

GRAYS HARBOR EMERGENCY MEDICAL SERVICES



PATIENT CARE PROTOCOL MANUAL

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Grays Harbor Emergency Medical Services Patient Care Protocols

REVISION

The date of the last revision of the GHEMS Patient Care Protocols is

September, 2018

Items revised, deleted or added will be denoted within the contents sections of the protocols as well as on the protocol itself with the above date.

PRINTING THIS DOCUMENT

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Norepinephrine	September, 2018	IFT-MED-070
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AHA Algorithms

Topic	Last Reviewed	Protocol No.
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Common Medical Abbreviations

Common Medical Abbreviations	September, 2018	
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Grays Harbor Emergency Medical Services Patient Care Protocols

INTRODUCTION

DISCLAIMER

Every attempt has been made to reflect sound medical guidelines and protocols based on currently accepted standards of care for out of hospital emergency medicine. It is the reader's responsibility to stay informed of any new changes or recommendations made at the state or service level.

PREFACE

This EMS protocol manual was established to provide an opportunity for optimal patient care by multiple levels of EMS providers functioning within the Grays Harbor EMS system. Personnel functioning within the Grays Harbor EMS system may only function as an EMS provider under the authority of the Medical Program Director.

Errors in pre-hospital care are generally errors of omission. The EMS provider will be proactive in the implementation of these protocols, and should not withhold or delay any indicated intervention. Providers should remember to "FIRST DO NO HARM"

Periodic revisions will be made in order to reflect the best possible care rendered to our patients consistent with currently acceptable medical practices. These revisions shall be made with the established EMS leadership in conjunction with the MPD and local medical community involvement.

Every patient will be afforded the best care available, in accordance with these protocols and the EMS provider's best judgment, without regard to their sex, mental status, national origin, religion, creed, color, race, diagnosis or prognosis, complaint, lifestyle preference, or ability to pay for services rendered. There is a zero tolerance policy for discrimination based on any of the above.

Any discipline based on patient care issues shall be done by the Medical Program Director under the guidelines of the Washington State Department of Health Medical Program Director's Handbook. Complaints and/or concerns based on an EMS provider's care or any other concerns related to EMS operations are to be forwarded to the Medical Program Director.

CONTINUOUS QUALITY IMPROVEMENT

To maximize the quality of care in EMS, it is necessary to continually review all EMS activity in order to identify areas of excellence and topics for improvement. This method

allows optimal and continuous improvement. CQI is defined as a proactive involvement in issues and applications to constantly assess the value and direction of the EMS system.

Components of CQI include: active communications, documentation, case presentations, protocol review and refinement, medical direction involvement, medical community involvement, continuing education, and reassessment of expected goals and outcomes. Participation in the CQI process is mandatory in order to function within the system.

The primary focus of CQI is on “system performance”. Specifically CQI focuses on the bigger picture of our system, including protocols, guidelines, equipment, training and standard operating procedures. The EMS Medical Program Director may request additional documentation, for the purpose of gathering information about a particular call, event, or procedure in question. Failure to cooperate with a request of the Medical Program Director may result in disciplinary action by the Medical Program Director and/or the State of Washington Department of Health.

GUIDELINES AND PROTOCOLS

This document contains both general guidelines and specific EMS protocols for use by EMS responders. Inactive members may not utilize these protocols without being cleared by their respective EMS department/service and the Medical Program Director.

Volunteer or career, emergency medicine demands a strong commitment to the profession. It is the responsibility of each EMS provider to remain current in the lifelong process of EMS education. EMS providers are heavily encouraged to attend any available continuing education opportunities. We trust and hope that this document is both informative and helpful.

Emergency medicine continues to evolve at a rapid pace. Accordingly, this document is subject to change as new information becomes available and accepted by the medical community. Dates of revised or newly implemented protocols will be shown on the respective protocol as well as in the contents section.

These protocols have been divided into seven sections, those being as follows:

1. Patient Care Protocols (PCP)

These are the guidelines for treatment of specific conditions present by patients and have 6 subsections:

- Significant Findings: These are items that patients may have as a complaint as part of their respective condition. Items contained here that are denoted with an asterisk (*) call for an automatic ALS response/upgrade.
- Required Paramedic Evaluation: Upon evaluation of a patient by either a BLS provider or IV-Tech, these findings require that an upgrade to ALS for a paramedic evaluation is performed.
- BLS Treatment: Treatment provided by BLS level responders. These treatments are geared towards providers certified at the EMT and EMT

with Supraglottic Airway (SGA) Endorsement level. EMR shall follow these guideline up to their scope of practice.

- IV Technician Treatment: Treatment provided by providers certified as an EMT with an IV Endorsement.
 - ALS Treatment: Treatment performed by ALS/Paramedic personnel.
2. Patient Care Procedures (PROC)
These are the guidelines set forth for specific procedures that may be performed by EMS personnel in the field. Generally, these procedures are broken into the following sections: Indications, Contraindications and procedure.
 3. Patient Care Reference (REF)
This section contains items of reference noted within the Patient Care Protocols.
 4. Medication Protocols (MED)
These are the informational protocols for the medications to be carried by EMS agencies within the GHEMS service area. Agencies are to carry the medications respective to their level of service.
 5. Interfacility Transport Protocols (IFT)
 6. AHA Algorithms
 7. Common Medical Abbreviations

Patient Care Procedures, References and Medications are noted for specifying which levels of certifications are approved for their respective use utilizing the following markings:



The end of each protocol will be denoted with *****.

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GRAYS HARBOR EMERGENCY MEDICAL SERVICES



PATIENT CARE PROTOCOL MANUAL

-- Patient Care Protocols --

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Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-010*

Effective: *June, 2009*

Revised: *September, 2018*

MEDICAL CONTROL

When the necessity arises that EMS personnel need to contact Medical Control, they shall contact an on-duty Emergency Room physician at Grays Harbor Community Hospital, unless otherwise expressed by the Medical Program Director.

In instances where, after receiving direction from medical control, EMS personnel feel medical control does not fully understand the circumstances of a pre-hospital situation the EMS provider in charge of the Patient may contact the Medical Program Director at his/her discretion.

Medical direction may also be made directly from the Medical Program Director or his/her designee.

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Grays Harbor Emergency Medical Services Patient Care Protocols

No. <i>PCP-020</i>	Effective: <i>June, 2009</i>	Revised: <i>September, 2018</i>
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DELIVERY OF SERVICES

PROVIDER LEVEL

1. Pre-hospital providers will provide care based on their respective scope of practice.

Level	Medical Control & Skill Capabilities	Medication Administration
EMR	<ul style="list-style-type: none"> MPD Protocols Patient Assessment CPR/BVM/AED Basic Bandaging/Splinting BLS Trauma Triage BLS Medical BLS Pediatrics 	<ul style="list-style-type: none"> Oxygen
EMT	All EMR skills and knowledge as well as: <ul style="list-style-type: none"> BLS OB/GYN Traction Splinting Supraglottic Airway (EMT w/ SGA only) Dexi Stick CPAP Pulse Ox 	All EMR medications as well as: <ul style="list-style-type: none"> Aspirin Epi-Injection Oral Glucose Activated Charcoal Narcan May assist patient with patient's... <ul style="list-style-type: none"> Nitroglycerin Metered Dose Inhaler
EMT-IV	All EMR and EMT skills and knowledge as well as: <ul style="list-style-type: none"> Peripheral IV skills Fluid Therapy Intraosseous Infusion (IO) skills 	All EMR and EMT medications.
PARAMEDIC	All EMR, EMT and EMT-IV skills and knowledge as well as: <ul style="list-style-type: none"> MPD Protocols Endotracheal Intubation Advanced Airway Procedures ACLS Manual Defibrillation Advanced medical and trauma assessment and skills Intraosseous Infusions Advanced IV Access 	

SERVICE LEVEL

1. EMS services shall be provided in Grays Harbor and North Pacific County by agencies licensed in the State of Washington at the level of their respective licensure as shown below.

ID	Department	License Trauma Verified	Type	Transport
14M01	Aberdeen Fire Department	ALS	Ambulance	Yes
14M02	Cosmopolis Fire Department	BLS	Aid	Aberdeen Fire
14M03	Elma Fire Department	BLS	Aid	GHFD 5
14M04	Hoquiam Fire Department	ALS	Ambulance	Yes
14M05	McCleary Fire Department	BLS	Aid	GHFD 5
14M06	Montesano Fire Department	ALS	Ambulance	Yes
14M08	Ocean Shores Fire Department	ALS	Ambulance	Yes
14D01	Grays Harbor Fire District 1	BLS	Aid	Thurston County AMR
14D02	Grays Harbor Fire District 2	ALS	Ambulance	Yes
14D04	Grays Harbor Fire District 4	BLS	Ambulance	Yes
14D05	Grays Harbor Fire District 5	ALS	Ambulance	Yes
14D06	Grays Harbor Fire District 6	BLS	Aid	Hoquiam Fire
14D07	Grays Harbor Fire District 7	BLS	Ambulance	Yes
14D08	Grays Harbor Fire District 8	BLS	Ambulance	Yes
14D10	Grays Harbor Fire District 10	BLS	Aid	Aberdeen/Hoquiam Fire
14D15	Grays Harbor Fire District 15	BLS	Aid	Aberdeen Fire
14D16	Grays Harbor Fire District 16	BLS	Ambulance	Yes
14D17	Grays Harbor Fire District 17	BLS	Aid	Hoquiam Fire
14X01	Quinault Nation EMS	ILS	Ambulance	Yes
14X03	South Beach RFA	ALS	Ambulance	Yes
25M03	Raymond Fire Department (NPCEMS)	ALS	Ambulance	Yes
ID	Department	License Non-Trauma Verified	Type	Transport
14X05	Ride To Wellness	ALS	Ambulance	Yes

2. In accordance with RCW 18.73.130, only in emergencies when licensed ambulances are not available or cannot meet overwhelming demand, transporting agencies may be pressed into service to transport above their respective level of licensure only if done so within responder's scope of practice, available equipment and GHEMS Patient Care Protocols.
3. BLS and ILS level agencies that transport must request an ALS/Paramedic level response when indicated by the Grays Harbor County Patient Care Protocols. The ALS/Paramedic response can come by the means of a request for mutual aid from the closest ALS agency.
4. Changes in the above response and transportation plan shall be done only with the approval of the Grays Harbor Emergency Medical Services Council, Grays Harbor Medical Program Director and West Region Emergency Medical Services Council.



Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-030*

Effective: *August, 2004*

Revised: *September, 2018*

GENERAL PATIENT ASSESSMENT

1. Patients that gain access to the services of the various Grays Harbor County EMS agencies via a direct means (walk-in's, etc.) will be triaged as appropriate by individuals present at the time.
2. Once notified of the need for services, EMS providers will take the appropriate actions to respond to the standard of care for their level of certification.

SIZE –UP

1. Answer the following questions.
 - a. Is it safe for us to be here?
 - b. Do we have the appropriate BSI protection deployed?
 - c. What is the Nature of the call? (Medical-NOI or Trauma-MOI)
 - d. How many patients are involved and how badly are they hurt?
 - e. Do I have enough resources to treat and transport the patients?

PRIMARY ASSESSMENT

1. Form a general impression of the patient.
 - a. Identify immediate threats
 - b. Identify chief complaint
 - c. Position patient for assessment
2. Determine responsiveness (AVPU)
3. Airway
4. Breathing
5. Circulation
6. Disability
7. Establish Priority (determine ALS vs. BLS evaluation, treatment, and transport)

SECONDARY ASSESSMENT

1. Medical Complaint-
 - a. Responsive
 - i. Rapid assessment PRN
 - ii. Baseline vital signs
 - iii. Treatment PRN
 - b. Unresponsive
 - i. Rapid assessment
 - ii. Baseline vital signs

- iii. SAMPLE History
- iv. Treatment PRN
- 2. Traumatic Complaint
 - a. Non-Significant MOI
 - i. Assess the injury site
 - ii. Baseline vital signs
 - iii. SAMPLE History
 - iv. Treatment PRN
 - b. Significant MOI/Unresponsive
 - i. Rapid head to toe trauma assessment
 - ii. Baseline vital signs
 - iii. SAMPLE History
 - iv. Treatment PRN

DETAILED PHYSICAL EXAM

Per training, but consider:

- 1. Medical Complaint
 - a. Responsive
 - i. A complete review of affected body systems
 - ii. Reassess vital signs
 - b. Unresponsive
 - i. A complete head to toe survey
 - ii. Reassess vital signs
- 2. Traumatic Complaint
 - a. Non-Significant MOI
 - i. A complete review of injured body region
 - ii. Reassess vital signs
 - b. Significant MOI/Unresponsive
 - i. A complete head to toe survey
 - ii. Reassess vital signs

ONGOING ASSESSMENT

- 1. Repeat and record initial assessment
- 2. Repeat and record vital signs
 - a. Unstable: every 5 min
 - b. Stable: every 15 min
- 3. Repeat and record focused assessment of patient complaint/injuries
- 4. Check and record response to interventions



Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-040*

Effective: *August, 2004*

Reviewed: *September, 2018*

DOWNGRADING CALLS FROM ALS TO BLS

1. The on-scene paramedic must contact the on duty Emergency Room Physician at Grays Harbor Community Hospital and discuss the case. The on duty Emergency Physician will determine if a call should be downgraded from ALS to BLS.
2. The following cases are not to be downgraded:
 - a. Chest Pain
 - b. Shortness of Breath
 - c. Hypotension
 - d. Mental Status Change

REFERENCE:

1. [PCP-010: Medical Control](#)

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Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-050*

Effective: *August, 2004*

Revised: *September, 2018*

GENERAL PATIENT CARE PROCEDURES

BOLD ITALICS INDICATE AN ALS PROCEDURE

AIRWAY

1. Management shall be in accordance with current AHA standards
 - a. Positioning
 - i. Head tilt/Chin lift (No trauma)
 - ii. Jaw Thrust
 - b. Foreign Body Airway Obstruction removal
 - i. Suctioning
 - ii. Finger Sweep (No blind sweeps)
 - iii. Abdominal thrusts (Chest thrusts for infants/pregnant/obese patients)
 - iv. Back blows (infants only)
 - v. ***Direct laryngoscopy and removal of the obstruction with McGill's***
 - c. Maintenance
 - i. Positioning
 - ii. Insertion of Oropharyngeal Airway
 - iii. Insertion of Nasopharyngeal Airway
 - iv. Insertion of Supraglottic Airway
 - v. ***Orotracheal Intubation***
 1. ***Eschmann Stylette***
 - vi. ***Surgical Intervention***

BREATHING

1. It shall be enhanced, assisted or maintained using the following equipment and techniques:
 - a. Nasal cannula with oxygen Non-Rebreather Mask with oxygen
 - b. Consider the use of CPAP

VENTILATION

1. It shall be enhanced, assisted or maintained using the following equipment and techniques:
 - a. Pocket Mask

- b. Bag Valve Mask with reservoir bag and oxygen
 - i. Used to assist a seated conscious patient
 - ii. Used to assist or breathe for an unconscious patient
 - iii. Used in conjunction with Supraglottic Airway, I-Gel, or King, EJ or Endotracheal tube
- c. Portable oxygen powered ventilator

CIRCULATION

1. Management shall be in accordance with current AHA standards
 - a. Bleeding Control
 - i. Direct pressure, tourniquet.
 - b. Assist Circulation
 - i. All Cardiac Arrest Patients that do not meet the Death in Field criteria will be considered for cardiopulmonary resuscitation.
 - ii. If a patient does not meet the criteria set for in the Death in Field protocol, BLS personnel shall begin resuscitation and apply the AED.
 - iii. Cardiopulmonary resuscitation shall be performed in accordance with current AHA guidelines or as directed by protocols

FLUID RESUSCITATION

1. Fluid resuscitation for individuals with circulatory compromise should be aggressively managed with close attention directed toward the patient's pulmonary status. The goal is to obtain and maintain a systolic BP between 80 – 100 mmHg. In patients with suspected internal bleeding, care should be taken not to raise the systolic BP higher than 90 – 100 mmHg.
2. Fluid resuscitation for children less than 8 y/o and presenting with signs and symptoms of shock should consist of a bolus of Normal Saline. Successive boluses can be given.
3. Peripheral IV's should be established in 2 –3 attempts, then external jugular IV access or central IV access should be sought in one of the following sites:
 - a. Right/Left EJ Vein
4. If peripheral IV access is difficult, consider intraosseous infusion

DISABILITY

1. Evaluation of MOI should be completed for every patient that is suspected of having a spinal injury.
 - a. All patients that have a traumatic MOI that is suggestive of spinal injury or has an uncertain degree of injury should receive immediate manual stabilization of their neck.

- b. After the initial assessment is complete, patients with a traumatic MOI and an uncertain degree of injury shall have the Spinal Immobilization Decision Tool used as part the evaluation in regards to spinal precautions.
- c. Patients that have a traumatic MOI that is suggestive of spinal injury or do not meet the inclusion criteria of the Spinal Immobilization Decision Tool shall have full spinal precautions applied.
- d. All patients with signs and symptoms of long bone fractures or joint injuries should be immobilized considering the following goals.
 - i. The joint above/below the fracture should be immobilized
 - ii. The bone above/below an injured joint should be immobilized
 - iii. Distal PMS should be evaluated and recorded before/after
 - iv. In general, joints should be splinted in position found unless it is not compatible with transport. In these cases, the joint should be repositioned as neutral as possible.
 - v. In general, bones should be splinted in gross anatomical alignment.
 - vi. When possible elevate extremities above the level of the heart and apply cold packs. At any time, ALS should be considered for pain management.

COMMUNICATION & DOCUMENTATION

1. ALS upgrades will be requested via dispatch (HARBOR/PACCOM) with the reason for upgrade given.
2. Short reports will be given to responding medic units.
3. BLS units recommending the cancellation of an ALS unit are required to give a complete verbal report to the incoming medic unit if possible.
4. Paramedics are required to make contact with a supervising physician when:
 - a. Directed to do so by Protocol.
 - b. The paramedic has evaluated a patient who was thought to be an ALS patient and would like to down grade to BLS.
 - c. The paramedic has examined the patient and needs to consult with a physician on the best course of treatment for the patient.
5. Any unit transporting a patient is required to contact the receiving facility to give a short report a.s.a.p. or initiation of transport.
6. Verbal and written document of patient care:
 - a. A verbal report shall be given for hand off of every patient
 - b. Except in emergent situations, the first arriving unit shall ensure that the written report accompanies the patient.
 - c. Transporting agencies must provide an initial written report of patient care, from the first arriving agency and the transporting agency, to the receiving facility at the time the patient is delivered to the facility.
 - i. Written/Electronic documentation shall be done utilizing the approved Grays Harbor Emergency Medical Services Patient Care Report.
 1. At the time of arrival at receiving facility, a minimum of a brief patient care report shall be submitted.

2. Within 24-hours of arrival, a complete patient care report shall be submitted,

TRANSPORTATION

1. Ground Transport
 - a. All ground transports will be made by a Washington State DOH licensed, and trauma verified, Fire Department or Fire District Medic Unit or Aid Unit unless otherwise noted in GHEMS PCP-020: Delivery of Services. An exception is made during disaster situations.
 - b. All patients transported by ground shall go to closest appropriate hospital, unless MEDICAL CONTROL approves of bypassing the closest facility.
 - c. All ground transport response times and providers shall be in accordance with current WAC 246-976-390
2. Air Transport
 - a. Any field personnel may request air transport on standby via dispatch (HARBOR/PACCOM). An ALS upgrade is required.
 - b. ALS personnel must contact Grays Harbor Community Hospital ER for notification of helicopter transport.



Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-060*

Effective: *June, 2009*

Reviewed: *September, 2018*

PHYSICIAN ON-SCENE

This protocol outlines the steps to be followed when, at the scene of an injury or illness, a bystander identifies their self as a physician

GENERAL GUIDELINES

1. Be courteous at all times.
2. Try not to be confrontational.
3. Explain to the individual that pre-hospital providers operate under the guidelines/protocols set forth by the Medical Program Director of GHEMS.
4. If needed, provide the individual access to protocols while on scene. This can be facilitated by showing the individual the protocols that should be kept in your response units.
5. The physician must contact **MEDICAL CONTROL** to obtain permission to intervene and will continue care until arrival at the receiving hospital.

PHYSICIAN AT A SCENE

When a bystander at an emergency scene identifies their self as a physician, the Paramedic or EMT in charge of the scene shall utilize the following procedure.

1. Ask to see the individual's medical license, unless the individual is known by providers on scene to be licensed in the State of Washington as a physician.
2. If the physician is able to produce a copy of his/her medical license they may participate in patient care by:
 - a. Assisting the pre-hospital providers in carrying out protocols, and/or
 - b. Performing additional interventions at the direction of medical control, and/or
 - c. Give orders if...
 - i. Medical control concurs with orders, AND
 - ii. The physician accompanies the patient to the hospital.
 - iii. In the event that the physician accompanies the patient to the hospital, the physician will be responsible for completing any required documentation (Patient Care Reports).

REFERENCE:

1. [PCP-010: Medical Control](#)

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Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-070*

Effective: *August, 2004*

Reviewed: *September, 2018*

DEAD ON ARRIVAL (DOA) GUIDELINES

EMS personnel shall not initiate resuscitation measures when a patient is determined to be:

1. “Obviously Dead” are victims who, in addition to absence of respiration and cardiac activity, have suffered one or more of the following:
 - a. Decapitation
 - b. Evisceration of the heart or brain
 - c. Incineration
 - d. Rigor Mortis
 - e. Decomposition
 - f. Multi-system trauma incompatible with life
 - g. Lividity
2. Do Not Resuscitate orders and no pulse or respirations:
 - a. DOA victims will be reported to the appropriate authorities based on local procedures.
 - b. DO NOT leave body unattended.
 - c. Consider Critical incident stress debriefing if needed.
3. Run reports for patients who die in the field are to be faxed to the MPD.

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Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-080*

Effective: *August, 2004*

Revised: *September, 2018*

DO NOT RESUSCITATE (DNR) ORDERS

Focused History and Physical Exam

- A. Determine the Patient is in a Do Not Resuscitate status in one of the following ways:
1. The patient has an original, valid POLST Form at the bedside or in the residence, or
 2. The patient has an EMS NO CPR bracelet that is intact and not defaced, or
 3. The patient has an original EMS-No CPR Form at the bedside or somewhere in the residence, or
 4. The patient has other DNR orders: We encourage medical facilities to use the POLST Form.
- B. Sometimes health care facilities prefer to use their own health care DNR orders. When encountering other DNR orders, perform the following:
1. Verify that the order has a physician signature requesting “Do Not Resuscitate”
 2. Verify the presence of the patient’s name on the order.
 3. Contact on-line medical control for further consultation. In most cases, on-line medical control will advise to withhold CPR following verification of a valid physician-signed DNR order.

Management

- A. Begin resuscitation when it is determined:
1. No valid DNR order exists
 2. In your medical judgment, your patient has attempted suicide or is a victim of a violent crime.
- B. Do Not initiate resuscitation measure when:
1. The patient is determined to be “obviously dead” (Refer to DOA protocol)
- C. When the patient has an existing, valid DNR order:
1. POLST:
 - a. Provide resuscitation based on patient’s wishes identified on the form.
 - b. Provide medical interventions identified on the form.
 - c. Always provide comfort care.
 2. EMS-No CPR:
 - a. Do not begin resuscitation
 - b. Provide comfort care.
 - c. Contact medical control if any questions arise.

3. Other DNR orders:
 - a. Follow specific orders contained in the DNR order based on the standard of care allowed by your level of certification.
- D. If resuscitative efforts have been started before learning of a valid DNR order, STOP these treatment measures unless continuation is requested by the DNR order and provide comfort care:
 1. Basic CPR.
 2. Intubation (Leave ET Tube in place, but stop any positive pressure ventilations).
 3. Cardiac monitoring and Defibrillation
 4. Administration of resuscitation medications.
 5. Any positive pressure ventilations through other devices
- E. Revoking the DNR order. The following people can inform the EMS system that the DNR order has been revoked:
 1. The patient
 2. The physician expressing the patient's revocation of the directive
 3. The legal surrogate for the patient expressing the patient's revocation of the directive. (The surrogate cannot verbally revoke a patient executed directive)
- F. Documentation:
 1. Complete the PCR form.
 2. State in writing in the narrative summary that the patient is a DNR.
 3. Record the name of the patient's Doctor and if you contacted him/her.
 4. Record the reason why EMS was called.
 5. Comfort the family and bystanders if possible.
 6. Follow local protocols for in field death (possible law involvement, coroners' office, etc...)
- G. Comfort Care Measures, which may include:
 1. Manually opening the airway. (no ventilations)
 2. Suction the airway.
 3. Oxygen per nasal cannula at.
 4. Splinting.
 5. Control bleeding.
 6. Pain medications for discomfort or as appropriate.
- H. Special Situations:
 1. The patient's wishes in regard to resuscitation should always be respected. Sometimes, however, the family may vigorously and persistently insist on CPR even if a valid DNR order is located. These verbal requests are not consistent with the patient's directive. However, in such circumstances:
 - a. Attempt to convince family to honor the patient's decision to withhold CPR/Treatment. If family persists, then:
 - b. Initiate resuscitation efforts until relieved by paramedics.
 - c. Advanced life support personnel should continue efforts and contact online medical control.



Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-090*

Effective: *June, 2009*

Reviewed: *September, 2018*

PATIENT INITIATED REFUSAL (AMA)

The intent of this protocol is to provide pre-hospital providers direction in the event that a patient initiates a refusal of service and/or transport. Patient refusal of service may be complete or partial. Partial refusal is defined as a patient refuses only an aspect of care/treatment rather than treatment or transport as a whole.

GENERAL GUIDELINES

1. It is the responsibility of the pre-hospital provider to accurately record and document the identifying information of all involved persons encountered during the course of emergency requests for service.
2. A patient care report (PCR) shall be completed on all patient contacts. The PCR shall document all assessment and care rendered to the patient by pre-hospital providers and all refusals of assessment, care, and/or transport.
 - a. Patient contact is defined as patients that EMS examines.

PATIENT REFUSAL

1. Certain members of the public, while suffering from an illness or injury, may decline all or part of the indicated assessment, emergency treatment, and/or transportation. These individuals have the right to refuse emergency treatment and/or transportation if the following factors are not present:
 - a. Impaired capacity to understand the emergent nature of their medical condition due to, but not limited to:
 - i. Alcohol,
 - ii. Drugs or medications,
 - iii. Mental illness,
 - iv. Traumatic injury or grave disability.
 - b. Legal minority (minority – legal age status at which full personal rights may not be exercised).
2. It is the responsibility of pre-hospital providers to render all appropriate assessments, treatments and transportation under the following conditions:
 - a. When it is medically indicated,
 - b. When requested by the patient to render treatment and/or transportation,
 - c. When evidence for impaired capacity exists,
 - d. When not of legal age.
3. For the members of the public that refuse part or all indicated assessments, emergency treatment, and/or transportation and who in the pre-hospital

provider's judgment, requires treatment and/or transportation, the following steps may be taken:

- a. Have your partner or another pre-hospital provider offer treatment and/or transportation.
 - b. Consider utilizing the patient's family and/or friends on-scene.
 - c. Consider the involvement of law enforcement early if there is a threat to the patient's self or others, or grave disability.
4. If attempts to gain the patient's consent for any indicated assessment, emergency treatment and/or transportation have been unsuccessful...
- a. Explain to the patient in very simplistic language as to the risks involved in not seeking proper medical care.
 - b. Have the patient sign refusal. Document the patient's refusal on the appropriate patient care report as indicated above.



Grays Harbor Emergency Medical Services Patient Care Protocols

No. PCP-100

Effective: August, 2004

Revised: September, 2018

ABDOMINAL PAIN

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

<i>*Distended or rigid abdomen</i>	<i>*Pulsating abdominal mass</i>
<i>*Unequal/absent femoral pulses</i>	<i>*ALOC</i>
<i>*Hypotension changes</i>	<i>Diaphoresis</i>
<i>Emesis</i>	<i>*Rebound Abdominal Tenderness</i>

REQUIRED PARAMEDIC EVALUATION

1. Unconscious/ Unresponsive
2. Respiratory distress
3. Vomiting red blood
4. Black, tarry stools
5. Abdominal pain with back pain

BLS TREATMENT

1. ABC's, History, PE, Orthostatic Vitals, SpO₂ (if indicated), Allergies ^{(a)(b)}
2. Administer O₂ via non-rebreather mask, assist respirations PRN
3. Position of comfort
4. NPO
5. Monitor vitals
6. Treat other associated signs/symptoms per protocol

IV TECHNICIANS

1. Perform treatment as above
2. IV access with blood draw
3. If hypotensive, administer fluid bolus
 - a. Make sure to check vitals and lung sounds before and after administration of fluid

ALS TREATMENT

1. Perform treatment as above
2. Administer O₂ via appropriate device.
3. EKG
4. For pain, give:
 - a. Morphine: OR
 - b. Fentanyl:
5. For Nausea/Vomiting, give:

- a. [Zofran](#): OR
- b. [Compazine](#):

NOTES:

- a. Abdominal pain may be the first sign of an impending rupture of the appendix, liver, spleen, ectopic pregnancy, or aneurysm. Monitor for signs of hypovolemic shock.
- b. If pulsating mass is felt, suspect an abdominal aneurysm and discontinue palpation. With suspected "AAA", be cautious with fluid administration.

REFERENCE:

- 2. [MED-180: Fentanyl](#)
- 1. [MED-290: Morphine](#)
- 2. [MED-330: Oxygen](#)
- 3. [MED-350: Prochlorperazine \(Compazine\)](#)
- 4. [MED-450: Zofran](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. <i>PCP-110</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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ALLERGIC REACTION/ANAPHYLAXIS

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)		
* <i>Circumferential cyanosis</i>	* <i>Hypotension</i>	* <i>Abdominal cramps</i>
* <i>Chest pain</i>	* <i>Itching, Urticaria</i>	* <i>Facial edema</i>
* <i>Wheezing, stridor</i>	* <i>Dizziness, anxiety</i>	* <i>ALOC</i>
* <i>Tachycardia</i>	* <i>Nausea/Vomiting</i>	* <i>Diarrhea</i>

REQUIRED PARAMEDIC EVALUATION
1. Unconscious/ Unresponsive
2. Cannot speak full sentences/ SOB
3. Edema in throat or difficulty swallowing
4. Diaphoresis
5. Syncope
6. History of prior anaphylactic reaction
7. ↓ LOC

BLS TREATMENT

1. ABC's, History, PE, VS, Allergies, SpO₂
2. Administer **O₂** via non-rebreather mask, assist respirations PRN
3. Remove offending agent (i.e. stinger)
4. Give **Epinephrine 1:1000 IM**
5. Assist with **Metered Dose Inhaler**
 - a. Make sure it is the pt's and it is not expired
6. Position of comfort
7. NPO
8. Treat other signs/symptoms per protocol

IV TECHNICIAN TREATMENT

1. Perform treatment as above
2. IV access with blood draw
3. If hypotensive, administer fluid bolus
 - a. Make sure to check vitals and lung sounds before and after administration of fluid

ALS TREATMENT

MILD/MODERATE REACTION

1. Perform treatment as above
2. EKG
3. For Urticaria, give [Benadryl](#):
4. For Wheezing & SOA, give [Albuterol](#): combined with [Atrovent](#):
5. Give [Methylprednisolone](#):

SEVERE REACTION/ANAPHYLAXIS

1. Perform treatment as above
2. [O₂](#) via appropriate device./Intubate PRN/Surgical Airway PRN/ETCO₂ device ^(c)
3. EKG
4. Give:
 - a. [EPI \(1/1,000\)](#) IM
 - b. [EPI \(1/10,000\)](#) IV:
5. For Urticaria, give: [Benadryl](#): For Wheezing & SOA, give [Albuterol](#): combined with [Atrovent](#):
6. Give: [Methylprednisolone](#): For Hypotension, give [Dopamine](#): Titrated to Systolic BP of 100mmHg
7. Treat cardiac arrhythmias per current ACLS guidelines

NOTES:

- a. Epinephrine is given only if the patient is in respiratory distress or hypoperfused.
- b. Contact [MEDICAL CONTROL](#) prior to administration of second dose of EPI
- c. If intubation is required, utilize the RSI procedure.
- d. May utilize [Duo-Neb](#) in place of mixing Albuterol and Atrovent.

REFERENCE:

1. [PCP-010: Medical Control](#)
2. [PROC-050: Capnography](#)
3. [PROC-110: Epinephrine Administration for EMT](#)
4. [PROC-260: Rapid Sequence Intubation](#)
5. [MED-060: Albuterol](#)
6. [MED-130: Diphenhydramine \(Benadryl\)](#)
7. [MED-140: Dopamine](#)
8. [MED-150: Duo-Neb](#)
9. [MED-160: Epinephrine 1:10,000](#)
10. [MED-170: Epinephrine 1: 1,000](#)
11. [MED-220: Ipratropium Bromide \(Atrovent\)](#)
12. [MED-270: Methylprednisolone \(Solu-Medrol\)](#)
13. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-120*

Effective: *August, 2004*

Revised: *September, 2018*

BEHAVIORAL EMERGENCIES

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

<i>Anxiety</i>	<i>*Agitation</i>	<i>*Hallucinations</i>
<i>Hyperventilating</i>	<i>*Hostile</i>	<i>*Tries to hurt self or others</i>
<i>*Profuse diaphoresis</i>	<i>Confusion</i>	<i>Affect change</i>

REQUIRED PARAMEDIC EVALUATION

1. Unconscious/ Unresponsive
2. Respiratory distress
3. Suicidal or Homicidal behavior
4. Seizures
5. ALOC

BLS TREATMENT

1. Scene Safety, advise law PRN ^(a)
2. ABC's, History, PE, VS, Allergies, SpO₂
3. Administer O₂ via non-rebreather mask, assist respirations PRN
4. Calm, relax, and reassure patient
5. Remove patient from stressful environment
6. Restrain Patient PRN for safety ^(b)
7. Treat other associated signs/symptoms per protocol ^(c)

IV TECHNICIAN TREATMENT

1. Perform treatment as above
2. IV access with blood draw if possible, do not put yourself in danger

ALS TREATMENT

1. Perform treatment as above
2. Administer O₂ via appropriate device.
3. EKG
4. Consider chemical restraint

NOTES:

- a. Do not leave patient alone or turn your back to them, maintain a safe exit.
- b. Restrain as necessary for your protection or that of the patient
- c. Consider contacting MHP

REFERENCE:

1. [PROC-120: Excited Delirium/Behavioral Emergencies](#)
2. [PROC-270: Restraint Guidelines](#)
3. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-130*

Effective: *August, 2004*

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CARDIAC ARREST

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

**Unresponsive*

**Apneic*

**Pulseless*

REQUIRED PARAMEDIC EVALUATION

1. Automatic ALS

BLS TREATMENT

1. ABC's, Initiate CPR/[AED](#) per current GHEMS guidelines. (a)(b)
2. Insert [Supraglottic Airway](#)
3. BVM with supplemental [O₂](#).
4. Transport/Rendezvous with ALS

IV TECHNICIAN TREATMENT

1. Perform treatment as above
2. IV access – 2 sites preferred
3. Administer fluid bolus

ALS TREATMENT

1. Per Current ACLS guidelines with Algorithm Current ACLS

FOR ARREST OF DIALYSIS PATIENTS

1. Treat rhythm as outlined above
2. Give:
 - a. [Sodium Bicarbonate:](#)
 - b. [Calcium Chloride:](#)
 - c. [Dextrose:](#)

For patients with return of spontaneous circulation (ROSC), perform 12-Lead EKG to determine presence of STEMI. If positive for STEMI utilize transport guidelines as outlined in REF-025: Cardiac Triage Destination Procedure.

NOTES:

- a. Do not initiate CPR if legal [POLST/DNR](#) documentation is present
- b. If CPR has been started and appropriate [POLST/DNR](#) orders are found, CPR may be stopped.
- c. Termination of efforts may be considered after the patient has been effectively ventilated with ET tube and two rounds of ACLS pharmacology have been given and Medical Control has given approval. Document appropriately.
- d. CPR: Continuous CPR to be performed as outlined in PROC-078.

REFERENCE:

1. [PCP-080: Do Not Resuscitate \(DNR\) Orders](#)
2. [PROC-020: Automated External Defibrillation](#)
3. [PROC-050: Capnography](#)
4. [PROC-078: Continuous CPR](#)
5. [PROC-170: Intraosseous Infusion – Adult](#)
6. [PROC-285: Supraglottic Airway](#)
7. [REF-025: Cardiac Triage Destination Procedure](#)
8. [MED-070: Amiodarone](#)
9. [MED-080: Atropine Sulfate](#)
10. [MED-090: Calcium Chloride](#)
11. [MED-100: Dextrose 50%](#)
12. [MED-160: Epinephrine](#)
13. [MED-250: Lidocaine 2%](#)
14. [MED-260: Magnesium Sulfate](#)
15. [MED-330: Oxygen](#)
16. [MED-370: Sodium Bicarbonate](#)
17. [AHA-ALG-002](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-140*

Effective: *August, 2004*

Revised: *September, 2018*

CARDIAC: BRADYCARDIA

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

* <i>Chest Pain</i>	* <i>Respiratory Distress</i>	* <i>Nausea/Vomiting</i>
* <i>Dizziness</i>	* <i>ALOC</i>	* <i>Diaphoresis</i>
<i>Slow HR</i>	* <i>Cyanosis</i>	

REQUIRED PARAMEDIC EVALUATION

1. Unconscious/ Unresponsive
2. ↓ LOC
3. Syncope
4. Dyspnea
5. Hypotension
6. Chest Pain
7. Signs of shock
8. Extensive Medical History

BLS TREATMENT

1. ABC's, History, PE, VS, SpO₂, Allergies
2. Administer O₂ via non-rebreather mask, assist respirations PRN
3. Treat other associated signs/symptoms per protocol

IV TECHNICIAN TREATMENT

1. Perform treatment as above
2. IV access with blood draw

ALS TREATMENT

1. Follow current ACLS guidelines Algorithm
2. Administer O₂ via appropriate device.
3. EKG - consider 12-Lead ^(a)

STABLE/ADEQUATE PERFUSION

1. Observe/monitor patient.

UNSTABLE/INADEQUATE PERFUSION

1. Prepare for Transcutaneous Pacing (TCP)
 - a. Use without delay for high-degree block – 2^o type II/3^o AV block.
2. Consider Atropine

- a. Atropine is not effective for 3^o heart block with wide complex escape idioventricular rhythm.
3. If pacing ineffective or unavailable, consider:
 - a. [Dopamine](#): OR
 - b. [Epinephrine](#):
4. Consider and treat contributing causes.

NOTES:

- a. 12-Leads or Cardiac Monitor placement are not to be performed as a diagnostic tool by EMS to determine the need for patient transport. 12-Leads should only be performed once it has been determined that the patient is going to be transported to the hospital.

REFERENCE:

1. [PROC-010: 12-Leads](#)
2. [PROC-310: Transcutaneous Pacing](#)
3. [MED-080: Atropine Sulfate](#)
4. [MED-140: Dopamine](#)
5. [MED-160: Epinephrine](#)
6. [MED-330: Oxygen](#)
7. [AHA-ALG-001](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-150*

Effective: *August, 2004*

Revised: *September, 2018*

CARDIAC: CHEST PAIN/ANGINA

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

* <i>Diaphoresis</i>	* <i>Pale, gray skin</i>	* <i>Cyanosis</i>
* <i>Irregular pulse</i>	* <i>Hypotension</i>	* <i>Respiratory Distress</i>
* <i>ALOC</i>	* <i>Nausea & Vomiting</i>	* <i>Tachycardia</i>

REQUIRED PARAMEDIC EVALUATION

1. Unconscious/ Unresponsive
2. Difficulty breathing
3. Male > 40 years
4. Female >45 years
5. Signs of shock
6. Implanted defibrillator shock
7. Extensive Medical History

BLS TREATMENT

1. ABC's, History, PE, VS, Allergies, SpO₂
2. Administer O₂ via non-rebreather mask, assist respirations PRN
3. Give Aspirin ^(a)
4. Assist with patient's Nitroglycerin ^(b)
5. Treat other associated signs/symptoms per protocol

IV TECHNICIAN TREATMENT

1. Perform treatment as above
2. IV access with blood draw

ALS TREATMENT

1. Perform treatment as above
 - a. Rapid assessment for suspected STEMI patients, perform history and physical exam during transport
 - b. For patient's experiencing a STEMI, establish 2 IV sites, minimum 18ga each.
2. Administer O₂ via appropriate device.
 - a. For patients with ACS/STEMI, titrate O₂ to a SpO₂ of 94%.
3. EKG - 12-Lead ^(c)
 - a. For 12-Leads showing STEMI, refer to REF-025: Cardiac Triage Destination Procedures for transport guidelines.

4. Intubate PRN/ETCO₂ device ^(d)
5. Treat any arrhythmias per current ACLS guidelines
6. Give: **Nitroglycerin:**
 - a. For patient with pain not relieved with Nitro give:
 - i. **Morphine:** OR
 - ii. **Fentanyl:**
7. For patient transports to Grays Harbor Community Hospital, Willapa Harbor Hospital and Summit Pacific, patients with STEMI are to remain on the EMS gurney and a rapid assessment is to be performed by the Emergency Room Physician to determine the need for thrombolytic therapy. Once the determination has been made on thrombolytics, the patient will continue transport to Providence St. Peter's Hospital by the initial transporting agency.

NOTES:

- a. Prior to administration of ASA, ask appropriate questions regarding stomach problems, ingestion of ASA already, blood thinners, etc...
- b. Prior to administration of Patient's NTG make sure it is prescribed to Patient and is not outdated.

REFERENCE:

1. [PROC-010: 12-Leads](#)
2. [PROC-050: Capnography](#)
3. [PROC-260: Rapid Sequence Intubation](#)
4. [REF-025: Cardiac Triage Destination Procedures](#)
5. [MED-020: Acetylsalicylic Acid \(Aspirin\)](#)
6. [MED-180: Fentanyl](#)
7. [MED-290: Morphine Sulfate](#)
8. [MED-310: Nitroglycerin](#)
9. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. <i>PCP-160</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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CARDIAC: TACHYCARDIA – NARROW COMPLEX A-FIB/A-FLUTTER

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)		
<i>*Chest Pain</i>	<i>*Respiratory Distress</i>	<i>*Nausea/Vomiting</i>
<i>*Dizziness</i>	<i>*ALOC</i>	<i>*Uncontrolled Tachycardia</i>
<i>*Diaphoresis</i>	<i>* Irregular HR</i>	<i>*Cyanosis</i>

REQUIRED PARAMEDIC EVALUATION
<ol style="list-style-type: none"> 1. Unconscious/ Unresponsive 2. ↓ LOC 3. Syncope 4. Signs of shock

BLS TREATMENT

1. ABC’s, History, PE, VS, SpO₂, Allergies
2. Administer O₂ via non-rebreather mask, assist respirations PRN
3. Check pulse to see if it is irregular
4. Try to find out when this started
5. Associated signs/symptoms per protocol

IV TECHNICIAN TREATMENT

1. Perform treatment as above
2. IV access with blood draw

ALS TREATMENT

1. Per Current ACLS guidelines Algorithm

REFERENCE:

1. [AHA-ALG-003](#)
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Grays Harbor Emergency Medical Services Patient Care Protocols

No. <i>PCP-170</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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CARDIAC: TACHYCARDIA – NARROW COMPLEX PAROXYSMAL SUPRAVENTRICULAR TACHYCARDIA (PSVT)

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)		
* <i>Chest Pain</i>	* <i>Respiratory Distress</i>	* <i>Nausea/Vomiting</i>
* <i>Dizziness</i>	* <i>ALOC</i>	* <i>Uncontrolled Tachycardia</i>
* <i>Diaphoresis</i>	* <i>Cyanosis</i>	

REQUIRED PARAMEDIC EVALUATION
1. Unconscious/ Unresponsive
2. ↓ LOC
3. Syncope
4. Dyspnea
5. Hypotension
6. Chest Pain
7. Signs of shock

BLS TREATMENT

1. ABC's, History, PE, VS, SpO₂, Allergies
2. Administer O₂ via non-rebreather mask, assist respirations PRN
3. Check pulse to see if it is irregular
4. Try to find out when this started
5. Treat other associated signs/symptoms per protocol

IV TECHNICIAN TREATMENT

1. Perform treatment as above
2. IV access with blood draw
 - a. Large bore in AC preferred.
 - b. Normal Saline

ALS TREATMENT

1. Per Current ACLS guidelines

REFERENCE:

1. [AHA-ALG-003](#)

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Grays Harbor Emergency Medical Services Patient Care Protocols

No. <i>PCP-180</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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CARDIAC: TACHYCARDIA – WIDE COMPLEX

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)		
<i>*Chest Pain</i>	<i>*Respiratory Distress</i>	<i>*Nausea/Vomiting</i>
<i>*Dizziness</i>	<i>*ALOC</i>	<i>*Uncontrolled Tachycardia</i>
<i>*Diaphoresis</i>	<i>*Cyanosis</i>	

REQUIRED PARAMEDIC EVALUATION
<ol style="list-style-type: none"> 1. Unconscious/ Unresponsive 2. ↓ LOC 3. Syncope 4. Dyspnea 5. Hypotension 6. Chest Pain 7. Signs of shock

BLS TREATMENT

1. ABC's, History, PE, VS, SpO₂, Allergies
2. Administer O₂ via non-rebreather mask, assist respirations PRN
3. Check pulse to see if it is irregular
4. Try to find out when this started
5. Treat other associated signs/symptoms per protocol

IV TECHNICIAN TREATMENT

1. Perform treatment as above
2. IV access with blood draw

ALS TREATMENT

1. Per current ACLS guidelines

NOTES:

- a. Consider SVT with aberrancy
- b. 12-Leads or Cardiac Monitor placement are not to be performed as a diagnostic tool by EMS to determine the need for patient transport. 12-Leads should only be performed once it has been determined that the patient is going to be transported to the hospital.

REFERENCE:

1. [PROC-060: Cardioversion](#)
2. [MED-040: Adenosine](#)
3. [MED-070: Amiodarone](#)
4. [MED-180: Fentanyl](#)
5. [MED-250: Lidocaine 2%](#)
6. [MED-330: Oxygen](#)
7. [MED-360: Propofol](#)
8. [AHA-ALG-003](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. PCP-190

Effective: August, 2004

Reviewed: June, 2020

CEREBROVASCULAR ACCIDENT/STROKE

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

*Headache	*Impaired Vision/Gaze Deviation	Affect changes
*Facial Droop	*ALOC	*Respiratory Distress
*Coma	*Confusion	*Paralysis
*Seizures	*Dizziness	*Unequal Pupils
*Hemiplegia	*Gaze Deviation	*Aphasia

REQUIRED PARAMEDIC EVALUATION

1. Unconscious/ Unresponsive
2. Difficulty breathing
3. Chest pain
4. Diabetic
5. Severe headache
6. Nausea & Vomiting

BLS TREATMENT

1. ABC's, History, PE, VS, SpO₂, Allergies ^(a)
2. Administer **O₂** PRN
3. Blood-glucose check
4. Perform **"BE FAST" Stroke Assessment**
5. If Positive "BE FAST" Stroke Assessment, Complete LAMS Score
6. Treat other associated signs/symptoms per protocol
7. *Request ALS upgrade, consider immediate transport meeting ALS en-route if possible.*

IV TECHNICIAN TREATMENT

1. Perform treatment as above
2. IV access, Establish 2 IVs if possible^(b)

ALS TREATMENT

1. Perform treatment as above
2. Administer **O₂** via appropriate device.
3. EKG/12 LEAD
4. Intubate PRN/**ETCO₂** device ^(c)
5. Fluid bolus PRN

LAST KNOWN NORMAL

For patients whose “last known normal” is less than 4 hours:

- Transport to nearest Emergency Department. Call receiving hospital and identify the patient as a CODE STROKE, and report the last known normal time.
- Stay with the patient for likely immediate transfer to a Level I Stroke Center.

For patient whose last known normal is 4-24 hours ago:

- **LAMS score of 4 or 5**, proceed directly to the nearest Level I Stroke Center (St. Peter’s hospital, 360-491-8888)
- **LAMS score 3 or less**, go to nearest ED
 - a. The patient may be transferred after initial assessments. This assessment should include a CT/CTA.
 - b. The patient will be transferred if a LVO (large vessel occlusion) is seen on CTA.
 - c. The patient may also be transferred if they are deemed to have **disabling symptoms**

LAMS Score (Los Angeles Motor Scale)

Los Angeles Motor Scale (LAMS)		
Face	0	Both sides move normally
	1	One side is weak or flaccid
Arm	0	Both sides move normally
	1	One side is weak
	2	One side is flaccid/doesn't move
Grip	0	Both sides move normally
	1	One side is weak
	2	One side is flaccid/doesn't move
Total	0-5	

B.E. F.A.S.T.	
Balance	Sudden loss of balance or coordination?
Eyes	Sudden loss of vision in one eye or both, double vision?
Face	Is one side of their face drooping?
Arms	Does one arm drift, or weak?
Speech	Slurred Speech, difficulty speaking, confused?
Time	When was the last normal?

REFERENCE:

1. [PROC-050: Capnography](#)
2. [PROC-260: Rapid Sequence Intubation](#)
3. [REF-005 AEIOU-TIPS C](#)
4. [REF-014: BEFAST Stroke Assessment](#)
5. [REF-065: Stroke Triage Destination Procedure](#)
6. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. <i>PCP-200</i>	Effective: <i>August, 2004</i>	Reviewed: <i>September, 2018</i>
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CHOKING

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)		
<i>Universal choking sign</i>	<i>*Noisy breathing</i>	<i>*No breath sounds</i>
<i>*Inability to speak</i>	<i>*Cyanosis</i>	<i>Flared nostrils</i>
<i>*Labored use of muscles</i>	<i>*ALOC</i>	<i>*Restlessness</i>

REQUIRED PARAMEDIC EVALUATION
<ol style="list-style-type: none"> 1. Unconscious/ Unresponsive 2. Signs of partial/full obstruction (a) (b) 3. Respiratory distress 4. Cyanosis 5. ↓ LOC

BLS TREATMENT

1. ABC's
2. Manage airway per current AHA guidelines
3. History, PE, VS as time permits, SpO₂
4. Treat other associated symptoms per protocol

IV TECHNICIAN TREATMENT

1. Perform treatment as above
2. IV access PRN

ALS TREATMENT

1. Perform treatment as above
2. Magill's PRN
3. EKG
4. Intubate PRN/Surgical Airway PRN/ETCO₂ device (c)

NOTES:

-
- a. If obstruction is successfully cleared, BLS transport may be considered
 - b. If the patient possibly aspirated a foreign object but is in no distress, he or she still needs to be transported
 - c. If intubation is required, utilize the RSI procedure as outlined in PROC-260.

