NORTH REGION EMS & TRAUMA CARE SYSTEM Operational Guidelines

PATIENT CARE PROCEDURES #1

Access to Prehospital EMS Care

OBJECTIVE

To define elements of the Regional EMS and trauma system necessary to assure rapid universal access to 911 and E-911, rapid identification of emergent situations, rapid dispatch of medical personnel, management of medical pre-arrival needs, rapid identification of incident location.

STANDARD 1

Region-wide access to emergency response shall be by 911 from all private and public telephones. Enhanced 911 is the preferred access capability, where available.

STANDARD 2

Emergency medical dispatch training for all dispatchers is the recommended standard of care. It is recommended that dispatch centers require emergency medical training for all dispatchers. The format shall be approved by the county MPD. A reference system for use by trained dispatchers shall provide dispatch decision criteria consistent with county patient care and level of care standards. Pre-arrival instructions for patient care should be a component.

STANDARD 3

Each county shall participate in a regional program of residence identification to enhance rapid EMS arrival. Establishing standards for addressing and emergency indicators are program elements.

Operational Guidelines

PATIENT CARE PROCEDURE #2

Identification of Major Trauma Patients

OBJECTIVE

To define which patient injuries and severities are classified as major trauma for the purpose of:

- field triage
- hospital resource team activation
- registry inclusion
- regional quality improvement program

STANDARD 1

Major trauma patients will be identified in the initial EMS field assessment using the most current State of Washington Prehospital Trauma Triage Procedures as published by DOH-EMS and Trauma Section.

STANDARD 2

Major trauma patients will be identified by the region's hospitals for the purpose of trauma resource team activation including the trauma surgeon using the approved trauma activation guidelines for that facility.

STANDARD 3

Major trauma patients will be identified by the region's Prehospital services and hospitals for the purposes of state trauma registry inclusion using the trauma registry inclusion criteria as outlined in WAC 246-976-430.

STANDARD 4

Major trauma patients will be identified for the purposes of regional quality improvement as:

- patients who meet the Trauma System Activation criteria of the most current version of the State of Washington Prehospital Triage Procedures Step 1 and 2 and others per Medical Control, and
- patients who activate hospital recourse teams and those who meet the hospital trauma patient registry inclusion criteria.

STATE OF WASHINGTON PREHOSPITAL TRAUMA TRIAGE [DESTINATION] PROCEDURES

• Prehospital triage [is based on the following 3 steps: Steps 1 and 2 require Prehospital EMS personnel to modify medical control and activate the Trauma System. Activation of the Trauma System in Step 3 is determined by medical control**



STATE OF WASHINGTON PREHOSPITAL TRAUMA TRIAGE (DESTINATION) PROCEDURE

Purpose

The purpose of the Triage Procedure is to ensure that major trauma patients are transported to the most appropriate hospital facility. This procedure has been developed by the Prehospital Technical Advisory Committee (TAC), endorsed by the Governor's EMS and Trauma Care Steering Committee, and in accordance with RCW 70.168 and WAC 246-976 adopted by the Department of Health (DOH).

The procedure is described in the schematic with narrative. Its purpose is to provide the Prehospital provider, with quick identification of a major trauma victim. If the patient is a major trauma patient, that patient or patents must be taken to the highest level trauma facility within 30 minutes transport time, by either ground or air. To determine whether an injury is major trauma, the Prehospital provider shall conduct the patient assessment process according to the trauma triage procedure.

Explanation of Process

- A. Any certified EMS and Trauma person can identify a major trauma patient and activate the trauma system. This <u>may</u> include requesting more advanced Prehospital services or aero-medical evacuation.
- B. The first step (1) is to assess the vital signs and level of consciousness. The words "Altered mental status" mean anyone with an altered neurological exam ranging from completely unconscious, to someone who responds to painful stimuli only, or a verbal response which is confused, or an abnormal motor response.

The "and/or" conditions in Step! mean that any one of the entities listed in Step 1 can activate the trauma system.

Also, the asterisk (*) means that if the airway is in jeopardy and the on-scene person cannot effectively manage the airway, the patient should be taken to the nearest medical facility or consider meeting up with an ALS unit. These factors are true regardless of the assessment of other vital signs and level of consciousness.

