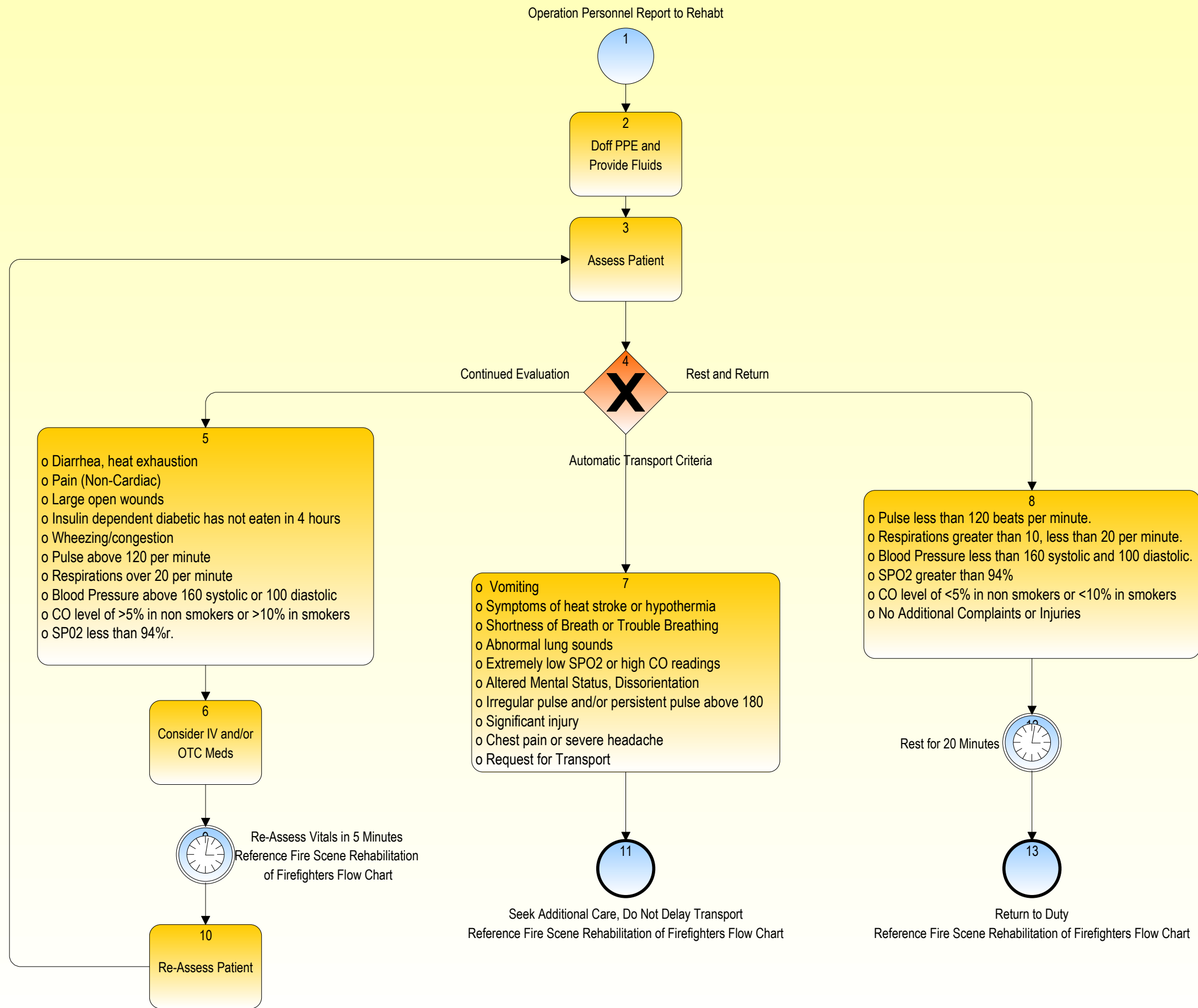


See Additional Documentation for Normal Limits, and Additional Care Criteria.

Rehab Training Aid

Rehabilitation Medical Criteria

Rehabilitation Medical Criteria



EMS REHAB FORM

Date: _____ Weather Conditions: _____

Incident Type: _____ Temperature: _____

Location: _____ Rehab Officer: _____

NAME	DEPT/ UNIT	TIME	B/P	HR	SaO2 / CO	Temp	Treatment/Findings Notes
1.							
2.							
3.							
4.							
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22.							

MEDICAL CRITERIA FLOW CHART

After 1st SCBA cylinder → re-hydrate & return to work (or send to staging or rehab if needed)

After 2nd SCBA cylinder OR 60 minutes of work → report to rehab for 20 minutes



Assess Personnel:

IF HR >160bpm, Vomiting, Wheezing → **EMS Evaluation**

IF HR <160bpm → REST for 10 minutes + oral rehydration



After 10 Minutes of Rest:

IF HR is <120bpm, and SBP < 160 → **Rest/Hydrate 10Minutes**

IF HR is >120bpm, or SBP > 160 → **EMS Evaluation**



Trouble breathing, Respiration >20, SPo <94% → **EMS Evaluation**



← ← ← ← REST for 10 minutes → → → →



SBP =/<160, HR <120bpm, SPo >94%, No Complaints → **RETURN TO WORK**



High Temp or BP >160, or HR >120bpm or SPo <94%, or Resp >20, or CO <5%(non-Smoker)

NO WORK, Consider Transport

Utilize LifePack 15 to obtain CO in addition to SpO2

★ If a firefighter's heart rate does not come down below 120bpm after ten minute rehab, do the following:

1. Assess blood pressure
2. Take temperature
3. Perform Neurological Exam

COOLING TECHNIQUES

- | | |
|-----------------------------|---|
| > Immerse forearms in water | > Gear removal |
| > Shade/shelter | > DO NOT apply wet towels to
The back of neck or head |
| > Cooling fans | |

A firefighter will be removed from service and an EMS evaluation will be required for the following medical guidelines:

- Heart rate does not slow below 160bpm after work subsides
- Pulse irregularities, chest pain
- Failure of neurological exam or decreased orientation
- Nausea, Vomiting
- Shortness of breath or Trouble Breathing
- Temperature is less than 90F or over 100F
- Hypertensive or Hypotensive
- CO level of >5% in non smokers or >10% in smokers.

WHILE IN REHAB

- > Encourage Oral Hydration
- > Remove PPE
 - coat
 - pants pushed to boots
- > Rest
- > Active/Passive cooling
- > **MINIMUM of 20 minutes**

REMEMBER THE AUTOMATIC TRANSPORT CRITERIA

- Vomiting
- Symptoms of heat stroke or hypothermia
- Shortness of Breath or Trouble Breathing
- Abnormal lung sounds
- Extremely low SPO2
- High CO readings
- Altered Mental Status, Disorientation
- Irregular pulse and/or persistent pulse above 180
- Significant injury
- Chest pain
- Severe headache
- Request for Transport