REFERENCE:

1. [PROC-050: Capnography](#)
2. [PROC-260: Rapid Sequence Intubation](#)
3. [PROC-290: Surgical Cricothyrotomy](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. <i>PCP-210</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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COMA OF UNKNOWN ORIGIN/ALOC

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)		
<i>Medical alert tag</i>	<i>Breath odor</i>	<i>*Evidence of Trauma</i>
<i>*ALOC</i>	<i>*Abnormal breathing</i>	<i>* Hypotension/Hypertension</i>
<i>*Diaphoresis</i>	<i>*Chest Pain</i>	<i>*Hyper/Hypoglycemia</i>

REQUIRED PARAMEDIC EVALUATION
<ol style="list-style-type: none"> Unconscious/ Unresponsive Difficulty breathing Drugs/ alcohol O.D. Seizure activity If DOA, cold, stiff, age <1 y/o

BLS TREATMENT

- ABC's, History, PE, VS, SpO₂, Allergies ^(a)
- C-spine precautions if indicated
- Administer O₂ via non-rebreather mask, assist respirations PRN
- Blood-glucose check
 - For ↓ BSL, give (1) Oral Glucose or food/beverage (patent airway)
- Narcan
- Perform FAST Stroke Assessment
- Prepare suction equipment
- If no trauma suspected, place patient in the recovery position
- Treat other associated signs/symptoms per protocol

IV TECHNICIAN TREATMENT

- Perform treatment as above
- IV access with blood draw
- Consider fluid bolus if hypotensive
 - Make sure to check vitals and lung sounds before and after administration of fluid

ALS TREATMENT

- Perform treatment as above
- Administer O₂ via appropriate device.
- EKG

4. For ↓ BSL, give:
 - a. [Oral Glucose](#): (patent airway) OR
 - b. [D₅₀](#): OR Dextrose
 - i. Pediatric:
 - c. [Glucagon](#):
 - i. Pediatric: (BELOW 44LBS)
5. Consider: [Thiamine](#): Still no response, give [Narcan](#):
6. If no response, Intubate patient/[ETCO₂](#) device ^{(b) (c)}
7. Treat cardiac arrhythmias per current ACLS guidelines

NOTES:

- a. Use the acronym:

A – ALCOHOL	T – TRAUMA
E – EPILEPSY	I – INFECTION
I – INSULIN	P – PSYCHIATRIC
O – OVERDOSE	S – STROKE
U – UREMIA	C – CARDIAC
- b. Check Blood Sugar prior to intubation
- c. If intubation is required, utilize the [RSI](#) procedure as outlined in PROC-260.

REFERENCE:

1. [PROC-050: Capnography](#)
2. [PROC-260: Rapid Sequence Intubation](#)
3. [REF-005: AEIOU-TIPSC](#)
4. [REF-021: FAST Stroke Assessment](#)
5. [MED-100: Dextrose 50% \(D₅₀\)](#)
6. [MED-200: Glucagon](#)
7. [MED-300: Naloxone \(Narcan\)](#)
8. [MED-320: Oral Glucose](#)
9. [MED-330: Oxygen](#)
10. [MED-410: Thiamine](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. <i>PCP-220</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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DIABETIC EMERGENCIES

<i>SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)</i>		
<i>Dry mouth & intensive thirst</i>	<i>Restlessness</i>	<i>Weak, Rapid pulse</i>
<i>Abd. Pain & vomiting</i>	<i>Full rapid pulse</i>	<i>Change in affect</i>
<i>Dry, red, warm skin</i>	<i>Pale, cool, clammy</i>	<i>Dizziness</i>
<i>*Fainting, convulsions</i>	<i>Fruity odor</i>	

REQUIRED PARAMEDIC EVALUATION
<ol style="list-style-type: none"> 1. Unconscious/ Unresponsive 2. Difficulty breathing 3. ALOC 4. Signs of shock 5. BS level >400 or <60 6. Seizures

BLS TREATMENT

1. ABC's, History, PE, VS, SpO₂, Allergies
2. Administer **O₂** via non-rebreather mask, assist respirations PRN
3. If unconscious, place patient in the recovery position if no trauma suspected
4. Blood-glucose check by patient or EMT ^(a) ^(b)
5. For ↓ BSL, give (1) **Oral Glucose** or food/beverage (patent airway)
 - a. May repeat PRN
6. Repeat Blood-glucose check
7. Treat other associated signs/symptoms per protocol

IV TECHNICIAN TREATMENT

1. Perform treatment as above
2. IV access with blood draw
3. If hyperglycemic start drip of NS **Drip**

ALS TREATMENT

1. Perform treatment as above
2. Administer **O₂** via appropriate device.
3. EKG
4. For ↓ BS, give:
 - a. **Oral Glucose:** (patent airway) OR
 - b. **D₅₀**

- c. **Glucagon:** (if no IV access)
 - i. Pediatric: (BELOW 44LBS)
 - d. Consider: **Thiamine:**
5. If Hyperglycemic,
 - a. IDDM
 - i. Consider contacting MEDICAL CONTROL for consideration of patients administration of insulin.
6. Intubate PRN/**ETCO₂** device ^(d)

NOTES:

- a. Normal BS level is 60 - 120
- b. Consider ALS if first time diabetic reaction
- c. Hyperglycemia is often associated with dehydration, consider fluid replacement
- d. If intubation is required, utilize the **RSI** procedure as outlined in PROC-260.
- e. Onset of Action of Insulin:
 - a. Short Acting Insulin: onset in <15 minutes
 - i. SQ
 - ii. Duration 3-5 Hours
 - b. Medium Onset Insulin: Onset in 30-60 minutes
 - i. SQ
 - ii. Duration 6-12 Hours
 - c. Long Acting Insulin: onset in 60 min w/duration 24 hours

REFERENCE:

- 1. [PCP-010 Medical Control](#)
- 2. [PROC-050: Capnography](#)
- 3. [PROC-260: Rapid Sequence Intubation](#)
- 4. [MED-100: Dextrose 50% \(D₅₀\)](#)
- 5. [MED-200: Glucagon](#)
- 6. [MED-320: Oral Glucose](#)
- 7. [MED-330: Oxygen](#)
- 8. [MED-410: Thiamine](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-230*

Effective: *August, 2008*

Revised: *September, 2018*

DIFFICULTY BREATHING: COPD/ASTHMA

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

<i>*Difficulty breathing</i>	<i>*Wheezing</i>	<i>*Tripod position</i>
<i>↑Pulse & ↑Respirations</i>	<i>*Diaphoresis</i>	<i>*Chest pain</i>
<i>*Hypertension</i>	<i>*Hypotension</i>	<i>*ALOC</i>

REQUIRED PARAMEDIC EVALUATION

1. Unconscious/ Unresponsive
2. Respiratory distress
3. Dyspnea with chest pain
4. Inhaled toxic substances
5. Unable to speak full sentences
6. Difficulty swallowing

BLS TREATMENT

1. ABC's, History, PE, VS, Allergies, SpO₂
2. Administer **O₂** via non-rebreather mask, assist respirations PRN
3. Consider the use of **CPAP**
 - a. Do not use CPAP for patients suffering from asthma
 - b. For patient suffering from Emphysema: Consider the use of **CPAP** Use **CPAP** with extreme caution in patients with end-stage COPD:
4. Assist with **Metered Dose Inhaler/Nebulizer** ^(a)
5. Treat other associated signs/symptoms per protocol

IV TECHNICIAN TREATMENT

1. Perform treatment as above
2. IV access with blood draw

ALS TREATMENT

1. Perform treatment as above
2. Administer **O₂** via appropriate device.
3. EKG
4. Intubate PRN/**ETCO₂** device ^(b)
5. Consider the use of **CPAP**.
 - a. Do not use CPAP for patients suffering from asthma
 - b. Consider initial pressure in patients with end-stage COPD.
6. Fluid bolus PRN

7. For wheezing/Asthma, give Duo Neb or [Albuterol](#):
8. For status asthmaticus, give [EPI \(1:1,000\)](#) SQ: Give [Methylprednisolone](#):
9. Consider use of **Magnesium**
10. Treat cardiac arrhythmias per current ACLS guidelines

NOTES:

- a. Only if Metered Dose Inhaler/Nebulizer is the patient's and is not outdated
- b. If intubation is required, utilize the [RSI](#) procedure as outlined in PROC-260.
- c. Only if patient is non-responsive to Albuterol/Atrovent treatment
- d. Contact medical control prior to giving 2nd dose of EPI

REFERENCE:

1. [PROC-050: Capnography](#)
2. [PROC-080: Continuous Positive Airway Pressure \(CPAP\)](#)
3. [PROC-260: Rapid Sequence Intubation](#)
4. [MED-060: Albuterol](#)
5. [MED-150: DuoNeb](#)
6. [MED-160: Epinephrine](#)
7. [MED-220: Ipratropium Bromide \(Atrovent\)](#)
8. [MED-260: Magnesium Sulfite](#)
9. [MED-270: Methylprednisolone \(Solu-Medrol\)](#)
10. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-240*

Effective: *August, 2004*

Revised: *September, 2018*

DIFFICULTY BREATHING: PULMONARY EDEMA

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

* <i>Difficulty breathing</i>	* <i>Diaphoresis</i>	* <i>Chest pain</i>
* <i>Tripod position</i>	<i>Cough</i>	* <i>Cyanosis</i>
* <i>Use of accessory muscles</i>	* <i>Hypertension</i>	* <i>Hypotension</i>
* <i>ALOC</i>	* <i>Pink, frothy sputum</i>	* <i>Wheezing</i>

REQUIRED PARAMEDIC EVALUATION

1. Unconscious/ Unresponsive
2. ↓ LOC
3. Inhaled toxic substance
4. Unable to speak full sentences
5. Drooling/Difficulty swallowing
6. Suspected Pulmonary embolus

BLS TREATMENT

1. ABC's, History, PE, VS, Allergies, SpO₂
2. Administer O₂ via non-rebreather mask, assist respirations PRN
3. Consider the use of CPAP.
4. Assist with **Metered Dose Inhaler/NEBULIZER** ^(a)
5. Treat other signs/symptoms per protocol

IV TECHNICIAN TREATMENT

1. Perform treatment as above
2. IV access with blood draw

ALS TREATMENT

1. Perform treatment as above
2. Administer O₂ via appropriate device.
3. EKG
4. Intubate PRN/ETCO₂ device ^(b)
5. Consider the use of CPAP.
 - a. With use of CPAP administer Morphine.
 - b. For variable flow generators Use an initial setting of 30% FiO₂ at a flow rate of 140 liters/min., increase FiO₂ PRN.
 - c. Consider increasing CPAP pressure.
6. IV access with blood draw

7. [Nitroglycerin](#): Continue dose with SBP>140
 - a. With [CPAP](#), administer via [Nitro Paste](#) applied to anterior chest
 - b. After 3 doses and still short of breath, Nitro Paste applied to anterior chest.
8. [Lasix](#):
9. With SBP >100: [Morphine](#):

REFERENCE:

1. [PROC-050: Capnography](#)
2. [PROC-080: Continuous Positive Airway Pressure \(CPAP\)](#)
3. [PROC-260: Rapid Sequence Intubation](#)
4. [MED-190: Furosemide \(Lasix\)](#)
5. [MED-290: Morphine Sulfate](#)
6. [MED-310: Nitroglycerin](#)
7. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. <i>PCP-250</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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HYPERTENSIVE CRISIS

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)		
<i>Headache</i>	<i>*Syncope</i>	<i>*Stroke symptoms</i>
<i>Nausea</i>	<i>*Blurred vision</i>	<i>*Respiratory Distress</i>
<i>Confusion</i>	<i>*Ears ringing</i>	<i>*Difficulty speaking</i>

REQUIRED PARAMEDIC EVALUATION
<ol style="list-style-type: none"> 1. Unconscious/ Unresponsive 2. Difficulty breathing 3. Chest pain 4. Seizures 5. ALOC 6. “Worst” Headache ever 7. Systolic BP > 220 with associated Syp. 8. Diastolic BP > 130 with associated Syp.

BLS TREATMENT

1. ABC’s, History, PE, VS, SpO₂, Allergies ^(a)
2. Administer O₂ via non-rebreather mask, assist respirations PRN
3. Place patient in position of comfort
4. Begin transport ASAP & meet ALS en route
5. Treat other associated signs/symptoms per protocol

IV TECHNICIAN TREATMENT

1. Perform treatment as above
2. IV access with blood draw

ALS TREATMENT

1. Perform treatment as above
2. Administer O₂ via appropriate device.
3. EKG
4. Intubate PRN/ETCO₂ device ^(b)
5. To reduce BP, contact MEDICAL CONTROL.

NOTES:

- a. Always consider the cause of the hypertension.
- b. For CVA with \uparrow BP >220: contact [MEDICAL CONTROL](#) prior to reducing BP (160 Systolic is ideal).
- c. Do not reduce BP if signs of \uparrow ICP

REFERENCE:

- 1. [PCP-010: Medical Control](#)
- 2. [PROC-050: Capnography](#)
- 3. [PROC-260: Rapid Sequence Intubation](#)
- 4. [MED-190: Furosemide \(Lasix\)](#)
- 5. [MED-230: Labetalol](#)
- 6. [MED-290: Morphine Sulfate](#)
- 7. [MED-310: Nitroglycerin](#)
- 8. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. PCP-260

Effective: August, 2004

Revised: September, 2018

HYPERTHERMIA/HEAT EMERGENCIES

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

<i>Weakness</i>	<i>Dizziness</i>	<i>Muscle cramps</i>
<i>*Pale, clammy skin</i>	<i>*Rapid respirations</i>	<i>*Hot, dry skin</i>
<i>*Seizures</i>	<i>Diaphoresis</i>	<i>*Flushed skin</i>

REQUIRED PARAMEDIC EVALUATION

1. Unconscious/ Unresponsive
2. Difficulty breathing
3. ALOC
4. Syncope
5. Signs of shock

BLS TREATMENT

1. ABC's, History, PE, VS, SpO₂, Allergies, Temperature
2. Administer O₂ via non-rebreather mask, assist respirations PRN
3. Remove Patient from environment ^(a)
4. Remove excess clothing PRN
5. Begin cooling process^{(b) (c)}
6. Blood Glucose check
7. Treat other associated signs/symptoms per protocol ^(d)

IV TECHNICIAN TREATMENT

1. Perform treatment as above
2. IV access with blood draw
3. Consider fluid bolus if hypotensive
 - a. Make sure to check vitals and lung sounds before and after administration of fluid

ALS TREATMENT

1. Perform treatment as above
2. Administer O₂ via appropriate device.
3. EKG
4. Intubate PRN/ETCO₂ device ^(e)

NOTES:

- a. Do not delay transport
- b. Attempt to reduce temperature with cold packs to the groin, neck & armpits. Air conditioning, fans, etc...
- c. Do not induce shivering
- d. Watch for changes in blood pressure, such as orthostatic changes or hypotension
- e. If intubation is required, utilize the [RSI](#) procedure as outlined in PROC-260

REFERENCE:

1. [PROC-050: Capnography](#)
2. [PROC-260: Rapid Sequence Intubation](#)
3. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-270*

Effective: *August, 2004*

Revised: *September, 2018*

HYPOTHERMIA

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

<i>*Temperature < 93</i>	<i>*Depressed Vitals</i>	<i>*ALOC</i>
<i>*Absence of shivering</i>	<i>*Cold, pale skin Shivering</i>	
<i>Tachycardia/Tachypnea</i>	<i>*Poor muscle control</i>	

REQUIRED PARAMEDIC EVALUATION

1. Unconscious/ Unresponsive
2. Abnormal breathing
3. ↓ LOC
4. Signs of shock
5. Syncope
6. Seizure

BLS TREATMENT

1. ABC's, History, PE, VS, Allergies & rectal temperature ^(a) ^(b)
2. Administer O₂ via non-rebreather mask, assist respirations PRN ^(c)
3. Remove from environment
4. Remove wet clothing & start warming process. ^(d)
5. Blood Glucose Check
6. Treat other associated signs/symptoms per protocol

IV TECHNICIAN TREATMENT

1. Perform treatment as above.
2. IV access with blood draw, fluid bolus PRN ^(e)

ALS TREATMENT

1. Perform treatment as above.
2. EKG
3. Intubate PRN/ETCO₂ device. ^(f)
4. Treat any arrhythmias per current ACLS guidelines.
5. Consider inserting NG Tube with warm Fluids Gastric Lavage

NOTES:

- a. Assess pulses for minimum of 30 seconds. If there are no pulses start CPR, consider one series of defibrillation or one round of AED protocols
- b. Treat very gently, do not rub or manipulate the extremities. Keep patient supine

- c. Oxygen should be heated if possible.
- d. Attempt to increase temperature with hot packs to the groin, neck and armpits. Cover patient entirely with emergency blanket and ensure that their head is covered to minimize heat loss.
- e. Use warm fluids if possible
- f. If intubation is required, utilize the [RSI](#) procedure as outlined in PROC-260.

REFERENCE

1. [PROC-050: Capnography](#)
2. [PROC-260: Rapid Sequence Intubation](#)
3. [REF-030: Core Body Temperatures - Hypothermia](#)
4. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. <i>PCP-290</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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OVERDOSE: AMPHETAMINE

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

<i>*Hypertension</i>	<i>*Chest Pain</i>	<i>*Pulmonary Edema</i>
<i>*Tachycardia</i>	<i>*Diaphoresis</i>	<i>Dizziness, anxiety</i>
<i>*Seizures</i>	<i>*Angina</i>	<i>*Severe Headache</i>

REQUIRED PARAMEDIC EVALUATION

1. Unconscious/ Unresponsive
2. Respiratory Distress
3. Syncope
4. ALOC

BLS TREATMENT

1. Scene Safety.
2. ABC'S, History, PE, VS, SpO₂, Allergies.
3. Administer O₂ via non-rebreather mask, assist respirations PRN.
4. Blood Glucose check
5. Treat other signs/symptoms per protocol.

IV TECHNICIAN TREATMENT

1. Perform treatment as above.
2. IV access with blood draw.

ALS TREATMENT

1. Perform treatment as above.
2. Administer O₂ via appropriate device.
3. 12 Lead EKG
4. Intubate PRN/ETCO₂ device ^(a)
5. For sedation, give:
 - a. **Benzodiazepine:** OR
 - b. Haldol
6. Treat chest pain per protocol.

REFERENCE

1. [PROC-050: Capnography](#)
2. [PROC-260: Rapid Sequence Intubation](#)
3. [MED-210: Haloperidol \(Haldol\)](#)
4. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. PCP-291	Effective: August, 2014	Revised: September, 2018
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OVERDOSE: BETA BLOCKER

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)		
<i>*Unable to speak</i>	<i>*Depressed Vitals</i>	<i>*ALOC</i>
<i>*Noisy Respiration</i>	<i>Cool, Clammy</i>	<i>Restlessness</i>
<i>Tachycardia/Bradycardia</i>	<i>Tachypnea</i>	<i>*Poor muscle control</i>

REQUIRED PARAMEDIC EVALUATION
<ol style="list-style-type: none"> 1. Unconscious/ Unresponsive 2. Respiratory Distress 3. Syncope 4. ALOC 5. Difficulty swallowing 6. Seizures 7. Intentional overdose

BLS TREATMENT

1. Scene Safety
2. ABC's, History, PE, VS, SpO₂, Allergies
3. Administer O₂ via non-rebreather mask, assist respirations PRN
4. Blood Glucose check
5. Treat other associated signs/symptoms per protocol.

IV TECHNICIAN TREATMENT

1. Perform treatment as above.
2. IV access with blood draw.
 - a. Consider fluid bolus if patient hypotensive Ensure to monitor patient's vital signs and lung sound before and after administration of fluid bolus.

ALS TREATMENT

1. Perform treatment as above.
2. Administer O₂ via appropriate device.
3. EKG
4. Intubate PRN/ ETCO₂ device. ^(a)
5. For Beta Blocker O.D. give Glucagon

6. For Seizures, give:
 - a. Benzodiazepine

REFERENCE

1. [PROC-050: Capnography](#)
2. [PROC-260: Rapid Sequence Intubation](#)
3. [REF-070: Toxidromes Chart](#)
4. [MED-200: Glucagon](#)
5. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. <i>PCP-292</i>	Effective: <i>August, 2014</i>	Revised: <i>September, 2018</i>
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OVERDOSE: CALCIUM CHANNEL BLOCKER

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)		
<i>*Unable to speak</i>	<i>*Depressed Vitals</i>	<i>*ALOC</i>
<i>*Noisy Respiration</i>	<i>Cool, Clammy</i>	<i>Restlessness</i>
<i>Tachycardia/Bradycardia</i>	<i>Tachypnea</i>	<i>*Poor muscle control</i>

REQUIRED PARAMEDIC EVALUATION
<ol style="list-style-type: none"> 1. Unconscious/ Unresponsive 2. Respiratory Distress 3. Syncope 4. ALOC 5. Difficulty swallowing 6. Seizures 7. Intentional overdose

BLS TREATMENT

1. Scene Safety
2. ABC's, History, PE, VS, SpO₂, Allergies
3. Administer **O₂** via non-rebreather mask, assist respirations PRN
4. Blood Glucose check
5. Treat other associated signs/symptoms per protocol.

IV TECHNICIAN TREATMENT

1. Perform treatment as above.
2. IV access with blood draw.
 - a. Consider fluid bolus if patient hypotensive
 - b. Ensure to monitor patient's vital signs and lung sound before and after administration of fluid bolus.

ALS TREATMENT

1. Perform treatment as above.
2. Administer **O₂** via appropriate device.
3. EKG
4. Intubate PRN/ **ETCO₂** device. ^(a)
5. For Calcium Channel Blocker O.D. give **Calcium Chloride:**

6. For Seizures, give:
 - a. Benzodiazepine

REFERENCE

1. [PROC-050: Capnography](#)
2. [PROC-260: Rapid Sequence Intubation](#)
3. [REF-070: Toxidromes Chart](#)
4. [MED-090: Calcium Chloride](#)
5. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. <i>PCP-293</i>	Effective: <i>August, 2014</i>	Revised: <i>September, 2018</i>
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OVERDOSE: CNS STIMULANT

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)		
<i>*Unable to speak</i>	<i>*Depressed Vitals</i>	<i>*ALOC</i>
<i>*Noisy Respiration</i>	<i>Cool, Clammy</i>	<i>Restlessness</i>
<i>Tachycardia/Bradycardia</i>	<i>Tachypnea</i>	<i>*Poor muscle control</i>

REQUIRED PARAMEDIC EVALUATION
<ol style="list-style-type: none"> 1. Unconscious/ Unresponsive 2. Respiratory Distress 3. ALOC 4. Difficulty swallowing 5. Seizures 6. Intentional overdose

BLS TREATMENT

1. Scene Safety
2. ABC's, History, PE, VS, SpO₂, Allergies
3. Administer O₂ via non-rebreather mask, assist respirations PRN
4. Blood Glucose check
5. Treat other associated signs/symptoms per protocol.

IV TECHNICIAN TREATMENT

1. Perform treatment as above.
2. IV access with blood draw.
 - a. Consider fluid bolus if patient hypotensive Ensure to monitor patient's vital signs and lung sound before and after administration of fluid bolus.

ALS TREATMENT

1. Perform treatment as above.
2. Administer O₂ via appropriate device.
3. EKG
4. Intubate PRN/ ETCO₂ device. ^(a)
5. For CNS stimulant O.D. give **Benzodiazepine**:
6. For Seizures, give:
 - a. **Benzodiazepine**

REFERENCE

6. [PROC-050: Capnography](#)
1. [PROC-260: Rapid Sequence Intubation](#)
2. [REF-070: Toxidromes Chart](#)
3. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-300*

Effective: *August 2004*

Revised: *September, 2018*

OVERDOSE: NARCOTIC

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

**Respiratory distress* **↓LOC*
Acting different **Coma*
Constricted pupils

REQUIRED PARAMEDIC EVALUATION

1. Unconscious/ Unresponsive
2. Difficulty breathing
3. Seizures
4. Chest pain
5. Signs of shock

BLS TREATMENT

1. Scene Safety.
2. ABC's, History, PE, VS, SpO₂, Allergies. ^(a) ^(b)
3. Administer O₂/assist respiration PRN.
4. Blood-glucose check. ^(c)
5. For ↓ BSL, treat per hypoglycemia protocol.
6. No response with normal BSL give Narcan
7. Treat other associated signs/symptoms per protocol

IV TECHNICIAN TREATMENT

1. Perform treatment as above.
2. IV access with blood draw.
 - a. Consider fluid bolus if patient hypotensive
 - b. Ensure to monitor patient's vital signs and lung sound before and after administration of fluid bolus.

ALS TREATMENT

1. Perform treatment as above.
2. Administer O₂ via appropriate device.
3. EKG
4. Intubate PRN/ETCO₂ device. ^(d)
5. No response with normal BS, give Narcan.

NOTES:

- a. When doing exam, be careful of drug paraphernalia
- b. Patient will have constricted pupils if this is a narcotic overdose
- c. Normal Blood Glucose Level is 60 – 120
- d. In addicted patients, Narcan can cause severe withdrawal reactions.

REFERENCE

- 1. [PROC-050: Capnography](#)
- 2. [PROC-215: Naloxone \(Narcan\) Administration for EMT](#)
- 3. [PROC-260: Rapid Sequence Intubation](#)
- 4. [REF-070: Toxidromes Chart](#)
- 5. [MED-300: Naloxone \(Narcan\)](#)
- 6. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-302*

Effective: *August, 2014*

Reviewed: *September, 2018*

OVERDOSE: PHENOTHIAZINE

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

<i>*Unable to speak</i>	<i>*Depressed Vitals</i>	<i>*ALOC</i>
<i>*Noisy Respiration</i>	<i>Cool, Clammy</i>	<i>Restlessness</i>
<i>Tachycardia/Bradycardia</i>	<i>Tachypnea</i>	<i>*Poor muscle control</i>

REQUIRED PARAMEDIC EVALUATION

1. Unconscious/ Unresponsive
2. Respiratory Distress
3. ALOC
4. Difficulty swallowing
5. Seizures
6. Intentional overdose

BLS TREATMENT

1. Scene Safety
2. ABC's, History, PE, VS, SpO₂, Allergies
3. Administer O₂ via non-rebreather mask, assist respirations PRN
4. Blood Glucose check
5. Treat other associated signs/symptoms per protocol.

IV TECHNICIAN TREATMENT

1. Perform treatment as above.
2. IV access with blood draw.
 - a. Consider fluid bolus if patient hypotensive
 - b. Ensure to monitor patient's vital signs and lung sound before and after administration of fluid bolus.

ALS TREATMENT

1. Perform treatment as above.
2. Administer O₂ via appropriate device.
3. EKG
4. Intubate PRN/ ETCO₂ device. ^(a)
5. For Phenothiazine O.D. give Diphenhydramine:
6. For Seizures, give:
 - a. Benzodiazepine

NOTES:

- a. If intubation is required, utilize the [RSI](#) procedure as outlined in PROC-260.

REFERENCE

1. [PROC-050: Capnography](#)
2. [PROC-260: Rapid Sequence Intubation](#)
3. [REF-070: Toxidromes Chart](#)
4. [MED-130: Diphenhydramine \(Benadryl\)](#)
5. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. PCP-304

Effective: August, 2014

Reviewed: September, 2018

OVERDOSE: TRICYCLIC ANTI-DEPRESSANTS

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

<i>*Unable to speak</i>	<i>*Depressed Vitals</i>	<i>*ALOC</i>
<i>*Noisy Respiration</i>	<i>Cool, Clammy</i>	<i>Restlessness</i>
<i>*Tachycardia/Bradycardia</i>	<i>Tachypnea</i>	<i>*Poor muscle control</i>

REQUIRED PARAMEDIC EVALUATION

1. Unconscious/ Unresponsive
2. Respiratory Distress
3. ALOC
4. Difficulty swallowing
5. Seizures
6. Intentional overdose

BLS TREATMENT

1. Scene Safety
2. ABC's, History, PE, VS, SpO₂, Allergies
3. Administer O₂ via non-rebreather mask, assist respirations PRN
4. Blood Glucose check
5. Treat other associated signs/symptoms per protocol.

IV TECHNICIAN TREATMENT

1. Perform treatment as above.
2. IV access with blood draw.
 - a. Consider fluid bolus if patient hypotensive
 - b. Ensure to monitor patient's vital signs and lung sound before and after administration of fluid bolus.

ALS TREATMENT

1. Perform treatment as above.
2. Administer O₂ via appropriate device.
3. EKG
4. Intubate PRN/ ETCO₂ device. ^(a)
5. For Tricyclic Anti-Depressants O.D. give Sodium Bicarbonate:
6. For Seizures, give:
 - a. **Benzodiazepine**

REFERENCE

1. [PROC-050: Capnography](#)
2. [PROC-260: Rapid Sequence Intubation](#)
3. [REF-070: Toxidromes Chart](#)
4. [MED-330: Oxygen](#)
5. [MED-370: Sodium Bicarbonate](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-310*

Effective: *August, 2004*

Reviewed: *September, 2018*

PEDIATRIC EMERGENCIES: DIFFICULTY BREATHING

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

* <i>Extreme Difficulty</i>	* <i>Audible wheezing</i>	* <i>Rapid HR</i>
* <i>Diaphoresis</i>	* <i>Tripod position</i>	* <i>Cyanosis</i>
* <i>Acutely ill with fever</i>	* <i>Use of accessory muscles</i>	* <i>See-Saw breathing</i>

REQUIRED PARAMEDIC EVALUATION

1. Unconscious/ Unresponsive
2. ALOC
3. Respiratory distress
4. Inhaled toxic substance
5. Unable to speak full sentences
6. Drooling/Difficulty swallowing

BLS TREATMENT

1. ABC's, History, PE, VS, SpO₂, Allergies.
2. Calm patient and keep in position of comfort. ^(a) ^(b)
3. Administer O₂ via non-rebreather mask, assist respirations PRN. ^(c)
4. Assist with Metered Dose Inhaler/Nebulizer. ^(d)
5. Treat other associated signs/symptoms per protocol.

IV TECHNICIANS TREATMENT

1. Perform treatment as above.
2. IV access PRN

ALS TREATMENT

1. Perform treatment as above.
2. Administer O₂ via appropriate device.
3. EKG
4. Intubate PRN/ETCO₂ device ^(e) ^(f)
5. Consider IO access in severely sick or after 2 failed IV attempts.
 - a. For wheezing, give Albuterol: May utilize DuoNeb in place of Albuterol and Atrovent.
6. For status Asthmaticus, give Epinephrine: Also for Asthma, give Solu-Medrol:
7. Treat other associated signs/symptoms per protocol.

NOTES:

- a. If epiglottitis is suspected, do not place anything in the child's mouth and do not agitate the patient. Transport rapidly with parent. Symptoms include drooling, sore throat, muffled voice, fever, and pain with swallowing.
- b. If croup is suspected, have the child spend a few minutes with their parents in a steamed bathroom or outside allowing the child to breathe cool air prior to getting in the ambulance.
- c. When providing [O₂](#) for the Croup or Epiglottitis patient, have a parent hold the mask and use the blow by technique. Also for Croup, use humidified O₂ if possible.
- d. Only if Metered Dose Inhaler/Nebulizer is the patient's and is not outdated.
- e. If intubation is required, utilize the [RSI](#) procedure as outlined in PROC-260.
- f. Consider inserting [NG tube](#) as outlined in PROC-230.
- g. To be used in asthma only with severe respiratory distress with marked bronchoconstriction and decreases tidal volume. Contact [MEDICAL CONTROL](#) prior to 2nd dose

REFERENCE

1. [PCP-010: Medical Control](#)
2. [PROC-050: Capnography](#)
3. [PROC-230: Nasogastric Tube Insertion](#)
4. [PROC-260: Rapid Sequence Intubation](#)
5. [MED-060: Albuterol](#)
6. [MED-150: DuoNeb](#)
7. [MED-160: Epinephrine](#)
8. [MED-220: Ipratropium Bromide \(Atrovent\)](#)
9. [MED-270: Methylprednisolone \(Solu-Medrol\)](#)
10. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. PCP-320

Effective: August, 2004

Revised: September, 2018

PEDIATRIC EMERGENCIES: FEVER

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

<i>Flushed dry/hot skin</i>	<i>Restlessness</i>	<i>*Seizures</i>
<i>Rash or stiff neck</i>	<i>Nausea/Vomiting</i>	<i>*Dehydration</i>
<i>Spike in Temperature</i>	<i>Loss of appetite</i>	<i>*ALOC</i>

REQUIRED PARAMEDIC EVALUATION

1. Unconscious/ Unresponsive
2. Respiratory distress
3. Seizures
4. Signs of Shock

BLS TREATMENT

1. ABC's, History, PE, VS, SpO₂, Allergies, Temperature.
2. Administer **O₂** via non-rebreather mask, assist respirations PRN
3. Remove any heavy clothing.
4. Do not induce shivering.
5. Treat other associated signs/symptoms per protocol.

IV TECHNICIANS TREATMENT

1. Perform treatment as above.
2. IV access PRN
 - a. Consider fluid bolus if hypotensive.
 - b. Ensure to monitor patient's vital signs and lung sound before and after administration of fluid bolus.

ALS TREATMENT

1. Perform treatment as above.
2. Administer **O₂** via appropriate device.
3. EKG
4. Intubate PRN/**ETCO₂** device ^{(a) (b)}
5. Consider **IO** insertion after 2 failed attempts PRN (severe hypotension).
6. For Fever, give **Tylenol**:
7. For continuous Febrile Seizures consider Benzodiazepine

NOTES:

- a. Consider inserting [NG tube](#) as outlined in PROC-230

REFERENCE

1. [PROC-050: Capnography](#)
2. [PROC-170: Intraosseous Infusion - Pediatric](#)
3. [PROC-230: Nasogastric Tube Insertion](#)
4. [PROC-260: Rapid Sequence Intubation](#)
5. [MED-010: Acetaminophen \(Tylenol\)](#)
6. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. PCP-330

Effective: August, 2004

Revised: September, 2018

PEDIATRIC EMERGENCIES: NEONATAL RESUSCITATION

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

*Unresponsive

*Apneic

*Pulseless

*HR<100

*Respiratory distress

*Central cyanosis

REQUIRED PARAMEDIC EVALUATION

1. Automatic ALS.

BLS TREATMENT

1. ABC's
 - a. HR <60 initiate CPR.
 - b. HR < 80 assist respirations.
 - i. If no improvement of HR with respirations and still <80 initiate CPR.
2. Administer O₂, assist respirations PRN.
3. Attempt to get patient history if time permits. ^(a)
4. Ensure patient is warm and dry, prevent heat loss.
5. Blood Glucose check. Heel Stick
6. Transport/rendezvous with ALS unit.

IV TECHNICIANS TREATMENT

1. Perform treatment as above.
2. IV access PRN

ALS TREATMENT

1. Perform treatment per PALS guidelines. If no response follow current PALS guidelines for resuscitation.
2. Administer O₂ via appropriate device.
3. EKG.
4. Intubate PRN/ETCO₂ device. ^{(b) (c) (d)}
5. IV-IO access

NOTES:

- a. If ALS unit is delayed, you should start transport and rendezvous with them.
- b. Consider inserting NG tube due to using an uncuffed tube.
- c. If meconium is present: Once baby is delivered, *do not immediately dry infant*. Immediately visualize cords, suction vigorously through ET tube with a

meconium aspirator. Re-intubate and repeat procedure as necessary to retrieve meconium. If baby has already started breathing do not attempt deep intubation suction.

REFERENCE

1. [PROC-050: Capnography](#)
2. [PROC-170: Intraosseous Infusion](#)
3. [PROC-230: Nasogastric Tube Insertion](#)
4. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. PCP-340

Effective: August, 2004

Revised: September, 2018

PEDIATRIC EMERGENCIES: UNCONSCIOUS/COMA

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

<i>Medical alert tag</i>	<i>*Abnormal breathing</i>	<i>Bizarre behavior</i>
<i>Nausea/Vomiting</i>	<i>*ALOC</i>	<i>*Evidence of Trauma</i>
<i>Recent illness</i>	<i>Fever</i>	<i>New medications</i>

REQUIRED PARAMEDIC EVALUATION

1. Unconscious/ Unresponsive
2. Difficulty breathing
3. Seizure activity
4. Abnormal Heart Rate

BLS TREATMENT

1. ABC, History, PE, VS, SpO₂.
2. Administer O₂ via non-rebreather mask, assist respirations PRN.
3. Blood-glucose check - For ↓ BSL, give: Oral Glucose: (patent) (Heel Stick for Infant).
4. If trauma is suspected, take C-spine precautions.
5. Rapid transport.
6. Treat other associated signs/symptoms per protocol.

IV TECHNICIANS TREATMENT

1. Perform treatment as above
2. IV access with blood draw.
 - a. Consider fluid bolus if hypotensive.
 - b. Ensure to monitor patient's vital signs and lung sound before and after administration of fluid bolus.

ALS TREATMENT

1. Perform treatment as above
2. Administer O₂ via appropriate device.
3. EKG.
4. Intubate PRN/ETCO₂ device. (a) (b)
5. IV-IO access
6. For ↓ BSL, give:
 - a. Dextrose
 - b. Glucagon: (if no IV access)

7. Still unresponsive, give [Narcan](#)..

NOTES:

- a. Consider inserting [NG tube](#) due to using an uncuffed tube.

REFERENCE

1. [PROC-050: Capnography](#)
2. [PROC-170: Intraosseous Infusion](#)
3. [PROC-230: Nasogastric Tube Insertion](#)
4. [MED-100: Dextrose 50%](#) (use for D₂₅)
5. [MED-200: Glucagon](#)
6. [MED-300: Naloxone](#) (Narcan)
7. [MED-320: Oral Glucose](#)
8. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. <i>PCP-345</i>	Effective: <i>August, 2014</i>	Revised: <i>September, 2018</i>
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POISONINGS

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)		
<i>*Unable to speak</i>	<i>*Depressed Vitals</i>	<i>*ALOC</i>
<i>*Noisy Respiration</i>	<i>Cool, Clammy</i>	<i>Restlessness</i>
<i>* Tachycardia/Bradycardia</i>	<i>Tachypnea</i>	<i>*Poor muscle control</i>

REQUIRED PARAMEDIC EVALUATION
<ol style="list-style-type: none"> 1. Unconscious/ Unresponsive 2. Respiratory Distress 3. ALOC 4. Ingestion of any type of cleaner 5. Ingestion of multiple Rx. medicines 6. Difficulty swallowing 7. Alcohol overdose 8. Seizures 9. Intentional overdose

BLS TREATMENT

1. Scene Safety
2. ABC's, History, PE, VS, SpO₂, Allergies
3. Administer O₂ via non-rebreather mask, assist respirations PRN
4. Blood Glucose check
5. Contact Poison Control and/or MEDICAL CONTROL (a) (b) (c)
6. With direction from Poison Control, give Activated Charcoal:
7. Treat other associated signs/symptoms per protocol.

IV TECHNICIAN TREATMENT

1. Perform treatment as above.
2. IV access with blood draw.
 - a. Consider fluid bolus if patient hypotensive
 - b. Ensure to monitor patient's vital signs and lung sound before and after administration of fluid bolus.

ALS TREATMENT

1. Perform treatment as above.
2. Administer O₂ via appropriate device.
3. EKG

4. Intubate PRN/ [ETCO₂](#) device. ^(d)
5. For Organophosphate Poisoning give [Atropine](#)
6. For Seizures, give:
 - a. Benzodiazepine

NOTES:

- a. Try to identify substance and quantity taken.
- b. If substance is unidentifiable, try to bring container with you.
- c. Poison Control number: 1-800-222-1222

REFERENCE

1. [PCP-010: Medical Control](#)
2. [PROC-050: Capnography](#)
3. [REF-070: Toxidromes Chart](#)
4. [MED-030: Activated Charcoal](#)
5. [MED-080: Atropine](#)
6. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-350*

Effective: *August, 2004*

Reviewed: *September, 2018*

PREGNANCY: BIRTH COMPLICATIONS

REQUIRED PARAMEDIC EVALUATION

1. Automatic ALS

BLS TREATMENT

1. ABC, History, PE, VS, SpO₂.
2. Administer **O₂** via non-rebreather mask, assist respirations PRN
3. Place Patient in the prone position, knee to chest for breech delivery^(a), prolapsed cord^(b) and limb presentation.^(c)
4. Do not delay transport, rendezvous with ALS en route.
5. If childbirth is imminent, prepare for delivery.
6. Treat other associated signs/symptoms per protocol.

IV TECHNICIAN TREATMENT

1. Perform treatment as above.
2. IV access with blood draw.
 - a. Fluid bolus PRN
 - b. Ensure to monitor patient's vital signs and lung sound before and after administration of fluid bolus.

ALS TREATMENT

1. Perform treatment as above.
2. Administer **O₂** via appropriate device.
3. EKG.

NOTES:

- a. If unable to deliver head, place gloved index finger and middle finger into vagina with palm towards the baby's face forming a "V" with your fingers to maintain airway. Transport immediately
- b. Place sterile gloved index and middle finger into the vagina, pushing the infant up to relieve pressure on the cord. Transport immediately.
- c. Transport immediately if there is limb presentation

REFERENCE

1. [MED-330: Oxygen](#)

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Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-360*

Effective: *August, 2004*

Reviewed: *September, 2018*

PREGNANCY: EMERGENCY DELIVERY

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

<i>Abdominal pain</i>	<i>*ALOC</i>	<i>*Seizures</i>
<i>Vaginal bleeding</i>	<i>Weakness/Dizziness</i>	<i>*Signs of shock</i>
<i>Nausea/Vomiting</i>	<i>*Edema in face or extremities</i>	
<i>*Meconium Staining</i>	<i>*Urge to have a bowel movement</i>	

REQUIRED PARAMEDIC EVALUATION

1. Unconscious/ Unresponsive
2. Difficulty breathing
3. Syncope
4. Bleeding
5. Premature labor > 4 weeks early
6. Delivery
7. Seizure
8. Abdominal injury with contractions
9. Hypertension

TXPRT Required for all Field Deliveries.

BLS TREATMENT

1. ABC, History, PE, VS, SpO₂.
2. Administer O₂ via non-rebreather mask, assist respirations PRN.
3. Place in left lateral recumbent, unless birth is imminent.
4. Childbirth imminent, prepare for delivery. ^(a)
5. Give newborn care:
 - a. Suction mouth first, then nose.
 - b. Clamp then cut cord (6 & 8 inches).
 - c. Dry newborn thoroughly.
 - d. Keep newborn warm.
 - e. Assess APGAR at 1 and 5 minutes after delivery.
 - f. Give newborn to mother and encourage nursing.
6. Initiate post-partum care:
 - a. Allow placenta to delivery. ^(b)
 - b. Massage uterus until firm.
 - c. Apply pressure with perineal pad if continuous bleeding.
7. Estimate blood loss, watch for post-partum hemorrhage.
8. Treat other associated signs/symptoms per protocol.

IV TECHNICIAN TREATMENT

1. Perform treatment as above
2. IV access with blood draw.
 - a. Fluid bolus PRN
 - b. Ensure to monitor patient's vital signs and lung sound before and after administration of fluid bolus.

ALS TREATMENT

1. Perform treatment as above.
2. Administer O₂ via appropriate device.
3. EKG.

NOTES:

- a. Transport is required for ALL deliveries.
- b. Be aware of the possibility of multiple births
- c. Do not pull on cord and do not delay transport for delivery of placenta

REFERENCE

1. [REF-010: APGAR Scale](#)
2. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. PCP-370

Effective: August, 2004

Revised: September, 2018

PREGNANCY: PRE-ECLAMPSIA/ECLAMPSIA

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

Edema of ↓ extremities *Sudden weight gain* **Seizures*
**ALOC* **Dark Urine*
**After 20 wks*
**Hypertension 160/110*

REQUIRED PARAMEDIC EVALUATION

1. Unconscious/ Unresponsive
2. ↓ LOC
3. Seizures
4. ↑ in Systolic BP 160

BLS TREATMENT

1. ABC, History, PE, VS, SpO₂.
2. Administer O₂ via non-rebreather mask, assist respirations PRN.
3. Place in Left lateral recumbent position.
4. Transport gently. ^(a) ^(b)
5. Treat other associated signs/symptoms per protocol.

IV TECHNICIAN TREATMENT

1. Perform treatment as above.
2. IV access with blood draw.

ALS TREATMENT

1. Perform treatment as above.
2. Administer O₂ via appropriate device.
3. EKG.
4. For Seizure's, give: Magnesium Sulfate.
5. If no response, give: **Benzodiazepine**.
6. Severe Hypertension consider: **Labetalol. Contact Medical Control.**

NOTES:

- a. Sirens and flashing lights may precipitate seizures.
- b. If ALS ETA delayed, consider rendezvous/transport after contact with responding ALS unit.

REFERENCE

1. [REF-010: APGAR Scale](#)
2. [MED – 230: Labetalol](#)
3. [MED-260: Magnesium Sulfate](#)
4. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-380*

Effective: *August, 2004*

Reviewed: *September, 2018*

PREGNANCY: POSTPARTUM CARE

REQUIRED PARAMEDIC EVALUATION

1. Birth complications
2. Signs of shock
3. Uncontrolled vaginal bleeding
4. Newborn - Unconscious or not breathing
5. Newborn with HR <80
6. Meconium present

BLS TREATMENT

1. ABC, History, PE, VS, SpO₂.
2. Administer O₂ via non-rebreather mask, assist respirations PRN.
3. Massage fundus, encourage mother to breast feed.
4. Keep warm & ↑ feet.
5. Treat infants according to appropriate pediatric care protocol.
6. Treat other associated signs/symptoms per protocol.

IV TECHNICIAN TREATMENT

1. Perform treatment as above.
2. IV access if not done already.
 - a. Fluid bolus PRN Ensure to monitor patient's vital signs and lung sound before and after administration of fluid bolus.

ALS TREATMENT

1. Perform treatment as above.
2. Administer O₂ via appropriate device.
3. EKG
4. For uncontrolled bleeding: Oxytocin

REFERENCE

1. [MED-330: Oxygen](#)
2. [MED-340: Oxytocin](#)

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Grays Harbor Emergency Medical Services Patient Care Protocols

No. PCP-390

Effective: August, 2004

Reviewed: September, 2018

PREGNANCY: SPONTANEOUS ABORTION ^(a)

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

Suspicion of pregnancy

Vaginal bleeding

Cramps

Contractions

**Passage of tissue*

REQUIRED PARAMEDIC EVALUATION

1. Unconscious/Unresponsive
2. ↓ LOC
3. Signs of shock
4. Difficulty breathing
5. Uncontrolled vaginal bleeding

BLS TREATMENT

1. ABC, History, PE, VS, SpO₂.
2. Administer O₂ via non-rebreather mask, assist respirations PRN.
3. Keep warm
4. If signs of shock: ↑ feet
5. Apply loose perineal pad.
6. Collect any tissue passed & bring it to the hospital.
7. Treat other associated signs/symptoms per protocol. ^(b)

IV TECHNICIAN TREATMENT

1. Perform treatment as above.
2. IV access with blood draw PRN.
 - a. Fluid bolus PRN Ensure to monitor patient's vital signs and lung sound before and after administration of fluid bolus.

ALS TREATMENT

1. Perform treatment as above.
2. Administer O₂ via appropriate device.
3. EKG.

NOTES:

- a. Abortion is defined as, a loss of pregnancy before the twentieth week of gestation.
- b. You will need to provide as much emotional support as possible.

REFERENCE

1. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-400*

Effective: *August, 2004*

Revised: *September, 2018*

SEIZURES

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

<i>Medical alert tag</i>	<i>Incontinence</i>	<i>*Pregnancy</i>
<i>Head or mouth trauma</i>	<i>*Seizure activity > 5mins</i>	<i>*ALOC</i>

REQUIRED PARAMEDIC EVALUATION

1. Unconscious/Unresponsive
2. Status Seizures
3. First time seizure
4. Diabetic
5. Secondary to illicit drugs
6. Secondary to head injury

BLS TREATMENT

1. ABC, History, PE, VS, SpO₂.
2. Protect patient from injury.
3. Administer O₂ via non-rebreather mask, assist respirations PRN.
4. C-spine precautions PRN.
5. Blood Glucose check.
6. Treat other associated signs/symptoms per protocol.

IV TECHNICIAN TREATMENT

1. Perform treatment as above.
2. IV access with blood draw.
 - a. Fluid bolus PRN Ensure to monitor patient's vital signs and lung sound before and after administration of fluid bolus.

ALS TREATMENT

1. Perform treatment as above.
2. Administer O₂ via appropriate device.
3. EKG.
4. Intubate PRN/ETCO₂ device. ^(a)
5. For Seizure, give:
 - a. Benzodiazepine

NOTES:

Conditions that may cause Seizures

- Epilepsy - Fever
- Infections - Poisoning
- Stroke - Hypoglycemia
- Hypoxia - Dysrhythmia
- Head Trauma - Eclampsia
- Tumor

REFERENCE

1. [PROC-050: Capnography](#)
2. [PROC-280: Spinal Immobilization](#)
3. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-410*

Effective: *August, 2004*

Reviewed: *September, 2018*

SEXUAL ASSAULT

BLS TREATMENT

1. Have Law enforcement notified/scene safety.
2. ABC, History, PE, VS.
3. Treat any injuries per applicable protocols. ^(a)
4. Do not allow patient to bathe, douche, etc...
 - a. Collect clothing worn during assault, if clothing already changed and law enforcement is not on-scene.
 - b. Transport clothes in **paper bag**, maintaining chain of evidence.
 - c. If patient needs to urinate, have the patient collect urine and wipes in urinal, maintaining the chain of evidence.
5. Transport.
6. Notify receiving hospital

IV TECHNICIAN TREATMENT

1. Perform treatment as above.

ALS TREATMENT

1. Perform treatment as above.

NOTES:

-
- a. Give emotional support; if patient is unwilling to answer questions, do not press.

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Grays Harbor Emergency Medical Services Patient Care Protocols

No. <i>PCP-420</i>	Effective: <i>August, 2004</i>	Revised: <i>February 2020</i>
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TRAUMA: AMPUTATION MANAGEMENT/HEMORRHAGE CONTROL

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)		
<i>*No distal pulse</i>	<i>*No distal sensation</i>	<i>*No distal movement</i>
<i>*Syncope</i>	<i>*ALOC</i>	<i>*Hypovolemia</i>
<i>*Uncontrolled bleeding</i>	<i>Anxiety</i>	<i>*Extreme Pain</i>

REQUIRED PARAMEDIC EVALUATION
<ol style="list-style-type: none"> 1. Unconscious/Unresponsive 2. Difficulty breathing 3. Hypotension 4. Amputation above wrist or ankle 5. Severe MOI

BLS TREATMENT

1. ABC, History, PE, VS, SpO₂.
2. C-spine precautions PRN.
3. Administer O₂ via non-rebreather mask, assist respirations PRN.
4. Control bleeding.
 - a. Apply direct pressure, elevate
 - b. Consider approved hemostatic, non-thermogenic agent (follow manufacturer's recommendation).
 - c. Tourniquet for uncontrolled bleeding
 - i. Apply above the wound; tighten until bleeding stops. Record time. If first tourniquet unsuccessful, apply second 4" above 1st tourniquet
 - ii. Leave in place until in ED
5. Stump treatment:
 - a. Cover with sterile dressing.
 - b. Saturate dressing with saline.
 - c. Cover with a dry dressing.
6. Severed Part:
 - a. Wrap part with moistened gauze, place in a plastic bag.
 - b. Place bag on ice, cold packs, etc. ^(a)
 - c. Label with Name, Date, and Time.
7. Partial Amputation:
 - a. Cover with sterile dressing.
 - b. Saturate dressing with saline.
 - c. Cover with a dry dressing.

- d. If no pulse or sensation, move to a neutral anatomical position.
8. Treat other associated signs/symptoms per protocol
9. Determine if patient meets criteria for trauma triage.

IV TECHNICIAN TREATMENT

1. Perform treatment as above.
2. IV access (Large Bore IV Preferred).
 - a. Fluid bolus PRN
 - b. Ensure to monitor patient's vital signs and lung sound before and after administration of fluid bolus.