C. The second step (2) is to assess the anatomy of injury. The specific injuries noted <u>require</u> activation of the trauma system. Even in the assessment of normal vital signs or normal levels of consciousness, the presence of any of the specific anatomical injuries <u>does</u> require activation of the trauma system.

Please note that steps 1 and 2 also require notifying Medical Control.

D. The third step (3) for the Prehospital provider is to assess the biomechanics of the injury and address other risk factors. The conditions identified are reasons for the provider to contact and <u>consult with</u> <u>Medical Control</u> regarding the need to activate the system. They do not automatically require system activation by the Prehospital provider.

Other risk factors, coupled with the "gut feeling" of savers injury, means that <u>Medical Control should be</u> <u>consulted</u> and consideration given to transporting the patient to the nearest trauma facility.

Please note that certain burn patients (in addition to those listed on Step 2) should be considered for immediate transport or referral to a burn center/unit.

PATIENT CARE PROCEDURE # 3

<u>Trauma System Activation</u>

OBJECTIVE

To define the components of trauma system activation on a regional level.

To clarify that the Prehospital component of trauma system activation includes identification of major trauma patients in the field (using the State of Washington Prehospital Trauma Triage [Destination] Procedure), and early notification and consultation with medical control, trauma center transport and data collection and submission.

To clarify that the hospital component of trauma system activation includes recognition of the critical trauma patients need to ED and surgical intervention and activation of the hospitals trauma resources, and data collection and submission.

STANDARD 1

Dispatch center personnel shall identify major trauma calls using the State of Washington Prehospital Trauma Triage [Destination] Procedure and shall dispatch verified trauma services according to the regional standard for identification of the level of medical care personnel to be dispatched to the scene of major trauma and to transport major trauma and state law. (Patient Care Procedure #4)

STANDARD 2

The response and transport services dispatched to the scene will confirm the patient meets major trauma patient parameters according to the State of Washington Prehospital Trauma Triage [Destination] Procedure.

STANDARD 3

The response and transport service personnel providing care shall place a trauma patient identification number band on all patients who activate the Trauma System according to the State of Washington Prehospital Trauma Triage [Destination] Procedure.

STANDARD 4

The transporting service will provide a patient report to medical control identifying each major trauma patient transported that meets the triage criteria. For STEP 1 patients to a 20 minute ETA notification is required to facilitate trauma surgeon arrival in the ED.

STANDARD 5

Trauma verified transport services shall take identified trauma patients who activate the Trauma System to designated trauma centers in accordance with state requirements and the regional standard *transport of patients to designated trauma centers* (Patient Care Procedure #8). (This standard will not apply until the state trauma center designation process is complete. Until then, Prehospital services will transport major trauma patients to the local facility that can provide the appropriate level of care needed by the patient.)

STANDARD 6

The response and transport services will provide patient data to the Department of Health for all patients identified as meeting the triage criteria (major trauma patients requiring transport to trauma centers) on the State of Washington Prehospital Trauma Triage [Destination] Procedure for trauma registry use. The transport service will provide written documentation of the call 95% of the time prior to leaving the ED.

STANDARD 7

The receiving hospital will utilize the approved trauma activation guidelines for that facility to identify the minimum threshold of activation of a hospital Trauma Team response. Trauma Team activation includes notification of the Trauma Surgeon.

STANDARD 8

Designated trauma centers will collect and submit data on major trauma patients for trauma registry use in accordance with WAC requirements.

STANDARD 9

<u>Injured patients who **do not meet** Prehospital triage criteria for activation of the trauma system</u> and all other patients will be transported to local facilities based on county Prehospital patient care protocols and procedures.

PATIENT CARE PROCEDURE # 4

Identification of the Level of Medical Care Personnel to be Dispatched to the Scene of Major Trauma and to Transport Major Trauma

OBJECTIVE

To define the role of BLS and ALS services (agency and its units) in emergency response to reported major trauma incidents.

To define the role of BLS and ALS services in transporting major trauma patients.