ALS TREATMENT

1. Perform treatment as above.
2. Administer O₂ via appropriate device.
3. EKG.
4. For pain, give:
 - A. Morphine: OR
 - B. Fentanyl:

NOTES:

- a. Do not use dry ice or put severed part in direct contact with ice.

REFERENCE

1. [PROC-280: Spinal Immobilization](#)
2. [REF-080: Trauma Triage](#)
3. [MED-180: Fentanyl](#)
4. [MED-290: Morphine Sulfate](#)
5. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. <i>PCP-430</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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TRAUMA: ANIMAL BITES

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)		
<i>*Hives</i>	<i>Burning sensation at site</i>	<i>*Chest tightness</i>
<i>*Anaphylactic shock</i>	<i>*Abnormal pulse rate</i>	<i>*Headache/Dizziness</i>
<i>*Difficulty breathing</i>	<i>Nausea/Vomiting</i>	<i>*Weakness/Syncope</i>

REQUIRED PARAMEDIC EVALUATION
<ol style="list-style-type: none"> 1. Unconscious/Unresponsive 2. Uncontrolled bleeding 3. Respiratory distress 4. Serious face/neck trauma 5. Bite from poisonous animal 6. Signs of shock 7. ↓ LOC

BLS TREATMENT

1. Scene Safety: Notify Law Enforcement.
2. ABC, History, PE, VS, SpO₂.
3. Administer **O₂** via non-rebreather mask, assist respirations PRN
4. Remove jewelry or any constricting items.
5. Scrape away stingers or venom.
6. Wash area gently.
7. Dress wound PRN.
8. Immobilize the extremity level to or below the heart.
9. Document the identity of the animal.
10. Treat other associated signs/symptoms per protocol.
11. Determine if patient meets criteria for trauma triage.

IV TECHNICIAN TREATMENT

1. Perform treatment as above.
2. IV access with blood draw.
 - a. Fluid bolus PRN Ensure to monitor patient’s vital signs and lung sound before and after administration of fluid bolus.

ALS TREATMENT

1. Perform treatment as above.

2. Administer O₂ via appropriate device.
3. EKG.
4. For Pain, give:
 - a. Morphine: OR
 - b. Fentanyl:
5. Patient should follow up on tetanus.

REFERENCE

1. [REF-080: Trauma Triage](#)
2. [MED-180: Fentanyl](#)
3. [MED-290: Morphine Sulfate](#)
4. [MED-330: Oxygen](#)

Notes: Patients should follow up for Tetanus vaccination.



Grays Harbor Emergency Medical Services Patient Care Protocols

No. <i>PCP-440</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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TRAUMA: ASSAULT

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)		
<i>Obvious bleeding</i>	<i>*Deformity to the head</i>	<i>* Hypotension</i>
<i>*Signs of shock</i>	<i>Diaphoresis</i>	
<i>*Deformity to torso</i>	<i>*ALOC</i>	

REQUIRED PARAMEDIC EVALUATION
<ol style="list-style-type: none"> 1. Unconscious/Unresponsive 2. ↓LOC 3. Any significant blunt trauma 4. Uncontrolled bleeding 5. Seizures secondary to head injury

BLS TREATMENT

1. Scene Safety/Make sure law is on-scene.
2. Crime Scene preservation
3. ABC, History, PE, VS, SpO₂.
4. C-spine precautions PRN.
5. Control any bleeding.
6. Administer O₂ via non-rebreather mask, assist respirations PRN.
7. Blood Glucose check PRN.
8. Treat other associated signs/symptoms per protocol.
9. Determine if patient meets criteria for trauma triage.

IV TECHNICIAN TREATMENT

1. Perform treatment as above.
2. IV access with blood draw - large bore IV preferred.
 - a. Fluid bolus PRN Ensure to monitor patient’s vital signs and lung sound before and after administration of fluid bolus.

ALS TREATMENT

1. Perform treatment as above.
2. Administer O₂ via appropriate device.
3. EKG.
4. For Pain, give:
 - a. Morphine: OR
 - b. Fentanyl:

5. Treat other associated signs/symptoms per protocol.

REFERENCE

1. [PROC-090: Crime Scene Preservation](#)
2. [PROC-280: Spinal Immobilization](#)
3. [REF-080: Trauma Triage](#)
4. [MED-180: Fentanyl](#)
5. [MED-290: Morphine Sulfate](#)
6. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. <i>PCP-450</i>	Effective: <i>June, 2009</i>	Revised: <i>September, 2018</i>
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TRAUMA: BURNS

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)		
<i>*ALOC</i>	<i>*Respiratory Distress</i>	<i>*Cough</i>
<i>*Swelling</i>	<i>Pain</i>	<i>Associated Trauma</i>
<i>*Singed Nasal Hair</i>		

REQUIRED PARAMEDIC EVALUATION
<ol style="list-style-type: none"> 1. Unconscious/Unresponsive. 2. Difficulty breathing. 3. Wheezing. 4. Signs and symptoms of shock. 5. Burns involving face, airway, hands, feet or genitalia. 6. Combination of burns $\geq 19\%$ in adults 7. Electrical burns. 8. Partial or full thickness burns greater than 1% BSA in patients 5 years old and under. 9. Severe pain. 10. Burns associated with fractures. 11. Patient confinement in an enclosed space.

BLS TREATMENT

1. Scene Safety: Do not enter the scene if danger is still present.
2. Safely remove the patient from the source of the burn/stop burning process.
3. Remove burning or smoldering clothing that is not melted to the patient's skin.
4. In the case of chemical burns: wash off all chemicals with copious amounts of water.
 - a. Dry chemicals should be brushed off prior to washing.
5. ABC, History, PE, VS (CPR PRN), SpO₂.
6. C-spine precautions PRN.
7. Administer O₂ via non-rebreather mask, assist respirations PRN.
8. Remove constrictive items (rings, etc.) as needed.
9. Determine Body Surface Area (BSA) burned.
10. Apply sterile dry dressing to burn area.
11. Do not apply ointment, lotion or antiseptic.
12. Prevent hypothermia.
13. Treat other associated signs/symptoms per protocol.
14. Determine if patient meets criteria for trauma triage.

IV TECHNICIAN TREATMENT

1. Perform treatment as above.
2. IV access with blood draw.
 - a. Consider fluids based on the parkland formula:
 - i. Fluid for first 24 hours (ml) = 2-4 ml x Patient's weight in kg x % BSA
 - ii. Half of above fluid should be given in the first 8 hours.
 - b. Avoid burn area if possible when establishing vascular access.

ALS TREATMENT

1. Perform treatment as above.
2. Administer O₂ via appropriate device.
3. EKG.
4. Intubate PRN/ETCO₂ device. ^(a)
5. Remove constrictive items (rings, etc.) as needed.
6. For pain consider:
 - a. Morphine: OR
 - b. Fentanyl:
7. Consider co-morbid factors:
 - a. Hypotension.
 - b. Age: <12, >55.
 - c. Circumferential.
 - d. High risk area: genitalia, hands, feet or face.
 - e. Suspected inhalation injuries: Singed nasal hairs, stridor, sooty airways, hoarse voice or history of enclosed space indicate a potential for CO poisoning or airway injury. Consider aggressive airway management.
 - f. Co-existing major trauma.
 - g. Electricity: Cardiac monitoring and 12-Lead if available. Consider path of damage. Treat entrance and exit soft tissue injuries.
 - h. Blast Injury: immobilize for C-spine precautions, consider barotrauma, and be alert of secondary blast devices.

REFERENCE

1. [PROC-010: 12-Leads](#)
2. [PROC-050: Capnography](#)
3. [PROC-280: Spinal Immobilization](#)
4. [REF-050: Rule of Nines](#)
5. [REF-080: Trauma Triage](#)
6. [MED-180: Fentanyl](#)
7. [MED-290: Morphine Sulfate](#)
8. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-460*

Effective: *August, 2004*

Revised: *September, 2018*

TRAUMA: DROWNING/NEAR DROWNING

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

<i>*Seizures</i>	<i>*ALOC</i>	<i>Cough</i>
<i>*Pink, frothy sputum</i>	<i>*Apnea</i>	<i>*Respiratory Distress</i>

REQUIRED PARAMEDIC EVALUATION

1. Unconscious/Unresponsive
2. Difficulty breathing
3. Submersion > 1minute ^(a)
4. Scuba diving accident

BLS TREATMENT

1. C-spine precautions PRN.
2. Remove patient from the environment.
3. ABC, History, PE, VS (CPR PRN), SpO₂. ^(b)
4. Administer O₂ via non-rebreather mask, assist respirations PRN
 - a. Insert Supraglottic Airway if patient is apneic and has no gag reflex
5. Remove wet clothing.
6. Check core temperature.
7. Keep warm.
8. Consider the use of CPAP.
9. Treat other associated signs/symptoms per protocol.
10. Determine if patient meets criteria for trauma triage.

IV TECHNICIAN TREATMENT

1. Perform treatment as above.
2. IV access with blood draw.

ALS TREATMENT

1. Perform treatment as above.
2. Administer O₂ via appropriate device.
3. EKG
4. Intubate PRN/ETCO₂ device. ^(c)
5. Consider the use of CPAP.
6. For prolonged submersion, give:
 - a. Sodium Bicarbonate:

NOTES:

- a. All patients suspected of submersion should be transported and evaluated at the ER.
- b. A drowning/near drowning patient is not deceased until warm.
- c. The most common arrhythmia associated with drowning is V-fib.

REFERENCE

1. [PROC-050: Capnography](#)
2. [PROC-080: Continuous Positive Airway Pressure \(CPAP\)](#)
3. [PROC-280: Spinal Immobilization](#)
4. [PROC-285: Supraglottic Airway](#)
5. [REF-080: Trauma Triage](#)
6. [MED-330: Oxygen](#)
7. [MED-370: Sodium Bicarbonate](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-470*

Effective: *August, 2004*

Revised: *September, 2018*

TRAUMA: FALLS/ACCIDENTS

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

**Hypotension*

**Signs of shock*

**Rapid, weak pulse*

**ALOC*

Obvious bleeding

REQUIRED PARAMEDIC EVALUATION

1. Unconscious/Unresponsive
2. ↓ LOC
3. Uncontrolled bleeding
4. Seizures secondary to head injury
5. Any penetrating/blunt trauma to head, neck, torso, or pelvis

BLS TREATMENT

1. ABC, History, PE, VS, SpO₂.
2. C-spine precautions PRN.
3. Control any bleeding.
4. Administer O₂ via non-rebreather mask, assist respirations PRN.
5. Apply splints PRN as time permits
6. Blood Glucose Check
7. Treat other associated signs/symptoms per protocol.
8. Determine if patient meets criteria for trauma triage.

IV TECHNICIAN TREATMENT

1. Perform treatment as above.
2. IV access with blood draw - large bore IV preferred.
 - a. Fluid bolus PRN
 - b. Ensure to monitor patient's vital signs and lung sound before and after administration of fluid bolus.

ALS TREATMENT

1. Perform treatment as above.
2. Administer O₂ via appropriate device.
3. EKG
4. Intubate PRN/ETCO₂ device. ^(a)
5. For Pain, consider:
 - a. Morphine: OR
 - b. Fentanyl

REFERENCE

1. [PROC-050: Capnography](#)
2. [PROC-280: Spinal Immobilization](#)
3. [REF-080: Trauma Triage](#)
4. [MED-180: Fentanyl](#)
5. [MED-290: Morphine Sulfate](#)
6. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-480*

Effective: *August, 2004*

Reviewed: *September, 2018*

TRAUMA: FRACTURES & DISLOCATIONS

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

<i>Localized pain</i>	<i>Tenderness</i>	<i>Swelling</i>
<i>*Loss of distal pulse</i>	<i>*Loss of Sensation</i>	<i>*Loss of motor func.</i>
<i>Acute angulation</i>	<i>Crepitus</i>	<i>Guarding</i>
<i>*Extreme pain</i>		

REQUIRED PARAMEDIC EVALUATION

1. Unconscious/Unresponsive
2. Difficulty breathing
3. ALOC
4. Seizures
5. Pelvic injury
6. Femur injury
7. Signs of shock
8. Any loss of PMS

BLS TREATMENT

1. ABC, History, PE, VS, SpO₂.
2. C-spine precautions PRN.
3. Administer O₂ via non-rebreather mask, assist respirations PRN.
4. Control any bleeding.
5. Evaluate Fracture/stabilize extremity. (a) (b) (c)
6. Check pulse, motor function, & sensation,
 - a. Pull traction
 - b. Move to neutral inline position
7. Apply sterile dressing to any open fracture.
8. Elevate isolated extremity fractures.
9. Apply cold pack to reduce pain/swelling.
10. For multiple lower extremity fractures use appropriate immobilization device.
 - a. For pelvic fractures consider use of Pelvic Wrap Splint
11. Treat other associated signs/symptoms per protocol.
12. Determine if patient meets criteria for trauma triage.

IV TECHNICIAN TREATMENT

1. Perform treatment as above.
2. IV access with blood draw - large bore IV preferred.

- a. Fluid bolus PRN Ensure to monitor patient's vital signs and lung sound before and after administration of fluid bolus.

ALS TREATMENT

1. Perform treatment as above.
2. Administer [O₂](#) via appropriate device.
3. EKG.
4. For isolated extremity fracture or dislocation, for pain, give:
 - a. [Morphine](#): OR
 - b. [Fentanyl](#):
5. Treat other associated signs/symptoms per protocol
6. Determine if patient meets criteria for major trauma.

NOTES:

- a. If there is severe deformity or the distal extremity is cyanotic or lacks pulses, align with gentle traction to achieve return of circulation before splinting.
- b. If no problems with pulse, motor function, or sensation, splint in position found.
- c. Check for pulses, motor function, & sensation before and after splinting

REFERENCE

1. [PROC-240: Pelvic Wrap Splint](#)
2. [PROC-280: Spinal Immobilization](#)
3. [REF-080: Trauma Triage](#)
4. [MED-180: Fentanyl](#)
5. [MED-290: Morphine Sulfate](#)
6. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. <i>PCP-490</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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TRAUMA: MOTOR VEHICLE COLLISIONS

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)		
<i>Head/Neck trauma</i>	<i>*Loss of P.M.S</i>	
<i>*ALOC</i>	<i>Obvious bleeding</i>	<i>*Rapid, weak pulse</i>
<i>*Hypotension</i>	<i>*Signs of shock</i>	<i>*Penetrating wound</i>

REQUIRED PARAMEDIC EVALUATION
<ol style="list-style-type: none"> 1. Unconscious/Unresponsive 2. ↓ LOC 3. Respiratory distress 4. Chest Pain 5. Patient was ejected 6. Patient extrication > 20mins 7. Identify any Major Trauma Patients

BLS TREATMENT

1. Assure scene safety.
 - a. Utilize law Enforcement for traffic control as needed.
2. ABC, History, PE, VS, SpO₂.
3. C-spine precautions PRN. ^(a)
4. Control any bleeding.
5. Administer O₂ via non-rebreather mask, assist respirations PRN.
6. Apply splints PRN as time permits.
7. Blood Glucose check.
8. Treat other associated signs/symptoms per protocol.
9. Determine if patient meets criteria for trauma triage.

IV TECHNICIAN TREATMENT

1. Perform treatment as above.
2. IV access with blood draw - large bore IV preferred.
 - a. Fluid bolus PRN Ensure to monitor patient’s vital signs and lung sound before and after administration of fluid bolus.

ALS TREATMENT

1. Perform treatment as above.
2. Administer O₂ via appropriate device.
3. EKG.

4. Intubate PRN/[ETCO₂](#) device. ^(b)

NOTES:

- a. If patient is stable, consider use of KED for extrication.

REFERENCE

1. [PROC-050: Capnography](#)
2. [PROC-260: Rapid Sequence Intubation](#)
3. [PROC-280: Spinal Immobilization](#)
4. [REF-080: Trauma Triage](#)
5. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. <i>PCP-500</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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TRAUMA: MULTI-SYSTEM/GENERAL

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)		
* <i>Seizures</i>	* <i>ALOC</i>	* <i>Difficulty Breathing</i>
* <i>Chest Pain</i>	* <i>Hypotension</i>	<i>Tachycardia</i>
* <i>Loss of consciousness</i>	* <i>Signs of shock</i>	

REQUIRED PARAMEDIC EVALUATION
<ol style="list-style-type: none"> 1. Unconscious/Unresponsive 2. ↓ LOC 3. Respiratory distress 4. Penetrating/blunt trauma to head, chest, torso, or pelvis. 5. Patient extrication > 20mins 6. Patient was ejected/ MOI

BLS TREATMENT

1. Assure scene safety.
2. ABC, History, PE, VS, SpO₂.
3. C-spine precautions PRN.
4. Control any bleeding.
5. Administer **O₂** via non-rebreather mask 15 l/min, assist respirations PRN.
6. Apply splints PRN as time permits.
7. Blood Glucose check.
8. Rapid transport/Rendezvous with ALS. ^(a)
9. Treat other associated signs/symptoms per protocol.
10. Determine if patient meets criteria for major triage.

IV TECHNICIAN TREATMENT

1. Perform treatment as above.
2. IV access with blood draw - large bore IV preferred.
 - a. Consider starting 2 IV lines.
 - b. Fluid bolus PRN
 - c. Ensure to monitor patient's vital signs and lung sound before and after administration of fluid bolus.

ALS TREATMENT

1. Perform treatment as above.
2. Administer **O₂** via appropriate device.

3. EKG.
4. Intubate PRN/[ETCO₂](#) device. ^(b)

NOTES:

- a. Limit on-scene time to 10 minutes.

REFERENCE

1. [PROC-050: Capnography](#)
2. [PROC-280: Spinal Immobilization](#)
3. [REF-080: Trauma Triage](#)
4. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-510*

Effective: *August, 2004*

Revised: *September, 2018*

TRAUMA: PNEUMOTHORAX/TENSION PNEUMOTHORAX

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

<i>*Chest pain</i>	<i>*Respiratory distress</i>	<i>Increased Heart Rate</i>
<i>*Asymmetrical chest</i>	<i>*Falling SpO₂</i>	<i>*Signs of hypoxia</i>
<i>*JVD</i>	<i>*Tracheal deviation</i>	<i>*Tachypnea</i>
<i>Signs of Trauma</i>	<i>↓Tidal Volume</i>	<i>*Signs of Shock</i>

REQUIRED PARAMEDIC EVALUATION

1. Unconscious/Unresponsive
2. ↓ LOC
3. ↓ in Respiratory status
4. Pain with respirations

BLS TREATMENT

1. ABC, History, PE, VS, SpO₂.
2. C-spine precautions PRN.
3. Administer O₂/Assist respirations PRN.
4. Rapid transport/Rendezvous with ALS. ^(a)
5. Treat other associated signs/symptoms per protocol.
6. Determine if patient meets criteria for trauma triage.

IV TECHNICIAN TREATMENT

1. Perform treatment as above.
2. IV access with blood draw - large bore IV preferred.
 - d. Fluid bolus PRN
 - e. Ensure to monitor patient's vital signs and lung sound before and after administration of fluid bolus.

ALS TREATMENT

1. Perform treatment as above.
2. Administer O₂ via appropriate device.
3. EKG.
4. Intubate PRN/ETCO₂ device. ^(b)
5. Consider Needle Thoracentesis.

NOTES:

- a. Limit on-scene time to 10 minutes.

REFERENCE

1. [PROC-050: Capnography](#)
2. [PROC-220: Needle Thoracentesis](#)
3. [REF-080: Trauma Triage](#)
4. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Protocols

No. *PCP-520*

Effective: *June, 2009*

Revised: *March, 2021*

VIRAL RESPIRATORY DISEASE PANDEMIC

Triggers for Pandemic Disease Activation

1. Activation of the EMS Viral Respiratory Disease Protocol will be by the Medical Program Director in consultation with the Public Health Department and Public Health Officer.
2. Communications – 911 Dispatch Center
 - a. Dispatch Center will ask pre-arrival screening questions as recommended by the CDC or DOH.
 - b. Dispatch Center will advise emergency responders of positive symptoms(s) for the patient and any people that are currently with the patient or in the household.
 - c. Pandemic Situation Reports
 - i. The Medical Program Director, in conjunction with the Public Health Department will provide situation reports to the emergency responder agencies for distribution to all responders.
 - d. Crew Briefings – EMS agencies will provide ongoing briefings to their responders to include:
 - i. Status of outbreak – epidemiology
 - ii. Hospital Status – arrival procedures and facility procedures impacting EMS.
 - iii. Recommended level of PPE, infection control mentions, and decontamination procedures.
 - iv. GHEMS Protocol/Procedure: Updates and recommendations.
 - v. Status of Special Assigned Teams, i.e. Incident Management Teams.

Worker Safety/Infection Control

1. Personal Protective Equipment (PPE)
 - a. Enhanced PPE Procedures:
 - i. All patient contacts – standard universal precautions of PPE including: gloves, surgical mask, and eye protection.

- ii. Patients with viral symptoms – PPE outlined above, plus: N95 mask or greater, disposable gown/overalls and shoe covers. Cover patient’s mouth and nose with a surgical or procedure mask.
 - iii. Change in response configuration to minimize personal exposure at each incident:
 1. Doorway Triage
 2. Have patient go outside for assessment if possible
 3. Limit the number of providers in close contact with the patient to only those needed to provide the correct level of care.
2. Follow CDC and Public Health Department guidelines, Medical Program Director updates, and individual department Standard Operating Procedures for viral pandemics.

Healthcare Providers General Health and Safety

1. Follow current CDC guidelines and Department of Health guidelines to self-screen for symptoms.
2. Use appropriate PPE prior, during and after providing patient care.
3. If you feel sick, or have symptoms, stay home and seek medical treatment as needed.
 - a. Follow up with your department supervisor per current guidelines provided by CDC or Department of Health.

Guidelines for Emergency Vaccination Administration

1. Scope
 - a. This protocol provides guidance under which designated EMTs or paramedics may administer vaccines in a declared emergency such as a pandemic.
 - b. Guidelines will be issued by the MPD that are specific to each incident.
2. Activation
 - a. Activation of this protocol is made by the Grays Harbor County Public Health Department in conjunction with the Medical Program director following a declaration of emergency by the Grays Harbor County Commissioners.
3. Concept of Operations
 - a. Vaccines are administered under the direction of the Public Health Department with the approval of the Medical Program Director.

- b. Vaccination activities will be confined to the administration of a vaccine to specific groups at points of distribution specifically authorized by the Public Health Department.
 - c. All EMS personnel authorized to vaccinate under this protocol will be briefed by public health personnel on the following issues:
 - i. Command and control
 - ii. Vaccine administration
 - iii. Documentation and Reporting
4. Worker Safety/Infection Control
- a. Will be conducted according to standard EMS procedures, current CDC guidelines, and/or state guidelines.

Guidelines for Emergency Vaccination Administration
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- 1. Scope
 - a. This protocol provides guidance under which designated EMS personnel may obtain specimens via nasal, nasopharyngeal, or oropharyngeal swabs for the purpose of viral testing in a declared emergency such as a pandemic.
 - b. Guidelines will be issued by the MPD that are specific to each incident.
- 2. Activation
 - a. Activation of this protocol is made by the Grays Harbor County Public Health Department in conjunction with the Medical Program director following a declaration of emergency by the Grays Harbor County Commissioners.
- 3. Concept of Operations
 - a. Swabs are obtained under the operational direction of the incident commander or local emergency management organization with the approval of the Medical Program Director.
 - b. Sample collection will be confined to points of operation as designated by the IC/EMO

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Grays Harbor Emergency Medical Services Patient Care Protocols

No. <i>PCP-530</i>	Effective: <i>June, 2009</i>	Revised: <i>September, 2018</i>
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WITHDRAWAL SYNDROMES

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)		
<i>*Chest pain</i>	<i>*Respiratory distress</i>	<i>Increased Heart Rate</i>
<i>Hypertension</i>	<i>Tremors</i>	<i>*Seizures</i>
<i>Hyperthermia</i>	<i>Nausea/Vomiting</i>	<i>Diarrhea</i>
<i>Paranoia</i>	<i>Agitation</i>	<i>Combativeness</i>
<i>Dizziness</i>		

REQUIRED PARAMEDIC EVALUATION
1. Combative or severe agitation
2. Seizures
3. ↓ LOC
4. ↓ in Respiratory status
5. Unconscious/Unresponsive
6. Signs and symptoms of shock

BLS TREATMENT

1. Scene Safety
2. Calm, low stimulus environment.
3. ABC, History, PE, VS, SpO₂.
4. Administer O₂/Assist respirations PRN.
5. Monitor temperature as feasible, cool as appropriate.
 - a. If suspected hyperthermia, allow for adequate heat dissipation.
6. Restrain patient PRN.
7. Treat other associated signs/symptoms per protocol.

IV TECHNICIAN TREATMENT

1. Perform treatment as above.
2. IV access with blood draw
 - a. Fluid bolus PRN Ensure to monitor patient’s vital signs and lung sound before and after administration of fluid bolus.

ALS TREATMENT

1. Perform treatment as above.
2. Administer O₂ via appropriate device.
3. EKG.
4. Intubate PRN/ETCO₂ device. (a) (b) (c)

5. For nausea/vomiting, give:
 - a. [Zofran](#), OR
 - b. [Compazine](#).
6. For severe agitation/sedation/combatative patients give:
 - a. Benzodiazepine.
7. For seizures give:
 - a. Benzodiazepine
8. Treat cardiac arrhythmias per current ACLS guidelines.

NOTES:

- a. If utilizing [Propofol](#) for sedation, may have to double initial dose
- b. For severely combative patients, intubate

REFERENCE

1. [PROC-050: Capnography](#)
2. [PROC-270: Restraint Guidelines for Combative/Violent Patients](#)
3. [MED-330: Oxygen](#)
4. [MED-350: Prochlorperazine \(Compazine\)](#)
5. [MED-360: Propofol](#)
6. [MED-450: Zofran](#)

GRAYS HARBOR EMERGENCY MEDICAL SERVICES



PATIENT CARE PROTOCOL MANUAL

-- Patient Care Procedures --

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Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. *PROC-010*

Effective: *June, 2009*

Revised: *September, 2018*

12-LEADS

PARAMEDIC

INDICATIONS:

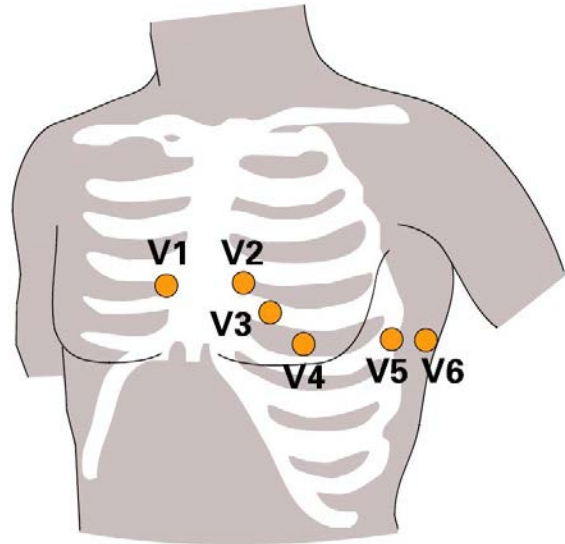
1. Chest pain or discomfort
2. As a tool to assist in the assessment of patients without chest pain or discomfort who may be experiencing an AMI.

CONTRAINDICATIONS:

1. Locations were modesty cannot be preserved (relative).
2. 12-Leads or Cardiac Monitor placement may be performed as a diagnostic tools by EMS, but not to determine the need for patient transport.

PROCEDURE:

1. Identify the Angle of Luis (just inferior to the sternal notch).
2. Identify the 2nd rib and 2nd intercostal space from the Angle of Luis (lateral and inferior).
3. Walk down the intercostal spaces until you have identified the 4th intercostal space.
4. Place V1 approximately 3cm to the right (patient's right) of the midline of the sternum in the 4th intercostal space.
5. Place V2 approximately 3cm to the left (patient's left) of the midline of the sternum in the 4th intercostal space.
6. Place V4 in the 5th intercostal space at the mid-clavicular line.
7. Place V3 halfway between V2 and V4.
8. Place V6 at the mid-axillary line horizontal from V4.
9. Place V5 halfway between V4 and V6.
10. Place the limb leads on the patient's wrists and ankle.
11. Have the patient remain still while 12-lead is acquired



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Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. <i>PROC-015</i>	Effective: <i>May, 2014</i>	Revised: <i>September, 2018</i>
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ACTIVE SHOOTER INCIDENTS/ HOSTILE INCIDENTS

EMR EMT EMT-IV PARAMEDIC

***Agencies shall not implement these procedures unless they have implemented a coordinated ASI/Hostile response plan with their partner law enforcement agency.**

DEFINITIONS:

- Cold Zone:** Areas that are relatively safe from danger and are secured.
- Warm Zone:** Areas that have been quickly cleared by law enforcement, but that are not 100% secure. This area is where victims will be contacted by Rescue Teams.
- Hot Zone:** Areas that have not been cleared by Law Enforcement.
- MARCH:** Patient injury identification and treatment tool. MARCH may also refer to a rapid trauma treatment bag, i.e.: MARCH bag.
- Rescue Team:** A team comprised of Fire/EMS personnel (minimum 2) and Law Enforcement personnel (2 to 4) formed to enter the Warm Zone and rapidly triage, treat immediate life threats, and remove patients to the Casualty Collection Point.
- Casualty Collection Point (CCP):** Area within the Warm Zone protected by Law Enforcement that serves as a collection point for victims extracted by Rescue Teams and/or the walking wounded.

INTRODUCTION:

This Guideline is to provide a frame work for the treatment of patients within the warm zone of a Hostile Incident. The goal is to make contact with patients as quickly as possible and treat massive bleeding or other immediate life threats, and get them moved to the CCP. Treatment of patients within the Casualty Collection Point/treatment area may become more advanced, but should not delay transport of any critically injured patients. Should the incident require the formal establishment of a cold zone treatment area, refer to the MPI/MCI protocol.

PROCEDURE:

Rescue Team(s) will make entry into the warm zone, providing scene relevant information back to command (see Communications below), while providing immediate MARCH based treatments and relocating patients to the CCP.

TREATMENT:

In non-Hostile Incidents, some findings and patient injuries may typically require a BLS level provider to call for immediate ALS assistance. In Hostile Incidents, BLS level providers should continue treatment and movement of a patient regardless of injury severity. Advanced interventions should be reserved for the CCP, and should not delay movement or transport. **Do not attempt procedures or treatments beyond your scope of practice.**

Suggested approach to rapid patient identification and treatment:

1. Rapidly triage patients and identify who is viable, who is deceased, who requires immediate intervention, and who can have their treatment delayed. Give consideration to treating the immediate life threats of multiple patients before beginning removal of patients/victims.
2. If an armed patient is found unconscious or with ALOC, have Law Enforcement personnel disarm them and secure their weapon(s). If they regain consciousness they may continue to fight, unable to identify Rescue Teams as a non-threat.
3. **MARCH** assessment and applicable treatments
 1. **M**assive hemorrhage
 1. Apply tourniquets or direct pressure bandages
 2. For abdominal wounds flex legs (knees to chest) to relieve tension on the abdomen.
 2. **A**irway compromise
 1. Reposition airway
 2. Place NPA
 3. **R**espiratory compromise
 1. Occlusive chest dressing
 2. Needle thoracentesis
 4. **C**irculatory compromise
 1. Reposition patient to shock position or recovery position.
 5. **H**ypothermia
 1. Reposition patient to recovery position.
 2. Cover patient if blankets or such covering is available.
4. Consider IV/IO and advanced airway procedures in the CCP. Do not delay transport once immediate life threats are treated.
5. If transport from the CCP becomes delayed because the primary receiving facility becomes over whelmed, consider establishing a treatment area per the MPI/MCI procedure.

COMMUNICATIONS:

Communications in a Hostile Incident should be limited. Communication to/from Rescue Teams should be limited to relevant information, as listed below, to allow Teams to focus on patient triage and treatment, and to allow command to focus on organizing teams, incoming units, and transport needs.

1. Additional threats if Law Enforcement element of Rescue Team is unable to communicate (e.g. IED, Traps, Additional Hostile persons)
2. Number of patients.
3. Location of the CCP
4. Personnel assigned to the CCP will communicate patient severity and transport priority to command, or a Treatment/Transport officer if established. Consider assigning an additional radio channel or utilizing phones.

REFERENCE:

6. [PCP-270: Hypothermia](#)
7. [PCP-450: Trauma; Burns](#)
8. [PCP-480: Trauma; Fractures & Dislocations](#)
9. [PCP-500: Trauma; Multi-system/General](#)
10. [PCP-510: Trauma; Pneumothorax/Tension](#)
11. [PROC-170: Intraosseous Infusion; Needle Site](#)
12. [PROC-220: Needle Thoracentesis](#)
13. [PROC-290: Surgical Cricothyrotomy](#)
14. [REF-060: START Triage](#)
15. [REF-080: Trauma Triage](#)

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Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. *PROC-020*

Effective: *January, 1998*

Reviewed: *September, 2018*

AUTOMATED EXTERNAL DEFIBRILLATOR

EMR

EMT

EMT-IV

PARAMEDIC

INDICATIONS:

1. Cardiac Arrest

CONTRAINDICATIONS:

1. “Obviously Dead” are victims who, in addition to absence of respiration and cardiac activity, have suffered one or more of the following:
 - a. Decapitation
 - b. Evisceration of the heart or brain
 - c. Incineration
 - d. Rigor Mortis
 - e. Decomposition
2. Do Not Resuscitate orders and no pulse or respirations:
 - a. DOA victims will be reported to the appropriate authorities based on local procedures.
 - b. DO NOT leave body unattended.
 - c. Consider Critical Incident Stress Debriefing (CISD) if needed.
3. Patient is conscious.
4. Patient has spontaneous respirations and pulse.

PRECAUTIONS:

1. Ensure that the patient’s skin is dry.
2. Remove any medication patches or jewelry than may interfere with the placement of AED patches.
3. Do not put patches near implanted pacers/defibrillators.

PROCEDURE:

1. Verify that the patient is in cardiac arrest.
2. Initiate CPR
 - a. If arrest was unwitnessed by pre-hospital provider, perform 2 minutes of CPR prior to initiating the use of an AED.
3. Turn on the AED and follow the verbal prompts.
 - a. Apply AED pads to the patient’s bare chest.

- b. Plug in pads connector into the AED.
 4. Clear the patient to allow the AED to analyze the rhythm.
 - a. If shock is advised:
 - i. AED will automatically charge.
 - ii. Ensure that the patient is clear.
 - iii. Deliver single shock
 - iv. After shock is delivered, immediately resume CPR for 2 minutes.
 - b. If no shock is indicated:
 - i. Immediately resume CPR for 2 minutes.
 5. After 2 minutes of CPR, analyze the patient's rhythm.
 - a. The AED should prompt you to do such.
 - b. If shock is advised:
 - i. AED will automatically charge.
 - ii. Ensure that the patient is clear.
 - iii. Deliver single shock
 - iv. After shock is delivered, immediately resume CPR for 2 minutes.
 - c. If no shock is indicated, check the patient's pulse:
 - i. If no pulse: immediately resume CPR for 2 minutes and analyze the patient's rhythm every 2 minutes, following the prompts of the AED.
 - ii. If patient has a pulse: provide needed care, ensuring that the patient does not go back into cardiac arrest.
 6. Continue the above cycle until ALS care is initiated.

SPECIAL CONSIDERATIONS:

1. Defibrillation is generally ineffective in patient's suffering from traumatic cardiac arrest. If major bleeding or trauma is obvious, initiate BLS support. If major bleeding or trauma is not obvious, initiate the AED process.
2. If EMS providers arrive to find a patient attached to a public access defibrillator, that device should be removed and replaced with the EMS provider's and the AED procedure initiated. This should be accomplished with as little interruption in CPR as possible.
3. If the patient has an implanted defibrillator, wait until it stops delivering shocks to initiate the AED process.



Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. <i>PROC-030</i>	Effective: <i>October, 2004</i>	Reviewed: <i>September, 2018</i>
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BLOOD DRAWS FOR LAW ENFORCEMENT

EMT-IV **PARAMEDIC**

PURPOSE:

1. To allow EMS providers a procedure for obtaining a blood sample at the request of law enforcement.

PROCEDURE:

1. Law Enforcement may request that EMS providers draw blood for blood alcohol levels at the scene of an accident, under the following circumstances:
 - a. The patient is under the care of GHEMS personnel; and
 - b. The blood draw does not interfere with patient care being provided; and
 - c. Law Enforcement provides EMS personnel with the proper blood tubes for the draw.
2. When performing a blood draw for law enforcement, utilize iodine to clean the skin. Do not use alcohol wipes as this may contaminate the skin and blood sample.
3. EMS personnel shall document blood draws on a GHEMS Medical Incident Report.
4. Under no other circumstances will EMS provide this service – specifically EMS will:
 - a. not be called to an accident scene for the sole purpose of performing a blood alcohol draw.
 - b. not respond to a jail, police station or other holding facility to perform a blood draw.
 - c. not draw blood at their station.
5. It is anticipated that Law Enforcement will obtain blood draws through other resources available to them if the criteria listed in this protocol is not met.

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Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. PROC-050

Effective: *August, 2004*

Revised: *September, 2018*

CAPNOGRAPHY

EMT

EMT-IV

PARAMEDIC

INDICATION:

1. All intubated/Supraglottic Airway patients.
2. Any patient being treated for carbon monoxide poisoning.
3. If appropriate cannula-type sensors are available capnography may be used in non- intubated patients with severe respiratory distress/respiratory insufficiency.

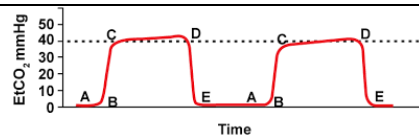
CONTRAINDICATION:


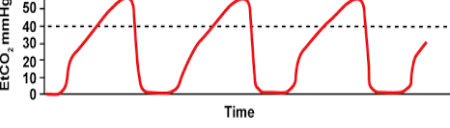



1. None is these settings.

PROCEDURES

1. For non-intubated patients with severe respiratory distress/respiratory insufficiency, place cannula-type sensor in patient's nares.
2. Attach capnography sensor to supraglottic airway or endotracheal tube.
3. Note CO₂ level and waveform changes. These will be documented on each respiratory failure or cardiac arrest patient.
4. The capnometer shall remain in place with the airway and be monitored throughout the prehospital care and transport.
5. Any loss of CO₂ detection or waveform indicative of an airway problem should be documented.
6. The capnogram should be monitored as procedures are performed to verify or correct the airway problem.
7. Document the procedure and results on/with the Patient Care Report (PCR).

NORMAL: "Square box" waveform;
baseline CO₂ = 0; ETCO₂ = 35-45 mm
Hg Management: Monitor



<p>DISLODGED ETT / ESOPHOGEAL INTUBATION: Loss of waveform, Loss of ETCO₂ reading Management: Replace ETT</p>	
<p>“SHARKFIN” with/without prolonged expiration = Bronchospasm (asthma, COPD, allergic rxn): Management: Bronchodilators (Albuterol, Atrovent, or epinephrine)</p>	
<p>RISING BASELINE = Patient is rebreathing CO₂: Management: Check equipment for adequate oxygen inflow Allow intubated patient more time to exhale</p>	
<p>HYPERVENTILATION: Rapid RR; shortened waveform; baseline ETCO₂ = 0; ETCO₂ < 35 mm Hg Management: Biofeedback if conscious, decrease assisted ventilation rate if unconscious/intubated</p>	
<p>PATIENT BREATHING AROUND ET TUBE: angled, sloping down stroke on waveform, Broken cuff or tube is too small Management: Assess patient, oxygenation, ventilation; may need to reintubate</p>	

**Important: Severe metabolic acidosis (DKA, sepsis, salicylate poisoning, acute renal failure, methanol ingestion, and tricyclic overdose) will cause tachypnea, but ETCO₂ will be HIGH.

THIS IS NOT NORMAL



Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. PROC-060

Effective: August, 2004

Reviewed: September, 2018

CARDIOVERSION

PARAMEDIC

OVERVIEW:

Synchronized electrical cardioversion causes a rapid and complete depolarization of cardiac tissue. Under many circumstances synchronized electrical cardioversion is the quickest and most effective method of correcting life threatening dysrhythmias.

INDICATIONS:

1. Unstable tachyarrhythmias – wide or narrow complex
2. patient are considered unstable if they display one or more of the following:
 - a. Altered LOC
 - b. Chest Pain
 - c. Syncope
 - d. Dyspnea
 - e. Hypotension
 - f. Pulmonary Edema
 - g. CHF
 - h. AMI

CONTRAINDICATIONS:

1. Supraventricular tachycardia induced by non-cardiac conditions (digitalis toxicity, hypovolemia, hyperthermia, hypoxia, etc.)

PROCEDURE:

1. If time permits, sedate the patient:
 - a. **Propofol:**
 - i. May use the following medications if patient has Propofol or peanut allergy:
 1. **Versed:** with **Fentanyl**
 2. **Diazepam:** with **Fentanyl** minutes prior to Cardioversion.
2. Place paddles/pads on patient.
3. Synchronize. ^(a)
4. Select initial energy level:
 - a. PSVT/A-Flutter:

- i. Monophasic: 100j
 - ii. Biphasic: 50j
 - b. A-Fib:
 - i. Monophasic 200j
 - ii. Biphasic: 120j
 - c. V-Tach:
 - i. Monophasic: 200j
 - ii. Biphasic: 100j
- 5. Confirm Synchronize.
- 6. Clear patient.
- 7. Deliver shock – hold button until shock is delivered.
 - a. If refractory increase to...
 - i. PSVT/A-Flutter:
 - 1. Monophasic: 200j, 300j, 360j progressively
 - 2. Biphasic: 100j, 150j, 200j, progressively
 - ii. A-Fib:
 - 1. Monophasic: 300j, 360j progressively
 - 2. Biphasic: 150j, 200j progressively
 - iii. V-Tach:
 - 1. Monophasic:, 300j, 360j progressively
 - 2. Biphasic:, 150j, 200j progressively
 - b. Re-Synchronize between each shock.

NOTES:

-
- a. If energy is delivered without synchronization, ventricular fibrillation could result.

	Biphasic				Monophasic			
PSVT/ A-Flutter	50j	100j	150j	200j	100j	200j	300j	360j
A-Fib	120j	150j	200j		200j	300j	360j	
V-Tach	100j	150j	200j		200j	300j	360j	

REFERENCE

-
- 1. [MED-180: Fentanyl](#)
 - 2. [MED-360: Propofol](#)



Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. PROC-078	Effective: October, 2011	Reviewed: September, 2018
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CONTINUOUS CPR

EMR	EMT	EMT-IV	PARAMEDIC
Component	<i>Adult</i> >8 years old	<i>Child</i> 1 – 8 years old	<i>Infant</i> 0 – 1 years
Recognition	Unresponsive - all ages. No breathing or no normal breathing (i.e. only gasping)-all ages. No pulse palpated within 10 seconds-all ages.		
CPR Sequence	C – A – B (circulation – airway - breathing).		
Compression Rate	Minimum 100cpm/all ages. Compressor counts, calls out at 180 and continues to count out loud to 200. Holds CPR, check pulse/ rhythm/ defibrillate if indicated - Rotate compressor at this time.		
Compression Depth	<i>Adult</i> At least 2 inches	<i>Child</i> At least 1/3 AP diameter About 2 inches	<i>Infant</i> At least 1/3 AP diameter About 1 ½ inches
Chest Wall Recoil	Allow complete recoil between compressions.		
Compression Interruptions	Attempt to limit interruptions to <10 seconds.		
Airway	Head tilt chin lift/jaw thrust maneuver when trauma suspected. No cricoid pressure when ventilating recommended. Place airway adjuncts (OPA/NPA) as soon as possible Prepare for suctioning. Secure airway (Supraglottic/ETT) when time permits. Recommended Eschmann Catheter (ET introducer) in place of stylet.		
Compression to Ventilation Ratio	Continuous compressions with 1 breathe every 6- 8 seconds or every 10 th compression with or without secured airway given over 1-2 seconds/compressions.		
Defibrillation	Attach and use AED/manual defibrillator as soon as available. Minimize interruptions in chest compressions before and after shock. When using a manual defibrillator charge at the 190 th compression, if no shock indicated discharge defibrillator. Continue compressions through charging phase if defibrillator allows, resume CPR beginning with chest compressions immediately after each shock.		
Note	All advanced procedures i.e. Advanced Airways, IVs'/IOs' will be attempted during compression phases in order to limit interruptions. If using "recording" defibrillator turn device on prior to starting CPR if possible. Follow current ACLS guidelines for medication administration.		

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Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. PROC-080

Effective: August, 2008

Reviewed: September, 2018

CONTINUOUS POSITIVE AIRWAY PRESSURE (CPAP) BLS AND ALS PROTOCOL

EMT

EMT-IV

PARAMEDIC

SIGNIFICANT FINDINGS (* DENOTES AUTOMATIC ALS)

- * Difficulty breathing * Diaphoresis * Hypertension
- * Tripod position * Pink, frothy sputum * Hypotension
- * Use of accessory muscles * Chest Pain * Rales/Wheezing
- * ALOC * Cyanosis * Tachypnea

INDICATIONS:

1. Any patient who is in respiratory distress with signs and symptoms consistent with:
 - a. Congestive Heart Failure (CHF),
 - b. [Pulmonary Edema](#),
 - c. [COPD](#) (emphysema, do not use in asthma patients),
 - d. [Near Drowning](#)
2. Other measures to improve oxygenation and decrease the work of breathing have failed (i.e., 100% [O₂](#) via NRM).
3. And who is:
 - a. Awake and able to follow commands
 - b. Is >12 years old and able to fit CPAP mask
 - c. Has the ability to maintain an open airway
 - d. Exhibits two or more of the following:
 - i. RR > 25
 - ii. SPO₂ < 94% at any time
 - iii. Use of accessory muscles of breathing

CONTRAINDICATIONS:

1. Significant Facial Hair
2. Patient is apneic
3. Pneumothorax is suspected
4. Patient is trauma patient with injury to the chest
5. Patient has a tracheostomy
6. Patient is actively vomiting or has upper GI bleeding
7. Patient has intolerance for CPAP mask or procedure. ALS personnel may use **Benzodiazepine** to facilitate patient compliance with procedure.

8. Patient has asthma.

PROCEDURE:

1. EXPLAIN THE PROCEDURE TO THE PATIENT
2. Place patient on continuous pulse oximetry
3. Position head of patient at 45 degrees or position of comfort
4. With device operating, place mask on patient and secure with straps
5. Use CPAP valve of 10 cm H₂O for most patients (for Pulmonary Edema).
 - a. ALS: In extreme cases 15 cm H₂O can be utilized.
6. ALS: For variable flow generators Use an initial setting of 30% FiO₂ at a flow rate of 140 liters/min., increase FiO₂ PRN.
7. Check for air leaks around face/mask interface. Readjust as needed
8. Coach patient to breathe with device
9. Request ALS intercept. ALS shall consider appropriate drug therapy as adjunct
 - a. May use small amounts of **Benzodiazepine** if the patient does not tolerate mask.
 - b. Use **Morphine** to reduce preload in CHF patients.
10. Check patient vital every 5 min.
11. If respiratory status deteriorates, remove device and assist ventilations w/ BVM
ALS personnel should consider intubation (follow RSI protocol).

SPECIAL CONSIDERATIONS:

1. Do not remove CPAP until hospital therapy is ready
2. Use extreme caution in patients with end-stage COPD: ALS - consider 5 cm H₂O as initial pressure.
3. CPAP may be used with patients who have POLST form or DNR orders
4. Do not use CPAP for asthma patients.
5. BLS agencies are equipped with fixed flow CPAP generators; ALS agencies are equipped with variable flow CPAP generators. BLS personnel in ALS agencies may use the variable flow generator only on the initial settings of 30% FiO₂ at a flow rate of 140 liters/min.

NOTES:

- A. WhisperFlow Fixed delivers 30% FiO₂ @ 140 LPM
- B. WhisperFlow Variable delivers 30% to 100% FiO₂ @ 0 -140 LPM
- C. Average D cylinder minutes of use (2200 PSI @ 10cmH₂O)
 - i. WhisperFlow Fixed: 33 min. 30% FiO₂
 - ii. WhisperFlow Variable: 4 – 33 Min. 30 – 100% FiO₂

REFERENCE

1. [MED-290: Morphine Sulfate](#)
2. [MED-330: Oxygen](#)



Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. <i>PROC-089</i>	Effective: <i>September, 2018</i>	Revised:
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CPR Assist Devices or Adjuncts

EMR	EMT	EMT-IV	PARAMEDIC
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INDICATIONS:

1. The CPR device/adjunct may be used for all patients that said device/adjunct is designed for.

CONTRAINDICATIONS:

1. Traumatic cardiac arrest with major chest trauma

PROCEDURE:

1. B.S.I.
2. At least one full cycle of high quality hands on CPR with placement of an AED or manual defibrillator.
3. Place devise/adjunct according to manufacturer's recommendation/training.

DOCUMENTTION:

1. Document the use of CPR devise/adjunct on PCR.

COMPLICATIONS:

1. The use of any CPR device or adjunct will follow manufacturer's recommendations and training. If any malfunction or damage to the device/adjunct occurs immediately resume high quality hands on CPR and continue until normal conclusion of CPR activity is achieved.

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Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. PROC-090	Effective: June, 2009	Reviewed: September, 2018
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CRIME SCENE PRESERVATION

EMR

EMT

EMT-IV

PARAMEDIC

1. Forensic guidelines emphasizing crime scene preservation are important. However, the most important role of EMS providers is to ensure the preservation of life.
 - a. EMS is in charge of the patient
 - b. Law Enforcement is in charge of the crime scene.
2. While an emotional cause of death, such as apparent SIDS, may cause a scene to be difficult, it is not an acceptable reason to move or transport a deceased person. If the patient is obviously deceased, do not disturb or move the body unless there is a clear potential the body will be lost or further damaged. Document why and what actions were taken.
3. Communicate with Law Enforcement, ensure the scene is safe.
4. Observe the area and try to make mental notes of the scene surroundings.
5. Limit access and egress to a single path/route. This may be identified by law enforcement; or if EMS arrives first, notify law enforcement of your route.
6. Limit the number of personnel entering a potential crime scene to only those essential to safely and efficiently care for the patient. Provide law enforcement with a list of responders' names, and when they arrived/departed.
7. EMS providers should not move anything; they should leave items alone unless absolutely necessary to perform lifesaving patient care.
8. Do not cut through bullet/stab holes on patient's clothing or binding knots, etc. as this may destroy critical evidence.
9. Do not use phones, sinks, toilets, garbage containers, or anything at a crime scene. Only utilize equipment that was brought to the scene and only remove equipment brought in if absolutely necessary.
10. Do not take anything from a crime scene that can be left. Give clothes, blankets, and sheets to law enforcement. If they want them packaged, put them in a paper bag and label it.
11. Document everything you observed (lighting, weather, temperature, odors, bystanders' behavior, position of patient), moved, and performed as patient care. Include statements made by the patient. Be as specific and exact as you can.

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Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. *PROC-100*

Effective: *August, 2004*

Reviewed: *September, 2018*

ET INDUCER: I.E. ESCHMANN CATHETER

PARAMEDIC

INDICATIONS:

1. Any situation involving poor vocal cord visualization
2. Anatomic, traumatic, or pathologic conditions limiting laryngeal access
3. Tracheal deviation
4. Cervical spine immobilization

PROCEDURE:

1. Lubricate bougie with water-soluble lubricant.
2. With the tip directed anteriorly, guide bougie toward the epiglottis.
3. Advance the bougie posterior to the epiglottis and into the glottic opening.
5. Cricoid pressure may facilitate correct placement
6. The operator may be able to feel the bougie “click” or “bump” over the anterior trachea rings.
7. Use the laryngoscope to elevate the pharyngeal soft tissue
8. Advance to the carina (resistance to passage) to verify placement. With further advancement the bougie should rotate as you enter into the bronchus, further confirming placement. Failure to meet resistance indicates esophageal placement.
9. Once placement is confirmed, withdraw and align the black “lip-line marker” with the lips.
10. Pass the endotracheal tube over the bougie.
11. After advancement, remove bougie and confirm ET tube placement. Secure the ET tube.
12. Attach [ETCO₂](#) device.

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Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. *PROC-110*

Effective: *September, 2004*

Reviewed: *September, 2018*

EPINEPHRINE ADMINISTRATION FOR EMT

EMT

EMT-IV

INDICATIONS:

1. Patient has had contact with a substance that has caused a reaction in the past and is currently experiencing respiratory distress, difficulty swallowing, or signs and symptoms of shock.
2. Patient has evidence of a prescription of epinephrine.

CONTRAINDICATIONS:

1. None in this setting.

PROCEDURE:

1. Request an ALS upgrade (give incoming report)
2. Provide [O₂](#) and /or ventilatory assistance as needed.
3. Administer the epinephrine:
 - a. confirm right medication: [Epinephrine](#);
 - b. prepare syringe and hypodermic needle;
 - c. cleanse vial rubber top;
 - d. insert needle into vial and inject air from syringe into vial;
 - e. withdraw appropriate volume of medication;
 - i. Adults:
 - ii. Pediatric:
 - f. Select IM injection site:
 - i. Deltoid – upper arm
 - ii. Dorsal Gluteal – butt muscle
 - iii. Vastus Lateralis – Anterior surface of upper leg
 - iv. Rectus Femoris – Lateral surface of upper leg
4. align needle/syringe at 90° angle at injection site and insert needle;
5. retract plunger of syringe to assure you haven't entered a blood vessel;
6. slowly and smoothly depress plunger to inject medication;
7. withdraw syringe and dispose of in a sharps container;
8. Record time of injection
9. Reassess vital signs and continue to treat for shock.

REFERENCE

1. [MED-170: Epinephrine](#)

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Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. *PROC-120*

Effective: *September, 2018*

Revised:

Excited Delirium/Behavioral Emergency

EMT

EMT-IV

PARAMEDIC

INDICATIONS:

1. Patient is exhibiting violent or combative behavior with any of these following presentations:
 - a. Extremely violent/Aggressive behavior
 - b. Constant or near constant physical activity
 - c. Does not respond to police presence
 - d. Attracted to reflective objects
 - e. Attracted to bright lights and/or loud sounds
 - f. Naked or inadequately clothed
 - g. Is hot to the touch
 - h. Rapid breathing
 - i. Profuse sweating
 - j. Keening(unintelligible animal noises)
 - k. Extreme tolerance to pain
 - l. Excessive strength (out of proportion)
 - m. Does not tire despite heavy exertion

CONTRAINDICATIONS:

1. Inadequate resources/personnel

PROCEDURE:

1. Preparation:
 - Request Law enforcement
 - ALS upgrade is required
 - Prepare all restraint equipment
 - Prepare PPE needed for personnel/patient
 - Prepare isolation zone if the patient is unable to be contained.
2. Procedure

- a. Risk assessment; coordinate with Law Enforcement to develop a sedation and/or patient control plan while maintaining scene safety.
- b. Continue to monitor ABC's
 - i. Attempt to apply cardiac monitoring
 - ii. Attempt to gain IV Access
- 3. Patient evaluation/assessment should also include body temperature
 - a. If body temperature exceeds 102 F or 39 C, move patient to a cool environment, and remove clothing. Cool aggressively with wet sheets, cool packs, and/or evaporative airflow.
 - b. Blood glucose level consider [AEIOU-TIPS](#)
- 4. Evaluate the need for physical restraint
 - a. As a team secure all limbs including the patients head with proper restraining equipment, i.e. soft restraints, backboards, spiders straps etc.
 - i. While restraining the patient attempt to be as gentle as possible
 - ii. Place the patient supine on a stretcher/backboard. Never prone.
 - iii. Once patient is secured, continue assessment and appropriate treatment.
 - iv. Monitor closely throughout transport.
 - b. Chemical restraint is required if physical restraints are not appropriate and/or not effective; if there is a threat to healthcare providers or scene safety; and to prevent hyperthermia, rhabdomyolysis, and sudden cardiac death.
 - i. Dosing.
 - 1. Benzodiazepines preferred, consider higher doses
 - 2. B52 (Haldol 10 mg, Ativan 2, Benadryl 50 mg IM.)
 - 3. Pediatric dosing: contact medical control
 - 4. If healthcare provider have determined maximum dose has not reached its therapeutic effect contact Medical Control
 - c. Consider RSI
- 5. Transport
 - a. Law enforcement will accompany the patient with healthcare providers
 - b. Continue to monitor patient with vital signs Q every 5 minutes.

NOTES:

- a. This protocol deals with a unique clinical situation. This protocol identifies goals of evaluation and treatment of the patient, but safety is paramount for the healthcare providers, the public, and the patient. Furthermore, the ability to achieve specific aspects of this protocol will be dependent on the severity of the patient's condition and their willingness to allow medical care.



Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. *PROC-125*

Effective: *January, 2015*

Reviewed: *September, 2018*

GLUCOMETRY

EMT

EMT-IV

PARAMEDIC

INDICATIONS:

2. Unconscious/Unresponsive
3. Altered Level of Consciousness
4. Signs and symptoms of Stroke
5. Known or suspected diabetic patient

CONTRAINDICATIONS:

2. Other patient care priorities (i.e. Airway, Breathing, Circulation)
3. Children less than one year of age

PROCEDURE:

6. Turn on and check glucometer for readiness and insert test strip. ^(a)
7. Choose desired finger and clean site with alcohol swab.
8. Use lancet to puncture skin, and then place used lancet into sharps container.
9. Apply gentle compression to fingertip, and then apply droplet of blood to test strip, allowing blood to wick up.
10. Place gauze on puncture site and apply pressure to stop bleeding.
11. Record reading. ^{(b)(c)}

NOTES:

- b. Perform the testing procedure as outlined in the instructions for your specific device.
- c. If a patient is treated with oral glucose, a second glucose level check must be performed.
- d. Patients who take insulin may be safely left at home if they respond completely (i.e. GCS 4, 5, 6 and are able to eat and drink normally), have a repeat glucose of at least 60 mg/dl and if a responsible person can remain in attendance.

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Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. *PROC-130*

Effective: *August, 2004*

Reviewed: *September, 2018*

HAZARDOUS MATERIALS RESPONSE

EMR

EMT

EMT-IV

PARAMEDIC

REFER TO DOT EMERGENCY RESPONSE GUIDEBOOK FOR INITIAL PROTECTIVE ACTIONS

PART I. EMERGENCY SCENE MANAGEMENT

Call for assistance early in the event: Fire department, WA State Patrol, Hazmat Team, Dept. of Ecology, Law enforcement.

Scene Safety:

- Isolate the hazard and deny entry
 - Establish a safe zone that is uphill, upwind and avoid low-lying areas
 - Evacuation distances vary depending on material. Distances listed below are guidelines. Consult reference material for specific product as soon as possible
 - Use DOT Guidebook and Placards on shipping containers to identify product(s) involved
-
- Evacuate for ½ to 1 mile for all Class A, B, and C Explosives
 - Evacuate for 1 mile if a tank or tank car of gaseous material is involved in fire
 - Evacuate for ½ mile if tank or tank car of flammable material is involved with fire

Do not assume the scene is safe because of no detectable odor or visible gas

Do not attempt rescue of involved individuals unless you are equipped with proper personal protective equipment. Fire fighter turnouts are considered Class D protective equipment and are not acceptable for chemical protection.

PART II. PATIENT DECONTAMINATION PROCEDURE

CONTAMINATED PATIENTS SHOULD NEVER BE PLACED IN AN AMBULANCE AND NEVER TAKEN INTO A HOSPITAL PRIOR TO DECONTAMINATION PROCEDURES

Emergency personnel must take steps to protect themselves from contamination by the patient. This includes contamination from solids, liquids and gasses. Emergency personnel MUST utilize proper PPE when decontaminating victims.

- Identify the product, route of exposure and life threat
- Establish a controlled access system with entry and exit points of the victims to the Decon corridor
- A minimum of a two-stage decontamination process should be utilized for grossly contaminated subjects (liquids, solids, toxic gasses).

First Stage:

Patient's clothing removed as needed to prevent further damage from chemical and to facilitate removal of product. Protect patient's privacy at all times.

Remove jewelry, shoes and clothing and place in biohazard bag. Keep patient's property secured for later decontamination.

- Solid or particulate substances should be brushed completely off patient's skin prior to water wash
- Heavy liquid contaminates should be blotted off skin prior to water wash

Second Stage:

- Wash areas of contamination with mild soap and water solution, rinse with copious amounts of water

In a patient with a life threatening medical condition the ABC's and Primary Survey are conducted simultaneously with Decontamination procedures. The head and upper torso should be decontaminated first so that airway management can be initiated early.



Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. <i>PROC-140</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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HELICOPTER TRANSPORT

EMR	EMT	EMT-IV	PARAMEDIC
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AIR AMBULANCE ACTIVATION:

An air ambulance will be activated by the on-scene EMS provider or Incident Commander. Air ambulance may be activated prior to contacting Medical Control in the cases of head injury with GCS <12 and significant mechanism of injury; burn patients >20% or involving the face and hands; spinal cord injuries with neurological deficits. For all other patients, the decision to activate Air Ambulance should be made in conjunction with Medical Control. Dispatch may assist in contacting an air ambulance service for activation as soon as the need for air transport is identified.

Every attempt should be made to stabilize the patient prior to transport, including IV, airway, chest decompression, control external hemorrhage, and spine immobilization. Transfer of care to air ambulance personnel will optimally occur at designated landing site, deviation from designated landing site should be briefly discussed with dispatch.

Personnel will request dispatch call the closest, most appropriate air ambulance.
Available air ambulance providers are Life Flight and Airlift Northwest.

Requesting an air ambulance

1. Notify communication center of need for helicopter and planned patient destination
2. Patient Considerations:
 - If hazardous materials involved the patient needs to be decontaminated.
 - Patient weight and girth;
 - i. Girth to a maximum of 26"
 - ii. Weight less than 300 lbs.
3. Select LZ location at or near incident site
 - Designate a tail rotor guard and LZ officer
 - 100' X 100' marked with cones (day) or strobe lights (night) if available
 - Slope less than 6 degrees
 - Provide GPS coordinates and/or cross streets
 - Clear of obstructions

- Consider use of roadway, school, parking lot (water down loose dirt if possible)
4. Select ground contact
 5. Coordinate frequency for LZ command via E-911.

General Responsibilities

1. Make sure LZ is clear of debris or unsecured materials and brush is no taller than knee high
2. Make note of overhead wires, light standards, radio towers, fences, or obstructions.
3. Fire department personnel maintain a 200' perimeter for bystanders, and personnel protective equipment should be used.
4. Do not use white strobe lights. Use red lights to assist in noting location. All white lights in the area need to be turned off during landing and departure. Do not spot light overhead hazards. Lights are to be turned off and on at the direction of the pilot.
5. Make sure to brief the pilot prior to arrival, noting locations of hazards.
6. Remain in two-way radio contact throughout landing.
7. Do not approach the helicopter until the rotor blades have stopped, or until directed to do so by the flight crew.
8. Approach the helicopter only from the 3 o'clock or 9 o'clock positions, once directed by the flight crew.
9. **Do not walk around the tail.** Have a designated tail rotor guard.
10. Maintain the LZ lighting at all times. At departure, clear all ground personnel away from the helicopter.
11. No one may approach the helicopter after the engines start and the blades are turning unless directed to do so by the flight crew.
12. Re-establish two-way radio communications with pilot and confirm the LZ is secure.
13. Notify the pilot if an unsafe situation develops.

UNITED STATES COAST GUARD ACTIVATION:

The United States Coast Guard, Group Astoria has helicopter assets available for Rescue and Medical Evacuation. In the event of an on scene Medical Evacuation, an air ambulance will be the first choice for air medical transport. In the event that an air ambulance is unavailable the USCG can be called.

Requesting USCG

1. Upon notification that an air ambulance is unavailable, notify the communications center to contact the USCG for the need for helicopter transport and planned patient destination
2. Provide patient information as outlined for requests involving an air ambulance.



Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. <i>PROC-150</i>	Effective: <i>June, 2009</i>	Reviewed: <i>September, 2018</i>
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HELMET REMOVAL

EMR

EMT

EMT-IV

PARAMEDIC

This procedure is for those patients wearing a helmet who require airway preservation, stabilization of head to long board, in-line stabilization for transfer, etc.

CONTRAINDICATIONS:

1. Do not remove football helmets unless airway is compromised. If you must remove a football helmet, ensure that the shoulder pads are also removed.

PROCEDURE:

1. This procedure requires two (2) rescuers.
2. The first rescuer (1) immobilizes the patient's head by holding the helmet.
3. Rescuer 1 brings the patient's head into a neutral position with eyes forward, maintaining manual stabilization.
4. The second rescuer (2) removes the chin strap, face piece and nose guard.
5. Rescuer 2 places one hand on the patient's mandible, with their thumb on one side and long index finger on the opposite side. The other hand is placed behind the patient's neck, and pressure is applied to the patient's occipital region.
6. Rescuer 1 releases manual stabilization and spreads the helmet and rotates it anteriorly off the patient's head.
7. Rescuer 1 takes over manual stabilization and support of the patient's head, keeping the head in a neutral position.
8. Apply an appropriate sized cervical collar as necessary.
9. When immobilizing the patient to a long board, utilize padding under the head as needed to maintain a neutral position.

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Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. <i>PROC -155</i>	Effective: <i>September, 2018</i>	Revised:
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I-GEL Supraglottic Airway

EMT w/ SGA	EMT-IV w/ SGA	PARAMEDIC
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INDICATION:

- Appropriate intubation is impossible due to patient access or difficult airway anatomy.
- Airway, Adult; Airway Rapid Sequence Intubation; Failed Airway, Adult; & Cardiac Arrest.
- Newborn Resuscitation.
- Pediatric Airway; Pediatric Difficult Airway & Pediatric Rapid Sequence Intubation.

CONTRAINDICATION:

- Pulmonary Fibrosis

SIZE: I-GEL

		<u>Compatible Endotracheal Tube</u>
Size 1.0	2-5 kg	3.0 mm I.D.
Size 1.5	5-12 kg	4.0 mm I.D.
Size 2.0	10-25 kg	5.0 mm I.D.
Size 2.5	25-35 kg	5.0 mm I.D.
Size 3	30-60 kg	6.0 mm I.D.
Size 4	50-90 kg	7.0 mm I.D.
Size 5	> 90 kg	8.0 mm I.D.

PROCEDURES

1. Lubricate with a water-soluble jelly on the middle of the smooth surface and return to the cradle.
2. Pre-Oxygenate the patient.
3. Grasp the lubricated i-gel along the integral bite block. Position the device so that the i-gel cuff outlet is facing towards the patient's chin (middle region of mandible).

4. The patient should always be in the 'sniffing position' with the head extended and neck flexed prior to insertion unless head/neck movement is inadvisable or contraindicated.
5. Introduce the leading soft tip into the mouth of the patient in the direction of the hard palate.
6. Glide the I-Gel downward and backward along the hard palate with a continuous but gentle push until a definitive resistance is felt.
7. Connect the I-Gel to a bag-valve-mask and assess for breath sounds, adequate air exchange and end tidal CO₂ (EtCO₂).
8. Monitor oxygen saturation with pulse oximetry, EtCO₂ and heart monitor.
9. Re-verify I-Gel placement after every move and upon arrival in the Emergency Department.
10. Secure the I-Gel.
11. Document the procedure, time, and result (success) on/with the patient care report (M.I.R./P.C.R.).

PARAMEDIC

*When using the device after encountering a difficult intubation endotracheal intubation may be accomplished by passing a bougie through the i-gel into the trachea (see above chart for endotracheal tube compatibility). When advancing the bougie you may be able to "rail-road" the bougie to over the cartilaginous rings in the trachea to confirm proper location. Place an endotracheal tube over the bougie and advance into the trachea.



Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. <i>PROC-160</i>	Effective: <i>June, 2009</i>	Reviewed: <i>September, 2018</i>
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INFANT TRANSFER OF CUSTODY

EMR	EMT	EMT-IV	PARAMEDIC
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1. In compliance with Washington Safe Haven Law (RCW 13.34.360), all firefighters shall be trained in and become familiar about their responsibilities as a “qualified person” to accept custody of a “newborn” infant.
 - a. The bill defines a newborn infant as one less than 72 hours old.
2. All qualified persons will ascertain from anyone seeking to transfer custody of a child whether the child is less than 72 hours old as determined to a reasonable degree of certainty.
3. The qualified person shall not require a parent to provide any identifying information as a condition of transferring custody of the newborn, and shall attempt to protect the anonymity of the parent.

PROCEDURE:

1. The qualified person should notify dispatch that a newborn or other child has been received and request an ALS response.
2. EMS personnel should medically assess the infant in accordance with Grays Harbor Emergency Medical Services Patient Care Protocols.
3. The qualified person should inquire as to whether the transferring person is the parent of the child, without requesting any identifying information.
4. The qualified person should attempt to verify the date and time of birth of the child to ascertain whether the child is a “newborn” as defined by the law.
5. Based on the information provided to the previous questions, it will be determined if the provisions of Washington Safe Haven Law (RCW 13.34.360) applies.
6. The qualified person will attempt to obtain a family medical history or information.
7. The qualified person shall notify Child Protective Services (1-866-END-HARM/1-866-363-4276) within 24 hours of the infant’s transfer.
8. If it is determined that the child is not a newborn as defined in the state statute, the qualified person shall attempt to obtain family medical history and address any immediate health and safety needs of the child. The qualified person must notify law enforcement and Child Protective Services. The parent could face criminal charges if Washington Safe Haven Law (RCW 13.34.360) is not applicable.
9. In the event that employees or members of the department, who do not meet the definition of a “qualified person”, are asked to accept transfer of a newborn from a parent, or any child from any person, they must ask the transferring individual to wait while a qualified person is summoned.

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Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. *PROC-170*

Effective: *August, 2004*

Revised: *September, 2018*

INTRASOSSEOUS INFUSION – NEEDLE SITE

IV TECH

PARAMEDIC

1. Adult Intraosseous infusions shall be completed by utilizing the EZ-IO system when indicated within the Grays Harbor Emergency Medical Services Patient Care Protocols.

INDICATIONS:

1. Intravenous fluid therapy or medications are urgently needed and a peripheral IV cannot be established in two (2) attempts or 90 seconds **AND** the patient exhibits one or more of the following:
 - a. Cardiopulmonary Arrest (Medical or Trauma)
 - b. An altered mental status (GCS of 8 or less)
 - c. Respiratory compromise (SaO₂ 90% after appropriate oxygen therapy, respiratory rate less than 10 or greater than 40 min.)
 - d. Hemodynamic instability (Systolic B/P of less than 90)

CONTRAINDICATIONS:

1. Fracture of the bone selected for IO infusion
2. Excessive tissue at insertion site with the absence of anatomical landmarks (consider alternate site)
3. Previous significant orthopedic procedures (IO within 24 hours, prosthesis – consider alternate site)
4. Infection at the site selected for insertion (consider alternate site)
5. Failed IO attempt in that extremity

PROCEDURE:

1. Take BSI precautions
2. Choose appropriate EZ-IO size:
 - a. Yellow 45 mm (>40kg)
 - b. Blue 25 mm (>40kg)
 - c. Pink 15 mm (3-39 kg)
3. Locate appropriate insertion site:
 - a. Proximal Tibia – preferred for peds/adult
 - b. Distal Tibia
 - c. Alternate Sites
 - i. Distal Femur – pediatrics
 - ii. Proximal Humorous – adult, children >10

4. Prepare site with aseptic technique
5. Prepare the EZ-IO driver and appropriate needle set
6. Stabilize site area
7. Insert the EZ IO needle
 - a. Position the Driver at 90 Degree angle with the bone surface
 - b. Verify that you can see the 5mm mark through the soft tissue (If it is not visible, the needle is too short)
8. Remove EZ-IO driver from needle set while stabilizing catheter hub
9. Remove stylet from catheter.
 - a. Place stylet in approved sharps container
10. Connect primed extension set
11. Confirm placement by flushing with **10 ml of NACL** through the catheter.
12. Begin infusion

13. When needed utilize pressure (syringe bolus, pressure bag or infusion pump) for continuous infusion.
14. Dress site and secure tubing.
15. Apply wristband
16. Monitor EZ IO site and patient condition
 - a. Remove catheter within 24 hours.

NOTES:

- a. All IV fluids and medications may be given via IO infusion
- b. Paramedics: consider infiltrating the area with [2% Lidocaine](#) down to the periosteum.

REFERENCE

1. [MED-250: Lidocaine 2%](#)



Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. *PROC -180*

Effective: *September, 2018*

Revised: *October, 2018*

KING AIRWAY LTS-D

EMT w/ SGA

EMT-IV w/ SGA

PARAMEDIC

INDICATION:

- Apneic patient when endotracheal intubation is not possible or readily available.
- Respiratory arrest with absent gag reflex when endotracheal intubation is not possible or not available.
- Failed airway protocol
- No history of esophageal disease

CONTRAINDICATION:

- Active gag reflex
- Caustic ingestion or extensive airway burns
- Known esophageal disease
- Laryngectomy with stoma

SIZE: KING LT

Size: King LTSD

Green (size 2): 12-25kg - 25-35ml inflation volume

Orange (size 2.5): 25-35kg - 30-40ml inflation volume

Yellow (size 3): 4-5 feet tall - 40-55ml inflation volume

Red (size 4): 5-6 feet tall - 40-55ml inflation volume

Purple (size 5) >6 feet tall - 60-80ml inflation volume

PROCEDURES

1. Select appropriate size tube per manufacturer specifications.
2. Pre-oxygenate and hyperventilate patient with BVM.
3. Lubricate distal portion of the tube.
4. Draw up 60ml of air in syringe and connect to pilot balloon.
5. Maintain the head in a neutral inline position.
6. Grasp the patient's tongue and jaw and pull up and forward.
7. Insert the tube into the corner of mouth with the blue orientation line facing laterally until the teeth are between the 14cm-16cm lines.

8. Inflate the cuff with 60 ml of air and remove syringe from pilot balloon
9. Connect BVM to tube and ventilate patient.
10. Auscultate for negative epigastric sounds and present bilateral lung sounds.
11. Check for chest rise and fall.
12. If available use ETCO₂ monitoring.
13. Secure tube with tape or commercial device.

PARAMEDIC

Endotracheal intubation with a King LM Airway in place. (Not necessary if ventilations are adequate with King LT Airway).

1. Prepare all equipment needed for an endotracheal intubation
2. Pre-oxygenate and hyperventilate patient.
3. Pass an Eschmann Catheter through the King airway.
4. Deflate cuff and extubate the tube.
5. Using the Eschmann Catheter insert ETT into airway.
6. Confirm correct placement. If ETT is in esophagus use direct laryngoscopy and insert ETT into the trachea.



Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. PROC-200

Effective: June, 2009

Reviewed: September, 2018

MORGAN LENS

PARAMEDIC

OVERVIEW:

Morgan lenses provide for an effective method of irrigating the eyes. Most patients are unable to keep their eyes open long enough to achieve proper irrigation. Morgan lens are applied under the patient's eye lids, allowing the patient to close their eye and/or blink while achieving quality irrigation.

INDICATIONS:

1. Chemical burns/irritation to the eye.

CONTRAINDICATIONS:

1. Laceration/Penetrating/Imbedded injury to the eye.
2. Thermal burns to the eye.

PROCEDURE:

INSERTION

1. Remove contact lenses if present.
2. Administer [Tetracaine](#): in eye(s) to be irrigated.
3. Attach IV Normal Saline Solution to Morgan Lens.
4. Begin flow wide open.
5. Have patient look down, Insert lens under upper eye lid.
6. Have patient look up, retract lower lid and drop lens in place.
7. Observe flow.

REMOVAL

1. Continue flow.
2. Have patient look up.
3. Retract lower lid.
4. Slide Morgan Lens out;
5. Stop flow of fluid.

REFERENCE

1. [MED-400: Tetracaine](#)



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Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. *PROC-210*

Effective: *November, 2006*

Revised: *January, 2018*

MULTI-PATIENT, MASS CASUALTY AND DISASTER INCIDENTS

EMR

EMT

EMT-IV

PARAMEDIC

DEFINITIONS:

MASS CASUALTY INCIDENT (MCI): The combination of numbers of injured or ill patients that exceeds the capabilities of an agency's normal first response. (reference FEMA Field Ops Guide 420-1 July 2010)

TRIAGE RIBBON: Colored ribbon (i.e. Red, Yellow, Green or Black/White), attached to a patient's arm or leg, indicating patient's treatment and/or transport priority status.

TRIAGE TRACKING TAG: Tag indicating patient's priority status along with space for vital signs, injuries, treatment and personal information.

TRIAGE REPORT: Includes the total number of patients and the number of patients triaged by color code. The triage report is a benchmark that should be relayed early by the IC at an incident to Harbor Dispatch and the receiving medical facility.

NIMS: National Incident Management System

INDICATIONS:

Background/Objectives: The guidelines listed here are designed to coincide with individual agency policies and procedures as well as NIMS to achieve the effective management of multiple patient incidents regardless of the number of patients or incident size.

Procedure: The guidelines listed here should be implemented by the first arriving unit(s) to arrive at a multiple patient incident when it is determined that the needs of the incident exceed the initial available resources. Depending on the number of patients encountered, a MCI incident should be declared.

PROCEDURE:

The following procedures are general orders for MCI and should serve as the basis for managing these incidents. Providers and incident commanders must be aware that this is not all encompassing of the variety HAZMAT, acts of violence, disasters or public health emergencies that may be encountered. Specific management of those incidents will require expanding the scale of response and ICS structure to mitigate the incident.

The following initial actions will be taken by first arriving unit(s):

1. Scene Size-up and situation assessment
2. First arriving unit should Initiate and/or establish Incident Command per agency guidelines
3. Determine if a MCI exists and request additional resources as needed through GH Communications Center.
4. Initiate START and assign Triage Officer
5. Establish a treatment area in safe zone (outside of the hot zone)
6. Assign Treatment Officer
7. Assign Transport Officer as needed to coordinate transportation of patients
8. Contact MEDCON and provide information concerning the incident, MEDCON will assist or directly coordinate the decisions on receiving facilities for patients. (Note see WA DOH Mass Casualty All Hazards Field Protocols, Revised January 2008)

INCIDENT ORGANIZATION:

TRIAGE Procedure (START):

Triage will be initiated early in a MCI incident, especially when the number of patients and/or the severity of their injuries exceed the capabilities of an agency's normal first-response. Triage will be performed using [START triage system](#).

Simple Triage And Rapid Treatment

Assesses Respirations, Perfusion and Mental Status.

- A. Immediate (RED)
 1. Respirations >30 per minute or absent until head repositioned, or
 2. Radial pulse absent or capillary refill > 2 seconds, or
 3. Cannot follow simple commands
- B. Delayed (YELLOW)
 1. Respirations present and <30 per minute and,
 2. Radial pulse present
 3. Can follow simple commands
- C. Minor (GREEN)
 1. Anyone that can get up and walk when instructed to do so.
- D. Deceased (BLACK/WHITE)
 1. Anyone not breathing after you open the airway

Personnel assigned to perform triage will utilize a systematic approach to identifying the severity of patient injuries using the START system. A colored ribbon corresponding to the appropriate START criteria above shall be tied to either the patient's wrist or ankle after triage is completed. Personnel will maintain a count of all patients triaged and their severity level to report to the Triage Officer or IC.

Triage is typically performed in the HOT ZONE, patients will be moved to the Treatment Area following the completion of triage.

TREATMENT AREA:

As a general rule, establishing a Treatment Area is optional for MCIs and should be dependent on the situation or hazards encountered. For MCIs when transportation is not immediate due to resource limitations or could be delayed, a Treatment Area should be established. A Treatment Area will be established for all situations where patients will be moved following triage when they are not in a safe environment or will continue to be exposed to a hazard.

If a Treatment Area is established a Treatment Unit Leader will be assigned to track patients. The Treatment Unit Leader is responsible for treatment, preparation for transport and directs the movement of patients to the Transportation Area. The Treatment Unit Leader will maintain intake tracking of all patients received from triage utilizing the color coded tabs on the Triage Tag. One appropriate color triage tab will be removed from the Triage Tag and a total of count of patients in the Treatment Area will be maintained.

The Treatment Area should be divided into clearly identified areas by color so that patients are identified by priority for transport. Entry into the Treatment Area should be clearly identified to ensure that all patients are appropriately tagged. At the entry, a Triage Tag is attached to the patient and the patient numbered according to triage tag system.

All patients triaged Minor (GREEN) shall be directed to a holding area where they can be further assessed, protected from the environment and arrangements made for their release from the scene or transported as appropriate. These patients should not be allowed to self-deploy to the hospital or from the scene. Prior to release all patients will receive a Triage Tag and their information appropriately recorded.

TRANSPORTATION AREA:

If a formal Treatment Area is established coordination for loading/transporting of patients should be assigned to a Transportation Group Supervisor. The Transportation Area shall be established to coordinate loading of patients and movement to the appropriate receiving facility. Personnel assigned to Transportation Group Supervisor shall be in communications with MEDCON.

The MEDCON doctor will communicate with the receiving facilities about transportation of patients to their facility. In cases of patients being moved out of county and at the request of MEDCON, direct communications with the regional Disaster Medical Command Center (DMCC) may be necessary. For Grays Harbor County – West Region PCP designates the DMCC as MEDCON Doctor at Providence St. Peters Hospital in Olympia.

Triage Tags provide a transportation receipt. The Transport Unit Leader is responsible to maintain the transportation receipt and provide each transporting unit with the appropriate ambulance receipt for assigned patients. The Transportation Unit Leader will

document on the transportation receipt the destination of the patient and transporting agency and unit ID.

STAGING:

When a Treatment Area has been established, a Staging Area for arriving ambulances should be designated to coordinate the orderly flow of units into and out of the patient Transport Area loading zone. A Staging Officer should be established to work in conjunction with the Transportation Group Supervisor to ensure patients are placed with an appropriate transport unit (ALS vs. BLS). The Staging Officer should operate on a predetermined radio frequency identified by the Incident Commander.

In the event an air ambulance will be utilized to transport patients, a separate Transport Unit Leader will be assigned to manage the air resources. A separate loading zone appropriate for air resources will be established in a safe area.

Reference NIMS for additional positions and descriptions.

COMMUNICATIONS:

Communication with the receiving medical facility is critical to the successful mitigation of a MCI. The following steps should be considered to eliminate confusion and to facilitate an orderly flow of patients.

- **Initial Triage Report:** The initial “head count” of the injured patients will allow the hospital to implement their appropriate internal response to the incident. This report should be communicated to MEDCON.
- **Individual patient reports:** These may be handled by the individual transporting units as they leave the scene if transport time and distance will allow. If a Transportation Group Supervisor or Communications Unit Leader is established, individual patient reports should be made by them to the receiving facility instead of by the transporting unit. The method of communicating with the receiving facility should be made clear to all transporting units prior to their departure from the scene.

Ongoing communications and progress reports should be made by the IC or designee to the MEDCON facility as needed.

REFERENCE:

1. [REF-060: START Triage](#)



Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. PROC-215

Effective: January 2017

Reviewed: September, 2018

NALOXONE (NARCAN) ADMINISTRATION FOR EMT

EMT

EMT-IV

INDICATIONS FOR NASAL NARCAN:

1. Known narcotic or opioid overdose.
2. Respiratory depression of unknown origin.
3. Coma or Altered Level of Consciousness of unknown origin.

INDICATIONS FOR IM ADMINISTRATION

1. For IM administration:
 - a. Excessive epistaxis
 - b. Nasal trauma
 - c. Septal abnormalities
 - d. Nasal congestion with mucous discharge
 - e. Destruction of nasal mucosa from surgery or past cocaine abuse
2. For IM administration: Hypersensitivity to Naloxone

PROCEDURE:

1. Request an ALS upgrade (give incoming report)
2. If apneic and pulseless, provide CPR.
3. If apneic but with a pulse, provide ventilatory assistance as needed.
4. Appropriately determines the need for Naloxone.
5. Administer the Naloxone:
 - a. confirm right medication: [Naloxone](#)
 - b. checks medication for expiration date
 - c. checks medication for cloudiness or discoloration
 - d. selects proper needle and syringe
 - e. cleanse vial rubber top
 - f. insert needle into vial and inject air from syringe into vial
 - g. withdraw appropriate volume of medication
 - h. For Intranasal (IN) administration:
 - i. Removes and discards needle in sharps container
 - ii. places mucosal atomizer device (MAD) on syringe
 - iii. using free hand to hold head stable, uses other hand to place MAD into nostril and applies pressure
 - iv. expels half the dose into nostril
 - v. removes MAD, places in opposite nostril and expels remainder of medication
 - vi. discards syringe and MAD in proper biohazard bag

- i. For Intramuscular (IM) administration:
 - i. Selects and cleans appropriate IM injection site:
 - a. Deltoid – upper arm
 - b. Dorsal Gluteal – butt muscle
 - c. Vastus Lateralis – Anterior surface of upper leg
 - d. Rectus Femoris – Lateral surface of upper leg
 - ii. inserts needle at 90° angle at injection site
 - iii. if blood returns on withdrawal of plunger on syringe, still ok to inject.
 - iv. injects medication
 - v. withdraws needle and discards syringe in sharps container
 - vi. applies pressure over injection site
- j. Records time of injection.
- k. Reassess vital signs.
- l. Repeat after 4 minutes if patient did not respond to the initial dose.
- m. May repeat dosing after 15 minutes only if the patient responded to the initial two doses.

REFERENCE

2. [MED-300: Naloxone \(Narcan\)](#)



Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. *PROC-220*

Effective: *August, 2004*

Reviewed: *September, 2018*

NEEDLE THORACENTESIS

PARAMEDIC

PRECAUTIONS:

- A tension pneumothorax may result from CPR or positive pressure ventilation.
- A misplaced ET tube may present like a pneumothorax.
- If patient is intubated, an increase in compliance may be due to a pneumothorax.

INDICATIONS:

1. Tension Pneumothorax
2. Absent breath sounds, Tachypnea, JVD, Hypoxia, Hyper-expanded chest, narrowing pulse pressures, cyanosis, and s/s of shock

CONTRAINDICATIONS:

1. None in the setting of tension pneumothorax
2. Not recommended for simple pneumothorax or hemo-pneumothorax

PROCEDURE:

1. Connect the syringe to the needle catheter device
2. Prep the access area with Chlorhexidine wipes if time permits. Find your access point
 - a. Preferred: between 4th & 5th rib; mid-axillary line. OR
 - b. Secondary: mid-clavicular, 2nd intercostal space.
3. Insert catheter through the skin along the superior aspect of the rib, keeping one hand pulling suction on the syringe while advancing needle to puncture the parietal pleura.
4. Once the air is freely aspirated into the syringe, the needle should not be advanced any further. Slowly advance the catheter in the pleural space. If any resistance is encountered, the catheter should not be forced.
5. Secure catheter with device that is included or with tape.
6. Re-evaluate lung sounds and hemodynamic status of your patient.
7. Stopcock, connecting tubing and chest drain may be attached at this point

NEEDLE DECOMPRESSION

1. Insert an appropriate over the 3.25” needle catheter (10-16 gauge IV catheter) mid-clavicular line 2nd intercostal space at a 90 degree angle (take care to avoid the inferior aspect of the rib) or insert an appropriate over the needle catheter between the 4th and 5th rib mid-axillary line; approximately male nipple line.
2. Remove the needle leaving the catheter in place.



Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. *PROC-230*

Effective: *August, 2004*

Reviewed: *September, 2018*

NASOGASTRIC TUBE INSERTION

PARAMEDIC

OVERVIEW:

Paramedics may insert a NG tube on pediatric patients requiring intubation with an uncuffed tube and adults with distended abdomens in cardiac arrest. Its purpose is to relieve pressure and distention of the stomach by removing air and fluid.

PROCEDURE:

1. Measure the length of the tube by placing the tip of the tube over the stomach and extending it to the patient's ear and from the ear to the tip of the nose. Note the marks on the tube.
2. Lubricate the distal end of the tube.
3. Insert the NG tube into the nose and slowly pass it the distance to where the tube was marked.
 - a. Flexing the neck will help with tube placement as long as C-spine precautions are maintained.
4. To check for proper tube placement, connect a 1060-20cc syringe to the NG tube and attempt to aspirate stomach contents. If no contents are obtained disconnect the syringe. Fill the same syringe with air and inject it into the tube rapidly while listening over the stomach.
 - a. If either of these techniques do not work, remove the tube and try again.
 - b. If aspiration of the NG tube is done too quickly, the tube can collapse and no contents would be seen.
5. Secure in place if you have positive confirmation on placement.

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Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. *PROC-240*

Effective: *June, 2009*

Reviewed: *September, 2018*

PELVIC WRAP SPLINT

EMT

EMT-IV

PARAMEDIC

INDICATIONS:

1. Patient with a suspected pelvic fracture secondary to blunt trauma.

CONTRAINDICATIONS:

1. Hip fracture.
2. Proximal femur fracture.

PROCEDURE:

1. Assemble equipment:
 - a. 1 Bed Sheet
 - b. 4 Towel Clips/Safety Pins
2. Place one rescuer on each side of the patient.
3. Place the folded sheet under the patient's pelvis, aligning the top of the sheet with the patient's umbilicus.
4. Rescuer 1 passes his end of the sheet of the sheet to rescuer 2.
5. Rescuer 2 folds the sheet back toward rescuer 1, aligning the fold with the patient's iliac crest nearest to rescuer 2.
6. Rescuer 2 passes the unfolded end of the sheet to rescuer 1.
7. Rescuer 2 holds the folded end of the sheet at the fold and pulls toward their self while rescuer 1 pulls the other end of the sheet toward their self.
8. Rotate the patient's feet internally prior to applying the splint, unless leg fractures are present.
9. Increase pressure until immobilization is achieved.
10. Rescuer 3 secures the sheet into place with the 4 clips/pins. 2 clips/pin with the fold and 2 clips/pins at opposite iliac crests.

NOTES:

- a. Optional MPD Approved after-market pelvic splint device.
 - i. Example: SAM Pelvic Sling Splint

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Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. *PROC-250*

Effective: *August, 2004*

Revised: *September, 2018*

PERICARDIOCENTESIS

PARAMEDIC

INDICATIONS:

1. Signs and symptoms of cardiac tamponade.

CONTRAINDICATIONS:

1. None in the setting of tamponade.

PROCEDURE:

1. Prep The xiphoid area with iodine soap
2. Local anesthesia, if needed (1cc 2% Lidocaine subcutaneous).
3. Attach a #14 gauge, 5-1/2" inch over-the-needle catheter to large syringe
4. Puncture the skin 1-2 cm inferior to the left margin of the xiphoid process, at a 45-degree angle to the skin.
5. Carefully advance the needle/catheter cephalad aiming for the tip of the left scapula, aspirating constantly.
6. When the needle tip enters the blood filled pericardial sac, withdraw as much blood as possible (pericardial sac will not clot). In a simple cardiac tamponade, withdrawal of a small amount of pericardial blood may result in a rapid drop of central venous pressure (neck veins) and a slow improvement in blood pressure.
7. If the needle is advanced to far during insertion or the epicardium contacts the needle tip during aspiration, an injury pattern will appear on the cardiac monitor (ST-T wave changes, PVC's etc.).
8. After aspiration, withdrawal the needle and secure the catheter to the skin while occluding the catheter with a small syringe attached. The pericardial sac may then be repeatedly aspirated as needed.
9. Rapid transport upon completing the procedure.

NOTES:

- a. The pediatric heart is considerable more shallow than the adult.

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Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. PROC-255

Effective: January 2015

Reviewed: September, 2018

PULSE OXIMETRY

EMT

EMT-IV

PARAMEDIC

INDICATIONS:

1. Signs and symptoms of respiratory distress or dyspnea
 - a. Shortness of breath
 - b. Chest pain or trauma
 - c. Altered level of consciousness
 - d. Pregnancy or active labor
2. Anytime oxygen is in use or to be administered ^(a)

CONTRAINDICATIONS:

1. Carbon monoxide poisoning
2. Cyanide poisoning

PROCEDURE:

1. Remove nail polish if necessary. ^(b)
2. Place probe on patient's finger. ^(c)
3. Assess for a good signal (green light or pulse reading correlating with palpable radial pulse).
4. Record reading. ^(d)

NOTES:

- a. Pulse Oximetry should be accomplished simultaneously with the initial administration of oxygen to allow for a "room air" reading.
- b. Perform the testing procedure as outlined in the instructions for your specific device.
- c. Use appropriate pediatric probe for children or infants.
- d. Pulse oximetry is inaccurate for patients in the following clinical situations:
 - i. Cardiac arrest
 - ii. Shock
 - iii. Hypothermia
 - iv. Jaundice

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Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. PROC-260	Effective: August, 2004	Revised: September, 2018
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RAPID SEQUENCE INTUBATION

		PARAMEDIC
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PROCEDURE:

<i>TIME</i>	<i>ACTION</i>	<i>DOSE</i>
0 - 10 minutes	Preparation	
0 - 5 minutes	Preoxygenation to an O ₂ Sat of >90%	
Zero minutes	Paralysis with induction: <u>Pre-medication:</u> ~ Propofol OR ~Benzodiazepine <u>Paralysis:</u> ~ Succinylcholine	
Zero plus 25 seconds	Protection - Sellick's Maneuver	
Zero plus 45 seconds	Placement- intubate, check placement	
After confirmed placement	For sedation: ~ Propofol OR ~Benzodiazepine <i>If Versed or Valium used, also use Fentanyl 50mcg.</i> For continued paralysis: ~ Vecuronium OR ~ Pancuronium	

INDICATIONS:

1. Patient is unable to protect their own airway.
2. Patient's expected course indicates that intubation will be necessary and will be more safely established at the present.

CONSIDERATIONS:

1. Extreme caution should be used in cases that are expected to be difficult intubations – have ET Inducer ready.
2. Use of [Succinylcholine](#) as a paralytic should not be used in patients with...
 - a. unhealed major burns older than 24 hours old;
 - b. crush injuries.
3. Considerations for dialysis patients:
 - a. do not use Succinylcholine,
 - b. Administer [Albuterol](#) via ET.
4. In cases that Succinylcholine as a paralytic is contraindicated, [Propofol](#) may be utilized as such

REFERENCE:

1. [PROC-100: ET Inducer – I.E. Eschmann Catheter](#)
2. [MED-060: Albuterol](#)
3. [MED-080: Atropine Sulfate](#)
4. [MED-180: Fentanyl](#)
5. [MED-280: Midazolam HCL \(Versed\)](#)
6. [MED-345: Pancuronium](#)
7. [MED-360: Propofol](#)
8. [MED-380: Succinylcholine](#)
9. [MED-430: Vecuronium](#)



Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. *PROC-270*

Effective: *August, 2004*

Revised: *September, 2018*

RESTRAINT GUIDELINE FOR COMBATIVE/VIOLENT PATIENTS

EMR

EMT

EMT-IV

PARAMEDIC

INDICATIONS:

1. A recognized health care emergency and implied consent exist.
2. Patient is exhibiting violent or combative behavior.

CONTRAINDICATIONS:

1. Insufficient resources (adequate number of personnel).

PREPARATION:

1. Request Law Enforcement.
2. ALS upgrade is required.
3. Prepare soft restraints.

PROCEDURE:

1. Risk assessment- do you need to take the patient down or can you wait for law?
2. Each member of the team secures their assigned limb with the leader controlling the head.
3. Take the patient to the ground as gently as possible.
4. Secure patient to backboard PRN.
5. Place soft restraints on each extremity, secure one arm above the head with the other secured towards the torso.
6. Place the gurney straps over the patient to secure for transport.
7. If patient continues to struggle once secure or is not compliant with immobilization, chemical restraint is indicated.
8. Once patient is secured, continue assessment and appropriate treatment. Monitor closely through transport.
9. If patient is in custody it is appropriate for law to accompany patient, may facilitate restraining patient as needed.

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Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. PROC-280

Effective: June, 2009

Reviewed: February 2020

SPINAL IMMOBILIZATION

EMR

EMT

EMT-IV

PARAMEDIC

INDICATIONS:

1. Spinal immobilization should be initiated for any patient who has sustained blunt trauma (MVA, fall, etc.) and displays ANY of the following. This assessment should be performed in the order displayed.
 - a. Distracting injuries
 - b. Inability to communicate with the patient (language/hearing/speech/children).
 - c. Altered LOC.
 - d. Presence of intoxicants by history or assessment.
 - e. Neurological deficit or complaint.
 - f. Spine pain or tenderness with palpation or movement
 - g. Acute a anatomical deformity of the spine.
2. Patients who's MOI is solely penetrating will be spinally immobilized if they display any of the following:
 - a. Inability to communicate with the patient (language/hearing/speech/children).
 - b. Altered LOC (GCS <15).
 - c. Presence of intoxicants by history or assessment.
 - d. Neurological deficit or complaint.
 - e. Spine pain or tenderness.
 - f. Acute anatomical deformity of the spine.
3. Any other patient with an MOI that would have an index of suspicion for a spinal injury will have their spine immobilized until cleared at the receiving facility.

CONTRAINDICATIONS:

1. None.

PROCEDURE:

1. Initiate manual spinal immobilization.
2. Assess sensation, circulation and motor function
3. Apply cervical collar.
4. Extricate patient while maintaining in-line spinal stabilization.
5. Immobilize patient onto long back board or the gurney may be used to immobilize during transport.
6. Pad voids as needed.

CONSIDERATIONS:

1. If you feel that a patient needs to be immobilized regardless of the above criteria.
2. Use a high index of suspicion when assessing MOI in patients <10 or >50 y/o.
3. Some patients may not be able to be immobilized utilizing standard techniques. Immobilize these patients to the best of your ability – it may require innovation.
4. Pregnant patients in spinal immobilization need to be transported in left lateral recumbent position. This may require backboard use.



Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. *PROC-285*

Effective: *August, 2004*

Revised: *September, 2018*

SUPRAGLOTTIC AIRWAY

EMT w/ SGA

EMT-IV w/ SGA

PARAMEDIC

INDICATIONS:

1. Cardiopulmonary Arrest
2. Respiratory Arrest
3. No gag reflex

CONTRAINDICATIONS:

1. An intact gag reflex
2. Airway obstruction
3. Cases of suspected caustic ingestion
4. Conscious/breathing patients
5. Facial Trauma
6. Esophageal disorder

PROCEDURE:

1. Maintain BSI
2. Use in accordance with manufacturer's recommendations.

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Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. PROC-290

Effective: August, 2004

Revised: September, 2018

SURGICAL CRICOTHYROTOMY

PARAMEDIC

INDICATIONS:

1. The inability to ventilate the patient with a BVM or the inability to perform endotracheal intubation by a less invasive means (i.e. ET inducers)
2. Massive oral, nasal, or pharyngeal hemorrhage, masseter spasm, clenched teeth with no response to paralytics, or structural deformities of the upper airway.
3. Airway obstruction which cannot be relieved using basic airway maneuvers.

CONTRAINDICATIONS:

1. Endotracheal intubation by a less invasive means.
2. Significant damage to the cricoid cartilage or larynx.
3. Patients with massive neck edema

COMPLICATIONS:

1. Asphyxia from time involved in procedure.
2. Aspiration of blood.
3. Creation of false passage in tissue
4. Hematoma formation
5. Hemorrhage
6. Laceration to esophagus

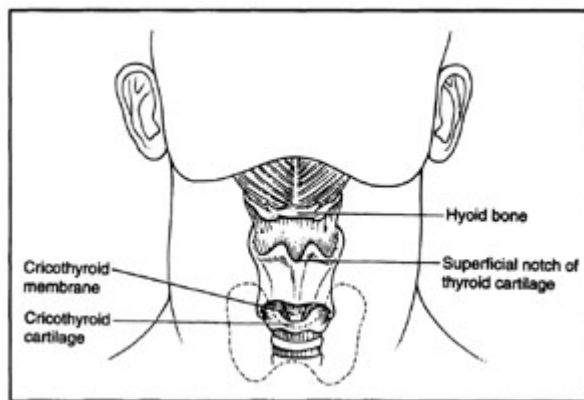
PROCEDURE:

H&H Civilian Cric Pack

Use of the H&H Civilian Cric Pack device is the preferred method of performing a surgical cricothyrotomy

1. Wear BSI (gloves, goggles, etc.)
2. Place pt. in supine position and extend neck.
3. Identify the Cricoid Membrane located between the cricoid cartilage and thyroid cartilage
4. Continue to ventilate with BVM

5. Prepare the area with Chlorhexidine wipes if time permits
6. Stabilize the thyroid cartilage with your non-dominant hand
7. Make a vertical incision over the cricothyroid membrane. (at least 2cm's)
8. Feel the cricothyroid membrane. Make a horizontal incision over the lower part of the membrane.
9. Insert the scalpel handle into the incision and rotate it 90 degrees to open the airway. (be cautious of spraying secretions)
10. Insert an appropriately sized cuffed endotracheal tube into the incision through the cricothyroid membrane. Direct the tube distally into the trachea. Inflate the cuff and ventilate the patient.
11. Check for proper tube placement.
12. Secure ET Tube in place, attach a BVM and ETCO₂ – ventilate the patient.





Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. PROC-300

Effective: August, 2004

Reviewed: September, 2018

TASER REMOVAL

PARAMEDIC

NOTE:

**Removal of a TASER barb is an automatic ALS response.
Only paramedics shall remove any TASER barbs.**

INDICATIONS:

1. When requested by LAW to remove TASER barbs from an individual.

CONTRAINDICATIONS:

1. TASER's will not be removed from the following locations:
 - a. Head
 - b. Face
 - c. Neck
 - d. Breasts
 - e. Groin
2. A TASER barb in any the above locations must be removed by the ER physician

PROCEDURE:

1. Make sure that LAW has the scene secure and it is safe to approach the patient.
2. Take all BSI precautions.
3. Make sure that the TASER lead has been removed from the gun.
4. Using a 4X4, stretch the skin around the barb so that it is taught. Grasp the barb tightly and using a quick firm motion, pull straight out from the skin.
5. If after (2) attempts it does not disengage, transport to ER for removal per ER physician.
6. Make sure to dispose of barb(s) in a sharps container.
7. Cleanse site with soap and water and apply dressing if needed.
8. Perform a complete medical assessment of the patient to ensure no other medical problems are present.
9. Document completely, including the location of TASER barb(s) and your medical assessment with vital signs.

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Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. *PROC-310*

Effective: *June, 2009*

Reviewed: *September, 2018*

TRANSCUTANEOUS PACING (TCP)

PARAMEDIC

OVERVIEW

Transcutaneous pacing (TCP) is a method of applying electrical energy to a patient's chest and through the patient's heart in order to stimulate cardiac contraction. Providers should keep in mind that TCP can be very painful and that patients should be sedated before or as soon as possible after the initiating of TCP.