STANDARD 1

For initial response to reported major trauma incidents the closest, designated local ALS or BLS trauma verified EMS service shall respond.

STANDARD 2

Where the closest designated local trauma verified service is BLS, a trauma verified ALS service shall respond simultaneously for <u>all</u> reported major trauma patient.

STANDARD 3

For transport of identified major trauma patients in Steps 1 and 2 of the State of Washington Prehospital Trauma Triage [Destination] Procedure, a designated local trauma verified ALS service shall provide transport.

STANDARD 4

For transport of identified major trauma patients in the "consult medical control portion of the State of Washington Prehospital Trauma Triage [Destination] Procedure", ALS or BLS transport shall be at the discretion of Medical Control from the receiving trauma center. In either case, the transport service shall be trauma verified, including air transport service.

STANDARD 5

For multi-casualty, major trauma incidents which exhaust resources of the local EMS system, mutual aid from BLS and ALS verified trauma services shall be activated using the county and inter-county procedures. Trauma verified ALS services shall transport the Step 1 and Step 2 patients as identified through the State of Washington Trauma Triage [Destination] Procedure tool when possible. Transport designated trauma facilities will be under the direction of Medical Control or Incident Command structure depend on the magnitude of the event.

PATIENT CARE PROCEDURE # 5 -

Prehospital Response Times

OBJECTIVE:

To define agency response times for trauma occurring in urban, suburban, rural and wilderness response areas in the North Region.

STANDARD 1:

Response Times – The North Region EMS & Trauma Care Council adopts the response time standards of the State EMS & Trauma Care System, as described in WAC 246-976-390, Verification of trauma care services, paragraphs 10 and 11; and the definitions of urban, suburban, rural and wilderness response areas as described in WAC 246-976-010, definitions.

		Don Response Time Standards - Torter Response Standards		
AREA/TYPEOF SERVICE	AID VEHICLE (NON TRANSPORT)	AMBULANCE (TRANSPORT)		
Urban An incorporated area over 30,000; <i>or</i> Any area of 10,000 and a population density of over 2,000 per square mile.	Less than or equal to 8 minutes	Less than or equal to 10 min		
Suburban Any area with a population of 10,000-29,999; <i>or</i> Any area with a population density of 1,000-1,999 per square mile.	Less than or equal to 15 minutes	Less than or equal to 20 minutes		
Rural Any area with total population less than 10,000; <i>or</i> Any area with a population density of less than 1,000 per square mile.	Less than or equal to 45 minutes	Less than or equal to 45 minutes		
Wilderness A rural area not readily accessible by public or private maintained road.	ASAP	ASAP		

DOH Response Time Standards = North Region Response Standards

Note: The state response times are listed here from WAC 246-976-390 (10 & 11). They must be met 80% of the time

PATIENT CARE PROCEDURE # 6

Activation of Air Ambulance services for Field Response to Major Trauma

OBJECTIVE

To define how helicopter activation for major field response is accomplished in the Region.

STANDARD 1

The decision to activate air ambulance service for field response to major trauma in urban and rural areas shall be made by the highest trained responder, who can be a First Responder, EMT or Paramedic, from the scene <u>with</u> on-line medical control consultation when needed. Where ICS is used, the commander shall be an integral part of this process.

STANDARD 2

The decision to activate air ambulance services for field response to major trauma in wilderness areas shall be made by anyone familiar with EMS in the area.

STANDARD 3

Aero-medical programs requested to respond will follow their internal policies for accepting a field mission.

PATIENT CARE PROCEDURE # 7

Transport of Patients Outside of Base Area

OBJECTIVE

To define responsibility for patient care for major trauma transports outside base coverage areas, counties and EMS Regions.

To define the procedure for transfer of responsibility during transports outside base areas, counties and EMS Regions.

STANDARD 1

Patients transferred out of any local base coverage area (from either the base hospital or the field) are initially the responsibility of local on-line medical control. Local Prehospital protocols will be followed by Prehospital personnel. Initial orders, which are consistent with local Prehospital protocols, will be obtained from base station on-line medical control.