INDICATIONS:

1. Symptomatic bradycardia.

CONTRAINDICATIONS:

1. Remove any transdermal medication patches or jewelry that may interfere with pad placement.

PROCEDURE:

1. Sedate patient if time permits or as soon as possible.
 - a. [Propofol](#): OR
 - b. **Benzodiazepine**
2. Consider Fentanyl for pain management
3. Place pacer pads on patient's chest.
4. Turn pacer power on.
5. Set pacer rate at desired rate – 80 beats/min preferred rate.
6. Increase milliamps from minimum setting until capture is obtained.
 - a. Widening of QRS
 - b. Broad T-wave
 - c. Palpable pulses.
7. Maintain patient sedation.

REFERENCE:

1. [MED-180: Fentanyl](#)
2. [MED-370: Propofol](#)

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Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. PROC-320

Effective: June, 2009

Revised: September, 2018

VENTILATOR GUIDELINE (ATV)

PARAMEDIC

OVERVIEW

1. Patients that are apneic or in a worsening state of shortness of breath requiring ventilatory support, that have either been orally or nasally intubated. Automatic Transport Vents (ATV) should be used during inter-facility transports and also in the field in such circumstances where there are not enough personnel on scene to manage the airway manually. (i.e. not to be used as a first line airway device)
2. Typically, respiratory care settings will already have been established by the Physicians and administered by the respiratory therapists.

PROCEDURE:

1. Always keep a bag-valve mask close by in case of ventilator failure.
2. Establish airway and employ BLS adjuncts to prepare for intubation
3. Perform intubation making sure proper tube placement
4. Determine tidal volume of pt., this equation can be used for either an adult or pediatric patient. **= Tidal Volume (6-8 ml x pt wt kg) with a maximum tidal volume of 800ml.**
 - a. Pediatric Tidal Volume of 8ml/kg
5. Set desired breaths per minute
6. Remove BVM and attach the outlet port of the ventilator assembly to the ET tube
7. Observe chest rise/fall during ventilation cycle. Personnel should continue to monitor respiratory status to ensure ATV is working properly and they shall also monitor [ETCO₂](#) throughout transport

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GRAYS HARBOR EMERGENCY MEDICAL SERVICES



PATIENT CARE PROTOCOL MANUAL

-- Patient Care Protocol Reference --

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Grays Harbor Emergency Medical Services Patient Care Protocol Reference

No. <i>REF-005</i>	Effective: <i>November 2018</i>	Reviewed:
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AEIOU-TIPS C

EMR	EMT	EMT-IV	PARAMEDIC
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For altered mental status or loss of consciousness with unknown etiology, consider:

A	Alcohol	T	Trauma, Temperature
E	Epliepsy, Endocrine, Electrolytes	I	Infection
I	Insulin	P	Psychiatric, Poison
O	Overdose Opioids	S	Stroke, Seizures, Sepsis
U	Uremia (Kidney Failure)	C	Cardiac

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Grays Harbor Emergency Medical Services Patient Care Protocol Reference

No. REF-010	Effective: August, 2004	Reviewed: September, 2018
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APGAR SCALE

EMR	EMT	EMT-IV	PARAMEDIC
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		1 min. Reading	5 min. Reading
A Appearance (Skin Color)	Normal over entire body = 2 Normal, except for extremities = 1 Blue/Pale = 0		
P Pulse	Above 100 = 2 Below 100 = 1 Absent = 0		
G Grimace (Reflex Irritability)	Sneeze, cough, pulls away = 2 Grimace = 1 No response = 0		
A Activity	Active movement = 2 Arms & legs flexed = 1 Absent = 0		
R Respiration	Good, strong cry = 2 Slow, Irregular = 1 Absent = 0		

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Grays Harbor Emergency Medical Services Patient Care Protocol Reference

No. REF-013	Effective: May, 2015	Reviewed: September, 2018
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AVPU

EMR	EMT	EMT-IV	PARAMEDIC
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Response	Infant	Child/Adult
A Alert	Curious/Recognizes parents	Alert/Aware of surroundings
V Responds to Voice	Irritable/Cries	Opens eyes
P Responds to Pain	Cries in response to pain	Withdraws from pain
U Unresponsive	No response	No response

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Grays Harbor Emergency Medical Services Patient Care Protocol Reference

No. REF-014	Effective: September, 2014	Reviewed: February, 2020
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BE FAST Code Stroke Algorithm

EMR

EMT

EMT-IV

PARAMEDIC

OVERVIEW:

Pre-hospital Stroke Algorithm

- To facilitate rapid evaluation, identify a CODE STROKE and give the LAMS score in report prior to arrival.
- Keep the patient on the EMS stretcher and monitor.
- Establish 2 IVs if possible.
- Establish as accurately as possible the **last known normal** time.

LAST KNOWN NORMAL

For patients whose “last known normal” is less than 4 hours:

- Call receiving hospital and identify the patient as a CODE STROKE, and report the last known normal time.
- Stay with the patient for likely imminent transfer to Stroke Center.

For patient whose last known normal is 4-24 hours ago:

- **LAMS score of 4 or 5**, proceed directly to the nearest Level I Stroke Center (St. Peter’s hospital, 360-491-8888)
- **LAMS score 3 or less**, go to nearest ED
 - a. The patient may be transferred after initial assessments. This assessment should include a CT/CTA.
 - b. The patient will be transferred if a LVO (large vessel occlusion) is seen on CTA.
 - c. The patient may also be transferred if they are deemed to have disabling symptoms

LAMS Score (Los Angeles Motor Scale)

Facial Droop	
Absent	0
Present	1
Arm Drift	
Absent	0
Drifts Down	1
Falls Rapidly	2
Grip Strength	
Normal	
Weak Grip	1
No Grip	2

Disabling Symptoms

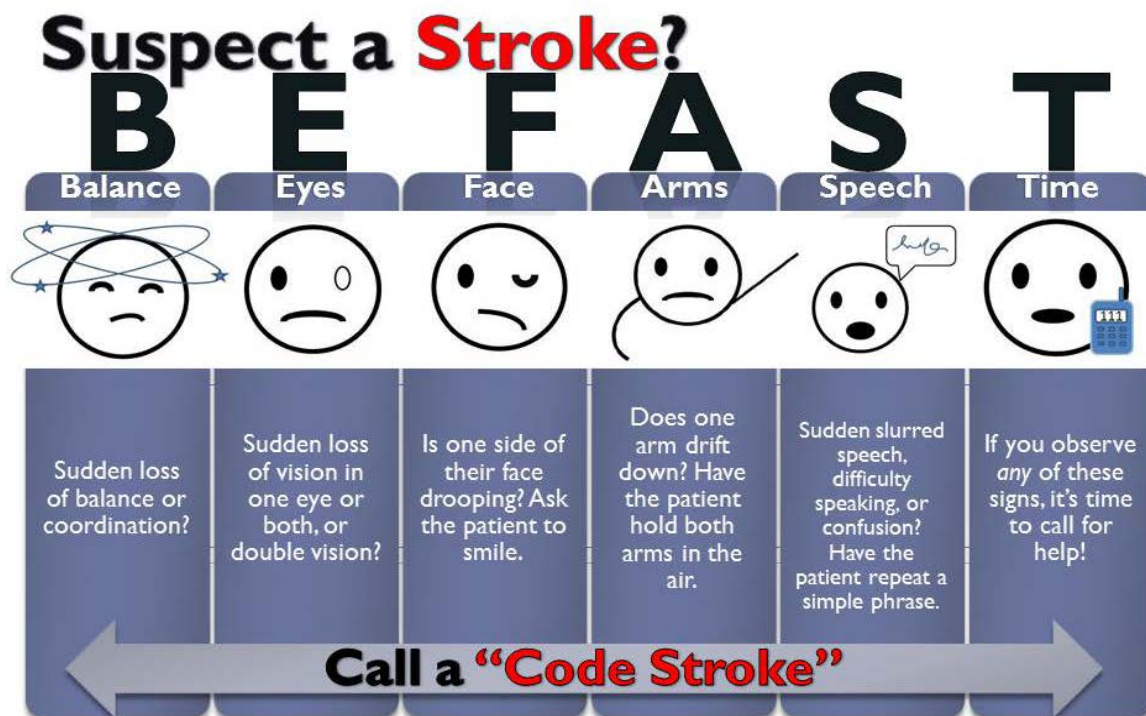
- NIHSS>5
- Sudden, unexplained loss of consciousness
- Gaze deviation (eyes forced to one side)
- Hemiplegia (one side weakness)
- Visual Field cut (vision loss on one side)
- Aphasia (difficulty expressing or understanding speech).
- Neglect (inattention to one side)
- Sudden onset gait ataxia((unable to stand without falling to one side)

BE FAST

- Balance-wobbly gait, falling over while sitting on the stretcher, may need to rely on reported history.
- Eye sight-Visual changes – Sudden loss of vision on one side (can mean in one eye or one side of the world disappears), double vision.

Note:

- The last known normal time is VERY important in this new algorithm. It might change the destination.
- Although we will be using BE FAST, it does not factor into the LAMS score. It will help identify more strokes that may be identified on CTA as LVO (posterior strokes).



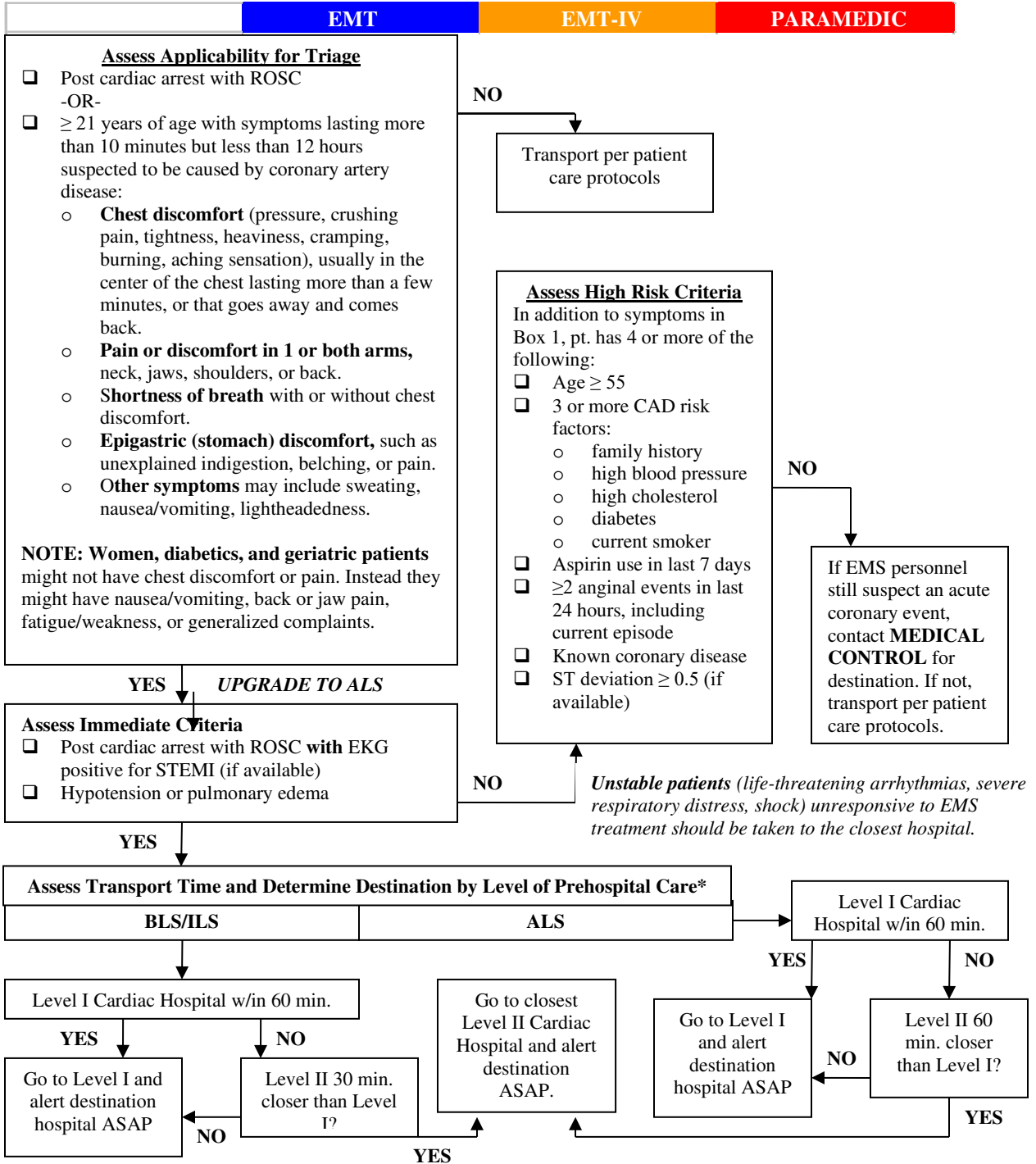
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Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. REF-015 Effective: January, 2012 Reviewed: September, 2018

CARDIAC TRIAGE DESTINATION PROCEDURE



Grays Harbor/North Pacific County Area Emergency Cardiac Hospitals

LEVEL	HOSPITAL	CITY	COUNTY
II	Grays Harbor Community Hospital	Aberdeen	Grays Harbor
I	Providence St. Peter's Hospital	Olympia	Thurston
II	Summit Pacific Medical Center	Elma	Grays Harbor
II	Willapa Harbor Hospital	South Bend	Pacific

Grays Harbor/North Pacific County Cardiac Transport Guidelines:

The goal for patients experiencing a STEMI is a time of transport to catheter of 90 minutes. The following will be utilized as a guideline when determining patient transport destination in these cases.

Grays Harbor County

1. For patients located East of Wynoochee River, transport to Providence St. Peter's Hospital, Olympia.
2. For patients located West of Wynoochee River, transport to Grays Harbor Community Hospital, Aberdeen.

North Pacific County

3. For Patients in the Pacific County area of North River, transport to Grays Harbor Community Hospital, Aberdeen.
4. For all other patients in North Pacific County, transport to Willapa Harbor Hospital, South Bend.

For patient transports to Grays Harbor Community Hospital, Willapa Harbor Hospital and Summit Pacific Medical Center, the patients are to remain on the EMS gurney and a rapid assessment is to be performed by the Emergency Room Physician to determine the need for thrombolytic therapy. Once the determination has been made on thrombolytics, the patient will continue transport to Providence St. Peter's Hospital by the initial transporting agency.



Grays Harbor Emergency Medical Services Patient Care Protocol Reference

No. <i>REF-020</i>	Effective: <i>August, 2004</i>	Reviewed: <i>September, 2018</i>
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CORE BODY TEMPERATURES - HYPOTHERMIA

EMR

EMT

EMT-IV

PARAMEDIC

CORE BODY TEMP	SYMPTOMS
99F-96F (37.0C-35.5C)	Shivering
95F-91F (35.5C-32.7C)	Intense shivering, if conscious, patient has difficulty speaking
90F-86F (32.0C-30.0C)	Shivering decreases, muscular rigidity, decreased LOC and muscle coordination is also decreased.
85F-81F (29.4C-27.2C)	Irrational, stuporous state, pulse and respirations are slowed and cardiac arrhythmias may develop.
80F-78F (26.6C-20.5C)	Patient loses consciousness, most reflexes cease to function, and heart beat becomes erratic.

NOTE: USE A HYPOTHERMIA THERMOMETER

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Grays Harbor Emergency Medical Services Patient Care Protocol Reference

No. REF-022	Effective: August, 2018	Reviewed:
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CISM Protocol

EMR

EMT

EMT-IV

PARAMEDIC

I. Introduction

- a. The Grays Harbor EMS and Trauma Care Council (GHEMS) Critical Incident Stress Management (CISM) program is based on a team approach consisting of peer support personnel. GHEMS CISM Team provides multiple services for emergency referrals and education. These services are performed in conjunction with fire, police, and EMS departments and providers in the county.
- b. There are strong indications that more than 86% of emergency service personnel experience some emotional, cognitive, or physical reaction after responding to certain calls. These calls have the potential to create a state of psychological distress which will cause the provider to become concerned about his or her health. It is extremely important that when providers are having unusual or intense reactions to a certain call or an accumulation of calls, that the GHEMS CISM Team be notified. Major stresses of emergency workers may include but are not limited to:
 - Death or serious injury to a colleague
 - Suicide of a fellow worker
 - Multiple casualty incidents
 - Death or serious injury to children
 - Familiarity with the victims
 - Prolonged Rescue Work
 - Exposure to dismemberment
 - A Failed Rescue

II. Goals

- a. To provide the psychological support necessary to ensure optimal well-being of emergency providers.
- b. To enhance jobs (volunteer and career) retention capabilities for providers and reduce turnover rate.
- c. To enhance the psychological welfare of providers and their families

III. Definitions:

- a. Defusing
 - a. Defusings are performed after the incident and after personnel have returned to the station. The purpose is to offer information, support and

allow initial ventilations of feelings. The need for a formal debriefing should be established at this time.

- b. Defusing should last only 15-30 minutes.
- b. Debriefing
 - a. Optimally debriefings should take place 48-72 hours after the incident if at all possible. The debriefing process allows the providers to express what they did, what they saw, and how they felt. This is done in a group forum to allow the discussion to take place freely among providers. The GHEM CISM Team members facilitate this discussion and provide positive feedback when appropriate.

IV. Indications

- a. Major indicators of need for debriefing of emergency works may include but are not limited to the following:
 - Feelings of Anger
 - Embarrassment
 - Anxiety
 - Frustration
 - Blaming Self
 - Unable to sleep
 - Guilt
 - Nightmares
 - Depression

V. Procedures to activate the team.

- a. The Departments or providers are to contact the coordinators for GHEMS CISM Team. The numbers for these individuals may be obtained by calling them directly or contacting the GHEMS office at 1-360-532-2067.
- b. When notified the team coordinator contacts the agency requesting service to assess the specific support needs and is given and time and place for the defusing/debriefing.
- c. It is the team coordinators responsibility to contact the appropriate number of peer supporters to conduct the defusing or debriefing. One of the team will be the team leader and is responsible for the team.
- d. The department needs to give only one person as contact person in activating and facilitating defusing/debriefing session.
- e. The team leader will call contact person of the department to gather any additional information and to confirm time and place of the defusing/debriefing.
- f. After the defusing/debriefing the team leader or coordinator is responsible for contacting the department within 48 hours to assess effectiveness of defusing/debriefing and to follow up if any referrals or follow-up sessions are needed

VI. Confidentiality

- a. All debriefing sessions are held in the strictest confidence.
- b. All participants must agree to keep names of persons participating in the session and the content of session confidential.

VII. All departments are to have the GHEMS CISM coordinators contact information available. Team is available 24-7.



Grays Harbor Emergency Medical Services Patient Care Protocol Reference

No. REF-030	Effective: May, 2015	Revised: September, 2018
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Glasgow Coma SCALE

EMR	EMT	EMT-IV	PARAMEDIC
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Adult			Pediatric	
Spontaneously	4	Best Eye Opening	Spontaneously	4
To verbal stimuli	3		To verbal stimuli	3
To painful stimuli	2		To painful stimuli	2
No eye opening	1		No eye opening	1
Oriented	5	Best Verbal Response	Appropriate coo & cry	5
Confused	4		Irritable cry	4
Inappropriate words	3		Inconsolable crying	3
Incomprehensible	2		Grunts	2
No verbal response	1		No verbal response	1
Obeys commands	6	Best Motor Response	Normal spontaneous	6
Localizes pain	5		Withdraws to touch	5
Withdraws to pain	4		Withdraws to pain	4
Flexion to pain	3		Flexion to pain	3
Extension to pain	2		Extension to pain	2
No motor response	1		No motor response	1

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Grays Harbor Emergency Medical Services Patient Care Protocol Reference

No. REF-035	Effective: August, 2016	Reviewed: September, 2018
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MARCH TRAUMA BAGS

EMR

EMT

EMT-IV

PARAMEDIC

The purpose of the MARCH trauma bag is to provide an easily deployed and mobile bag that a provider can use to treat life threats across multiple trauma patients. This reference is to provide a list of the contents within a MARCH bag.

Reference [MSO/EMC price list and vendor memo](#) which will provide uniformity amongst all agencies covered by the Grays Harbor protocols.

Contents

Item	Quantity
1. Bag (Option A or B)	1-2 per primary medic unit
2. Gloves	3-5 patients worth
3. Eye Protection	1
4. Trauma shears	2
5. 25' Looped Webbing	1
6. Combat application tourniquet	4
7. Nasopharyngeal airway	2 of each size 28 fr & 32 fr
8. Cricothyrotomy kit (optional for ALS)	1
9. Thoracentesis needle (optional for ALS)	2
10. Asherman Chest Seal	2
11. HALO Chest Seal	2
12. H&H PriMed compressed gauze 4"	6
13. Israeli ABD Bandage	1
14. Israeli 4" Bandage	6
15. 3" roll medical tape	1
16. Cravats	4

REFERENCE

- [1. PROC-015: Active Shooter Incidents/Hostile Incidents](#)

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Grays Harbor Emergency Medical Services Patient Care Protocol Reference

No. REF-040	Effective: August, 2004	Reviewed: September, 2018
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Pulse, Blood Pressure, and Respiration - Ranges

EMR	EMT	EMT-IV	PARAMEDIC
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NORMAL RANGES OF ARTERIAL BLOOD PRESSURE (mm/Hg)

Newborn	80/46	8-9 YEARS	106/58
6-12 Months	89/60	9-10 YEARS	108/58
1 YEAR	96/66	10-11 YEARS	112/58
2 YEARS	98/64	11-12 YEARS	114/60
3 YEARS	100/68	12-13 YEARS	116/60
4 YEARS	98/66	13-14 YEARS	118/60
5 YEARS	94/56	MALE ADULT	<u>Systolic</u> : Pt's age + 100 (up to 150 mmHg) <u>Diastolic</u> : 60 -90 mmHg
6-7 YEARS	100/56	ADULT FEMALE	<u>Systolic</u> : Pt's age+90mmHg (up to 140 mmHg) <u>Diastolic</u> : 50-80 mmHg

NOTE: The systolic values given above may vary up or down from the mean significantly and still remain in the normal range as follows:

- Newborn: + or - 16
- 4 yrs to 10 yrs: + or - 16
- 6 mos to 4 yrs: + or - 25
- 10 yrs to 14 yrs: + or - 18

The diastolic values given above (for Newborn through 14 years old) may vary up to + or - 24 mmHg from the mean and still remain in the normal.

NORMAL PULSE RATES (HEART BEAT PER MINUTE)

Newborn	110-150	6 YEARS	80-100
11 Months	100-140	8 YEARS	76-90
2 YEARS	90-110	10 YEARS	70-110
4 YEARS	80-120	ADULT	60-100

NORMAL RESPIRATORY RATES (RESP. PER MINUTE)

Neonate	30-50	10 YEARS	14-22
2 YEARS	20-30	ADOLESCENT & ADULT	12-20

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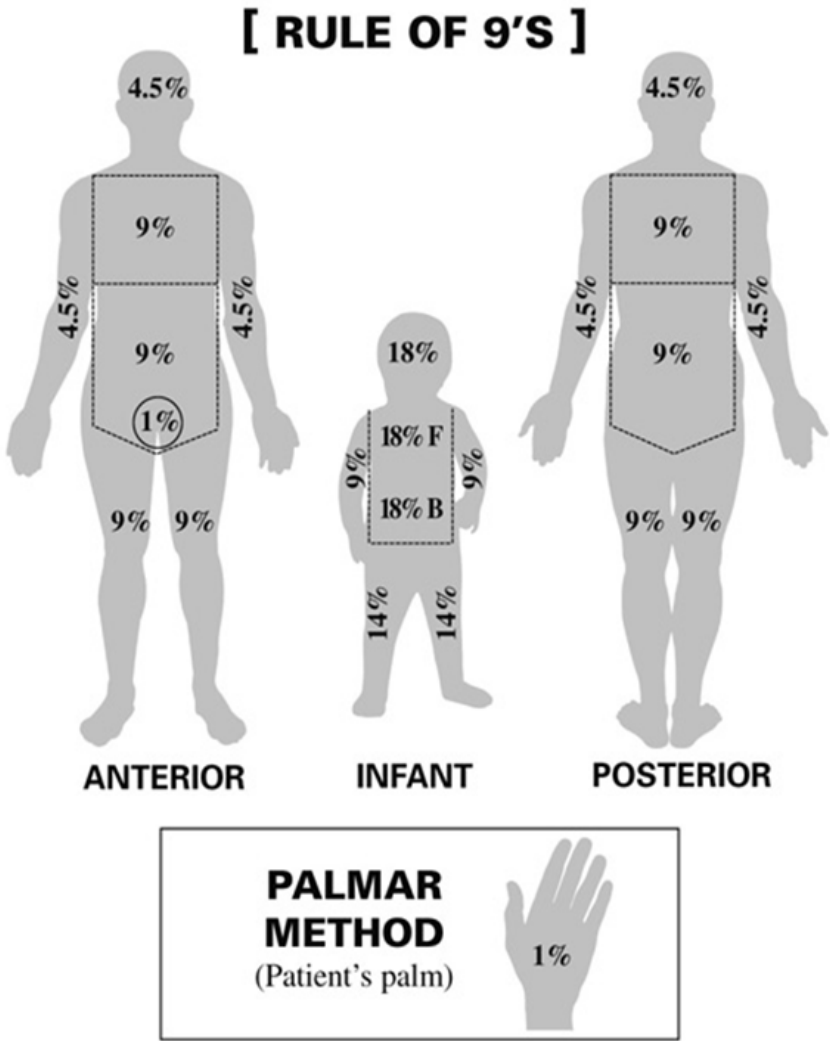


Grays Harbor Emergency Medical Services Patient Care Protocol Reference

No. REF-050	Effective: June, 2009	Reviewed: September, 2018
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RULE OF 9'S

EMR	EMT	EMT-IV	PARAMEDIC
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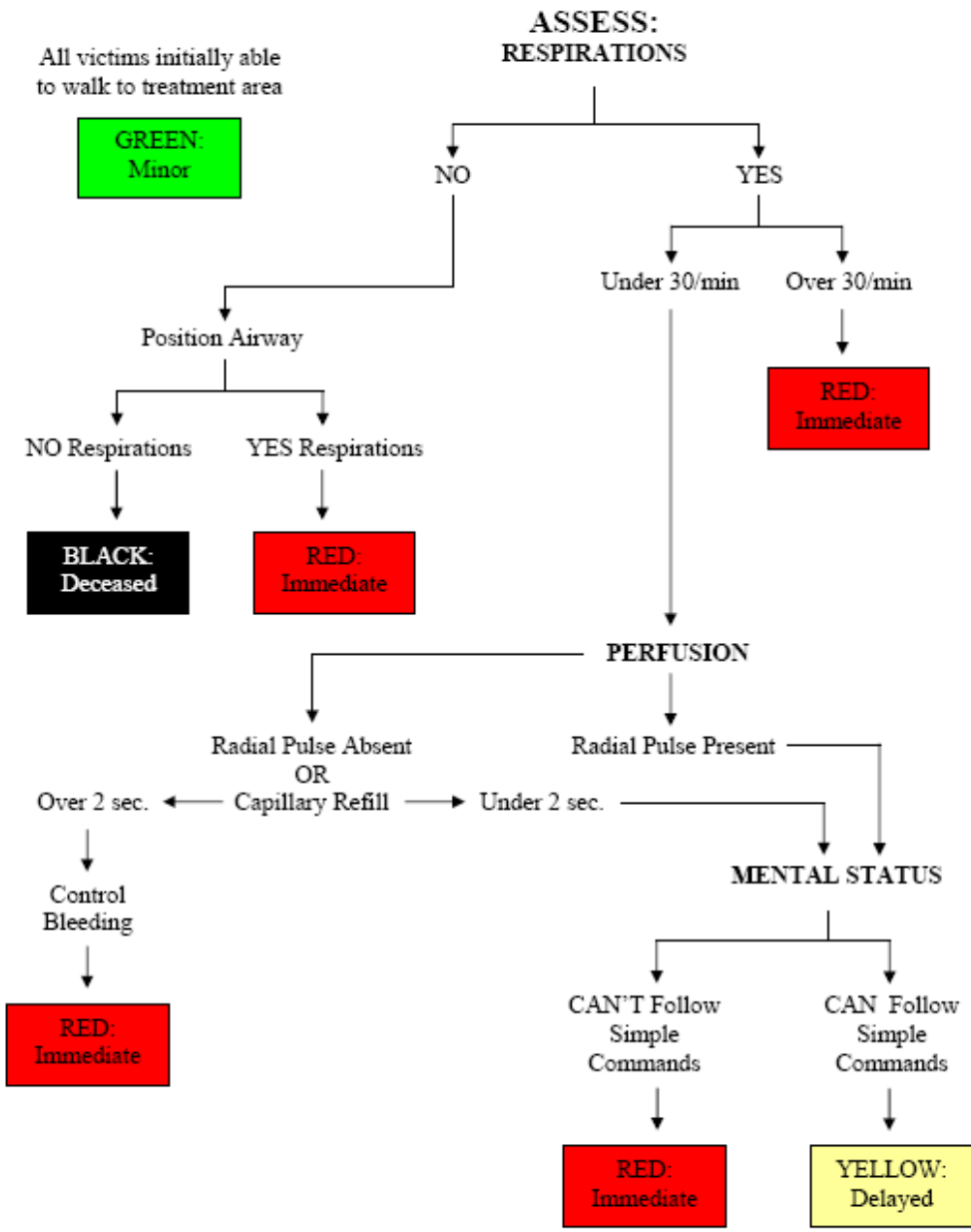
Grays Harbor Emergency Medical Services Patient Care Protocol Reference

No. REF-060	Effective: June, 2009	Reviewed: September, 2018
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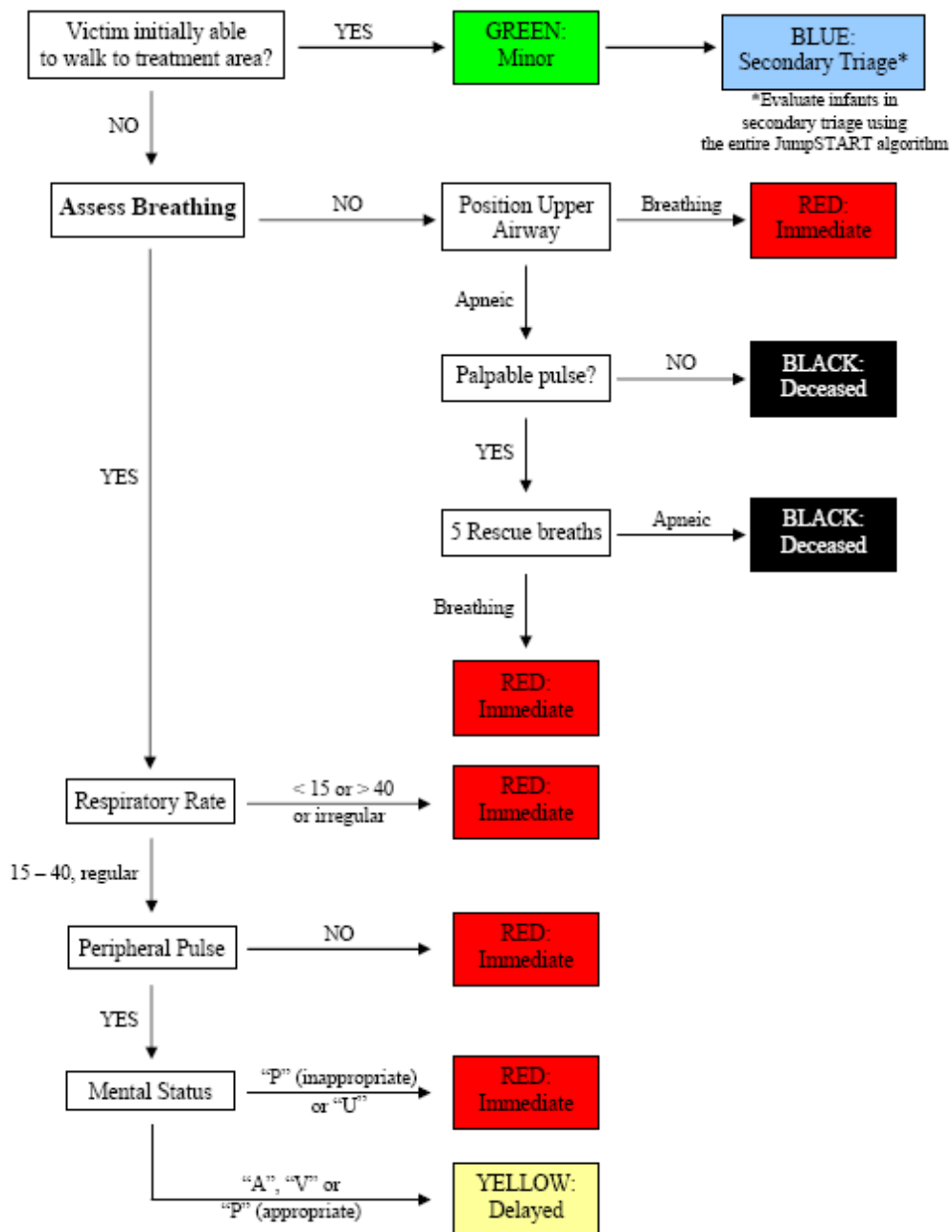
START Triage

EMR	EMT	EMT-IV	PARAMEDIC
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Simple Triage and Rapid Transport (START) guidelines for patients over 8 years of age



JumpSTART guidelines for patients 8 years and younger





Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

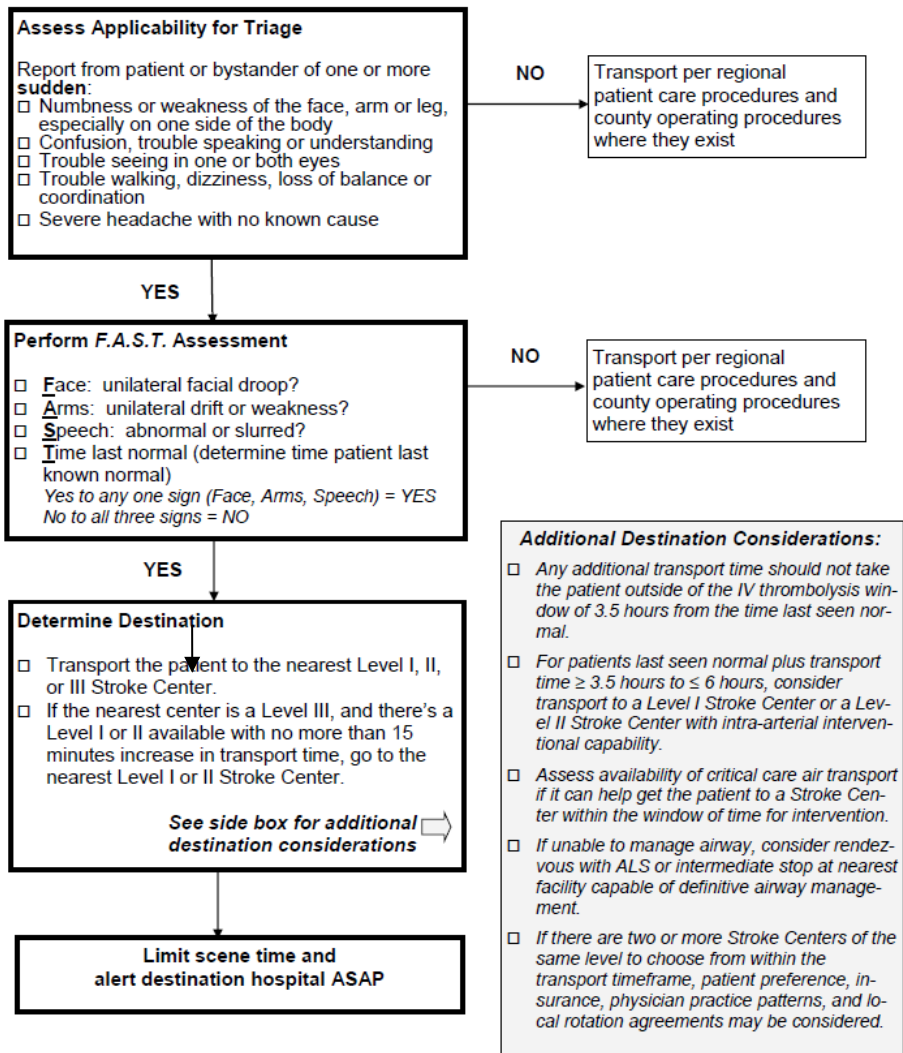
No. REF-065 Effective: September, 2014 Reviewed: March, 2018

STROKE TRIAGE DESTINATION PROCEDURE

EMT EMT-IV PARAMEDIC



State of Washington Prehospital Stroke Triage Destination Procedure



DOH 346-049 October 2012

Grays Harbor/North Pacific County Area Emergency Stroke Hospitals

LEVEL	HOSPITAL	CITY	COUNTY
II	Grays Harbor Community Hospital	Aberdeen	Grays Harbor
I	Providence St. Peter's Hospital	Olympia	Thurston
III	Summit Pacific Medical Center	Elma	Grays Harbor
III	Willapa Harbor Hospital	South Bend	Pacific

Grays Harbor/North Pacific County Stroke Transport Guidelines:

The goal for patients experiencing a Stroke is a time of transport to catheter of 3.5 hours from the time of last seen normal. The following will be utilized as a guideline when determining patient transport destination in these cases.

Grays Harbor County

1. For patients located in Grays Harbor, transport to Grays Harbor Community Hospital, Aberdeen.

North Pacific County

1. For Patients in the Pacific County area of North River, transport to Grays Harbor Community Hospital, Aberdeen.
2. For all other patients in North Pacific County, transport to Willapa Harbor Hospital, South Bend.

For patient transports to Willapa Harbor Hospital, the patients are to remain on the EMS gurney and a rapid assessment is to be performed by the Emergency Room Physician to determine the need for thrombolytic therapy. Once the determination has been made on thrombolytics, the patient will continue transport to Providence St. Peter's Hospital by the initial transporting agency.



Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. REF-067

Effective: November, 2016

Reviewed: September, 2018

Stroke Transport – Level 1 Center

PARAMEDIC

Guidelines for the transport of an Acute Stroke Patient to Level 1 Stroke Center

ALS Treatment

- 1. Report from transferring facility:**
 - a. Obtain PMH, Allergies, Last known well, and current treatment(s).
 - b. Establish baseline neurologic status of the patient. Presenting deficits and current.
- 2. Monitor vital signs and Neuro checks:**
 - a. Every 15 mins while in transport
 - b. Neuro checks to include: LOC, pupils, GCS, and orolingual angioedema if the patient has received or receiving TPA.
 - c. Blood pressure management recommendation for TPA patient and hemorrhagic patient. See range recommendations below.
- 3. Ischemic/TIA **non-TPA** patients:**
 - a. If SBP > 220mmHg or DBP >120 mmHg treat with [Labetalol 10mg IV](#) q 10 mins x 2 doses (monitor HR).
 - b. If SBP < 90mmHg or DBP <50mmHg treat with IV bolus per protocol.
- 4. Ischemic **with or s/p TPA** treatment:**
 - a. If SBP >180 mm Hg or DBP >100mmHg treat with [Labetalol 10mg IV](#) q 10 mins x 2 doses.
 - b. If SBP <105mmHg or DBP < 50mmHg treat with IV fluid bolus per protocol.
- 5. Intraparenchymal hemorrhage:**
 - a. If SBP > 160 mmHg or DBP >110 mmHG treat with [Labetalol 10mg IV](#) q 10 mins x 2 doses.
- 6. Subarchnoid hemorrhage:**
 - a. If SBP >140 mmHG or DBP > 100mmHg treat with [Labetalol 10mg IV](#) q 10 mins x 2 doses.
- 7. Treatment for Orolingual Angioedema:**
 - a. **Stop TPA infusing immediately**
 - b. Administer [Diphenhydramine 50mg IV](#) x 1
 - c. Administer [Famotidine 20mg IV](#) x 1
 - d. Administer [Methylprednisolone 125mg IV](#) x 1

- e. IF symptoms do not resolve with initial treatment:
- f. Administer [Epinephrine 0.3mg \(0.3ml\)](#) IM.

NOTES:

- a. Monitor blood pressure within parameters to ensure the patient has adequate perfusion and decrease risk for cerebral injury.
- b. Monitor for orolingual angioedema: most common during the TPA infusing and up to 2 hours post infusing but monitor for delayed reaction.
- c. Monitor neuro checks q 15 mins to determine patient tolerance to treatment(s). Any neurological deterioration, new headache, nausea/vomiting, new atrial fibrillation may require call to medical control if patient has TPA infusing during transport.

REFERENCES:

- 1. [MED-230: Labetalol](#)
- 2. [MED-130: Diphenhydramine](#)
- 3. [MED-175: Famotidine](#)
- 4. [MED-270: Methylprednisolone](#)



Grays Harbor Emergency Medical Services Patient Care Protocol Reference

No. REF-070	Effective: August, 2004	Reviewed: September, 2018
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TOXIDROMES CHART

EMR	EMT	EMT-IV	PARAMEDIC
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SUBSTANCE	BP	HR	RR	TEMP	LOC	SIGNS AND SYMPTOMS
Adrenergic Agonists	↑	↑	↑	↑	Agitation, psychosis	Mydriasis, diaphoresis
Antihistamines	↓	↑	↑	↑	Agitation to coma, psychosis	Dry mouth, blurred vision, mydriasis, flushing
Beta-blockers	↓↓	↓↓			Lethargy, coma	Dizziness, cyanosis, seizures
Cholinergic Agents	BOTH	BOTH			Lethargy, coma	Salivation, urination, diarrhea, diaphoresis
Cyclic Antidepressants	↓	↑			Lethargy, coma	Dry mouth, blurred vision, mydriasis, flushing
Ethanol & Sedatives	↓↓	↓↓	↑	↑	Lethargy, coma	Slurred speech, ataxia, hyporflexia
Ethanol or Sedative Withdrawal	↑	↑	↑	↑	Agitation, psychosis	Mydriasis, tremors, seizures
Hallucinogens					Agitation to coma, psychosis	Mydriasis
Opioid Compounds	↓↓	↓↓	↓↓	↓↓	Lethargy, coma	Slurred speech, ataxia, hyporflexia
Opioid withdrawal	↑	↑			Normal to agitated	N/V, abd. cramping, hyperactivity
Salicylate Compounds	↓	↑	↑	↑	Agitation to coma, psychosis	Tinnitus, N/V, diaphoresis

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Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. REF-080	Effective: June, 2009	Reviewed: September, 2018
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TRAUMA TRIAGE

EMR

EMT

EMT-IV

PARAMEDIC

The purpose of the trauma triage procedure is to ensure that major trauma patients are transported to the most appropriate hospital facility. If the patient is a major trauma patient, they shall be taken to the highest level trauma facility within 30 minutes transport, by either ground or air. Any air transport must be done in accordance with the GHEMS Patient Care Procedure on helicopter transport.

Area facilities and their respective designated trauma level:

- Grays Harbor Community Hospital: Level III
- St. Peters Hospital: Level III
- Summit Pacific Medical Center: Level IV
- Willapa Harbor Hospital: Level V
- Capital Medical Center: Level IV
- Mason General Hospital: Level IV
- Forks Community Hospital: Level IV

If pre-hospital personnel are unable to effectively manage the patient's airway, consider rendezvous with ALS, or intermediate stop at nearest facility capable of immediate definitive airway management.

PROCESS

Any certified EMS personnel can identify a major trauma patient and alert the trauma system. This may include requesting more advanced pre-hospital services.

STEP 1

Assess vital signs and level of consciousness using the Glasgow Coma Scale.

- Glasgow Coma Scale <13
- Systolic BP <90
 - For pediatric (<15 yrs) patients use BP <90 or capillary refill >2 seconds.
- HR >120
 - For pediatric (<15 yrs) patients use HR <60 or >120.
- Any of the above vital signs associated with signs and symptoms of shock, and/or
 - Respiratory Rate <10 or >29 associated with evidence of distress, and/or
 - For pediatric (<1 year) <20/min
 - Altered mental status

If patient meets step 1 criteria:

1. Transport patient as above.

2. Contact receiving facility – talk with ED physician to alert trauma system.
 - Advise ED that you have a “Step 1 trauma patient.”

STEP 2

Assess anatomy of injury.

- Penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee; or
- Combination of burns $\geq 19\%$ or involving face or airway; or
- Amputation proximal to wrist or ankle; or
- Spinal cord injury; or
- Flail chest; or
- Two or more proximal long bone fractures; or
- Crushed, de-gloved, mangled, or pulseless extremities; or
- Pelvic fractures; or
- Open or depressed skull fracture; or
- Paralysis

If patient meets step 2 criteria:

1. Transport patient as above.
2. Contact receiving facility – talk with ED physician to alert trauma system.
 - Advise ED that you have a “Step 2 trauma patient.”

STEP 3

Assess mechanism of injury & evidence of high-energy impact

- Falls
 - Adults: ≥ 20 feet; or
 - Children: ≥ 10 feet or 2-3 times height of child
 - High-Risk Auto Crash: Intrusion, including roof > 12 inches occupant site; > 18 inches any site; or
 - Death in same passenger compartment; or
 - Ejection (partial or complete) of patient from vehicle; or
 - Vehicle telemetry data consistent with a high risk injury
- Auto vs. pedestrian/bicyclist thrown, run over, or with significant impact (≥ 20 mph) Motorcycle, ATV accident > 20 mph
- Extremes of age: < 15 , > 60
- Hostile environment (extremes of heat or cold)
- Medical illness (such as COPD, CHF, renal failure, etc.)
- Second/third trimester pregnancy
- Gut feeling of medic

If patient meets step 3 criteria:

1. Contact medical control for destination decision
2. If transported as trauma patient by order of medical control, transport as above.
3. If medical control is not receiving facility, contact receiving facility – talk with ED physician to alert the trauma system.
 - Advise receiving ED that you have a “Step 3 trauma patient.”

STEP 4

Assess special patient or system considerations

- Older Adults
 - Risk of injury or death after age 55
 - Systolic BP < 110 may represent shock after age 65
 - Low impact mechanisms (e.g. ground level) fall may result in severe injury
- Children
 - Triage to pediatric capable trauma center
- Anticoagulants and bleeding disorders
 - Patients with head injury are at high risk for rapid deterioration
- Burns
 - Without other trauma mechanism, triage to burn facility
- Pregnancy > 20 weeks
- Hostile environment (extremes of heat or cold)
- Medical illness (such as COPD, CHF, renal failure, etc.)
- EMS provider judgement

If patient meets step 4 criteria:

- Contact Medical Control and consider transport to a trauma center or a specific resource hospital.
- Contact receiving facility – talk with ED physician to alert trauma system.
 - Advise ED that you have a “Step 4 trauma patient.”

If the patient fails to meet any of the above criteria, transport the patient to the nearest appropriate facility.

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GRAYS HARBOR EMERGENCY MEDICAL SERVICES



PATIENT CARE PROTOCOLS

-- Medication Protocols --

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-000

Effective: *January, 2013*

Revised: *September, 2018*

CONTROLLED SUBSTANCE POLICY

PARAMEDIC

PURPOSE:

To establish policies and procedures pertaining to the acquisition, administration and security of controlled substances in compliance with state and federal Controlled Substances Acts and rules.

POLICY:

It is the responsibility of all Grays Harbor and North Pacific County emergency medical services personnel that are required by the scope and/or application of their duties to adhere to all procedures contained in this Controlled Substance Policy. The Medical Services Officer (MSO)/Emergency Medical Coordinator (EMC), Supervisors or Chief of each licensed EMS agency is responsible for securing and maintaining the required registration with the DEA. This will be done in conjunction with the Medical Program Director (MPD), his or her physician delegate or the hospital pharmacy in compliance with applicable laws.

PROCEDURE:

A. INITIAL RECEIPT OF CONTROLLED SUBSTANCE STOCK

1. Only the MSO/EMC or his/her designated alternate may order and transport controlled substances.
2. Upon receipt of controlled substances, two personnel, other than the MSO/EMC or designated alternate, shall count and record the controlled substances on the *Controlled Substance Receivable Log*.
3. The *Controlled Substance Receivable Log*, with the original copy of the *DEA Form-222* attached to it, shall be forwarded to the MSO/EMC. The MSO/EMC will forward them to the MPD via the GHEMS office.
4. The *Controlled Substance Record* cards shall be filled out for the appropriate amount of controlled substance being added to the daily controlled substance count.

B. STORAGE OF CONTROLLED SUBSTANCES

1. Upon receipt of controlled substances, they shall be placed into the Controlled Substances Supply Safe or Lock-Box at the appropriate

location. Access to the Controlled Substances Supply Safe or Lock-Box shall be directly limited to the department's Authorized Personnel only.

2. For ALS units, all controlled substances will be secured in a locking cabinet and/or drawer for storage within the confines of the ALS unit. Access shall be limited to the paramedic assigned to the unit and those under his/her direct supervision.

C. DAILY INVENTORY OF CONTROLLED SUBSTANCES

1. Inventory of controlled substances shall be done at the beginning of each shift by a paramedic and his/her assigned partner with the results recorded in ink on the *Controlled Substance & Monitor Daily Check* form. Discrepancies will be investigated immediately and reported as described in **Section H** of this policy.
2. During daily and monthly inventory, all controlled substances shall be inspected for an intact seal and the correct number of controlled substances on each ambulance:
 - i. Each Ambulance shall have approximately the following or as supplies allow:
 - a) Five (5) 100 mcgs Fentanyl
 - b) Two (2) 10 mgs Morphine
 - c) Four (4) 100 mgs Propofol
 - d) Two (2) 200 mgs Succinylcholine
 - e) Four (4) 1 mg Lorazepam
 - f) Two (2) 10 mgs Rocuronium
3. The *Controlled Substance & Monitor Daily Check* form will be matched with the *Controlled Substance Record* cards to verify the amount of controlled substances on hand.
4. Due to constant controlled substance supply shortages; there can be fluctuations in the amount of each controlled substance that is stored on each ambulance. These fluctuations will be made known to the personnel assigned to the units and the *Controlled Substance & Monitor Daily Check* form shall reflect such changes.
5. If there is a discrepancy with the drug count on the *Controlled Substance & Monitor Daily Check* form, the Paramedic who found the discrepancy shall notify the MSO/EMC, Supervisor or Chief. They shall investigate the cause of the discrepancy and fill out the *Controlled Substance Discrepancy Report*.
 - i. If the discrepancy is found to be a **Minor** discrepancy (as defined in section H), the Paramedic with the supervision of the Chief and/or Supervisor shall make the correction on the *Controlled Substance & Monitor Daily Check* form.
 - ii. If the discrepancy is found to be a **Major** discrepancy (as defined in section H), the steps outlined in **Section H** shall be followed. The MSO/EMC shall be notified of each occurrence. The completed *Controlled Substance Discrepancy Report* shall be forwarded to the MSO/EMC. The MSO/EMC shall fax all completed *Controlled Substance Discrepancy Reports* to the EMS office.

6. If an irregularity or discrepancy is apparent in a controlled substance container, the Supervisor or Chief must be notified immediately. Follow all steps as outlined in **Section H** of this Policy. The MSO/EMC shall notify the MPD as soon as possible.

D. ADMINISTRATION OF CONTROLLED SUBSTANCES

1. The administration and use of controlled substances shall be in accordance with treatment guidelines in the Grays Harbor/North Pacific County Protocols.
2. The drug, route of administration, amount, ordering physician, administering paramedic and receiving hospital shall be documented on the Patient Care Report (PCR).
3. After each use of a controlled substance, the appropriate *Controlled Substance Record* card shall be filled out with the following information:
 - i. Date of use
 - ii. Patient Name
 - iii. Signature of administering paramedic
 - iv. Witness' initials
 - v. Name of ordering Physician
 - vi. Amount of drug given and amount of drug wasted
4. The controlled substance that was used shall be replaced from the controlled substance supply safe/lock-box and the drug count shall be changed accordingly on the *Controlled Substance Record* card.

E. DISCARDING (WASTING) THE UNUSED PORTION OF A CONTROLLED SUBSTANCE

1. Any remnants of controlled substances contained in pre-load and/or vial forms that were not administered to a patient must be discarded in the following manner:
 - i. The Paramedic who administered the controlled substance remains responsible for the controlled substance until the remaining portion is discarded. All controlled substances are to be destroyed by a registrant, or caused to be destroyed by a registrant pursuant to Section 1317.90 DEA's destruction of controlled substances, they shall be destroyed in compliance with applicable Federal, State, tribal, and local laws and regulations and shall be rendered non-retrievable.
 - ii. Where multiple controlled substances are commingled, the method of destruction shall be sufficient to render all such controlled substances non-retrievable.
 - iii. The method of destruction shall be consistent with the purpose of rendering all controlled substances to a non-retrievable state in order to prevent diversion of any such substance to illicit purposes and to protect the public health and safety.
 - iv. The names of the personnel involved in the disposal process must be documented on the *Controlled Substance Record* card with the amount of controlled substance that is rendered non-retrievable.

- v. The destruction of any controlled substances shall be in accordance with the following regulations, Title 21 Code of Federal Regulations: PART 1317 - DISPOSAL, Subpart A - Disposal of Controlled Substances by Registrants

F. OUTDATED CONTROLLED SUBSTANCE

1. When an outdated controlled substance is found, the Paramedic shall notify the Supervisor and/or Chief.
2. The outdated controlled substance shall be wasted in accordance with **Section E** of this policy.
3. The *Broken/Expired/Missing/Stolen Controlled Substance Report* shall be filled out accordingly and forwarded to the MSO/EMC.
4. The changes to the *Controlled Substance & Monitor Daily Check* form shall be made accordingly.
5. The *Controlled Substance Record* card shall be filled out appropriately.

G. DOCUMENTATION

1. Controlled substance information, purpose and use.
 - i. Federal Law requires that possession of controlled substances be tracked from the manufacturer to the patient receiving the medication. Accurate record keeping is essential, as every milligram of a controlled substance must be traceable and accounted for. Therefore, the chain of responsibility must be recorded by signature at each step of use and/or transfer of controlled substances.
 - ii. A Paramedic, by his or her acceptance of the possession of a controlled substance, thereby accepts complete responsibility for the security, handling, and use of the controlled substance. Discrepancies and/or failure to follow procedures for handling, possession, use or disposal of controlled substances, as outlined in this policy, shall require the immediate notification of the Supervisor and MSO/EMC.
2. Random audits shall be performed for quality control purposes. All logs and any controlled substance materials shall be made available to the individual performing the audit. The individual performing the audit shall utilize the Grays Harbor & N. Pacific County *Controlled Substance Audit Report*. Once the audit is performed, the *Controlled Substance Audit Report* shall be forwarded to the MSO/EMC. If discrepancies are found, the Supervisor and MSO/EMC shall be notified and the proper steps taken to investigate the discrepancy as noted in **Section H**.
3. Logs and Forms
 - i. All controlled substance forms shall be done in ink and forwarded to the MSO/EMC upon completion.
 - ii. Hard copies of all controlled substance documents shall be stored in a locked file cabinet for no less than 2 years.
 - iii. Records regarding controlled substances shall be made available to the MPD and appropriate federal, state and local law enforcement agencies upon request: all of whom will be

responsible for maintaining confidentiality of information contained therein.

- iv. *Controlled Substance Record* cards shall be photocopied and placed with all other controlled substance documentation. The original *Controlled Substance Record* card shall be turned in the Grays Harbor EMS office.

H. CONTROLLED SUBSTANCE DISCREPANCIES

1. Strict adherence to the controlled substance policy will prevent discrepancies. Any discrepancy involving controlled substances shall result in the immediate mandatory notification of the Supervisor, MSO/EMC and MPD. Should a discrepancy occur, it shall be classified as either a **Minor Discrepancy** or a **Major Discrepancy**. These discrepancies are defined as follows:

- i. **Minor Discrepancies** are defined as incomplete or omitted documentation on a PCR, *Controlled Substance Record* card, *Controlled Substance & Monitor Daily Check* form, or other controlled substance written documentation or a witnessed accidental breakage of a controlled substance. Also, an error made opening the incorrect controlled substance prior to administering the controlled substance.
 - a) The Supervisor shall determine the appropriate action to resolve minor discrepancies.
 - b) The Supervisor shall notify, during the shift, the MSO/EMC.
 - c) All minor discrepancies shall be noted and tracked by using one or both forms:
 - a. Grays Harbor & N. Pacific County *Controlled Substance Discrepancy Report*.
 - b. Grays Harbor & N. Pacific County *Broken/Expired/Missing/Stolen Controlled Substance Report*
 - d) The MSO/EMC will report all major/minor discrepancies to the Chief and the Grays Harbor Medical Program Director. All discrepancies shall be tracked by both the department and the Grays Harbor Medical Program Director.
- ii. **Major Discrepancies** are defined as accidental loss of a controlled substance, an error in the administration of a controlled substance, theft thereof or tampering (open packaging, broken seals, or broken locks). In the event of a major discrepancy, the following procedure shall take place:
 - a) The employee(s) discovering the discrepancy shall immediately notify the Supervisor.
 - b) Under no circumstances may any employee responsible for the controlled substances involved in a discrepancy be released from duty until the Supervisor approves such release.

- c) All evidence must be retained for the Supervisor's inspection.
- d) The Supervisor will conduct an immediate investigation.
- e) The employee(s) involved must complete a *Controlled Substance Discrepancy Report* and a *Broken/Expired/Missing/Stolen Controlled Substance Report*. Copies of such forms shall be attached to the Controlled Substances Policy and included in the final report. All on-duty and/or off-going personnel must submit all patient care reports for entire shift prior to the discovery of the discrepancy.
- f) The Supervisor shall notify the MSO/EMC as soon as possible.
- g) A complete report of the discrepancy including its resolution must be completed and submitted to the MSO/EMC and MPD for review.
- h) The MSO/EMC will report all major/minor discrepancies to the Chief and the Grays Harbor Medical Program Director. All discrepancies shall be tracked by both the department and the Grays Harbor Medical Program Director.
- i) Under the direction of the Chief and the MPD, the MSO/EMC shall notify the appropriate Law Enforcement Agency for "suspected" criminal activity involving a controlled substance.
 - a. Criminal activity shall include, but is not limited to:
 - i. Theft of a controlled substance
 - ii. Unauthorized tampering of a controlled substance container
 - iii. Unauthorized use of a controlled substance
 - iv. Unauthorized distribution of a controlled substance
 - v. Any act that reflects a willingness to deceive or misrepresent facts and information that may pertain to an ongoing controlled substance investigation
 - b. Individuals involved may be subjected to criminal prosecution under applicable laws and/or possible disciplinary action through their department.



Grays Harbor Emergency Medical Services Patient Care Protocols

No. <i>MED-001</i>	Effective: <i>August, 2012</i>	Revised: <i>September, 2018</i>
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MEDICATION LIST

Following is a list of medication that are to be carried on all GHEMS Medic Units.

*Denotes medications to be carried for use by EMTs.

Acetaminophen (MED-010)	*Acetylsalicylic Acid – ASA (MED-020)
*Activated Charcoal (MED-030)	Adenosine (MED-040)
Afrin (MED-050)	Albuterol (MED-060)
Amiodarone (MED-070)	Atropine Sulfate (MED-080)
Calcium Chloride (MED-090)	Dextrose 50% (MED-100)
Diazepam (MED-110)	Diltiazem (MED-120)
Diphenhydramine (MED-130)	Dopamine HCL (MED-140)
Duo-Neb (MED-150)	Epinephrine 1:10,000 (MED-160)
*Epinephrine 1:1000 (MED-170)	Famotidine (MED-175)
Fentanyl (MED-180)	Furosemide (MED-190)
Glucagon (MED-200)	Haloperidol (MED-210)
Hydromorphone (MED-213)	Hydroxyzine (MED-217)
**Ipratropium Bromide (MED-220)	Labetalol (MED-230)
Lidocaine 1% (MED-240)	Lidocaine 2% (MED-250)
Lorazepam (MED-255)	Magnesium Sulfate (MED-260)
Methylprednisolone (MED-270)	Metoprolol (MED-275)
Midazolam HCL (MED-280)	Morphine Sulfate (MED-290)
*Naloxone (MED-300)	Nitroglycerin (MED-310)
*Oral Glucose (MED-320)	*Oxygen (MED-330)
Oxytocin (MED-340)	Pancuronium Bromide (MED-345)
Procainamide (MED-347)	Prochlorperazine (MED-350)
Promethazine (MED-355)	Propofol (MED-360)
Propranolol (MED-363)	Rocuronium (MED-366)
Sodium Bicarbonate (MED-370)	Succinylcholine (MED-380)

Tetracaine (MED-400)	Thiamine (MED-410)
Vecuronium (MED-430)	Verapamil (MED-435)
Xylocaine Jelly (MED-440)	Zofran (MED-450)

**Duo-Neb (MED-150) may be carried in place of Ipratropium Bromide (MED-220).



Grays Harbor Emergency Medical Services Patient Care Protocols

No. *MED-002*

Effective: *August, 2012*

Revised: *September, 2018*

ALTERNATIVE MEDICATIONS

From time to time there may be shortages in various medications carried by GHEMS units. The following is a list of approved alternatives, in order of preference, which can be utilized in times of shortage of the primary medications.

RAPID SEQUENCE INTUBATION/SEDATION	
MEDICATION	APPROVED USE
Succinylcholine	Induce paralysis during RSI.
Rocuronium	Maintain paralysis after intubation.

ANTICONVULSANT/SEDATION	
MEDICATION	APPROVED USE
Diazepam (Valium)	Anticonvulsant; Sedation during RSI except head injury & trauma; Excited delirium or severe agitation; Sedation prior to cardioversion.
Midazolam (Versed)	Anticonvulsant; Sedation during RSI; Excited delirium or severe agitation; Sedation prior to cardioversion

PAIN MANAGEMENT	
MEDICATION	APPROVED USE
Morphine	Acute pain control
Fentanyl	Acute pain control

CARDIAC MEDICATIONS	
MEDICATION	APPROVED USE
Atropine	Bradycardia
Amiodarone	Ventricular dysrhythmias
Lidocaine	Ventricular dysrhythmias
Diltiazem (Cardizem)	Narrow complex supraventricular tachycardia, A-fib/flutter with rapid ventricular response.
Dopamine	Cardiogenic shock; hypotension not related to hypovolemic.
Furosemide (Lasix)	Pulmonary edema; Hypertensive crisis.
Epinephrine (1:10,000)	Asystole; PEA

ALLERGIC REACTIONS	
MEDICATION	APPROVED USE
Diphenhydramine (Benadryl)	Moderate to severe anaphylaxis.
Epinephrine	Severe anaphylaxis

DIABETIC EMERGENCIES	
MEDICATION	APPROVED USE
50% Dextrose (D ₅₀)	Hypoglycemia
10% Dextrose	Hypoglycemia

ANTIEMETIC	
MEDICATION	APPROVED USE
IM Promethazine	Antiemetic
Reglan	
Zofran	Antiemetic

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Grays Harbor Emergency Medical Services Medication Protocol Reference

No. <i>MED-003</i>	Effective: <i>August, 2012</i>	Revised: <i>September, 2018</i>
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Analgesics: Opioid Equivalency

PARAMEDIC

	<i>IV/SC/IM/IO</i>	<i>PO</i>
Opioid Agonists		
Morphine	10 mg q3-4h	30 mg q3-4h
Codeine	60 mg q2h	60 mg q3-4h
Fentanyl	0.1 mg q1h	n.a.
Hydromorphone (Dilaudid)	1.0 mg q3-4h	6 mg 4mg
Hydrocodone	n.a.	10 mg q3-4h
Meperidine	100 mg q3h	Not Recommended

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Grays Harbor Emergency Medical Services Medication Protocol

No. <i>MED-010</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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PARAMEDIC

ACETAMINOPHEN	
Trade Names:	Tylenol
Class:	Analgesic, Antipyretic, NSAID
Mechanism of Action:	Elevates the pain threshold in the CNS and acts on the hypothalamic thermoregulatory centers.
Indications:	<ul style="list-style-type: none">○ Fever○ Moderate Pain
Contraindications:	<ul style="list-style-type: none">○ Hypersensitivity
Adverse/Side Affects:	<ul style="list-style-type: none">○ Dizziness○ Lethargy○ Nausea/Vomiting○ Abdominal Pain○ Diarrhea○ Anorexia○ Diaphoresis○ Chills○ Elevated Liver Function.
Drug Interactions:	Alcohol may increase risk of hepatotoxicity with chronic co-administration with many other drugs.
Dosage:	Adult: 325-975mg PO q 4-6 hours 650mg PR q 4-6 hours up to 975 mg Peds: 15mg/kg q 4-6 hours

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Grays Harbor Emergency Medical Services Medication Protocol

No. <i>MED-020</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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EMT

EMT-IV

PARAMEDIC

ACETYLSALICYLIC ACID (ASA)

Trade Names:	Aspirin
Class:	Platelet Aggregator Inhibitor Antipyretic Anti-inflammatory
Therapeutic Action:	Prevents blood clot formation (specifically in coronary arteries) , decreases inflammation, controls pain and decreases fever
Mechanism of Action:	Prevents platelet clumping and blood clot formation by irreversible changes in platelet shape and function. The pain, anti- inflammatory, and antipyretic effects are due to blocking prostaglandins (Chemical Messengers).
Indications:	<ul style="list-style-type: none">o Chest Pain consistent with AMI
Contraindications:	<ul style="list-style-type: none">o Hypersensitivity to Aspirino Pediatric Fever
Adverse/Side Affects:	<ul style="list-style-type: none">o Excessive use may cause GI irritations and bleeding.
Drug Interactions:	Adverse reactions and effects may be increased with use of other NSAID's.
Dosage:	324mg orally, chewed or swallowed with small amount of water after onset of chest pain

Note: Not recommended for children because it has been linked with Reye's syndrome.

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-030	Effective: August, 2004	Revised: September, 2018
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EMT	EMT-IV	PARAMEDIC
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ACTIVATED CHARCOAL

Trade Names:	Insta-Char, Sorbitol, Acti-Char, Liqui-Char. Acti-Dose
Class:	Adsorbent
Therapeutic Action:	Adsorbs poisonous compounds, Prevents GI tract absorption
Mechanism of Action:	Binds many poisons and chemicals to its surface while in GI tract.
Indications:	<ul style="list-style-type: none"> ○ Poisonings at direction of poison control if possible. ○ Overdoses at direction of poison control if possible
Contraindications:	<ul style="list-style-type: none"> ○ Petroleum Distillates ○ Caustic Acids and Alkalis ○ GI Bleeding ○ Protracted Vomiting ○ Altered Level of Consciousness ○ Cyanide Poisoning
Adverse/Side Affects:	<ul style="list-style-type: none"> ○ Aspiration ○ Nausea/Vomiting ○ Diarrhea ○ Constipation
Drug Interactions:	
Dosage:	<p>Adult: 25-30gms in tap water 1gm/kg in tap water to form slurry</p> <p>Peds: 10-30gm in tap water</p>
Onset:	Immediate
Duration:	Continual while in GI tract

Note: Unlikely to be helpful if after one hour of ingestion. Contact Poison Control.
Use Phails for consideration of administration:

- Pesticides/Petroleum
- Hydrocarbons/Heavy Metals
- Acids Alkalies
- Iron
- Lithium
- Solvents

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Grays Harbor Emergency Medical Services Medication Protocol

No. <i>MED-040</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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PARAMEDIC

ADENOSINE

Trade Names:	Adenocard
Class:	Antidysrhythmic
Therapeutic Action:	Terminates SVT dysrhythmias
Mechanism of Action:	Slows conduction of electrical impulses through the Sinoatrial (SA) and Atrioventricular (AV) nodes. Interrupts reentry pathways such as Wolf-Parkinson-White.
Indications:	<ul style="list-style-type: none">○ Unstable narrow complex SVT or PSVT
Contraindications:	<ul style="list-style-type: none">○ 2nd and 3rd degree heart blocks○ Sick Sinus Syndrome○ Hypersensitivity to Adenosine
Adverse/Side Affects:	<ul style="list-style-type: none">○ Transient flushing○ Dyspnea○ Chest pain○ Bradycardia○ Headache○ Hemodynamic instability○ Brief period of asystole○ Dizziness○ Nausea/Vomiting
Drug Interactions:	<ul style="list-style-type: none">○ Aminophylline inhibits effects by blocking receptor sites, dose may be increased○ Tegretol (Persantine) prolongs effects by blocking the uptake of Adenosine.
Dosage:	Adult: 6mg rapid IVP with 10-20ml NS rapidly followed. If no change in 2 minutes, give 12mg rapid IVP. If no change in 2 minutes repeat 12mg dose IVP. Peds: 0.1mg/kg may repeat with 0.2mg/kg up to 12mg max single dose.
Onset:	Rapid
Duration:	5-10 seconds

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Grays Harbor Emergency Medical Services Medication Protocol

No. <i>MED-050</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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PARAMEDIC

AFRIN

Trade Names:	Oxymetazoline
Class:	Adrenergic Sympathomimetic
Therapeutic Action:	Topical Vaso constrictor
Mechanism of Action:	Unknown. Causes vasoconstrictions of the smaller arterioles in the nasal passages, which lasts up to 12 hours.
Indications:	<ul style="list-style-type: none">○ Control of epistaxis. Preparation for nasotracheal intubations.
Contraindications:	<ul style="list-style-type: none">○ Known hypersensitivity to drug.
Adverse/Side Affects:	<ul style="list-style-type: none">○ Headache○ Drowsiness○ Insomnia○ Palpitations○ Hypertension○ Burning, stinging, or sneezing may occur if recommended dosage is exceeded○ The use of the dispenser by more than one patient may spread infection.○ Rebound nasal congestion or irritation.
Drug Interactions:	None
Dosage:	Adult: 2-3 sprays per nostril Peds: Not recommended for Children under 6 years old.
Onset:	Less than 5 minutes
Duration:	Less than 12 hours

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-060	Effective: August, 2004	Revised: September, 2018
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PARAMEDIC

ALBUTEROL	
Trade Names:	Proventil, Ventolin
Class:	Bronchodilator
Therapeutic Action:	Dilates bronchial smooth muscles
Mechanism of Action:	Albuterol is a Sympathomimetic agent which primarily targets the B2 receptors on the bronchial tree.
Indications:	<ul style="list-style-type: none"> ○ Bronchospasms associated with COPD (Bronchitis, Emphysema) ○ Hyperkalemia ○ Asthma wheezes associated with toxic inhalations.
Contraindications:	<ul style="list-style-type: none"> ○ Tachydysrhythmias ○ Known hypersensitivity to Albuterol. ○ Caution with hypertension, angina, and diabetes.
Adverse/Side Affects:	<ul style="list-style-type: none"> ○ Palpitations ○ Tachycardia ○ Tremors ○ Nervousness ○ Dizziness ○ Headache ○ Restlessness ○ Anxiety ○ Nausea and Vomiting.
Drug Interactions:	
Dosage:	<p>Adult: 2.5mg of 0.5% solution in 3ml, PRN.</p> <p>Peds: wt. > 20kg: 1.25mg (half a fish) of 0.5 solution in 3ml, PRN wt. < 20kg: 0.1 to 0.15mg/kg by nebulization, PRN</p> <p><i>Note: 0.02 to 0.03mL/kg of 5mg/mL solution with normal saline to make 3mL total in nebulizer; maximum single dose, 5mg</i></p>
Onset:	5-15 minutes
Duration:	3-4 hours

Note: EMT EMT-IV

May only assist patient with that patient's own Metered Dose Inhaler

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-070	Effective: August, 2004	Revised: September, 2018
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PARAMEDIC

AMIODARONE	
Trade Names:	Cordarone
Class:	Antiarrhythmic
Therapeutic Action:	Prolongs action potential and refractory period. Reduces ventricular dysrhythmias and raises fibrillation threshold
Mechanism of Action:	Class III antiarrhythmic agent which inhibits adrenergic stimulation (alpha- and beta-blocking properties), affects sodium, potassium, and calcium channels, prolongs the action potential and refractory period in myocardial tissue; decreases AV conduction and sinus node function
Indications:	<ul style="list-style-type: none"> ○ Shock Refractory VF/Pulseless VT ○ Polymorphic VT/Wide complex tachycardia of uncertain origin. ○ Control of hemodynamically stable VT when cardioversion is unsuccessful.
Contraindications:	<ul style="list-style-type: none"> ○ Patients with hypersensitivity to Amiodarone ○ Patients with cardiogenic shock ○ Marked Sinus Bradycardia ○ 2nd & 3rd degree AV blocks unless a pacemaker is available.
Adverse/Side Affects:	<ul style="list-style-type: none"> ○ Vasodilatation ○ Hypotension
Drug Interactions:	Digitalis, Warfarin, Procainamide, Fentanyl
Dosage:	<p>Adult: <i>Cardiac Arrest: Pulseless VF or VT</i> 300mg IVP, consider repeating 150mg in 3-5 minutes. Max dose – 2.2g IV in 24hours. Stable VTACH 150mgIV 10 min 1mg min 6 hours</p> <p style="text-align: center;"><u>Route of Delivery – IV</u> Use NS or D5W – Run Wide Open – Push 300mg – Flush Line</p> <p style="text-align: center;"><u>Route of Delivery – Saline Lock</u> Mix 300mg Amiodarone with 10cc of NS or D5W – Rapid IVP</p> <p>Peds: <i>Cardiac Arrest: Pulseless VF or VT</i> 5 mg/kg (maximum 300 mg/dose) rapid I.V. bolus or I.O.; repeat up to a maximum daily dose of 15 mg/kg. (Note: Maximum recommended daily dose in adolescents is 2.2 g.)</p>
Onset:	Immediate
Duration:	Up to 40 days
Caution:	May produce vasodilatation and hypotension. May have negative inotropic effects and prolong QT interval.

NOTE: Amiodarone 150 mg in a 250ml bag of NS using a 10gtt set wide open will equal over 10 minutes.*****

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Grays Harbor Emergency Medical Services Medication Protocol

No. <i>MED-080</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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PARAMEDIC

ATROPINE SULFATE

Trade Names:	None
Class:	Anticholinergic
Therapeutic Action:	Increases rate of SA node discharge and enhances conduction through the AV junction
Mechanism of Action:	Blocks or antagonizes the effects of acetylcholine in sweat glands, smooth and cardiac muscle. Acetylcholine is a parasympathetic neurotransmitter, which is released into the synapses with stimulation of the Vagus (10 th Cranial Nerve). This release of Acetylcholine decreases heart rate and velocity through the junction. Atropine blocks the receptors for Ach, thus blocking effects on the cardiac muscle, causing an increase in heart rate. Vagal stimulation can be caused by ischemic damage or parasympathomimetic overdose.
Indications:	<ul style="list-style-type: none">○ Symptomatic Bradycardia○ 1st & 2nd Type 1 AV blocks○ Narrow Complex 2nd and 3rd degree AV blocks○ Cholinergic Poisoning (Organophosphate and Carbamate)
Contraindications:	<ul style="list-style-type: none">○ Tachycardia
Adverse/Side Affects:	<ul style="list-style-type: none">○ Blurred vision○ Dry mouth○ Headache○ Pupillary dilatation○ Tachycardia
Drug Interactions:	Amantadine, Quinidine, Phenothiazines, Tricyclic Antidepressants
Dosage:	<p>Adult: <i>Symptomatic Bradycardia</i> 0.5mg – 1mg IVP, q 3 – 5 minutes to maximum dose of 0.04mg/kg or 3mg</p> <p>Adult: <i>Cholinergic Poisoning</i> 2mg IV q 15 minutes</p> <p>Peds: <i>Symptomatic Bradycardia</i> 0.02mg/kg rapid IVP to a maximum single dose of 0.5mg in child/1mg in adolescent. Maximum total dose of 1mg in child/2mg in adolescent.</p>
Onset:	Rapid
Duration:	2-6 hours

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-090	Effective: August, 2004	Revised: September, 2018
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PARAMEDIC

CALCIUM CHLORIDE	
Trade Names:	None
Class:	Electrolyte, Elemental Ion
Therapeutic Action:	Facilitates conduction in tissues such as myocardium, muscle and nerves. Increases myocardial contraction strength.
Mechanism of Action:	Increases calcium levels in blood and tissues.
Indications:	<ul style="list-style-type: none">• Acute Hyperkalemia (renal failure with CV compromise).• Acute Hypocalcemia• Calcium Channel Blocker toxicity (hypotension, dysrhythmias)• Refractory hypotension secondary to Diltiazem administration.• Crush Injuries• Black Widow spider bite
Contraindications:	<ul style="list-style-type: none">• Digitalis use and toxicity
Adverse/Side Affects:	<ul style="list-style-type: none">• Cardiac Arrest• Dysrhythmias and Bradycardias• Nausea and Vomiting• Syncope and Tissue Necrosis
Drug Interactions:	Precipitates with Sodium Bicarb and Aminophylline
Dosage:	Adult: Hypocalcemia/Hyperkalemia/Spider Bite 500-1000mg of a 10% hypocalcemia, hyperkalemia and black widow bites. If no response after 10 minutes may repeat the dose Adult: Refractory Hypotension 100mg IV for hypotension secondary to Diltiazem administration. Peds: 20-25mg/kg of a 10% solution, up to 500mg slow IVP.
Onset:	5-15 minutes
Duration:	Dose dependent up to 4 hours after IV administration.

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Grays Harbor Emergency Medical Services Medication Protocol

No. <i>MED-100</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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PARAMEDIC

DEXTROSE 50% (D50W)	
Trade Names:	None
Class:	Nutrient
Therapeutic Action:	Increases blood glucose levels
Mechanism of Action:	Adds glucose to circulating blood volume
Indications:	<ul style="list-style-type: none">• Hypoglycemia• Coma or Altered Level of Consciousness of Unknown origin• Status Epilepticus• Refractory Cardiac Arrest
Contraindications:	<ul style="list-style-type: none">• Intracranial Bleed• CVA
Adverse/Side Affects:	<ul style="list-style-type: none">• Wernicke's Encephalopathy in alcoholics (thiamine). Tissue necrosis• Korsakoff's
Drug Interactions:	None significant
Dosage:	Adult: 50ml of a 50% solution through a flowing IV line Peds: 0.5mg/kg slow IV. Mix 1:1 for D25W
Onset:	<1 minute
Duration:	Depends on degree of hypoglycemia

Note: in the event of a shortage of D₅₀, D₁₀ may be substituted and administered as per protocol.

Conversion of D₅₀ to D₂₅ or D₁₀

D₅₀ to D₂₅: Discard 25ml of Dextrose draw in 25ml sterile water or saline to complete solution.

D₅₀ to D₁₀: Discard 40ml of Dextrose draw in 40ml sterile water or saline to complete solution.

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-110	Effective: August, 2004	Revised: September, 2018
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PARAMEDIC

DIAZEPAM	
Trade Names:	Valium
Class:	Benzodiazepine
Therapeutic Action:	Suppresses seizure activity in motor cortex. CNS depressant and muscle relaxant. Suppresses anxiety and tremors with DT's, mild amnesic. Sedative effects during cardioversion and Transcutaneous pacing (TCP).
Mechanism of Action:	Binds to specific benzodiazepine receptors in the CNS, which inhibits neuronal transmissions.
Indications:	<ul style="list-style-type: none"> • Acute Anxiety and tremors in alcoholic delirium tremens. • Grand Mal seizures • Anxiety • DT Symptoms/Tremors • Meth/Cocaine Use • Premedication for cardioversion, TCP and RSI • Acute Anxiety states and Cocaine toxicity • Severe back or muscle spasms • Excited delirium
Contraindications:	<ul style="list-style-type: none"> • Hypersensitivity to Benzodiazepines • CNS depression secondary to head injuries or mind altering drugs, Pregnancy (mother comes first) • Respiratory depressed patients • Shock • Patients with alcohol and depressant drugs on board.
Adverse/Side Affects:	<ul style="list-style-type: none"> • Hypotension • Respiratory depression or arrest • Confusion • Nausea/Vomiting • Coma • Periods of excitement • Reflex tachycardia.
Drug Interactions:	Potentiates effects of other CNS depressing medications. May react with other medications in IV line. Barbiturates, Alcohol, and other narcotics will increase effects of benzodiazepines.
Dosage:	<p>Adult: Seizures 1-5mg IV, IM, IO.</p> <p>Adult: Anxiety 2-5mg IM, slow IV</p> <p>Adult: Premedication 5-10mg slowly IV, IM, Nasal or ET; 5-10 prior to TCP/Cardioversion or Succinylcholine use.</p> <p>Peds: Seizures 0.1 – 0.3mg/kg IV, IO, or ET (no faster than 1mg/min)</p>

	0.3 – 0.5mg/kg rectally q 10 – 15min total 3 doses
Onset:	IV: 1 – 5min IM: 15 – 30min, ET rapidly
Duration:	IV: 15min – 1 hour, IM: 15min – 1 hour, ET 15min – 1 hour

NOTE: DOSE SHOULD BE REDUCED BY 50% IN THE ELDERLY



Grays Harbor Emergency Medical Services Medication Protocol

No. MED-120	Effective: August, 2004	Revised: September, 2018
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PARAMEDIC

DILTIAZEM

Trade Names:	Cardizem
Class:	Calcium Channel Blocker
Therapeutic Action:	Slows conduction through AV node and dilates coronary and peripheral arteries.
Mechanism of Action:	Slows calcium ion influx during myocardial depolarization.
Indications:	<ul style="list-style-type: none"> • Atrial fibrillation/flutter with rapid ventricular response • PSVT and SVT • Multi-Focal Atrial Tachycardia
Contraindications:	<ul style="list-style-type: none"> • Sick Sinus Syndrome, 2nd & 3rd degree AV blocks • Hypotension and Cardiogenic Shock • Wolf Parkinson White, Ventricular or Wide Complex Tachycardia • Beta Blocker Use • Pulmonary Congestion • In same IV line as Lasix (Furosemide)
Adverse/Side Affects:	<ul style="list-style-type: none"> • AV Blocks • Hypotension • Bradycardia • Ventricular Dysrhythmias • Chest Pain • CHF • Dyspnea • Dizziness • Syncope • Nausea & Vomiting
Drug Interactions:	Increases effects of Beta-blockers, Digoxin, Lithium, Tegretol, Cyclosporine and other Calcium channel blockers. Increased effects by Cimetidine (Tagamet)
Dosage:	<p>Adult: 0.25mg/kg IV slowly over 2 minutes. If no effect 0.35mg/kg 15 minutes later given over 2 minutes. <i>Drip:</i> 25mg into 50cc NS (0.5mg/cc) Consider starting lower Dose 10-15 mg. Lower dose for BP under 100.</p> <p>Peds: Not recommended</p>
Onset:	2 – 5 minutes
Duration:	1 – 3 hours

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-130	Effective: August, 2004	Revised: September, 2018
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PARAMEDIC

DIPHENHYDRAMINE HCL	
Trade Names:	Benadryl
Class:	Antihistamine
Therapeutic Action:	Prevents responses mediated by histamine such as vasodilatation, bronchospasm, capillary permeability and edema.
Mechanism of Action:	Blocks H1 (bronchial & gastric constrictions) and H2 (peripheral vascular dilation & gastric secretions) receptor sites.
Indications:	<ul style="list-style-type: none"> • Acute Urticaria, • Anaphylactic Reactions • Dystonic reactions to phenothiazines (thorazine, haldol, compazine, phenergan, reglan, mellaril)
Contraindications:	<ul style="list-style-type: none"> • Asthma & COPD (thickens secretions) • Anticholinergic symptoms (flushing, dilated pupils, dry mucous membranes) • MAO inhibitor use • Narrow Angle Glaucoma • CNS Depression
Adverse/Side Affects:	<ul style="list-style-type: none"> • Hypotension • Headache • Tachycardia • Sleepiness • Palpitations • Blurred Vision • Dizziness
Drug Interactions:	Potentiates other CNS depressants (narcotics & alcohol) and Anticholinergic medications Caution: Incompatible with Methylprednisolone; Flush between drugs.
Dosage:	<u>Adult:</u> 25 – 50mg IV or IM <u>Peds:</u> 1-2mg/kg IV or IM to Max 50mg
Onset:	1 – 3 hours
Duration:	6 – 12 hours

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Grays Harbor Emergency Medical Services Medication Protocol

No. <i>MED-140</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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PARAMEDIC

DOPAMINE HCL

Trade Names:	Intropin, Dopastat
Class:	Sympathomimetic Amine
Therapeutic Action:	Increased renal and gastric flow; Increases BP; Mild Chronotropy
Mechanism of Action:	Alpha – 1; Beta 1; Dopaminergic receptor stimulation
Indications:	<ul style="list-style-type: none">• Correct hypoperfusion (BP<90mmHg) after fluid resuscitation and rate problems have been corrected.• Cardiogenic Shock• Septic Shock• Neurogenic Shock
Contraindications:	<ul style="list-style-type: none">• Hypovolemic Shock• Hypotensive CHF with Pulmonary Edema (PVR)
Adverse/Side Affects:	<ul style="list-style-type: none">• Chest Pain• Palpitations & Tachycardia• Nausea & Vomiting• Dyspnea & Headache• Sloughing with infiltration
Drug Interactions:	Inactivated by alkaline medications (Calcium Chloride, Sodium Bicarb) Reduce to 1/10 th dose when on MAO inhibitors Dilantin + Dopamine = Hypertension
Dosage:	<u>Adult/Peds:</u> 2 – 20 mcg/kg/min infusion 2 – 5 mcg/kg/min – Renal/Gastric Effects 5 – 10 mcg/kg/min – Cardiac Effects 10 – 20 mcg/kg/min – Vasopressor Effects <i>1600mcg/cc – Standard Mixture</i>
Onset:	2 – 4 Minutes
Duration:	10 – 20 minutes

Dopamine (Intropin) 2 - 20 mcg/kg/min

A mixture of 400 mg Dopamine in 250 ml = 1,600 mcg/ml

mcg/kg/ minute	Patient's Weight in Kilograms											
	2.5	5	10	20	30	40	50	60	70	80	90	100
2 mcg	-	-	1	2	2	3	4	5	5	6	7	8
5 mcg	-	1	2	4	6	8	9	11	13	15	17	19
10 mcg	1	2	4	8	11	15	19	23	26	30	34	38
15 mcg	1	3	6	11	17	23	28	34	39	45	51	56
20 mcg	2	4	8	15	23	30	38	45	53	60	68	75

With a 60 drop per ml drip set this is the number of drops/minute (or ml/hr)

Observe for extravasation - swelling, pallor, pain, etc. at IV site.



Grays Harbor Emergency Medical Services Medication Protocol

No. <i>MED-150</i>	Effective: <i>August, 2008</i>	Revised: <i>June, 2009</i>
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PARAMEDIC

DuoNeb

GHEMS Agencies may carry DuoNeb in lieu of Ipratropium Bromide.

See Medication Protocols for Albuterol ([MED-060](#)) and Ipratropium Bromide ([MED-220](#)).

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Grays Harbor Emergency Medical Services Medication Protocol

No. <i>MED-160</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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PARAMEDIC

EPINEPHRINE 1:10,000

Trade Names:	Adrenalin
Class:	Catecholamine
Therapeutic Action:	Vasoconstriction, Bronchial Dilation, Inotropic & Chronotropic Effects
Mechanism of Action:	Sympathomimetic which stimulates the Alpha and Beta receptors
Indications:	<ul style="list-style-type: none"> • V-Fib/Pulseless V-Tach • Asystole/PEA • Bronchospasms • Anaphylaxis • Symptomatic Bradycardia
Contraindications:	<ul style="list-style-type: none"> • Suspected IC bleed • Bronchospasms with Coronary Artery Disease
Adverse/Side Affects:	<ul style="list-style-type: none"> • Palpitations • Ventricular Ectopy • Tachycardia • Anxiety • Headache • Nausea & Vomiting
Drug Interactions:	Antagonizes the effects of vasodilators, beta-blockers, and anti-diabetic medications. Inactivated by Aminophylline, Calcium Chloride, CaGluconate, Sodium Bicarb, Valium
Dosage:	<p>Adult: <i>VF/Pulseless VT/Asystole/PEA</i> 1mg of 1:10,000 IV q 3-5 minutes</p> <p>Adult: <i>Bradycardia/Hypotension</i> 2-10mcg/min by hemodynamics Mix 1mg in 250cc = 4mcg/cc</p> <p>Adult: <i>Bronchospasm/Anaphylaxis</i> 0.1-0.5mg of 1:1,000 SQ/IM, may repeat in 5 min. If no response or rapidly deteriorating give 0.25-0.5mg of 1:10,000 slow IV. ET Dose 2-2.5 times IV dose.</p> <p>Peds: <i>VF/Pulseless VT/Asystole/PEA</i> 0.01 mg/kg (0.1 mL/kg of 1:10,000 concentration) IV/IO. Repeat every 3-5 min. If no IV/IO access, may give endotracheal dose: 0.1 mg/kg (0.1 mL/kg of 1:1000 concentration).</p> <p>Peds: <i>Bradycardia</i> 0.01 mg/kg (0.1 mL/kg of 1:10,000 concentration) IV/IO. If no IV/IO access, may give endotracheal dose: 0.1 mg/kg (0.1 mL/kg of 1:1,000 high concentration).</p> <p>Peds: <i>Bronchospasms/Anaphylaxis</i> 0.01mg/kg 1:1,000 SQ/IM; ET Dose 0.1 mg/kg of 1:1,000 , follow with 5ml NS flush. 1 microdrop/kg/min = 0.1 mcg/kg/min</p>

Onset:	5 – 10 minutes - IV & ET: 1 – 2 minutes
Duration:	5 – 10 minutes



Grays Harbor Emergency Medical Services Medication Protocol

No. <i>MED-170</i>	Effective: <i>August, 2008</i>	Revised: <i>September, 2018</i>
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EMT	EMT-IV	Paramedic
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<i>EPINEPHRINE 1:1000</i>	
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Trade Names:	Adrenalin, Epi-Pen
Class:	Catecholamine
Therapeutic Action:	Vasoconstriction, Bronchial Dilation, Inotropic & Chronotropic Effects
Mechanism of Action:	Sympathomimetic which stimulates the Alpha and Beta receptors
Indications:	<ul style="list-style-type: none"> • Anaphylaxis
Contraindications:	<ul style="list-style-type: none"> • None in life-threatening situations
Adverse/Side Affects:	<ul style="list-style-type: none"> • Palpitations • Ventricular Ectopy • Tachycardia • Anxiety • Headache • Nausea & Vomiting
Drug Interactions:	Potentiated by--MAOIs, TCAs Antagonized by--Beta blockers
Dosage:	<p>Adult: <i>Bronchospasm/Anaphylaxis</i> <i>Patient over 30kg/66lbs.</i> 0.3mg of 1:1,000 IM, may repeat in 5 minutes if no response with MEDICAL CONTROL approval.</p> <p>Peds: <i>Bronchospasms/Anaphylaxis</i> <i>Patient less than 30kg/66lbs</i> 0.15mg of 1:1,000 IM, may repeat in 5 minutes if no response with MEDICAL CONTROL approval.</p>
Onset:	Rapid
Duration:	5 – 10 minutes

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Grays Harbor Emergency Medical Services Medication Protocol

No. <i>MED-175</i>	Effective: <i>August, 2012</i>	Reviewed: <i>September, 2018</i>
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PARAMEDIC

**** ALTERNATIVE MEDICATION ****

<i>FAMOTIDINE</i>	
Trade Names:	Pepcid
Class:	Histamine H ₂ -receptor antagonist
Therapeutic Action:	
Mechanism of Action:	Competitively blocks histamine at H ₂ receptors, particularly those in gastric parietal cells, leading to inhibition of gastric acid secretion
Indications:	<ul style="list-style-type: none"> • Allergic reactions
Contraindications:	<ul style="list-style-type: none"> • Hypersensitivity to drug or other histamine₂-receptor antagonists
Adverse/Side Affects:	<ul style="list-style-type: none"> • Dizziness/Headache • Nausea/Vomiting • Palpitations
Drug Interactions:	<ul style="list-style-type: none"> • No drug interactions have been identified.
Dosage:	<p>Adult: 20 mg I.V. q 12 hours</p> <p>Peds: 0.25mg/kg over 2 minutes q 12 hours</p>
Onset:	Rapid
Duration:	8-15 Hours

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Grays Harbor Emergency Medical Services Medication Protocol

No. <i>MED-180</i>	Effective: <i>August, 2008</i>	Revised: <i>September, 2018</i>
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PARAMEDIC

<i>FENTANYL</i>	
Trade Names:	
Class:	Synthetic Opioid Agonist
Therapeutic Action:	
Mechanism of Action:	Binds to stereospecific receptors at many sites with the CNS, increases pain threshold and alters pain reception.
Indications:	<ul style="list-style-type: none">• Pain Management including cardiac• Post-intubation sedation
Contraindications:	<ul style="list-style-type: none">• Sensitivity to Fentanyl• Uncorrected shock• ↑ ICP
Adverse/Side Affects:	<ul style="list-style-type: none">• Bradycardia• Hypotension• Nausea and Vomiting• Respiratory depression• Euphoria <p><i>Give Narcan if reaction becomes severe.</i></p>
Drug Interactions:	ETOH, other narcotics, beta-blockers, phenothiazines
Dosage:	Adult: 25-100 mcg IO/ IV/IM/IN, may be repeated PRN Peds: 2-3 mcg/kg Nasal Dosage
Onset:	IV: Immediate IM: 7-15 minutes
Duration:	1-2 hours

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Grays Harbor Emergency Medical Services Medication Protocol

No. <i>MED-190</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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PARAMEDIC

<i>FUROSEMIDE</i>	
Trade Names:	Lasix
Class:	Diuretic
Therapeutic Action:	Increases water excretion and venous dilatation, reduces preload.
Mechanism of Action:	Inhibits sodium and chloride re-absorption in the kidney. Reduces vascular volume, thus removing excess volume from the lungs in CHF and Pulmonary Edema.
Indications:	<ul style="list-style-type: none"> • Pulmonary Edema • Edema associated with CHF • Hypertension
Contraindications:	<ul style="list-style-type: none"> • Hypotension • Pregnancy • History of no urine production • Dehydration • Allergies to Sulfa's
Adverse/Side Affects:	<ul style="list-style-type: none"> • Volume depletion • Hypotension • Electrolyte disturbances (especially Potassium loss) • Rash • Headache • Deafness • Cardiac Dysrhythmias.
Drug Interactions:	Incompatible with Diazepam, Diphenhydramine, and Thiamine
Dosage:	<p>Adult: 0.5 – 1mg/kg over 1 – 2 minutes. Max dose 2mg/kg.</p> <p>Peds: 1 – 2mg/kg slow IV. Max 6mg/kg</p>
Onset:	<p>Vascular effects – 5 minutes</p> <p>Diuretic effects – 15 – 20 minutes</p>
Duration:	4 – 6 hours

Note: Patients already taking Lasix, double their dose IV; max dose of 2mg/kg. Also patient should be monitored for cardiac disturbances due to electrolyte imbalances and for hypotension from volume depletion

Note: Watch for Hypotension.

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Grays Harbor Emergency Medical Services Medication Protocol

No. <i>MED-200</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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PARAMEDIC

<i>GLUCAGON</i>	
Trade Names:	None
Class:	Hormone
Therapeutic Action:	Stimulates the release of glucose from the liver, muscles and adipose tissue into the bloodstream.
Mechanism of Action:	Directly binds to target cells in the liver and counteracts the effects of insulin.
Indications:	<ul style="list-style-type: none"> Hypoglycemic emergencies when IV access cannot be established. Beta-blocker and calcium channel blocker toxicity. Anaphylaxis when Epinephrine is relatively contraindicated by age or known cardiac disease.
Contraindications:	<ul style="list-style-type: none"> Pregnancy Pheochromocytoma (adrenal gland tumor) Do Not Reconstitute with Saline (see Procedure note below)
Adverse/Side Effects:	<ul style="list-style-type: none"> Headache Nausea & Vomiting Allergic Reaction
Drug Interactions:	May Reverse Beta Blockers Calcium Channel Blockers.
Dosage:	<p>Adult: 0.5 – 1.0mg IM or IV</p> <p>Peds: <i>below 44lbs.</i> 0.1 -0.5mg IM or IV</p> <p>Sites of choice – buttock, thigh, or arm Beta-blocker 3 – 10mg IV</p>
Onset:	Within 1 minute
Duration:	9 – 17 minutes

Procedure: Withdraw solution from bottle labeled #1. Inject the solution into the bottle labeled #2. Shake bottle gently until contents appear clear and water like.

Other Facts: May improve cardiac contractility and increase heart rate in beta-adrenergic blocker and calcium channel blocker toxicity.

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-210	Effective: August, 2004	Revised: September, 2018
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PARAMEDIC

HALOPERIDOL	
Trade Names:	Haldol
Class:	Tranquilizer, Anti-Psychotic
Therapeutic Action:	Controls aggression and activity in psychotic patients.
Mechanism of Action:	Exact mechanism in brain is not clear, however, it does block dopamine receptors and suppresses the cerebral cortex, limbic system, and an anti-cholinergic blocking component is present. It also exhibits a strong Alpha-adrenergic effect.
Indications:	<ul style="list-style-type: none"> • Acute psychotic episode, which needs to be treated for the safety of the patients, public, or response personnel. • Excited delirium.
Contraindications:	<ul style="list-style-type: none"> • CNS depression or Coma or suspected brain damage • Hypersensitivity to Haloperidol • Pregnancy; <3 yo • Alcohol or barbiturate withdrawals • Parkinson 's disease
Adverse/Side Affects:	<ul style="list-style-type: none"> • Hypotension (orthostatic) • Dystonias • Akathisia • N&V • Blurred vision • Cardiac arrest • Respiratory depression • Seizures.
Drug Interactions:	Potentiates other CNS depressants Toxicity: EPI, Lithium = Brain Damage Increases both drugs: Beta-blockers, Alcohol and Anticholinergic
Dosage:	Adult: 2 – 5mg IM, IV use is OK, but IM is preferred Peds: Not Recommended
Onset:	15 – 60 minutes IM
Duration:	12 – 24 hours

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-213	Effective: August, 2012	Revised: September, 2018
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PARAMEDIC

**** ALTERNATIVE MEDICATION ****

HYDROMORPHONE	
Trade Names:	Dilaudid
Class:	Narcotic Analgesic
Therapeutic Action:	Hydromorphone is a pure opioid agonist with the principal therapeutic activity of analgesia
Mechanism of Action:	Binds opiate receptors in the CNS.
Indications:	Treatment of severe pain
Contraindications:	<ul style="list-style-type: none"> • Known allergy to <ol style="list-style-type: none"> 1. Morphine/Morphine related medications 2. Codeine • Respiratory Depression • Bronchospams and Asthma • Hypovolemia and Shock • Brain Injury • Patient in Labor • Diarrhea or other bowel problems caused by antibiotics or poisoning.
Adverse/Side Affects:	<ul style="list-style-type: none"> • Bronchospasm and laryngospasm • Hypotension • Dizziness/Drowsiness/Lightheadedness • Nausea and Vomiting • Constipation
Drug Interactions:	Sodium Oxybate (GHB)
Dosage:	<p>Adult: .5-1 mg SC/IV, slowly over 2 min q 3 hours prn for pain control.</p> <p>Peds: 0.005 mg/kg SC/IV q4-6h</p>
Onset:	Immediate
Duration:	2.6 Hours

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-217	Effective: August, 2012	Reviewed: September, 2018
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PARAMEDIC

**** ALTERNATIVE MEDICATION ****

HYDROXYZINE	
Trade Names:	Vistaril
Class:	Histamine H ₁ antagonist, Mild anxiolytic agent with sedating properties
Therapeutic Action:	
Mechanism of Action:	<ul style="list-style-type: none"> Hydroxyzine competes with histamine for binding at H₁-receptor sites on the effector cell surface, resulting in suppression of histaminic edema, flare, and pruritus. The sedative properties of hydroxyzine occur at the subcortical level of the CNS. Secondary to its central anticholinergic actions, hydroxyzine may be effective as an antiemetic.
Indications:	<ul style="list-style-type: none"> Allergic reactions
Contraindications:	<ul style="list-style-type: none"> Hypersensitivity to drug SC, IV, or intra-arterial administration pregnancy 1st trimester caution in elderly patients caution if asthma caution if high environmental temperature
Adverse/Side Affects:	<ul style="list-style-type: none"> Drowsiness Tremors Headache
Drug Interactions:	<ul style="list-style-type: none"> ETOH Acetylcholinesterase Inhibitors Anticholinergic medications Other medications that cause drowsiness Phenothiazine medications
Dosage:	<p>Adult: 25mg IM - For IM administration only</p> <p>Peds: 1mg/kg IM - For IM administration only</p>
Onset:	15-30 minutes
Duration:	4-6 Hours

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-220	Effective: August, 2004	Revised: September, 2018
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PARAMEDIC

IPRATROPIUM BROMIDE	
Trade Names:	Atrovent
Class:	Anticholinergic (parasympatholytic)
Therapeutic Action:	Relaxes bronchial constriction associated with COPD (Chronic bronchitis & Emphysema), Dries bronchial secretions.
Mechanism of Action:	Inhibits acetylcholine and Vagal-mediated reflexes in the bronchial smooth muscles.
Indications:	<ul style="list-style-type: none"> Bronchial spasm associated with COPD (Chronic Bronchitis & Emphysema) Bronchial Asthma <p><i>Administration with Albuterol will improve affects and duration of relaxed bronchial tree.</i></p>
Contraindications:	<ul style="list-style-type: none"> Known Allergies to Ipratropium Bromide or Atropine. Use caution in patients with Narrow Angle Glaucoma, Prostatic hypertrophy, and bladder neck obstruction.
Adverse/Side Affects:	<ul style="list-style-type: none"> Temporary blurred vision - Keep away from eyes Tachycardia Palpitations Urinary retention Bronchospasms Headache Dry mouth. Soy or Peanut allergy
Drug Interactions:	
Dosage:	<p><u>Adult:</u> 500mcg (1 unit-dose phish) in a hand-held nebulizer with Albuterol.</p> <p><u>Peds:</u> .025-.25 infants 4 hours ½ fish to whole. .25-.5mg children.</p>
Onset:	1 – 3 minutes
Duration:	4 – 6 hours

Note: EMT & EMT-IV may only assist patient with that patient’s own Metered Dose Inhaler

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-225	Effective: March, 2020	Revised:
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PARAMEDIC

<i>Ketamine</i>	
Trade Names:	Ketalar
Class:	General Anesthetic
Therapeutic Action:	Positive side effect profile of causing pain relief, bronchodilation, amnesia and sedation
Mechanism of Action:	Dissociative hypnotic, structurally related to PCP. It also stimulates opioid and catecholamine receptors.
Indications:	<ul style="list-style-type: none"> • Excited delirium or severe agitate that interferes with patient care in adults • May be useful in other situations <u>with medical control approval and guidance</u> <ul style="list-style-type: none"> ○ RSI ○ Sedation for painful procedures (cardioversion, painful extractions)
Contraindications:	<ul style="list-style-type: none"> • Age less than 3 months • Acute globe/ocular injuries • (severe liver disease) • SBP>200. Patients in whom a significant elevation in BP could cause harm (CHF, ICH, aneurysm, acute coronary syndrome)
Adverse/Side Affects:	<ul style="list-style-type: none"> • Sympathomimetic-increase HR, BP • Psychomimetic-hallucinations, vivid dreams (mitigated by benzos) • Increased salivation and upper airway obstruction • Laryngospasm • Increased intraocular pressure
Drug Interactions:	<ul style="list-style-type: none"> • Other sedative are additive (but not synergistic)
Dosage:	
Onset:	IV/IO ~1 minutes IV, IM 3-5 minutes
Duration:	<p>IV/IO 5-15 minutes IM 15-25 minutes IV/IO: 1-2 mg/kg, over 1-2 minutes (faster results in respiratory depression). May give repeat dose of 0.5-1 mg/kg if needed in 10 minutes, one time.</p> <p>Intramuscular 4 mg/kg, Do not exceed 400 mg May repeat 2 mg/kg IM in 10 minutes if needed one time.</p> <p>Dosing for agitated delirium: IM 60 kg person => 250 mg 70=> 300 mg 80=> 350 mg</p>

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-230	Effective: August, 2004	Revised: September, 2018
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PARAMEDIC

LABETALOL	
Trade Names:	Transdate, Normodyne
Class:	Alpha & Beta adrenergic blocker
Therapeutic Action:	Lowers blood pressure without reflex tachycardia
Mechanism of Action:	Competitive Alpha receptor blocker and a non-selective Beta-blocker. Reduces Renin plasma levels. Vasodilatation and Beta-blocker blockade of heart and lungs are the main effects.
Indications:	<ul style="list-style-type: none"> ○ Hypertensive Crisis
Contraindications:	<ul style="list-style-type: none"> ● Bradycardia, 2nd & 3rd degree AV blocks ● Cardiogenic shock and Hypotension ● Cardiac Failure (CHF) ● Asthma & COPD ● Stimulant overdose
Adverse/Side Affects:	<ul style="list-style-type: none"> ● Orthostatic hypotension ● Bradycardia ● AV Blocks, ● Bronchospasms ● Pulmonary Edema ● Ventricular dysrhythmias ● CHF
Drug Interactions:	Blocks effects of beta-adrenergic bronchodilators in Asthma and COPD patients. Severe Bradycardias if given after Verapamil or other Calcium Channel Blockers. Potentiates hypotension with Nitroglycerine.
Dosage:	<u>Adult: Contact Medical Control</u> 5 – 20mg IV over 2 minutes. If no response in 10 minutes give double dose over 2 minutes. If still no response in 10 minutes give 80mg slow IV over 2 minutes. Max dose 300mg.
Onset:	Within 10 minutes
Duration:	2 – 6 hours

Note: Consider ½ dose for patients over 65 years old.