STANDARD 2

When transport service crosses into *destination* jurisdiction, the destination on-line medical control will be contacted and given the following information:

- brief history
- pertinent physical findings
- summary of treatment (per protocols and per orders from base medical control)
- response to therapy
- current condition

STANDARD 3

The destination medication control physician may add further orders if they are within the capabilities of the transport personnel and consistent with the provider's local medical protocols.

STANDARD 4

The nearest trauma center base station will be contacted during transport should the patient's condition deteriorate and/or assistance is needed. The transporting unit (ground or air) may divert to the closest trauma center as dictated by the patient's condition.

STANDARD 5

Pre-hospital providers will follow local county protocols.

PATIENT CARE PROCEDURE #8

Transport of Patients to Designated Trauma Centers

OBJECTIVES

To define the flow of major trauma patients from the incident scene to hospitals in the region and interregionally.

STANDARD 1

Prehospital service personnel will identify injured patients as "major trauma patients" using the state of Washington Prehospital Trauma Triage [Destination] Procedure identification tool.

STANDARD 2

Prehospital trauma patients identified as meeting "trauma System Activation" criteria (major trauma patient in Step 1 and Step 2 and anyone in Step 3 [State of Washington Prehospital Trauma Triage [Destination] Procedure Tool] by order of medical control) shall be transported to the highest level designated trauma center hospital within 30 minutes. (The 30 minutes is calculated from the time of the departure of the transport vehicle from the scene and the ETA at the designated trauma center.)

STANDARD 3

For Prehospital trauma patients identified as meeting the criteria for Consulting Medical Control, the on-line medical control physician will determine if the patient activates the trauma system. If it is determined that the trauma patient does activate the trauma system, the patient shall be taken to the highest level designated trauma center within 30 minutes. If the on-line medical control physician (the only Emergency Department physician) determines the trauma patient does not activate the trauma system the medical control physician will determine the destination of the patient, which may include non-designated hospitals. It shall be on the on-line medical control physician's responsibility to communicate the patient's trauma system activation status and the destination decision to the transporting service.

STANDARD 4

Major trauma patients with special needs, as in head injury, burns, intra-thoracic injury, and pediatric trauma will be considered for direct transport, by ground or air, to the highest level designated interregional trauma center with capabilities to manage the patient. Medical control will determine the patient destination. This standard recognizes longer transport times.

PATIENT CARE PROCEDURES #9

Designated Trauma Center Diversion

OBJECTIVE

To define implications for initiation of trauma center diversion (bypass) status in the Region.

To define methods for notification of initiation of trauma center diversion.

STANDARD 1

Designated trauma centers in the Region will go on diversion for receiving major trauma patients based on the facilities' inability to provide initial resuscitation, diagnostic procedures and operative intervention at the designated level of care.

STANDARD 2

Diversion will be categorized as *partial* or *total* based on the inability of the facility to manage specific types of major trauma or all traumas at the time.

Hospitals must consider diversion when:

- Surgeon is unavailable
- OR is unavailable
- CT is down if Level II
- Neurosurgeon is unavailable if Level II
- ER unable to manage more major trauma

STANDARD 3

Each designated trauma center will have a hospital approved policy to divert patient to other designated facilities based on its ability to manage each patient at a particular time. A diversion log will be kept indicating the time of diversion and the reason for partial or total diversion.

STANDARD 4

All facilities imitating diversion must provide notification to other regional trauma centers.

NORTH REGION EMS & TRAUMA CARE SYSTEM Operational Guidelines

PATIENT CARE PROCEDURES #10

Activation of Hospital Trauma Resuscitation Team

OBJECTIVE

To define region-wide minimum activation criteria for hospital trauma resuscitation teams.

STANDARD 1

The Prehospital Index (PHI) (trauma patient severity scoring tool) will be utilized for trauma patients over 14 years of age. Patients with a PHI score of 4 or greater than 4 will automatically trigger the activation of the hospital trauma resuscitation team including response by the surgeon on trauma call.* The PHI will be calculated by the medical control physician from the Prehospital medic radio report and shall be based on the patient's initial condition (prior to Prehospital treatment). When possible, the Prehospital report will be called to the Emergency Department 20 minutes prior to the estimated time of arrival, to allow for notification and response of the surgeon on call for trauma.