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Grays Harbor Emergency Medical Services Medication Protocol

No. <i>MED-240</i>	Effective: <i>August, 2008</i>	Reviewed: <i>September, 2018</i>
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PARAMEDIC

LIDOCAINE 1%

Trade Names:	Xylocaine 1%
Class:	Local anesthetic
Therapeutic Action:	
Mechanism of Action:	Stabilizes the neuronal membrane by inhibiting the ionic fluxes required for the initiation and conduction of impulses thereby effecting local anesthetic action.
Indications:	<ul style="list-style-type: none">• Epidural anesthesia/Infiltration during IV or IO procedures.
Contraindications:	<ul style="list-style-type: none">• Sensitivity to Lidocaine or other anesthetics.
Adverse/Side Affects:	
Drug Interactions:	
Dosage:	Adult/Peds: Varies based on area to be anesthetized: generally 2-3 mL per dermatome.
Onset:	5-30 minutes
Duration:	2 – 3 hours

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Grays Harbor Emergency Medical Services Medication Protocol

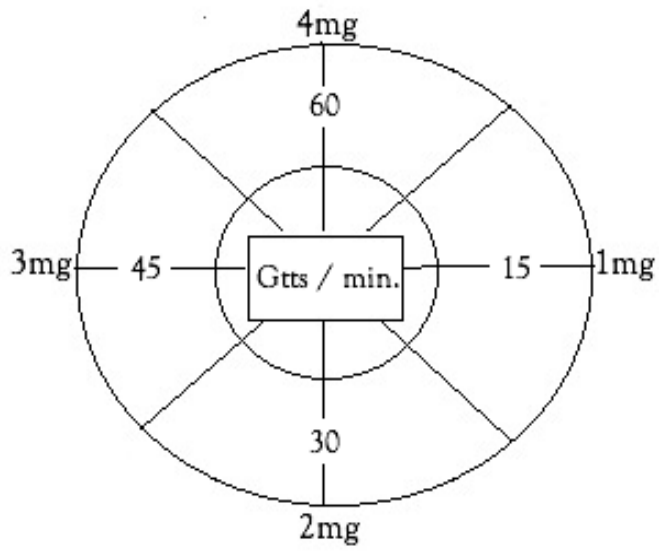
No. MED-250	Effective: August, 2004	Revised: September, 2018
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PARAMEDIC

<i>LIDOCAINE 2%</i>	
Trade Names:	Xylocaine
Class:	Ventricular Antidysrhythmic
Therapeutic Action:	Suppresses ventricular automaticity in ischemic tissue, thus lowering the ventricles ability to produce ectopic beats. Lengthens phase 4's spontaneous depolarization.
Mechanism of Action:	Raises the Ventricular Fibrillation threshold by altering phase 4 depolarization and ventricular automaticity.
Indications:	<ul style="list-style-type: none"> • V-Fib/V-Tach (Pulseless and with a pulse) • PVC's >6 a minute, couplets, triplets, R-on-T, Multi-Focal • Wide Complex Tachycardias of unknown origin.
Contraindications:	<ul style="list-style-type: none"> • 2nd & 3rd degree AV blocks • Idioventricular rhythms • Escape rhythms • Reprofusion Dysrhythmias
Adverse/Side Affects:	<ul style="list-style-type: none"> • Drowsiness & Discoloration • Hypotension, Seizures • Coma • Numbness and Tingling
Drug Interactions:	Caution with Procainamide, Phenytoin, Quinidine, and Beta Blockers
Dosage:	<p>Adult: Cardiac Arrest Rhythms 1 – 1.5mg/kg IVP q 5 minutes at 1 – 1.5mg/kg IVP to a total of 3mg/kg</p> <p>Adult: V-Tach w/ Pulse(stable/unstable) & Malignant PVC's 1 – 1.5mg/kg IVP over 2 minutes. Repeat dose if needed in 5 – 10 minutes at 0.5 – 0.75mg/kg over 2 minutes to total of 3mg/kg.</p> <p>Drip: 4mg/cc – Standard Mix Pt. received 1mg/kg: Conversion drip at 2mg/min (30gtts) Pt. received 1.5 – 2mg/kg Conversion drip at 3mg/min (45gtts) Pt. received 2.25 – 3mg/kg Conversion drip at 4mg/min (60gtts)</p> <p>Peds: 1mg/kg IVP to a max of 3mg/kg. Pediatric Drip: 20-50 mcg/kg/min To make 1cc/hr = 1 mcg/kg/min: Mix [kg x 15] mg in 250cc NS</p>
Onset:	30 – 90 seconds
Duration:	2 – 4 hours

Notes: ET Dose should be 2 – 2.5 times the normal dose. Patients over 70 y/o and hepatic disease – reduce dose by ½.

Lidocaine Clock:





Grays Harbor Emergency Medical Services Medication Protocol

No. MED-255	Effective: August, 2012	Revised: September, 2018
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PARAMEDIC

LORAZEPAM	
Trade Names:	Ativan
Class:	Benzodiazepine
Therapeutic Action:	Suppresses seizure activity in motor cortex. CNS depressant and muscle relaxant. Suppresses anxiety and tremors with DT's. Sedative effects during cardioversion and TCP.
Mechanism of Action:	Binds to specific benzodiazepine receptors in the CNS, which inhibits neuronal transmissions.
Indications:	<ul style="list-style-type: none"> • Acute Anxiety and tremors in alcoholic delirium tremens. • Grand Mal seizures • Premedication for cardioversion, TCP and RSI • Acute Anxiety
Contraindications:	<ul style="list-style-type: none"> • Hypersensitivity to Benzodiazepines • CNS depression secondary to head injuries or mind altering drugs, Pregnancy (mother comes first) • Respiratory depressed patients • Shock • Patients with alcohol and depressant drugs on board. • Acute narrow angle glaucoma
Adverse/Side Affects:	<ul style="list-style-type: none"> • Hypotension • Respiratory depression or arrest • Confusion/Decreased LOC • Nausea /Vomiting
Drug Interactions:	Potentiates effects of other CNS depressing medications. May react with other medications in IV line. Barbiturates, Alcohol, and other narcotics will increase effects of benzodiazepines.
Dosage:	<p>Adult: Seizures 1-2 mg slow IV, IM, or ET as needed. Max dose 4mg</p> <p>Adult: Anxiety .5-1 mg slow IV</p> <p>Adult: Premedication .5-1 mg slowly IV, IM or ET; 5-10 prior to TCP/Cardioversion or Succinylcholine use.</p> <p>Peds: Seizures 0.05-0.1 mg/kg IV, IO, or ET (no faster than 2mg/min)</p>
Onset:	5-20 minutes
Duration:	6-8 hours

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-260	Effective: August, 2004	Revised: September, 2018
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PARAMEDIC

MAGNESIUM SULFATE	
Trade Names:	None
Class:	Electrolyte
Therapeutic Action:	Stops convulsive seizures associated with pre-eclampsia, CNS depressant.
Mechanism of Action:	Magnesium is integral in the normal functioning of the sodium/potassium pump, which helps maintain cellular wall stability. It is identified as a “physiological” calcium channel blocker and a blocker of normal neuromuscular nerve transmission. It effects the movement of potassium across the cellular wall during cellular depolarization, which increases intracellular potassium and altering calcium effects on conduction. This decreases Chronotropic effects.
Indications:	<ul style="list-style-type: none"> • Seizures associated with Eclampsia • Bronchospasm • Asthma • Torsades de Pointes • Refractory VF & Cardiac Arrest
Contraindications:	<ul style="list-style-type: none"> • Kidney Failure • Respiratory Depression • Hypocalcemia • Heart Blocks • Shock due to blocking effects
Adverse/Side Affects:	<ul style="list-style-type: none"> • Hypotension; Respiratory depression or arrest • If given rapidly can drop heart rate. • Toxicity – Flaccid muscle paralysis due to blocking neuromuscular transmissions; Depression of deep tendon reflexes; Respiratory paralysis and Circulatory collapse.
Drug Interactions:	May interfere with effects of neuromuscular blocking agents and calcium
Dosage:	<p>Adult: <i>Eclamptic Seizure</i> 1g per minute IV to Max dose of 4g</p> <p>Adult: <i>Cardiac Dysrhythmias/Torsades with Pulse/Asthma</i> 1 – 2g in 100ml over 5-60 minutes</p> <p>Adult: <i>Cardiac Arrest/Torsades/Refractory VF</i> 1-2g IV/IO</p> <p>Peds: <i>Cardiac Dysrhythmias/Asthma</i> 25 – 50mg/kg IV over 3 – 5 minutes</p>
Onset:	Immediate
Duration:	3 – 4 hours

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Grays Harbor Emergency Medical Services Medication Protocol

No. <i>MED-270</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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PARAMEDIC

<i>METHYLPREDNISOLONE</i>	
Trade Names:	Solu-Medrol
Class:	Steroid
Therapeutic Action:	Decreases inflammatory response and reduces edema in tissues
Mechanism of Action:	Has strong anti-inflammatory and cell membrane stabilizing effects.
Indications:	<ul style="list-style-type: none"> • Acute COPD • Asthma • Allergic Reaction
Contraindications:	<ul style="list-style-type: none"> • Premature infants • Systemic Fungal Infections • Known hypersensitivity to methylprednisolone
Adverse/Side Affects:	<ul style="list-style-type: none"> • Exacerbation of CHF (retention of fluid) • Arrhythmias • Hyperglycemia
Drug Interactions:	Cyclosporine, Phenobarbital, Phenytoin, Rifampin, Troleandomycin, and Ketoconazole Caution: Incompatible with Diphenhydramine (Benadryl); Flush between drugs.
Dosage:	Adult: 125mg slow IVP Peds: 1 – 2mg/kg (max 125mg) slow IVP
Onset:	IV immediate – 30 minutes
Duration:	3 – 4 hours

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-275	Effective: September, 2018	Revised:
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PARAMEDIC

**** ALTERNATIVE MEDICATION ****

METOPROLOL	
Trade Names:	Lopressor
Class:	Beta Blocker
Therapeutic Action:	To reduce the incidence of ventricular fibrillation and other complications in patients who have recently suffered an MI. To slow ventricular conduction in the presence of atrial fibrillation with rapid ventricular response.
Mechanism of Action:	Metoprolol is a beta-adrenergic blocking agent with preferential effect on beta 1 adrenoceptors located primarily on the cardiac muscle.
Indications:	<ul style="list-style-type: none"> To convert to NSR or slow ventricular response in atrial fibrillation or atrial flutter.
Contraindications:	<ul style="list-style-type: none"> Heart rate < 45/beats a minute Second degree AVB Third degree AVB Significant first degree AVB (PR interval >0.24 sec) Systolic blood pressure <100 mmHg Moderate to severe cardiac failure Cardiogenic shock CHF Recent stimulant use (meth, cocaine)
Adverse/Side Affects:	<ul style="list-style-type: none"> Dizziness Fatigue Bradycardia Palpitation Chest Pain Nausea/vomiting Hypotension
Drug Interactions:	Barbiturates and rifampin may decrease the effects of metoprolol. Added bradycardic effects may be seen with dioxin.
Dosage:	<p>Adult: 5 mg Slow IV push up to 3 times q 5 min</p> <p>Peds: Not recommended</p>
Precautions	<ul style="list-style-type: none"> During IV administration, BP, heart rate, and ECG should be monitored carefully May aggravate bronchospasms
Special Considerations	IV metoprolol may be given by direct IV undiluted at a rate of 5 mg over 60 seconds.

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-280	Effective: August, 2004	Revised: September, 2018
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PARAMEDIC

MIDAZOLAM HCL	
Trade Names:	Versed
Class:	Short-acting Benzodiazepine
Therapeutic Action:	Relieves apprehension and impairs memory during cardioversion and endotracheal intubation.
Mechanism of Action:	
Indications:	<ul style="list-style-type: none"> • Premedication for: • Endotracheal Intubation • Cardioversion • Conscious Sedation • Excited delirium
Contraindications:	<ul style="list-style-type: none"> • Hypersensitivity to Midazolam • Glaucoma • Shock – Depressed Vital Signs • Coma • Overdose • Alcohol intoxication • Barbiturates; Narcotics; or other CNS depressants on board
Adverse/Side Affects:	<ul style="list-style-type: none"> • Cough • Over sedation • Pain at injection site • Blurred Vision • N/V • Hypotension • Fluctuating Vitals • Respiratory Depression or Arrest
Drug Interactions:	Narcotics, Benzodiazepines, Barbiturates, or other CNS depressants accentuate sedative effects
Dosage:	<p>Adult: 1 – 5mg IV/IM/IO over 2 – 3 minutes. May be repeated in 1mg increments.</p> <p>Adult: Excited delirium 10mg IV</p> <p>Peds: 0.1mg/kg</p>
Onset:	1 – 3 minutes IV
Duration:	2 – 6 hours

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-290	Effective: August, 2004	Revised: September, 2018
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PARAMEDIC

MORPHINE SULFATE	
Trade Names:	None
Class:	Narcotic analgesic, Venous dilation
Therapeutic Action:	Potent pain reliever; venous pooling; reduces preload; reduces systemic vascular resistance; reduces mixed venous oxygen saturator; reduces cardiac workload
Mechanism of Action:	Smooth muscle relaxant (venous & arterial); Binds opiate receptors in the CNS.
Indications:	<ul style="list-style-type: none"> • Chest Pain secondary to Acute Myocardial Infarction • Analgesia • CHF with Pulmonary and Peripheral Edema
Contraindications:	<ul style="list-style-type: none"> • Head Injuries • Bronchospasm and Asthma • Hypovolemia and Shock • Abdominal Pain of Unknown Etiology
Adverse/Side Affects:	<ul style="list-style-type: none"> • Respiratory depression and arrest • CNS depression • Hypotension and Bronchospasms • Nausea and Vomiting
Drug Interactions:	Other CNS depressants, Respiratory depressants and alcohol
Dosage:	<p>Adult: 2mg q 2 – 3 minutes when respiratory drive OK and BP >90mmHg. 2 – 10mg slow IV, IM push repeated every 5 minutes for pain.</p> <p>Peds: 0.1 – 0.2mg/kg IV, IM. Max – 15mg</p>
Onset:	Immediate
Duration:	2 – 7 hours

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-300	Effective: August, 2004	Reviewed: September, 2018
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EMT	EMT-IV	PARAMEDIC
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<i>NALOXONE (Narcan)</i>	
Trade Names:	Narcan
Class:	Opiate antagonist
Therapeutic Action:	Reverses effects of narcotics on the body
Mechanism of Action:	Binds to the opiate receptors in the body to block the effects of narcotics.
Indications:	<ul style="list-style-type: none"> • Known narcotic or opioid overdose • Respiratory depression of unknown origin • Coma or Altered LOC of unknown origin
Contraindications:	<ul style="list-style-type: none"> • Hypersensitivity to Naloxone.
Adverse/Side Affects:	<ul style="list-style-type: none"> • Tachycardia • Diaphoresis • Hypertension • N/V • Dysrhythmias • Withdrawals
Drug Interactions:	Alkaline Solutions
EMT Dosages:	<p><u>Adult:</u> 1mg- may repeat 1mg in 4 minutes if pt has not responded to a Max of 2mg IN (MAD), IM, SQ</p> <p><u>Peds:</u> 0.5mg- may repeat 0.5 mg in 4 minutes if pt has not responded to a Max of 1mg IN (MAD), IM, SQ</p> <p>May repeat dosages again in 15 minutes if the pt responds to the 1st/2nd dose</p>
Paramedic Dosages:	<p><u>Adult:</u> 0.4-2mg q 2 – 5 minutes to a Max of 10mg IV, IM, IN, SQ, MAD and IO</p> <p><u>Peds:</u> 0.1mg/kg to a max single dose of 2mg IV, IM, IN, SQ, MAD and IO</p>
Onset:	Within 2 minutes
Duration:	30 – 60 minutes

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-310	Effective: August, 2004	Reviewed: September, 2018
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PARAMEDIC

NITROGLYCERINE/NITRO PASTE	
Trade Names:	Nitro, Nitrostat
Class:	Vasodilator
Therapeutic Action:	Systemic arterial and venous dilatation; Reduces preload and after load
Mechanism of Action:	Relaxes vascular smooth muscle
Indications:	<ul style="list-style-type: none"> • Chest pain secondary to decreased myocardial oxygen flow • CHF • Pulmonary Edema • Hypertension
Contraindications:	<ul style="list-style-type: none"> • Hypotension (systolic <90 mmHg) • Intracranial bleeding • Viagra, Cialis or Levitra
Adverse/Side Affects:	<ul style="list-style-type: none"> • Hypotension • Headache • Fainting • Flushing • Nausea
Drug Interactions:	Other hypotension causing medications
Dosage:	0.4mg SL q 5min until 3 doses given 1” of Nitro Paste may be applied to the anterior chest after the 2 nd dose in chest pain secondary to decreased myocardial oxygen flow (Angina/AMI) 1” of Nitro Paste may be applied to the anterior chest of patients experiencing pulmonary edema in association with congestive heart failure.
Onset:	1 – 3 minutes
Duration:	20 – 30 minutes

Note: EMT & EMT-IV may only assist patient with that patient’s own Nitro Tablets

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Grays Harbor Emergency Medical Services



Medication Protocol

No. MED-320	Effective: August, 2008	Reviewed: September, 2018
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EMT
EMT-IV
PARAMEDIC

ORAL GLUCOSE

Trade Names:	Insta-Glucose
Class:	Nutrient
Therapeutic Action:	Oral glucose is absorbed from the intestine after administration and then used by tissues. Direct absorption occurs, resulting in a rapid increase in blood glucose levels, making it very effective in small doses.
Mechanism of Action:	Adds glucose to circulating blood volume
Indications:	<ul style="list-style-type: none"> Altered mental status caused by hypoglycemia.
Contraindications:	<ul style="list-style-type: none"> Unresponsive patient No gag reflex Inability to swallow
Adverse/Side Affects:	<ul style="list-style-type: none"> No common side effects have been reported with this product
Drug Interactions:	No significant interactions
Dosage:	<p>Adult: 1 tube, repeat in 10 minutes as needed.</p> <p>Peds: ½ tube, repeat in 10 minutes as needed.</p>
Onset:	10 minutes
Duration:	Varies

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Grays Harbor Emergency Medical Services Medication Protocol

No. <i>MED-330</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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EMR	EMT	EMT-IV	PARAMEDIC
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<i>OXYGEN</i>

Trade Names:	O ₂
Class:	Inhaled gas
Therapeutic Action:	Increases inspired oxygen levels, alveolar oxygen levels, and oxygen within the blood stream.
Mechanism of Action:	Binds up to 100% of unsaturated hemoglobin molecules inside RBC's
Indications:	<ul style="list-style-type: none"> • Known or suspected hypoxia or hypoxemia • Respiratory insufficiency • Prophylactically • Carbon monoxide poisoning
Contraindications:	<ul style="list-style-type: none"> • None in emergent patient care • O₂ saturation greater than 94% in acute coronary syndrome of patient without complaint of dyspnea
Adverse/Side Affects:	<ul style="list-style-type: none"> • Depression of respiratory drives in COPD patients.
Drug Interactions:	None
Dosage:	Adult & Pediatrics: 24 – 100% BVM/Supraglottic: 15Lpm – 100% Nasal Cannula: 2-6 L/min (24 – 44%) Simple Mask: 10-12 L/min (40 – 60 %) Non-Rebreather Mask: 10-15 L/min (60 – 100%)
Onset:	Immediately
Duration:	Less than 2 minutes

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Grays Harbor Emergency Medical Services Medication Protocol

No. <i>MED-340</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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PARAMEDIC

OXYTOCIN

Trade Names:	Pitocin
Class:	Pituitary Hormone, Uterine stimulant
Therapeutic Action:	Stimulates contractions of uterine smooth muscle to decrease bleeding from uterine vessels. Squeezes down on uterine smooth muscle myofibrils, producing uterine wall contractions.
Mechanism of Action:	Synthetic hormone similar to the one released by the posterior Pituitary gland, which causes contraction of the uterine smooth muscle myofibrils producing uterine wall contractions.
Indications:	<ul style="list-style-type: none">• Postpartum hemorrhage after delivery of baby & placenta
Contraindications:	<ul style="list-style-type: none">• Prior to delivery• Multiple babies, which have not all delivered• Previous cesarean section• Fetal distress• Serum toxemia
Adverse/Side Affects:	<ul style="list-style-type: none">• Hypotension• Hypertension• Angina• Anxiety• Uterine Rupture• Tachycardia• Seizure• Allergic Reaction• Dysrhythmias• IC Bleed
Drug Interactions:	Vasopressors = Severe Hypertension
Dosage:	10 units IM Mix 10units (1ml) in 1000cc NS = 10 milliunits/ml
Onset:	Immediate
Duration:	20 minutes after infusion stopped

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-345	Effective: May, 2010	Revised: September, 2018
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PARAMEDIC

**** ALTERNATIVE MEDICATION ****

PANCURONIUM BROMIDE	
Trade Names:	Pavulon
Class:	Nondepolarizing, neuromuscular blocking agent
Therapeutic Action:	
Mechanism of Action:	Nondepolarizing, neuromuscular blocking agent belonging to the curariform class of drugs. Its activity leads to neuromuscular blockage by competing for cholinergic receptors at the motor end-plate.
Indications:	<ul style="list-style-type: none"> • Intubated patients requiring the need to be paralyzed for prolonged periods of time.
Contraindications:	<ul style="list-style-type: none"> • Hypersensitivity to Pancuronium or bromide products • Patients with Unsecured Airways • Patients which require a Neuro examination upon arrival to ER. • Patients need to be adequately sedated prior to and during paralysis.
Adverse/Side Affects:	<ul style="list-style-type: none"> • Increased salivation • Hypertension • Tachyarrhythmia • Prolonged neuromuscular block • Apnea • Bronchospasm (rare) • Respiratory Failure
Drug Interactions:	Prior administration of succinylcholine may enhance the neuromuscular blocking effect of Pancuronium bromide and increase its duration of action. If succinylcholine is used before Pancuronium bromide, the administration of Pancuronium bromide should be delayed until the patient starts recovering from succinylcholine-induced neuromuscular blockade
Dosage:	<p>Adult: 0.06 – 0.1 mg/kg IV</p> <p>.</p> <p>Peds: 0.04 – 0.1 mg/kg IV</p>
Onset:	Approximately 4 minutes
Duration:	90 – 160 minutes Doubled in patients with cirrhosis, biliary obstruction and renal failure

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-347	Effective: August, 2012	Reviewed: September, 2018
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PARAMEDIC

**** ALTERNATIVE MEDICATION ****

PROCAINAMIDE HYDROCHLORIDE	
Trade Names:	Pronestyl, Procan
Class:	Antidysrhythmic
Therapeutic Action:	
Mechanism of Action:	<ul style="list-style-type: none"> • Suppresses ectopy in atrial & ventricular tissue, has little use on arrhythmias of nodal origin. • In normal ventricular muscle and Purkinje fibers, it suppresses phase 4 diastolic depolarization thus reducing the automaticity of all pacemakers. It also slows intraventricular conduction, thus suppressing reentry arrhythmias. • If there is ischemic tissue and conduction is already slowed, • Procainamide may further slow conduction and produce bi-directional block and may terminate reentry dysrhythmias. • Potent vasodilator. • Decreases chronotropy, excitability, negative dromotropy. • Modest negative inotropy.
Indications:	<ul style="list-style-type: none"> • Sustained ventricular tachycardia (with pulse) refractory to lidocaine. • Management of ventricular dysrhythmias when lidocaine contraindicated.
Contraindications:	<ul style="list-style-type: none"> • Pre-existing QT prolongation or torsades de pointes • High AV blocks unless a pacemaker is in place. • Hypersensitivity
Adverse/Side Affects:	<ul style="list-style-type: none"> • May cause severe hypotension, bradycardia and heart blocks • Nausea and vomiting are common.
Drug Interactions:	<ul style="list-style-type: none"> • Additive effect with other antidysrhythmics • Additive anticholinergic effects with other anticholinergics. • Neurological toxicity with lidocaine
Dosage:	<p>Adult: 20mg/min IV Infusion until:</p> <ol style="list-style-type: none"> a. The dysrhythmia is suppressed b. Hypotension ensues c. The QRS is widened by 50% of its original width d. A total of 17 mg/kg of the medication has been administered e. Infusion [1gm] in 250 ml D5W or NS at 1 to 4 mg per minute <p>Peds: 15mg/kg IV, IO infusion over 30-60 min</p>

Onset:	10-30 minutes
Duration:	3-6 Hours



Grays Harbor Emergency Medical Services Medication Protocol

No. MED-350	Effective: August, 2004	Reviewed: September, 2018
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PARAMEDIC

**** ALTERNATIVE MEDICATION ****

PROCHLORPERAZINE	
Trade Names:	Compazine
Class:	Antiemetic, antipsychotic
Therapeutic Action:	Acts centrally by blocking chemoreceptor trigger zone, which in turn acts on vomiting center.
Mechanism of Action:	
Indications:	<ul style="list-style-type: none"> • Nausea & Vomiting • Psychotic Disorders
Contraindications:	<ul style="list-style-type: none"> • Hypersensitivity to Compazine • Comatose States • Under influence of CNS depressants (ETOH, barbiturates, narcotics). • Seizures • Encephalopathy • Bone marrow depression • Narrow angle glaucoma • Pregnancy
Adverse/Side Affects:	<ul style="list-style-type: none"> • Neuroleptic malignant syndrome • Extrapyrimalid reactions <ul style="list-style-type: none"> ○ For reactions: 50mg Benadryl • Tachycardia • Respiratory depression • Severe Hypotension
Drug Interactions:	Other phenothiazines
Dosage:	<p>Adult: Nausea & Vomiting 5-10mg IM, 2.5-5mg slow IV</p> <p>Adult: Psychotic Episodes 10-20mg IM, 2.5-10mg slow IV</p> <p>Peds: Nausea/Vomiting & Psychotic Episodes 0.132mg/kg IM</p> <ul style="list-style-type: none"> • IM preferred route in large muscle mass. • If given IV, dilute before administration.
Onset:	IM 10-20 minutes
Duration:	12 Hours: Metabolized by liver, excreted in urine and breast milk. Crosses placenta.

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-355	Effective: <i>September, 2018</i>	Reviewed:
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PARAMEDIC

PROMETHAZINE	
Trade Names:	Phenergan
Class:	antiemetic, phenothiazine class
Therapeutic Action:	alleviation of nausea and vomiting
Mechanism of Action:	Phenothiazine derivative that competitively block histamine H1 receptors without blocking secretion of histamine. Drug has sedative, antimotion-sickness, antiemetic, and anticholinergic effects, but no dopaminergic effects
Indications:	<ul style="list-style-type: none"> Nausea & Vomiting
Contraindications:	<ul style="list-style-type: none"> decreased LOC other sedating medications history of dystonic reaction subcutaneous or intra-arterial administration pediatric patient (especially less than 2 yo) lower respiratory infection avoid in Parkinsons disease
Adverse/Side Affects:	<ul style="list-style-type: none"> sedation dystonic reaction respiratory suppression lower seizure threshold neuroleptic malignant syndrome soft tissue/skin injury
Drug Interactions:	potentiates opioids and other CNS depressants, IV incompatible with cephalosporins, clindamycin, diazepam, heparin, haloperidol, ketorolac, methylprednisolone, nitroprusside, pantoprazole, bicarb,
Dosage:	<ul style="list-style-type: none"> 12.5-25 mg IV or IM dosing every 4 hours (max concentration is 25 mg/ml, max rate is 25 mg/min) Adjustment – Geriatric patients – starting does 6.25 mg IV. Decrease dosing of narcotic medications by 25-50%
Onset:	IV in minutes, IM onset 5-15 minutes, peaks at 3 hours
Duration:	4-6 hours

Note: Safe in pregnancy, caution in breast feeding.

Black box warning- 1. respiratory depression has resulted in death in some children 2. subcutaneous or intra-articular injection has resulted in severe tissue necrosis and gangrene. If patient c/o pain, stop injection immediately. *****

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-360	Effective: August, 2004	Revised: September, 2018
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PARAMEDIC

PROPOFOL	
Trade Names:	Diprivan
Class:	Sedative-Hypnotic
Therapeutic Action:	Short acting hypnotic
Mechanism of Action:	Not well defined, agonism of GABA receptors
Indications:	<ul style="list-style-type: none"> ○ Induction ○ Sedation ○ Conscious Sedation
Contraindications:	○ Hypersensitivity to Propofol, Soy, Peanuts or Eggs
Adverse/Side Affects:	<ul style="list-style-type: none"> ○ Injection Site Pain ○ Involuntary Muscle movement ○ Nausea & Vomiting ○ Anaphylaxis (rare) – soy & peanut allergy ○ Respiratory Acidosis ○ Bradycardia ○ Hypertension ○ Hypotension ○ Torsades de Pointes – Responds well to Magnesium Sulfate
Drug Interactions:	
Dosage:	<p>Adult: Sedation – Induction 50-100mg IV (1 – 2.5mg/kg) Dose varies</p> <p>Adult: Sedation – Maintenance 10mg or 20mg incremental IV bolus doses</p> <p>Peds: Sedation – Induction (3 – 16yo & Healthy) 2.5 – 3.5mg/kg IV; as above</p>
Dose Adjustments:	Geriatrics, Weight, ETOH, etc – titrate
Administration:	<ul style="list-style-type: none"> ○ Use dedicated line ○ Dilute only with normal saline to a concentration not less than 2mg/ml ○ Maintain strict aseptic technique during handling
Monitoring:	Continuously; Hypotension; Apnea; Airway Obstruction; Oxygen Desaturation
Onset:	30-60 seconds
Duration:	3 minutes

Pregnancy Category:B

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-363	Effective: August, 2012	Revised: September, 2018
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PARAMEDIC

**** ALTERNATIVE MEDICATION ****

<i>PROPRANOLOL</i>	
Trade Names:	Inderal
Class:	Beta-adrenergic blocker (nonselective), Antiarrhythmic
Therapeutic Action:	Competitively blocks beta-adrenergic receptors decreasing the influence of the sympathetic nervous system, the excitability of the heart, cardiac workload and oxygen consumption, and the release of renin and lowering BP; has membrane-stabilizing (local anesthetic) effects that contribute to its antiarrhythmic action; acts in the CNS to reduce sympathetic outflow and vasoconstrictor tone. The mechanism by which it prevents migraine headaches is unknown.
Mechanism of Action:	Non selected Beta Blockade
Indications:	<ul style="list-style-type: none"> • Supraventricular arrhythmias
Contraindications:	<ul style="list-style-type: none"> • Cardiogenic Shock • Sinus Bradycardia & greater than 1st degree block • Bronchial asthma • Patients with known hypersensitivity to Propranolol • Use cautiously with hypoglycemia and diabetes, thyrotoxicosis, hepatic dysfunction. • Hypotension
Adverse/Side Affects:	<ul style="list-style-type: none"> • Hypotension • Dizziness • Bradycardia
Drug Interactions:	<ul style="list-style-type: none"> • Other beta-blockers • Disopyramide
Dosage:	<p>Adult: 1-3 mg slow IV (1mg/min) Sufficient time should be allowed for the drug to reach the site of action even when a slow circulation is present. A second dose may be given after 2 minutes. Thereafter, additional drug should not be given in less than 4 hours. Additional propranolol should not be given when the desired alteration in rate and/or rhythm is achieved.</p> <p>Peds: 0.01 to 0.1 mg/kg slow IV over 10 minutes; maximum dose: 1 mg (infants); 3 mg (children).</p>
Onset:	Immediate
Duration:	4 hours

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Grays Harbor Emergency Medical Services Medication Protocol

No. <i>MED-366</i>	Effective: <i>August, 2012</i>	Revised: <i>September, 2018</i>
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PARAMEDIC

ROCURONIUM

Trade Names:	Zemuron
Class:	Non-depolarizing neuromuscular blocker.
Therapeutic Action:	Provides skeletal muscle relaxation to facilitate endotracheal intubation.
Mechanism of Action:	
Indications:	<ul style="list-style-type: none">• Maintenance of paralysis AFTER intubation to assist ventilation during prolonged transport.• Initial means of paralysis for adult and pediatric patients with contraindications for succinylcholine (i.e. crush injury patients, personal or family history of malignant hyperthermia, inherited myopathies such as muscular dystrophy and pre-existing hyperkalemia).
Contraindications:	<ul style="list-style-type: none">• Known sensitivity to Rocuronium.• Expected difficult airway.
Adverse/Side Affects:	<ul style="list-style-type: none">• Patients with neuromuscular diseases such as myasthenia gravis or myasthenic syndrome may have prolonged periods of paralysis.• May cause tachycardia in up to 30% of patients.• May cause temporary hypotension
Drug Interactions:	
Dosage:	<u>Adult:</u> 1mg/kg IV or IO push <u>Peds:</u> 1mg/kg IV or IO push.
Onset:	60 Seconds
Duration:	40-60 minutes

NOTE: Ensure that drug is kept refrigerated or replaced every 60 days.

NOTE: Do not push in same IV line as Versed.

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Grays Harbor Emergency Medical Services Medication Protocol

No. <i>MED-370</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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PARAMEDIC

<i>SODIUM BICARBONATE</i>	
Trade Names:	None
Class:	Electrolyte
Therapeutic Action:	Increases pH in blood. Buffering agent.
Mechanism of Action:	Acts as a bicarbonate ion and binds with H ions to form Carbonic acid.
Indications:	<ul style="list-style-type: none"> ○ Metabolic Acidosis ○ Prolonged Resuscitation Situations ○ Tricyclic Anti-Depressant OD class IIa ○ Hyperkalemia
Contraindications:	<ul style="list-style-type: none"> ○ CHF & Kidney failure ○ Before Respiratory Alterations have been accomplished
Adverse/Side Effects:	<ul style="list-style-type: none"> ○ Decreased O₂ delivery at cellular level ○ CNS acidosis ○ Metabolic Alkalosis ○ Hyponatremia
Drug Interactions:	<ul style="list-style-type: none"> ○ May precipitate with Calcium Chloride, Calcium Gluconate, Morphine, Aminophylline, and Magnesium Sulfate. ○ Inactivates Epinephrine, Isuprel, Dopamine
Dosage:	<p>Adult: 1mEq/kg slow IV. Repeat in 10 minutes with 0.5mEq/kg</p> <p>Peds: 1mEq/kg of pediatric mixture (8.4%). Repeat in 10 minutes with 0.5mEq/kg slow IV</p>
Onset:	2 – 10 minutes
Duration:	30 – 60 minutes

Note: NOT recommended with current ACLS guidelines. Use discretion.

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-380	Effective: August, 2004	Revised: September, 2018
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PARAMEDIC

SUCCINYLCOLINE	
Trade Names:	Anectine
Class:	Depolarizing Neuromuscular Blocker (Paralytic)
Therapeutic Action:	Paralysis of Diaphragm and Skeletal muscles throughout the body.
Mechanism of Action:	Binds with receptors at the motor end plate of skeletal, muscle and the diaphragm thereby blocking acetylcholine from attaching to the receptors. Because it binds to the receptors instead of blocking them; muscle fasciculations and some muscle contractions occur.
Indications:	<ul style="list-style-type: none"> ○ To facilitate intubation of patients which have an intact gag reflex ○ Termination of Laryngospasms
Contraindications:	<ul style="list-style-type: none"> ○ Penetrating eye injuries (Succ's ↑ intraocular pressure) ○ Unlikely to have a successful intubation ○ Neuromuscular Disease (Myasthenia Gravis) ○ Absence of Surgical Airway Skills ○ Narrow Angle Glaucoma (Succ's ↑ intraocular pressure) ○ Severe Uncontrolled Hypertension ○ Recent Trauma Surgery ○ Major unhealed burns <24 hours old ○ Hyperkalemia
Adverse/Side Affects:	<ul style="list-style-type: none"> ○ Muscle fasciculations ○ Hypersalivation ○ Bradycardia ○ Malignant Hyperpyrexia (rare, muscle rigidity, tachycardia, hypertension) ○ Trismus (locking of jaw & teeth clenching) Don't give more succinylcholine.
Drug Interactions:	<ul style="list-style-type: none"> ○ Oxytocin, Beta-blockers, Procainamide, Lidocaine, Magnesium salts and Organophosphates may potentiate effects. ○ Diazepam may reduce duration of action ○ Digoxin may cause dysrhythmias
Dosage:	Adult/Ped: 1 – 2mg/kg rapid IV
Onset:	Less than 1 minute
Duration:	4 – 6 minutes

Note: Always use sedation before administration.

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Grays Harbor Emergency Medical Services Medication Protocol

No. <i>MED-400</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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PARAMEDIC

TETRACAINE	
Trade Names:	Tetracaine, Proparacaine, and Ophthaine
Class:	Ophthalmic Anesthetic
Therapeutic Action:	Suppresses sensory-input from conjunctiva and eye
Mechanism of Action:	Decreases ion (Na+) permeability by stabilizing neuronal membrane. Inhibits nerve impulses from sensory nerves.
Indications:	<ul style="list-style-type: none">○ Removal of foreign objects (non-impaled)○ Placement of Morgan lenses during an eye flushing procedure.
Contraindications:	<ul style="list-style-type: none">○ Hypersensitivity to Paraaminobenzoic Acid○ Caution with Hypothyroidism, Hypertension, CAD, Pregnancy
Adverse/Side Affects:	<ul style="list-style-type: none">○ Blurred Vision○ Stinging○ Burning○ Lacrimation○ Cornea ulceration with prolonged use.
Drug Interactions:	Decreases antibacterial action of sulfonamides
Dosage:	1 – 2 gtts in eye
Onset:	15 – 30 seconds
Duration:	15 – 20 minutes

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Grays Harbor Emergency Medical Services Medication Protocol

No. <i>MED-410</i>	Effective: <i>August, 2004</i>	Revised: <i>September, 2018</i>
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PARAMEDIC

<i>THIAMINE</i>	
Trade Names:	Betaxin
Class:	Vitamin (B12)
Therapeutic Action:	Replenishes Thiamine stores in Malnourished Individuals.
Mechanism of Action:	Converts pyruvic acid to acetyl-coenzyme-A. This allows cells to use the glucose on hand to fuel the body. Prevents Wernicke's syndrome (acute & reversible encephalopathy) and Korsakoff's psychosis (mental derangement which may not be reversible). Combines with ATP to form Thiamine pyrophosphate coenzyme (carb metabolism).
Indications:	<ul style="list-style-type: none">○ Coma of unknown origin where alcohol use is possible○ Delirium Tremens
Contraindications:	<ul style="list-style-type: none">○ None in the pre-hospital setting
Adverse/Side Affects:	<ul style="list-style-type: none">○ Hypotension○ Dyspnea○ Respiratory Failure○ Nausea/Vomiting○ Diaphoresis
Drug Interactions:	None in the pre-hospital setting
Dosage:	100mg slow IV or IM
Onset:	Rapidly
Duration:	Depends on Deficiency

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Grays Harbor Emergency Medical Services Medication Protocol

No.MED-430	Effective: August, 2004	Revised: September, 2018
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PARAMEDIC

**** ALTERNATIVE MEDICATION ****

VECURONIUM	
Trade Names:	Norcuron
Class:	Non-Depolarizing Neuromuscular Blocker
Therapeutic Action:	Paralysis of diaphragmatic and skeletal muscles throughout the body.
Mechanism of Action:	A non-depolarizing neuromuscular blocker (NMB), blocks the receptor sites for Acetylcholine on the motor end plate (MEP), preventing stimulation of the muscle fibers.
Indications:	<u>Intubated patients that are:</u> <ul style="list-style-type: none"> ○ Bucking or fighting the endotracheal tube ○ Attempting to Extubate themselves ○ At risk of harming EMS Personnel ○ Trismus (locking of jaw and teeth clenching)
Contraindications:	<ul style="list-style-type: none"> ○ Myasthenia Gravis ○ Newborns ○ Patients with Unsecured Airways ○ Patients which require a neuro examination upon arrival to ER
Adverse/Side Affects:	<ul style="list-style-type: none"> ○ Apnea ○ Hypoxia ○ Hypercarbia ○ Profound Weakness
Drug Interactions:	<u>Increased neuromuscular blockade:</u> Clindamycin, Lincomycin, Quinidine, Polymyxin Antibiotics, Local Anesthetics, Lithium, Narcotics, Thiazides <u>Dysrhythmias:</u> Theophylline
Dosage:	<u>Adult/Children >9y/o:</u> 0.1mg/kg IV Maintenance – 0.01 – 0.015 mg/kg
Onset:	3 – 5 minutes
Duration:	45 minutes to 1 hour

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-435	Effective: August, 2012	Revised: September, 2018
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PARAMEDIC

**** ALTERNATIVE MEDICATION ****

VERAPAMIL	
Trade Names:	Calan, Isoptin
Class:	Calcium channel blocker
Therapeutic Action:	
Mechanism of Action:	Slows conduction through the AV node, inhibits reentry during PSVT, decreases rate of ventricular response, decreases myocardial oxygen demand.
Indications:	<ul style="list-style-type: none"> • SVT • A-Fib with RVR Wolf Parkinsons White syndrome or other accessory tract
Contraindications:	<ul style="list-style-type: none"> • Heart Block • Conduction system disturbances • Severe CHF • V-Tach • Severe Hypotension or Cardiogenic Shock
Adverse/Side Affects:	<ul style="list-style-type: none"> • Nausea/Vomiting • Extreme bradycardia • Asystole • AV block • Hypotension • Congestive heart failure • WPW
Drug Interactions:	<ul style="list-style-type: none"> • Other beta-blockers
Dosage:	<p>Adult: 2.5-5.0 mg IV over 2-3 minutes, a repeat dose of 5-10mg may be given after 15-30 minutes if PSVT does not convert. Maximum dose is 20mg.</p> <p>Peds: 0.1-0.2 mg/kg slow IV with a maximum of 2.0 mg.</p>
Onset:	1-3 minutes
Duration:	2-5 Hours

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Grays Harbor Emergency Medical Services Medication Protocol

No. MED-440	Effective: August, 2004	Reviewed: September, 2018
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PARAMEDIC

XYLOCAINE JELLY (2%)	
Trade Names:	None
Class:	Topical Anesthetic
Therapeutic Action:	
Mechanism of Action:	
Indications:	<ul style="list-style-type: none">○ Nasal/Oral Endotracheal Intubation.○ Nasogastric tube placement
Contraindications:	<ul style="list-style-type: none">○ Known hypersensitivity to local Anesthetics.
Adverse/Side Affects:	<ul style="list-style-type: none">○ Impaired swallowing may lead to aspiration.○ Numbness of tongue or buccal mucosa may enhance possibility of unintentional biting trauma.○ Allergic Reaction○ Bradycardia○ Hypotension○ Drowsiness○ Blurred/Double Vision○ Light Headedness
Drug Interactions:	
Dosage:	Apply moderate amount to external surfaces of endotracheal / nasogastric tubes prior to placement.
Onset:	3 – 5 minutes after contact with topical region or mucosa.
Duration:	1.5 – 2.0 hours. Can vary with dosage and site of application.

Caution:

Reduce dose with elderly/young.

Wear protective gloves when handling to prevent numbing.

Do not apply to stylet or inner lumens of ET or Nasogastric tubes.

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Grays Harbor Emergency Medical Services Medication Protocol

No. <i>MED-450</i>	Effective: <i>August, 2008</i>	Revised: <i>September, 2018</i>
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PARAMEDIC

ZOFRAN	
Trade Names:	Ondansetron
Class:	Antiemetic
Therapeutic Action:	
Mechanism of Action:	Selective 5-HT ₃ receptor antagonist, blocking serotonin, both peripherally on vagal nerve terminals and centrally in the chemoreceptor trigger zone.
Indications:	<ul style="list-style-type: none">○ Nausea and Vomiting
Contraindications:	<ul style="list-style-type: none">○ Known hypersensitivity to medication or similar medications such as Anzemet or Kytril.○ Decreased liver function○ Long QT syndrome○ Intestinal obstruction○ Cardiac arrhythmias
Adverse/Side Affects:	<ul style="list-style-type: none">○ Headache○ Prolong QT syndrome○ Serotonin Syndrome○ Oculogyrie Syndrome○ Fever○ Diarrhea○ Rash
Drug Interactions:	Apomorphine
Dosage:	Adult: 4-8 mg IV, IM, NPO. Repeat once after 2 minutes as needed. Peds: (6 months – 18 years) 0.15 mg/kg repeated up to 3 times or a maximum single dose of 0.45 mg/kg
Onset:	30 minutes
Duration:	2 Hours

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GRAYS HARBOR EMERGENCY MEDICAL SERVICES



PATIENT CARE PROTOCOL MANUAL

-- Inter-Facility Transport Protocols --

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Grays Harbor Emergency Medical Services Patient Care Protocols

No. *IFT-PCP-001*

Effective: *August, 2017*

Reviewed: *September, 2018*

INTER-FACILITY TRANSPORTS

Inter-facility transport may occur at either the BLS or ALS level within the following categories and under the following guidelines:

1. Transfer between hospitals for admission for services not available at the initial hospital.
2. Transport of patient to another facility for diagnostic evaluations with return to the initial facility.
3. Transport from an acute care facility to an extended care facility.
4. Transport of patient between facilities at the patient's request.
5. Transport of Mental Health patients to a state designated psychiatric facility.

As a general rule, it is the responsibility of the transferring facility to insure that medical necessities for safe patient transfer are met. Medical instructions and orders of the attending physician will be followed unless specifically contrary to standing orders. If the attending physician accompanies the patient during the transfer, he/she may assume complete authority and direct all care. Medical Control should be aware and in agreement.

Registered nurses who accompany patients on inter-facility transports must have orders to give medications, as they do not have coverage under pre-hospital WAC to do so. Such orders may come from the attending physician, on-line Medical Control, or by the receiving physician. If orders are verbal, they should be clearly documented as such in the pre-hospital patient care record. Further, if an RN attends a patient for an ALS transfer, a Grays Harbor County certified EMT-Paramedic shall accompany the patient. The authority of primary patient care will reside with the nurses accompanying the EMS providers. However, primary patient care will be transferred to the ALS Providers under the following circumstances:

1. The patient request for the paramedic to take over primary patient care
2. Patient presentation deteriorates to the level that prehospital skill intervention is required for stabilization (example: placement of advanced airway)

The responsibility for arranging transfer to another facility resides with the transferring facility. In general patients will not be transferred to another facility without first being stabilized. Stabilization should include adequate evaluation and initiation of treatment to assure that transfer of the patient will not, within reasonable medical probability, result in material deterioration of the medical condition, death, or loss or serious impairment of

Inter-Facility Transports Cont.

bodily functions, parts or organs. Evaluation and treatment of patients prior to transfer should include the following:

1. Establish and assure an adequate airway and adequate ventilation;
2. Initiate control of hemorrhage;
3. Stabilize and splint the spine and/or fractures;
4. Establish and maintain adequate access routes for fluid and/or medication administration;
5. Initiate adequate fluid and/or blood product replacement;
6. Determine that the patient's vital signs (including pulse, respiration, blood pressure and urinary output, if indicated) are sufficient to sustain adequate tissue perfusion.

It is understood that circumstances may arise for which full stabilization is not possible or appropriate; however, the potential benefits of transfer should outweigh the risks. It is, further, the transferring facility's responsibility to establish the need for BLS or ALS care.

For ALS calls not meeting the criteria consistent with these protocols or stabilization prior to inter-facility transport, Medical Control shall be contacted and the following may apply:

1. You may initiate pre-hospital protocols and guidelines as appropriate including the establishment of intravenous lines, airway control, vasopressor support, etc.
2. ALS providers shall contact Medical Control for all medications and/or medical equipment not approved within these protocols. When transporting patients with medications and or equipment not being covered by these protocols, providers shall obtain the appropriate information concerning the medication or equipment (i.e. indications, contraindications, side effects, dosages etc.) and consult with Medical Control.
3. You may refuse to transfer the patient until the facility complies with the previously noted evaluation and/or treatment. Should you decide this is necessary, contact online Medical Control for concurrence and consultation or contact the MPD directly, if available.

If BLS transport is requested and it is the judgment of the BLS crew that the patient needs ALS support, it is mandated that ALS level care be dispatched and Medical Control contacted. Under no circumstances (except as noted) should a BLS crew transport a patient, if in their judgment; this is an ALS level transport. (The only exception is a disaster/multi-casualty incident with exhaustion of county and air transport ALS capabilities).

Inter-Facility Transports Cont.

The subsequent medications in this section are to be utilized during Inter-Facility Transports and not in the pre-hospital setting.