Trauma patients over 14 years of age, who arrive at the ED by private car or EMS transport ad have a Prehospital Index score of 4 or greater on arrival will automatically trigger a hospital trauma resuscitation team activation including surgeon response.

STANDARD 2

The Pediatric Trauma Score (trauma patient severity scoring tool) will be utilized for pediatric trauma patients (0 to 14 years of age). Pediatric trauma patients with a Pediatric Trauma Score of 8 or less will automatically trigger the activation of the hospital trauma resuscitation team including response by the surgeon on trauma call. The Pediatric Trauma Score will be calculated by the on-line medical control physician from the Prehospital radio report and be based on the patient's initial condition (prior to Prehospital treatment). When possible, the Prehospital report will be called to the Emergency Department 20 minutes prior to the estimated time of arrival, to allow for notification response of the surgeon on call for trauma.

Pediatric trauma patients who arrive at the ED by private car or EMS transport and have a Pediatric Trauma Score of 8 or less will automatically trigger a hospital trauma resuscitation team activation including surgeon response.

STANDARD 3

A hospital may set a higher standard for activation of its hospital trauma resuscitation team.

PATIENT CARE PROCEDURES #11

Inter-Facility Transfer Of Major Trauma Patients

OBJECTIVE

To define the referral resources for inter-facility transfers of major trauma patients requiring a higher level of care or transfer due to situational adult and pediatric inability to provide care.

To recommend criteria for inter-facility transfer of adult and pediatric major trauma patients from receiving facility to a higher level of care.

STANDARD 1

All inter-facility transfers will be consistent with OBRA/COBRA regulations as defined by WAC.

STANDARD 2

Written transfer agreements will be in place among all facilities in the region and tertiary care facilities commonly referred to which are out of the region. A standard regional transfer agreement shall be utilized.

STANDARD 3

Level III, IV and V facilities are recommended to consider transferring the following adult and pediatric patients to Level I or II facilities for post resuscitation care:

Central Nervous System Injury D₃

- Head injury with any one of the following:
 - open, penetrating, or depressed skull fracture
 - CSF leak
 - severe coma (Glasgow Coma Score < 10)
 - deterioration on Coma Score of 2 or more points
 - lateralizing signs
- Unstable spine
- Spinal cord injury (any level)

Chest Injury D_x

- Suspected great vessel or cardiac injuries
- Major chest wall injury
- Patients who may require protracted ventilation

Pelvis Injury D_x

- Pelvic ring disruption with shock requiring more than 5 units of blood transfusion
- Evidence of continued hemorrhage
- Compound/open pelvic fracture or pelvic visceral injury

Multiple System Injury D_x

- Severe facial injury with head injury
- Chest injury with head injury
- Abdominal or pelvic injury with head injury
- Burns with head injury

Specialized Problems

- Burns > 20% BSA or involving airway
- Carbon monoxide poisoning
- Barotrauma

Secondary Deterioration (Late Sequelae)

- Patient requiring mechanical ventilation
- Sepsis
- Organ system(s) failure (deterioration in CNS, Cardiac, Pulmonary, Hepatic, Renal, or Coagulation systems)
- Osteomyelitis

STANDARD 4

All pediatric patients < 15 years who are triaged under Step 1 or Step 2 of the Prehospital triage tool or are unstable after ED resuscitation or emergent operative intervention at hospitals with general designations should be considered for immediate transfer to a Level I designated pediatric trauma center hospital.

STANDARD 5

For inter-facility transfer of critical major trauma patients, air or ground ALS transport is the standard. Transport of patients out of base area, standards (Patient Care Procedure #7) shall be followed. Trauma verified services shall be used for inter-facility transfers.

PATIENT CARE PROCEDURES #12

Regional All Hazards (Mass Casualty Incident)

- I. STANDARD: EMS personnel, licensed ambulance and licensed aid services shall respond to a Mass Casualty Incident (MCI) as identified in this document.
 - 1. All verified ambulance and verified aid services shall respond to an MCI per the county MCI plans.
 - 2. Licensed ambulance and licensed aid services shall assist during an MCI per county MCI plans when requested by command through dispatch in support of county MCI Plan and/or support of verified EMS services.
 - 3. EMS certified first response personnel shall assist during an MCI per county MCI plans when requested by command through dispatch in support of county MCI Plan and/or in support of verified EMS services.
 - 4. Pre-identified patient mass transportation, EMS staff and equipment to support patient care may be used.
 - 5. All EMS agencies working during an MCI event shall operate within the National Incident Management System (NIMS) or the Incident Command System (ICS) as identified in the jurisdiction that has authority, protocol and MCI plan.

II. PURPOSE:

- 1. To develop and communicate the information or regional trauma plan section VII prior to an MCI.
- 2. To implement county MCI plans during an MCI.
- 3. Severe Burns: To provide trauma and burn care to severely injured adults and pediatric patients per region.
- 4. To provide safe mass transportation with pre-identified EMS personnel, equipment, and supplies per the approved County Disaster Plan and/or the Hazardous Mitigation Plan.

III. PROCEDURES:

- 1. Incident Commander (IC) shall follow the county MCI Plan to inform medical control and possible appropriate medical facilities when an MCI condition exists. (Refer to county specific Department of Emergency Management Disaster Plan).
- 2. Medical Program directors agree that protocols being used by the responding agency should continue to be used throughout the transport of the patient, whether it is in another county, region or state. This ensures consistent patient care will be provided by personnel trained to use specific medicines, equipment, procedure, and/or protocols until delivery at the receiving facility has been completed.

3. EMS personnel may use the **Prehospital Mass Casualty Incident General Algorithm** (attached) during the MCI incident.

IV. QUALITY IMPROVEMENT:

The North Region Education and Prehospital Committees will review this PCP upon receipt of suggested modifications from a regional provider, the North Region Quality Improvement (QI) Committee, the Department of Health, or any other entity suggesting modifications to the document, at least biennially.

V. **DEFINITIONS:**

- **CBRNE** Chemical, Biological, Radiological, Nuclear, Explosive
- **County Disaster Plan** County Emergency Management Plan (CEMP)
- Medical Control MPD authority to direct medical care provided by certified EMS personnel in the prehospital system.
- **Hospital Control** Hospital identified in the county MCI plan as the control hospital.

Prehospital Mass Casualty Incident (IC) General Algorithm

renospital Mass Casualty Incident (IC) General Algorithm		
Receive dispatch		
Respond as directed		
Arrive at scene and establish Incident Command (IC)		
Scene assessment and size-up		
Determine if mass casualty conditions exist		
Implement county MCI plan		
Request additional resources as needed		
The dispatch center shall coordinate notification and dispatch of required agencies and resources including notification of the County Department of Emergency management (DEM) and hospital control. The Local Health Jurisdiction (LHJ) shall be notified in events where a public health threat exists.		
Identify hazards and determine needs to control or eliminate them. Take immediate action to isolate and deny access (Site Access Control) or mitigate the hazards as necessary to prevent additional injuries. Consider possibility of terrorist attack (WMD, secondary device).		
Initiate START		
Reaffirm additional resources		
Initiate ICS 201 or similar tactical worksheet (see attached)		
Upon arrival at Medical Center, transfer care of patients to medical center's staff (medical center should activate their respective MCI Plan as necessary)		
Prepare transport vehicle and return to service		

NORTH REGION EMS & TRAUMA CARE SYSTEM Operational Guidelines

PATIENT CARE PROCEDURES #13

EMS Transport Destination of Medical Patients

OBJECTIVE

To allow Medical Program Directors to develop local protocols to define the destination of EMS Medical Patients.

To allow local county protocols to route patients to hospitals that have capabilities appropriate for the patient's presenting medical condition.

STANDARD 1

All EMS Agencies should follow their Medical Program Director's patient care protocols and/or guidelines for the care and transport of medical and non-major trauma patients.

STANDARD 2

If it is unclear as to where a medical or non-major trauma patient should be transported, contact medical control at your nearest resource hospital for directions; otherwise follow off-line medical control of patients as outlines in your standing orders, patient care protocols, and/or guidelines provided by your Medical Program Director.