Medical instructions and orders, including medication administration, will be at the discretion of the attending physician and will be followed unless specifically contrary to standing orders. Dosages and infusion rates are to be determined by attending physician and not to be changed by the transporting agency unless otherwise directed by medical control.

In the event an emergency occurs en route, which was not anticipated, pre-hospital patient care protocols will immediately apply. Medical Control should be contacted as appropriate and the receiving facility should be contacted as soon as possible to inform them of changes in the patient's condition.

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Grays Harbor Emergency Medical Services Patient Care Procedure Protocol

No. *IFT-PROC-010*

Effective: *June, 2009*

Reviewed: *September, 2018*

BLOOD TRANSFUSION GUIDELINES

PARAMEDIC

PURPOSE

1. To administer blood products during transport between facilities.

PROCEDURE:

1. Prior to taking over patient care make sure that the blood is the patient's. Double check that the patient's wristband coincides with the compatibility tag on the blood by:
 - a. Checking the patient's full name.
 - b. Ensuring that the identification numbers match.
2. Check blood for:
 - a. Expiration
 - b. Appearance: color, clots, or presence of a lot of fine bubbles.
3. Setup will vary depending on the component that is to be transfused. Blood must be transfused through a sterile IV set which has a filter to prevent the introduction of large aggregations into the system. The maximum time limit for use of a blood filter is 4 hours.
 - a. DO NOT USE ANY OTHER IV FLUID THAN NORMAL SALINE (0.9%)
 - b. May also give FFP with blood.
4. Connection procedure is as follows:
 - a. Insert the Y tubing into the blood container.
 - b. Close the clamp to the NS and open the clamp to the blood bag.
 - c. Squeeze the drip chamber several times until the blood level is above the filter.
 - d. Check vital signs, flow rates, transfusion reaction symptoms and document appropriately.
5. Record patient's initial vitals according to Blood card. Upon completion, record final set of vitals. For uncomplicated transfusions, there is no requirement to return the empty bag.
6. If the patient has a history of CHF, give [Furosemide](#) IV between units.

PATIENT MONITORING:

1. Question the patient for any symptoms prior to transfusion or ask the nurse if the patient had any symptoms prior to administration.
2. Reactions to look for:
 - Anxiety
 - Restlessness
 - Redness or unusual warmth near the transfusion site
 - Flushing
 - Chest pain
 - Tachypnea
 - Urticaria
 - Tachycardia
 - Fever
 - Chills
 - Cough
 - N/V
 - Diarrhea
 - Shock
 - Lumbar pain
 - Decreased urine output
 - Hypotension
 - Abnormal bleeding.
3. Reaction most likely to occur in the first 15 minutes.
4. If a reaction occurs, STOP transfusion, but keep IV in and open while contacting Medical Control. Note the amount of blood received.

REFERENCE

1. [MED-190: Furosemide \(Lasix\)](#)



Grays Harbor Emergency Medical Services Medication Protocol

No. IFT-MED-010	Effective: August, 2017	Reviewed: September, 2018
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PARAMEDIC

IV ANTIBIOTICS

Examples:	Penicillin, Ampicillin, Amoxicillin, Piperacillin and Tazobactam (Zosyn), Ampicillin and Sulbactam (Unasyn)
Class:	Beta-lactam
Mechanism of Action:	Binds to and inactivates enzymes required for bacterial wall synthesis. Penicillins are used for disease due to gram-positive organisms and some gram-negative cocci. These medications are inexpensive but can cause life-threatening anaphylactic reactions in those who are allergic.
Indications:	<ul style="list-style-type: none">○ Bacterial infections such as syphilis, endocarditis, respiratory tract infections, bacterial meningitis, urinary tract infections, and gastrointestinal infections
Contraindications:	<ul style="list-style-type: none">○ Known allergy/hypersensitivity
Adverse/Side Affects:	<ul style="list-style-type: none">○ Nausea, vomiting, diarrhea, and rash
Drug Interactions:	Ampicillin is incompatible with D5W, dopamine, diphenhydramine, lorazepam, midazolam, ondansetron, and sodium bicarbonate.
Dosage:	Dose is influenced by patient weight, but ampicillin is typically 500 mg every 6 hours. Administered in 10-15 minutes.

Examples:	Cephalexin (Keflex), Cefazolin (Ancef), Ceftriaxone (Rocephin)
Class:	Cephalosporin/Beta-lactam
Mechanism of Action:	Binds to and inactivates enzymes required for bacterial wall synthesis. Used with both gram-positive and gram-negative activity. These typically do not produce anaphylactic reactions, but people can be allergic to them.
Indications:	<ul style="list-style-type: none">○ Cholecystitis, urinary tract infections, and cellulitis
Contraindications:	<ul style="list-style-type: none">○ Known allergy/hypersensitivity○ Known allergy/hypersensitivity to penicillin
Adverse/Side Affects:	<ul style="list-style-type: none">○ Pain at injection site, headache, nausea, vomiting, seizures
Drug Interactions:	Ceftriaxone is incompatible with amiodarone, diltiazem, morphine, and sodium bicarbonate.
Dosage:	Ceftriaxone (Rocephin) dose is 1 to 2 grams IV over 30 minutes

Examples:	Ciprofloxacin (Cipro), Levofloxacin (Levaquin), Moxifloxacin (Avelox)
Class:	Quinolone
Therapeutic action:	Broad spectrum antibiotic that plays an important role in treatment of serious bacterial infections, especially hospital-acquired infections and others in which resistance to older antibacterial classes is suspected.
Indications:	<ul style="list-style-type: none"> ○ Hospital acquired pneumonia, urinary tract infection, pyelonephritis
Contraindications:	<ul style="list-style-type: none"> ○ Known allergy/hypersensitivity ○ Certain disorders that predispose to arrhythmias such as prolonged QT syndrome, hypokalemia, hypomagnesemia, and significant bradycardia
Adverse/Side Affects:	<ul style="list-style-type: none"> ○ Nausea, diarrhea, abdominal pain, headache, dizziness, tendonitis, and tendon rupture
Drug Interactions:	Use caution with other medications that prolong QT interval. Can cause QT prolongation
Dosage:	Ciprofloxacin (Cipro)-400 mg, Levofloxacin (Levaquin)-500 mg, Moxifloxacin (Avelox)-400 mg. All over 60 minutes

Examples:	Sulfamethoxazole and Trimethoprim (Bactrim) (Septra)
Class:	Sulfonamide
Therapeutic action:	One of a group of drugs derived from sulfanilamide that prevents the growth of bacteria.
Indications:	<ul style="list-style-type: none"> ○ Severe urinary tract infection, prophylaxis for immunosuppressed, MRSA, and other skin infections
Contraindications:	<ul style="list-style-type: none"> ○ Known allergy/hypersensitivity
Adverse/Side Affects:	<ul style="list-style-type: none"> ○ Nausea, vomiting, and rash are most frequent
Drug Interactions:	Incompatible with diltiazem, lorazepam, magnesium sulfate, and morphine
Dosage:	10-20 mg/kg/24 hours spread over 6 or 12 hours. Administered in 60-90 minutes

Examples:	Azithromycin (Zithromax)
Class:	Macrolide
Therapeutic action:	Action is primarily bacteriostatic but may be bactericidal at high concentrations, or depending on the type of microorganism
Indications:	<ul style="list-style-type: none"> ○ Community-acquired pneumonia, pelvic inflammatory disease
Contraindications:	<ul style="list-style-type: none"> ○ Known allergy/hypersensitivity ○ Known allergy/hypersensitivity to erythromycin, any macrolide, or ketolide drug ○ Hepatic dysfunction- history of cholestatic jaundice/hepatic dysfunction associated with prior use of azithromycin
Adverse/Side Affects:	<ul style="list-style-type: none"> ○ Usually mild to moderate in severity and reversible after discontinuation-abdominal pain, arrhythmias, cough, dizziness, dyspnea, facial edema, hypotension, injection site pain, rash, and vomiting
Drug Interactions:	Incompatible with amiodarone and midazolam
Dosage:	500 mg over at least 1 hour

Examples:	Metronidazole (Flagyl)
Class:	Nitroimidazoles
Therapeutic action:	Works by stopping the growth of bacteria and protozoa
Indications:	<ul style="list-style-type: none"> ○ Used to treat bacterial infections of the vagina, GI tract, skin, joints, and respiratory tract
Contraindications:	<ul style="list-style-type: none"> ○ Known allergy/hypersensitivity ○ Known allergy/ hypersensitivity to other nitroimidazole derivatives.
Adverse/Side Affects:	<ul style="list-style-type: none"> ○ Most serious include-aseptic meningitis, encephalopathy, optic and peripheral neuropathy. Others include-abdominal cramping, dizziness, dry mouth, epigastric distress, fever, flushing, metallic taste (expected), nausea, rash, seizures, and Stevens-Johnson Syndrome
Drug Interactions:	Incompatible with diltiazem, dopamine, lorazepam, magnesium sulfate, methylprednisolone, midazolam, morphine, and vasopressin
Dosage:	15 mg/kg over 1 hour

Examples:	Gentamicin
Class:	Aminoglycoside
Therapeutic action:	Used to treat a wide variety of bacterial infections. Works by stopping the growth of bacteria
Indications:	<p>Severe Gram-Negative Infections:</p> <ul style="list-style-type: none"> ○ Upper and lower urinary tract infections ○ Burn and wound infections ○ Septicemia, Bacteremia ○ Abscesses

	<ul style="list-style-type: none"> ○ Subacute Bacterial Endocarditis ○ Respiratory Tract infections (Bronchopneumonia) ○ Neonatal infections ○ Gynecological infections <p>Gram-Positive Infections:</p> <ul style="list-style-type: none"> ○ Bacteremia ○ Abscesses ○ Accidental and operative trauma ○ Burns and serious skin lesions
Contraindications:	<ul style="list-style-type: none"> ○ Known allergy/hypersensitivity to gentamicin, any other ingredient or other aminoglycosides ○ Myasthenia gravis ○ Gentamicin should be used with caution in premature infants because of their renal immaturity, in elderly people, and generally in patients with impaired renal function.
Adverse/Side Affects:	<ul style="list-style-type: none"> ○ Nausea, vomiting, stomach upset, or loss of appetite. ○ Pain/irritation/redness at injection site
Drug Interactions:	Avoid use with Furosemide. May potentiate neuromuscular blockade
Dosage:	1mg/kg IM or IV every 8 hours; max 5mg/kg/day

Examples:	Levofloxacin (Levaquin)
Class:	Fluoroquinolone
Therapeutic action:	Broad-spectrum antibiotic that plays an important role in treatment of serious bacterial infections, especially hospital-acquired infections and others in which resistance to older antibacterial classes is suspected
Indications:	Hospital acquired pneumonia, UTI, pyelonephritis
Contraindications:	<ul style="list-style-type: none"> ○ Known allergy/hypersensitivity to drug or other histamine2-receptor antagonists
Adverse/Side Affects:	<ul style="list-style-type: none"> ○ Nausea ○ Diarrhea ○ Abdominal pain ○ Headache ○ Dizziness ○ Tendonitis ○ Tendon rupture
Drug Interactions:	Can cause QT prolongation, use caution with other medications that prolong QT interval
Dosage:	Adult: 500 mg



Grays Harbor Emergency Medical Services Medication Protocol

No. IFT-MED-020	Effective: August, 2017	Reviewed: September, 2018
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PARAMEDIC

ETOMIDATE	
Trade Names:	Amidate
Class:	Non-narcotic, non-barbiturate, sedative hypnotic
Therapeutic Action:	Depresses the activity of the brain stem reticular system
Mechanism of Action:	May lower intraocular and intracranial pressure, and lower the rate of cerebral oxygen utilization, all with minimal cardiovascular and respiratory depressant effects.
Indications:	<ul style="list-style-type: none">• Induction agent for RSI in adults and pediatric patients 10 years old or older.• Sedation prior to cardioversion.
Contraindications:	<ul style="list-style-type: none">• Hypersensitivity to the agent.• Not recommended for pregnant or nursing mothers
Adverse/Side Affects:	<ul style="list-style-type: none">• Nausea/Vomiting• Painful myoclonus (diffuse muscle contractions). This can be reduced by giving muscle relaxant immediately after Etomidate is given.• Pain at the injection site.• Apnea• Hypotension• Tachycardia
Drug Interactions:	<ul style="list-style-type: none">• Synergistic effect with other anesthetics, sedatives, hypnotics and/or opiates
Dosage:	<p>Adult: Induction agent – 0.3 mg/kg IV/IO push over 30-60 seconds. Sedation agent – 0.1 mg/kg IV/IO.</p> <p>Peds: 0.3 mg/kg IV/IO push over 30-60 seconds. Max dose: 20 mg.</p>
Onset:	Within 10-60 seconds
Duration:	Dose dependent but can be 3-5 minutes with full recovery in 15 minutes.

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Grays Harbor Emergency Medical Services Medication Protocol

No. <i>IFT-MED-030</i>	Effective: <i>August, 2016</i>	Revised: <i>September, 2018</i>
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PARAMEDIC

HEPARIN DRIP

Trade Names:	Heparin
Class:	Anticoagulant
Therapeutic Action:	Prevent the formation, and treatment of blood clots
Mechanism of Action:	Acts at multiple sites in coagulation process; binds to antithrombin III, catalyzing inactivation of thrombin and other clotting factors
Indications:	<ul style="list-style-type: none">• Acute myocardial infarction• DVT (deep vein thrombosis)• DIC (disseminated intravascular coagulation)• Pulmonary embolism• Atrial fibrillation(to prevent the formation of blood clots)• Prophylactically for prevention of blood clots
Contraindications:	<ul style="list-style-type: none">• Bleeding OR
Adverse/Side Affects:	<ul style="list-style-type: none">• Care should be used when handling patient who are receiving Heparin infusion, as rough handling can cause bleeding• Heparin should not be used with patients who are actively bleeding• Heparin should not be used on patients with known or suspected intracranial hemorrhage• Concurrent use of Heparin and oral anticoagulants, thrombolytic and salicylates or IIb/IIIa antagonists may increase the chances of bleeding and some patients may be on 2 or more agents
Drug Interactions:	If patient has history of HIT Antibodies, do not give. HIT Antibodies = Heparin induced Thrombocytopenia. It is not a rare disorder so ask patient if they have a positive history of it.
Dosage:	Continue Heparin infusion at rate set by transferring physician Recommended mixing instructions are 25,000 units in 250 cc of NS Heparin may be mixed in either NS or D5W.
Onset:	
Duration:	

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Grays Harbor Emergency Medical Services Medication Protocol

No. <i>IFT-MED-040</i>	Effective: <i>August, 2017</i>	Reviewed: <i>September, 2018</i>
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		PARAMEDIC
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CONTINUOUS INSULIN DRIP THERAPY

Trade Names:	Insulin
Class:	Hormone
Therapeutic Action:	Decrease blood glucose concentration
Mechanism of Action:	Increases glucose metabolism by cells, to increase glycogen levels, and to decrease blood glucose concentration toward normal levels. Insulin acts as an antagonist to glucagon
Indications:	<ul style="list-style-type: none"> • DKA (Diabetic Ketoacidosis) • Hyperglycemia BS > 200 • Hyperkalemia
Contraindications:	<ul style="list-style-type: none"> • Hypoglycemia
Adverse/Side Affects:	<ul style="list-style-type: none"> • Hypoglycemia • Hypokalemia • Blurred vision • Confusion • Nausea • Diaphoresis • Heart Palpitations • Tremors • Irritability • Loss of consciousness • Anaphylaxis
Drug Interactions:	<ul style="list-style-type: none"> • Hypokalemia (low blood potassium) may occur. Insulin stimulates movement of potassium from blood into cells. Combining insulin with potassium lowering drugs may increase the risk of hypokalemia.
Dosage:	<ul style="list-style-type: none"> • Dose to be determined by transferring physician • Rate should not require adjusting during transfer. • Insulin infusion concentrations are generally 1 unit per 1 ml, confirm any variations with sending Physician. • Blood sugar shall be checked at a minimum of twice per transport once when assuming care and just prior to arrival of receiving facility.
Onset:	5-10 minutes
Duration:	Half-life 5-10 minutes

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Grays Harbor Emergency Medical Services Medication Protocol

No. IFT-MED-050	Effective: August, 2017	Reviewed: September, 2018
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PARAMEDIC

INTEGRILIN	
Trade Names:	Eptifibatide
Class:	Antiplatelet
Therapeutic Action:	Inhibits platelet aggregation and thus intravascular obstruction
Mechanism of Action:	Inhibits platelet function (glycoprotein IIb/IIIa inhibitor).
Indications:	<ul style="list-style-type: none">Acute coronary syndrome/acute MI. Integrilin will not be initiated during field response but will be administration on physician orders during transfers of STEMI or other ACS patients.
Contraindications:	<ul style="list-style-type: none">Active GI, GNS or other hemorrhageStroke within 30 days or history of hemorrhagic strokeRecent major surgeryDialysis or renal failureThrombocytopeniaSBP >200 or DBP >110
Adverse/Side Affects:	<ul style="list-style-type: none">Bleeding, including at IV siteHypotension
Drug Interactions:	<ul style="list-style-type: none">Use caution with thrombolyticsSynergistic effect with other platelet inhibitors
Dosage:	<p>Adult: IV Bolus 180 mcg/kg followed by IV infusion at 2 mcg/kg/min with a second IV bolus of 180 mcg/kg given 10 minutes after initial bolus.</p> <ol style="list-style-type: none">Do not shake vial, do not administer if particles or discoloration are present in vial.Bolus should be administered over 2 minutesInfusion should be via pump and rate should be set/infusion started prior to transfer of care.EMS may administer second IV bolus if this expedites transport.
Onset:	1-hour
Duration:	Up 4 hours after discontinuation

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Grays Harbor Emergency Medical Services Medication Protocol

No. <i>IFT-MED-060</i>	Effective: <i>August, 2017</i>	Reviewed: <i>September, 2018</i>
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NICARDIPINE HYDROCHLORIDE

Trade Names:	Cardene
Class:	Calcium channel blocker; Antihypertensive
Therapeutic Action:	<ul style="list-style-type: none"> • Produces significant reduction in systemic vascular resistance.
Mechanism of Action:	<ul style="list-style-type: none"> • Inhibits influx of calcium ions into cardiac and smooth muscles without changing serum calcium concentrations.
Indications:	<ul style="list-style-type: none"> • Acute hypertension requiring acute blood pressure control.
Contraindications:	<ul style="list-style-type: none"> • Hypersensitivity to the agent. • Pt's. with advanced aortic stenosis • Heart blocks • Renal failure • Recent AMI
Adverse/Side Affects:	<ul style="list-style-type: none"> • Nausea/Vomiting • Headache • Tachycardia • Symptomatic hypotension • Angina • Confusion • Rash
Drug Interactions:	<ul style="list-style-type: none"> • Beta blockers – Titrate slowly in Pts. with heart failure.
Dosage:	5 mg/hour IV infusion, then increase by 2.5 mg/hour every 15 minutes to desired BP reduction, or a maximum of 15 mg/hour. <ul style="list-style-type: none"> • Do not mix with NaHCO₃ or LR or Magnesium Sulfate
Onset:	5-15 minutes
Duration:	15-30 minutes; may exceed 4 hours

If concentration is 25mg/250ml:	If concentration is 40mg/250ml:
<ul style="list-style-type: none"> • 5 mg/hour = 50 ml/hour • 7.5 mg/hour = 75 ml/hour • 10 mg/hour = 100 ml/hour • 12.5 mg/hour = 125 ml/hour • 15 mg/hour = 150 ml/hour 	<ul style="list-style-type: none"> • 5 mg/hour = 25 ml/hour • 7.5 mg/hour = 37.5 ml/hour • 10 mg/hour = 50 ml/hour • 12.5 mg/hour = 62.5 ml/hour • 15 mg/hour = 75 ml/hour

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Grays Harbor Emergency Medical Services Medication Protocol

No. IFT-MED-065	Effective: August, 2016	Revised: September, 2018
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PARAMEDIC

NITROGLYCERIN DRIP	
Trade Names:	Nitroglycerin, Nitrostat
Class:	Vasodilator
Therapeutic Action:	<ul style="list-style-type: none"> • Decreased preload; reduces venous tone, decreasing venous load on the heart • Reduces cardiac oxygen demand • Decreases afterload; reduces peripheral vascular resistance • Increases myocardial oxygen supply; causes dilation of coronary arteries and relief of coronary artery spasm.
Mechanism of Action:	Relaxes vascular smooth muscle
Indications:	<ul style="list-style-type: none"> • Chest pain secondary to presumed cardiac ischemia, acute coronary syndrome or acute myocardial infarction • Acute pulmonary edema/CHF
Contraindications:	
Adverse/Side Affects:	<ul style="list-style-type: none"> • Peripheral vasodilation can cause profound hypotension and reflex tachycardia • Common side effects <ul style="list-style-type: none"> ○ Throbbing headaches ○ Flushing ○ Dizziness • Less common side effects <ul style="list-style-type: none"> ○ Orthostatic hypotension, sometimes marked • Nitroglycerin does not provide controlled hypotension • Because nitroglycerin causes smooth muscle relaxation, it may be effective in relieving chest pain caused by esophageal spasm • Decreases cardiac preload so caution with valvular disease (i.e. mitral stenosis or aortic stenosis). Extreme caution with inferior wall MIs and suspected right ventricular involvement.
Drug Interactions:	
Dosage:	<ul style="list-style-type: none"> • Continuing nitroglycerin infusion at rate sets by transferring physician • Dosing chart: See table 1 for example charts. Nitroglycerin may be mixed in NS • If pain resolves completely, maintain drip at current rate of administration • If pain continues, increase drip by 5-10 mcg/min every 5 minutes until pain resolves or systolic BP falls below 90 mmHg • Maximum dose for nitroglycerin is 200 mcg/min

	<ul style="list-style-type: none"> • If systolic BP falls below 90 mmHg during titration, decrease the drip rate by 10 mcg and give 250 mL NS bolus IV • If BP remains below 90 mmHg, discontinue drip • Vital sign must be rechecked q 5-10 minutes and after each dosing change.
Onset:	
Duration:	

Nitroglycerin Conversion Table

Strength:	25 mg/250mL	50 mg/250 mL	100 mg/250 mL	50 mg/500 mL
	100 mcg/1 mL	200 mcg/1 mL	400 mcg/1 mL	100 mcg/1 mL
Dose Ordered:				
5 mcg/min	3 mL/hr	1.5 mL/hr	0.75 mL/hr	3 mL/hr
10	6 mL/hr	3 mL/hr	1.5 mL/hr	6 mL/hr
15	9 mL/hr	1.5 mL/hr	0.75 mL/hr	9 mL/hr
20	12 mL/hr	4 mL/hr	1.5 mL/hr	12 mL/hr
25	15 mL/hr	1.5 mL/hr	0.75 mL/hr	15 mL/hr
30	18 mL/hr	5 mL/hr	1.5 mL/hr	18 mL/hr
35	21 mL/hr	1.5 mL/hr	0.75 mL/hr	21 mL/hr
40	24 mL/hr	6 mL/hr	1.5 mL/hr	24 mL/hr
45	27 mL/hr	1.5 mL/hr	0.75 mL/hr	27 mL/hr
50	30 mL/hr	7 mL/hr	1.5 mL/hr	30 mL/hr
55	33 mL/hr	1.5 mL/hr	0.75 mL/hr	33 mL/hr
60	36 mL/hr	8 mL/hr	1.5 mL/hr	36 mL/hr
65	39 mL/hr	1.5 mL/hr	0.75 mL/hr	39 mL/hr
70	42 mL/hr	9 mL/hr	1.5 mL/hr	42 mL/hr
75	45 mL/hr	1.5 mL/hr	0.75 mL/hr	45 mL/hr
80	48 mL/hr	10 mL/hr	1.5 mL/hr	48 mL/hr
85	51 mL/hr	1.5 mL/hr	0.75 mL/hr	51 mL/hr
90	54 mL/hr	11 mL/hr	1.5 mL/hr	54 mL/hr
95	57 mL/hr	1.5 mL/hr	0.75 mL/hr	57 mL/hr
100	60 mL/hr	12 mL/hr	1.5 mL/hr	60 mL/hr



Grays Harbor Emergency Medical Services Medication Protocol

No. IFT-MED-070	Effective: August, 2016	Reviewed: September, 2018
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PARAMEDIC

NOREPINEPHRINE	
Trade Names:	Levophed
Class:	Adrenergic vasopressor
Therapeutic Action:	Primary alpha adrenergic vasoconstrictor
Mechanism of Action:	Vasoconstriction; increases peripheral vascular resistance, increases BP, decreases renal and mesenteric perfusion Beta -1 adrenergic: increases inotropy
Indications:	<ul style="list-style-type: none"> • Hypotension • Sepsis • Shock persisting after adequate fluid volume replacement
Contraindications:	<ul style="list-style-type: none"> • Hypertension • Given prior to fluids for uncorrected hypotension
Adverse/Side Affects:	<ul style="list-style-type: none"> • Headache • Palpitations • Tachycardia • Chest Pain • Eventual Hypertension • Bradycardia and result reflexively from an increase in blood pressure.
Drug Interactions:	
Dosage:	Start at 2-4mcg/minute – se dosage chart – titrated to a systolic B/P \geq 100mmHg. Maximum infusion rate is 12 mcg/minute.
Onset:	Rapid
Duration:	1 to 2 minutes after discontinuation of IV dosing

DOSAGE Chart

Indication	Dose	Route(s)	Special
Adult			MIXING/ADMINISTRATION ADULT AND PEDIATRIC: Add one 4 mg ampule to 1000 mL of NS or D5W. Administer via infusion pump ONLY.
Septic, cardiogenic, neurogenic, and obstructive shock	Begin at 4 mcg/min. If no response, increase every 5 min in 4 mcg/min. increments to MAX 12 mcg/min	IV/IO	
Pediatric			
Septic, cardiogenic, neurogenic, and obstructive shock	Begin at 0.1 mcg/kg/min. If no response in 5 min. increase to 0.2 mcg/kg/mi. IF still no response after 5 more min., may increase to 0.4 mcg/kg/min. Increase all subsequent doses 0.2 mcg/kg/min. every 5 min to MAX does of 2 mcg/kg/min. Goal is age appropriate systolic blood pressure.	IV/IO	



Grays Harbor Emergency Medical Services Medication Protocol

No. IFT-MED-080	Effective: August, 2016	Revised: September, 2018
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PARAMEDIC

<i>PANTOPRAZOL</i>	
Trade Names:	Protonix
Class:	Proton Pump Inhibitor
Therapeutic Action:	A proton pump inhibitor that suppresses the final step in gastric acid production.
Mechanism of Action:	
Indications:	<ul style="list-style-type: none"> • History of GERD with or without history of erosive esophagitis. • Maintenance of Healing of Erosive Esophagitis • Pathological Hypersecretory Conditions including Zollinger-Ellison syndrome
Contraindications:	<ul style="list-style-type: none"> • Known Hypersensitivity
Adverse/Side Affects:	<ul style="list-style-type: none"> • Headache • Abdominal Pain • Chest Pain • Dyspnea • Hemorrhage • Diarrhea • Nausea • Vomiting • Dizziness • Rash
Drug Interactions:	
Dosage:	<p>Adult: 40mg IV/IO once</p> <p>Peds: Children 5 years and older (short term treatment of erosive esophagitis associated with GERD) 33 lbs – 88 lbs. 20 mg IV/IO once Greater than 88 lbs. 40 mg IV/IO once 8 mg 1 hr drip</p>
Onset:	
Duration:	

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Grays Harbor Emergency Medical Services Medication Protocol

No. <i>IFT-MED-085</i>	Effective: <i>August, 2017</i>	Reviewed: <i>September, 2018</i>
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PARAMEDIC

<i>CONTINUOUS POTASSIUM DRIP THERAPY</i>	
Trade Names:	Potassium Chloride (KCl)
Class:	Electrolyte
Therapeutic Action:	Replenishes Potassium when oral Potassium is not possible
Mechanism of Action:	Potassium plays an important role in muscle contraction, enzyme action, nerve impulses, and cell membrane function. Potassium imbalances interfere with neuromuscular function and may cause cardiac rhythm disturbances including sudden death.
Indications:	<ul style="list-style-type: none">• Treatment of Potassium depletion in patients with Hypokalemia when oral replacement is not feasible.• Treatment of digitalis intoxication
Contraindications:	<ul style="list-style-type: none">• Renal Impairment• Untreated Addison's Disease• Hyperadrenalism• Severe Burns• Hyperkalemia of any etiology
Adverse/Side Effects:	<ul style="list-style-type: none">• Fever• Venous thrombosis, infection at injection site• Extravasation, phlebitis, pain at injection site• Hypervolemia• Hyperkalemia• Abdominal Pain• Nausea Vomiting• Paresthesias of extremities• ECG Abnormalities• Mental Confusion• Hypotension <p>Discontinue if IV infiltrates Discontinue if widening QRS Discontinue if Ventricular dysrhythmias Discontinue if Mechanical pump fails Discontinue if Allergic reaction</p>
Drug Interactions:	<ul style="list-style-type: none">• Cardiac arrest can occur with high potassium conditions, such as chronic renal failure, burns, acidosis dehydration, and potassium sparing diuretic usage such as spironolactone.• Drug interactions causing elevation of potassium can occur with ACE inhibitors (Used to treat HTN) and certain diuretics.

Dosage:	<p>MUST BE DILUTED BEFORE ADMINISTRATION Dose to be determined by transferring Physician only Do not exceed 10mEq/hour through peripheral line. Do not exceed 20mEq/hour via central line or Med Port</p> <p>For serum potassium level >2.5mEq/L Continuous IV infusion: 10mEq/hour in a concentration up to 40mEq/L. Max dose of 200mEq/day For serum potassium level <2.0 with ECG changes and or muscle paralysis, potassium chloride may be administered at a rate up to 40mEq/hour.</p>
Onset:	5-15 minutes
Duration:	Dose dependent up to 4 hours after IV Administration

Note: Patients receiving >10 mEq/hour must be on cardiac monitor



Grays Harbor Emergency Medical Services Medication Protocol

No. <i>IFT-MED-090</i>	Effective: <i>August, 2017</i>	Reviewed: <i>September, 2018</i>
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		PARAMEDIC
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THROMBOLYTIC THERAPY	
Trade Names:	Streptokinase, Alteplase (Activase), Urokinase,
Class:	Plasminogen Activator/Thrombolytic Enzyme
Therapeutic Action:	Degrades the fibrin matrix of the intravascular thrombus enhancing blood flow
Mechanism of Action:	Thrombolytic Action: Streptokinase promotes thrombolysis by activating plasminogen in two (2) steps. First, plasminogen and streptokinase form a complex, exposing plasminogen-activating site and secondly, cleavage of peptide bond converts plasminogen to plasmin.
Indications:	<ul style="list-style-type: none"> • Acute MI. • Pulmonary Embolism. • Acute CVA.
Contraindications:	<ul style="list-style-type: none"> • Intracranial aneurysm or AVM. • Intracranial surgery or trauma w/in 3 mo. • Intraspinial surgery or trauma w/in 3 mo. • HTN, severe uncontrolled. • Stroke w/in 3 mo. • Active Internal Bleeding. • Intracranial neoplasm. • Chronic hepatic or renal insufficiency.
Adverse/Side Effects:	<ul style="list-style-type: none"> • Minor hemorrhages from IV site and gums. • Major hemorrhage from GI and intracranial or spinal sites. • Reperfusion dysrhythmias often occur about 30-60 minutes after starting infusion. • Allergic reactions including anaphylaxis may occur with Streptokinase or APSAC.
Drug Interactions:	<ul style="list-style-type: none"> • Aminocaproic Acid; inhibits the effects on plasminogen activation. • Anti-coagulants; may cause severe hemorrhage if used in conjunction. • Drug-herb; may cause severe hemorrhage if used in conjunction.
Dosage:	Dose to be determined by transferring physician (determined by patient weight and indication for therapy). Rate should not require adjusting during transfer.
Onset:	Immediate (IV); peak effectiveness 20 min-2 hours.
Duration:	4 hours.

Trade Names:	Tenecteplase (TNK)
Class:	Tissue plasminogen activator.
Therapeutic Action:	Promotes thrombolysis by converting plasminogen to plasmin which degrades fibrin and fibrinogen.
Mechanism of Action:	Genetically engineered variant of alteplase with multiple point mutations of tPA molecule resulting in longer plasma half-life, enhanced fibrin specificity and increased resistance to inactivation by plasminogen activator inhibitor 1.
Indications:	<ul style="list-style-type: none"> • Acute MI. • Lysis of intracoronary emboli.
Contraindications:	<ul style="list-style-type: none"> • Intracranial aneurysm or AVM. • Intracranial surgery or trauma w/in 3 mo. • Intraspinial surgery or trauma w/in 3 mo. • HTN, severe uncontrolled. • Stroke w/in 3 mo. • Active Internal Bleeding. • Intracranial neoplasm. • Chronic hepatic or renal insufficiency
Adverse/Side Affects:	<ul style="list-style-type: none"> • Minor hemorrhages from IV site and gums. • Collection of blood under skin. • Bloody or black, tarry stools. • Allergic reactions including anaphylaxis may occur with Streptokinase or APSAC.
Drug Interactions:	<ul style="list-style-type: none"> • Anti-coagulants; may cause severe hemorrhage if used in conjunction.
Dosage:	<p>Weight based one-time dose, administered over 5 seconds:</p> <ul style="list-style-type: none"> • <60 kg (30 mg) • 60 kg-<70 kg (35 mg) • 70 kg-<80 kg (40 mg) • 80 kg-<90 kg (45 mg) • 90+ kg (50 mg) <p>Occasionally used as a continuous infusion for peripheral arterial thrombus 0.25 mg – 0.50 mg/hour; up to 48 hours.</p>
Onset:	30 minutes (IV)
Duration:	2-4 hours.

Trade Names:	Retevase
Class:	Tissue Plasminogen Activator
Therapeutic Action:	Promotes thrombolysis by converting plasminogen to plasmin which degrades fibrin and fibrinogen.
Mechanism of Action:	Thrombolytic Action: Reteplase catalyzes the cleavage of endogenous plasminogen to generate plasmin, which in turn degrades the fibrin matrix of the thrombus, resulting in thrombolysis.
Indications:	<ul style="list-style-type: none"> • Acute MI. • Heart Failure.
Contraindications:	<ul style="list-style-type: none"> • Intracranial aneurysm or AVM. • Intracranial surgery or trauma w/in 3 mo. • Intraspinial surgery or trauma w/in 3 mo. • HTN, severe uncontrolled. • Stroke w/in 3 mo. • Active Internal Bleeding. • Intracranial neoplasm. • Chronic hepatic or renal insufficiency
Adverse/Side Affects:	<ul style="list-style-type: none"> • Sudden numbness or weakness, especially on one side of the body. • Sudden headache, confusion, problems with vision, speech or balance. • Chest pain, sudden cough, wheezing, rapid breathing. • Syncope. • Weak pulse, fainting, slow breathing.
Drug Interactions:	<ul style="list-style-type: none"> • Heparin; increased chance of bleeding. • Anti-coagulants; may cause hemorrhage if used prior to Retevase.
Dosage:	<p>10 unit initial dose; over 2 minutes. Second dose of 10 units given 30 minutes later.</p> <p>No information on continuous infusion available.</p>
Onset:	Information not readily available.
Duration:	30-35 minutes.

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Grays Harbor Emergency Medical Services Medication Protocol

No. IFT-MED-095 Effective: August, 2016 Revised: September, 2018

PARAMEDIC

VANCOMYCIN	
Trade Names:	Vanocin
Class:	Antibiotic
Therapeutic Action:	A very potent tricyclic glycopeptide antibiotic, it is bactericidal against gram positive organisms.
Mechanism of Action:	
Indications:	<ul style="list-style-type: none">• Serious gram positive infections, is effective against MRSA• Penicillin allergic patients• Endocarditis
Contraindications:	<ul style="list-style-type: none">• Known Hypersensitivity• Corn products
Adverse/Side Affects:	<ul style="list-style-type: none">• Infusion reactions Hypotension and thrombophlebitis• Red man syndrome, slow transfusion rate• Rash/urticaria• Anaphylaxis• Flushing of the upper body (most common Redman Syndrome)• Easy bleeding or bruising• Diarrhea• Ringing in the ears, ototoxicity• Renal toxicity• Pan-cytopnea
Drug Interactions:	
Dosage:	<p>Adult: Physician ordered dose. 10-20 mg Kg every 8-12 hours.</p> <p>Peds: Physician ordered dose. 40 mg/kg/24 hours Do not exceed 2 Gm in 24 hours</p>
Onset:	
Duration:	

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GRAYS HARBOR EMERGENCY MEDICAL SERVICES

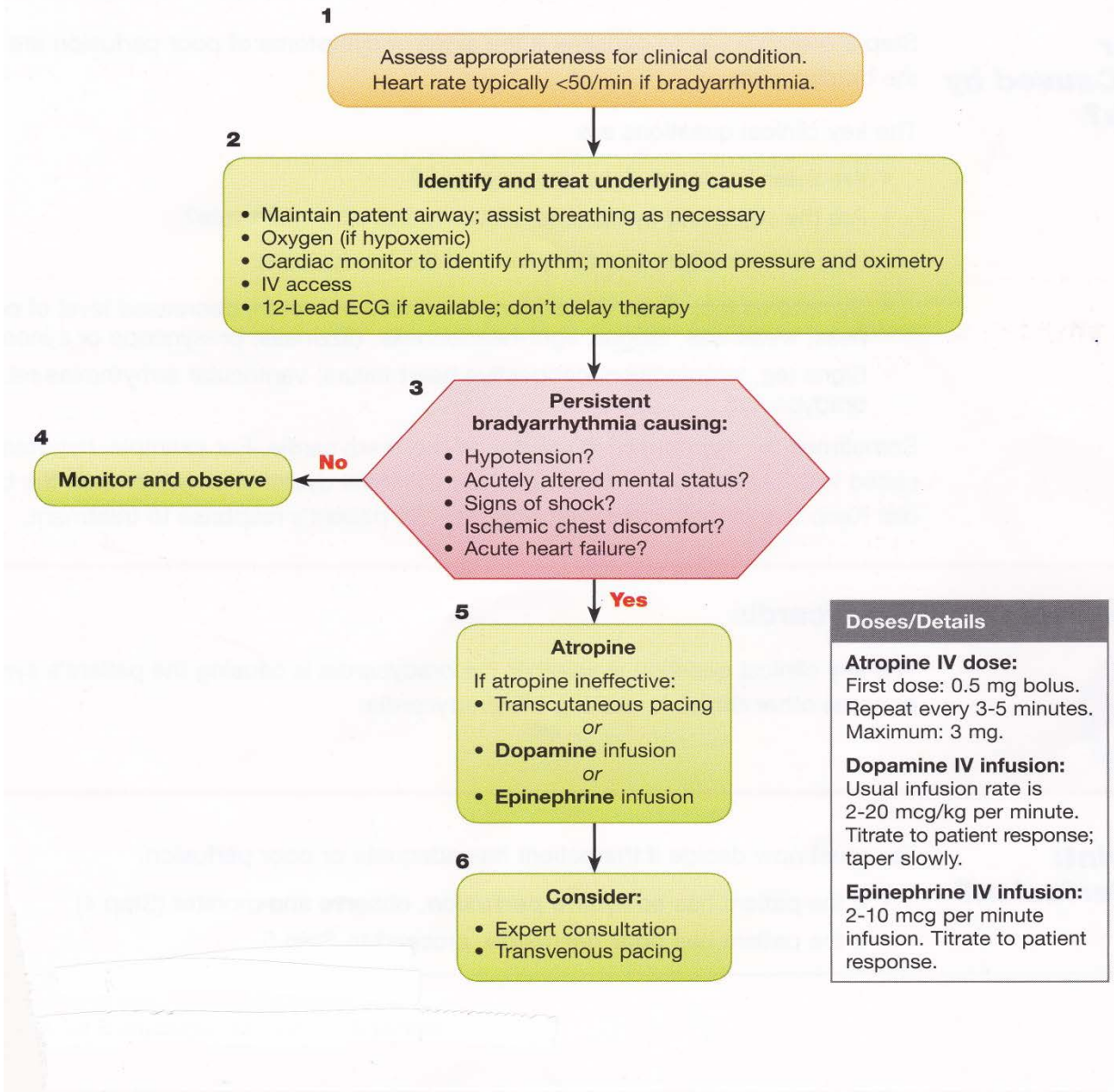


PATIENT CARE PROTOCOL MANUAL

--AHA 2015 Algorithms--

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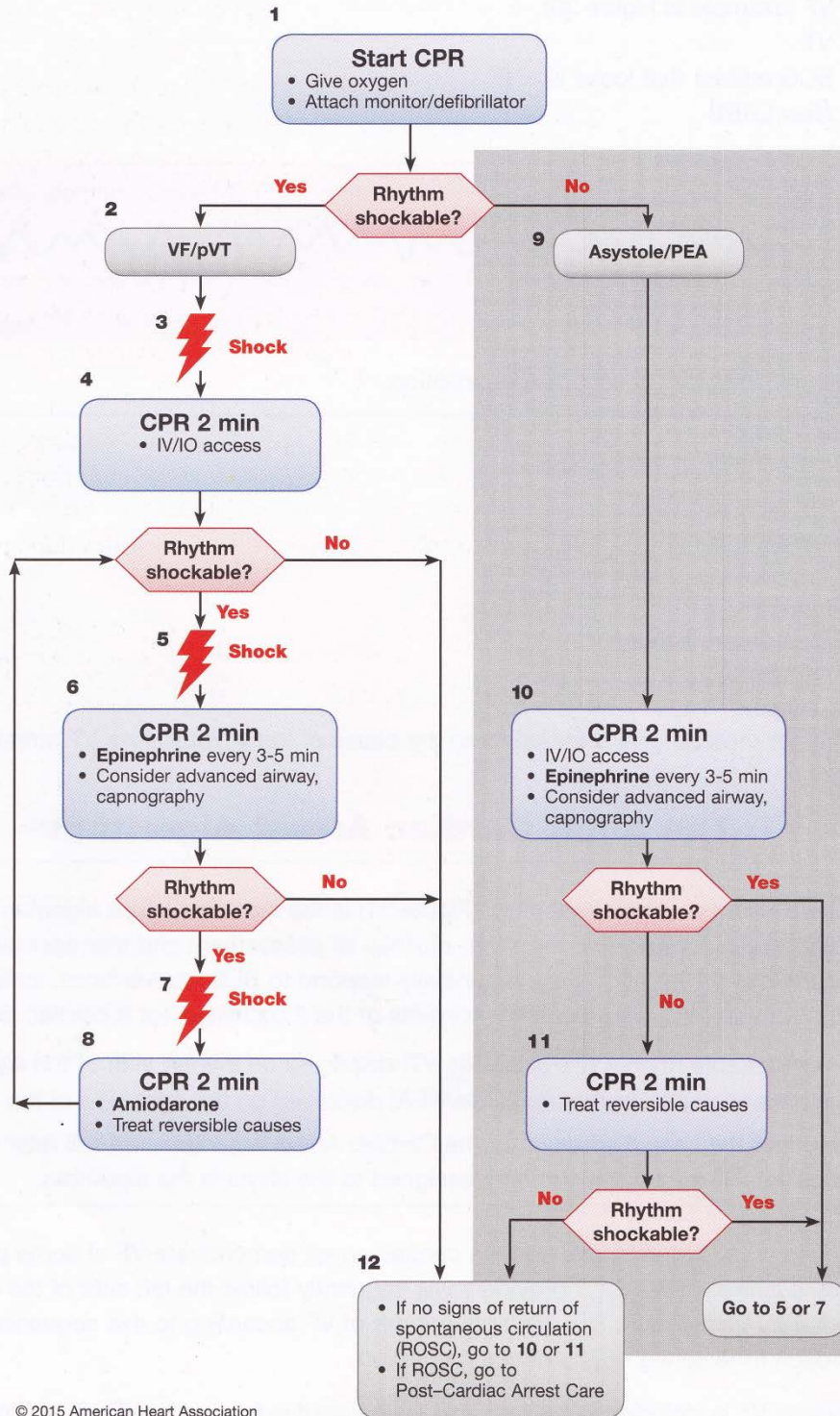
Adult Bradycardia With a Pulse Algorithm



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Adult Cardiac Arrest Algorithm—2015 Update



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CPR Quality

- Push hard (at least 2 inches [5 cm]) and fast (100-120/min) and allow complete chest recoil.
- Minimize interruptions in compressions.
- Avoid excessive ventilation.
- Rotate compressor every 2 minutes, or sooner if fatigued.
- If no advanced airway, 30:2 compression-ventilation ratio.
- Quantitative waveform capnography
 - If PETCO₂ <10 mm Hg, attempt to improve CPR quality.
- Intra-arterial pressure
 - If relaxation phase (diastolic) pressure <20 mm Hg, attempt to improve CPR quality.

Shock Energy for Defibrillation

- **Biphasic:** Manufacturer recommendation (eg, initial dose of 120-200 J); if unknown, use maximum available. Second and subsequent doses should be equivalent, and higher doses may be considered.
- **Monophasic:** 360 J

Drug Therapy

- **Epinephrine IV/IO dose:** 1 mg every 3-5 minutes
- **Amiodarone IV/IO dose:** First dose: 300 mg bolus. Second dose: 150 mg.

Advanced Airway

- Endotracheal intubation or supraglottic advanced airway
- Waveform capnography or capnometry to confirm and monitor ET tube placement
- Once advanced airway in place, give 1 breath every 6 seconds (10 breaths/min) with continuous chest compressions

Return of Spontaneous Circulation (ROSC)

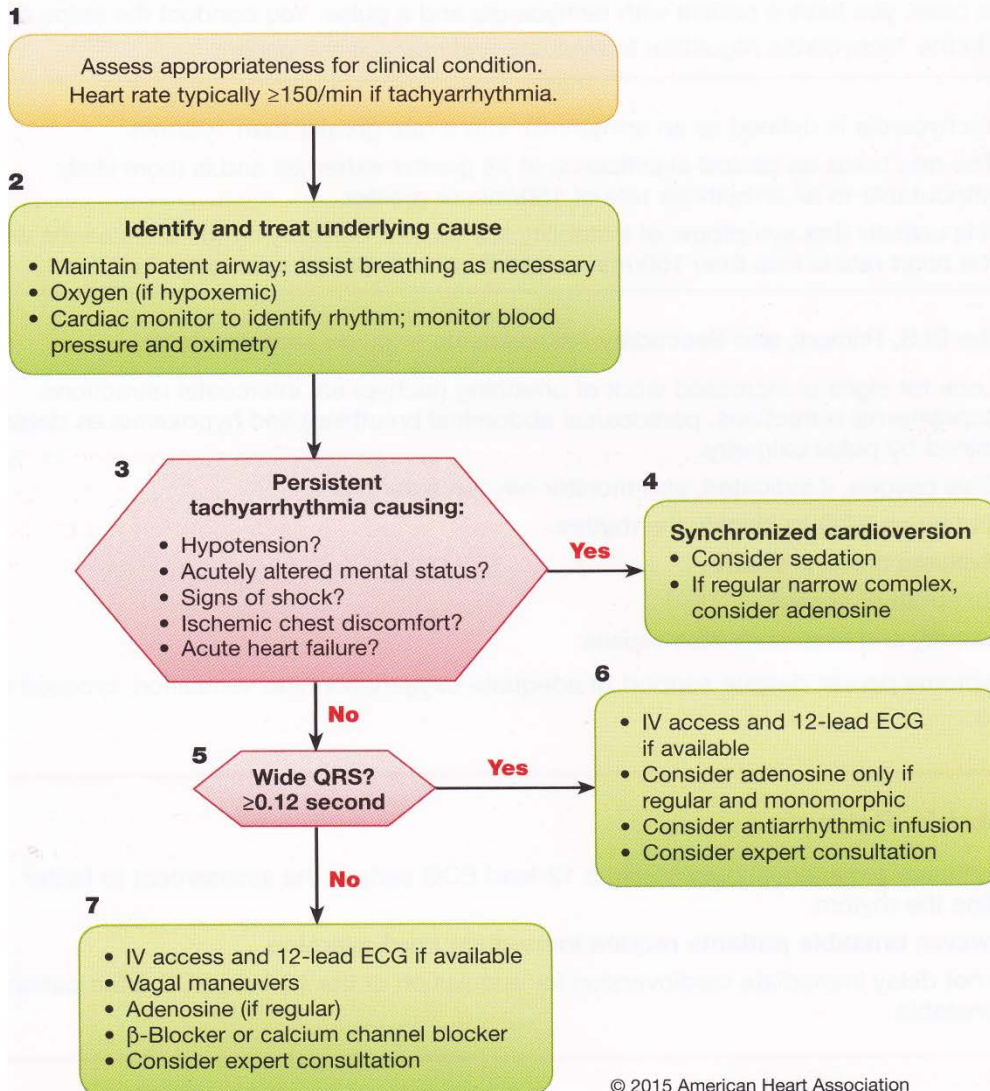
- Pulse and blood pressure
- Abrupt sustained increase in PETCO₂ (typically ≥40 mm Hg)
- Spontaneous arterial pressure waves with intra-arterial monitoring

Reversible Causes

- Hypovolemia
- Hypoxia
- Hydrogen ion (acidosis)
- Hypo-/hyperkalemia
- Hypothermia
- Tension pneumothorax
- Tamponade, cardiac
- Toxins
- Thrombosis, pulmonary
- Thrombosis, coronary

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Adult Tachycardia With a Pulse Algorithm



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Doses/Details

Synchronized cardioversion:

Initial recommended doses:

- Narrow regular: 50-100 J
- Narrow irregular: 120-200 J biphasic or 200 J monophasic
- Wide regular: 100 J
- Wide irregular: defibrillation dose (*not* synchronized)

Adenosine IV dose:

First dose: 6 mg rapid IV push; follow with NS flush.
Second dose: 12 mg if required.

Antiarrhythmic Infusions for Stable Wide-QRS Tachycardia

Procainamide IV dose:

20-50 mg/min until arrhythmia suppressed, hypotension ensues, QRS duration increases $>50\%$, or maximum dose 17 mg/kg given. Maintenance infusion: 1-4 mg/min. Avoid if prolonged QT or CHF.

Amiodarone IV dose:

First dose: 150 mg over 10 minutes. Repeat as needed if VT recurs. Follow by maintenance infusion of 1 mg/min for first 6 hours.

Sotalol IV dose:

100 mg (1.5 mg/kg) over 5 minutes. Avoid if prolonged QT.

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GRAYS HARBOR EMERGENCY MEDICAL SERVICES



PATIENT CARE PROTOCOL MANUAL

--Common Medical Abbreviations--

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Grays Harbor Emergency Medical Services Patient Care Protocols

Common Medical Abbreviations

<u>Abbreviation</u>	<u>Meaning</u>
\bar{a}	before
AAA	Abdominal Aortic Aneurysm
AED	Automated External Defibrillator
ALOC	Altered Level of Consciousness
ASA	Aspirin
AMA	Against Medical Advice
AMI	Acute Myocardial Infarction
BP	Blood Pressure
BSI	Body Substance Isolation
BSL	Blood Sugar Level
BVM	Bag Valve Mask
\bar{c}	with
CC or C/C	chief complaint
c/o	complaining of
CHF	Congestive Heart Failure
CNS	Central Nervous System
COPD	Chronic Obstructive Pulmonary Disease
CPAP	Continuous Positive Airway Pressure
CPR	Cardiopulmonary Resuscitation
CQI	Continuous Quality Improvement
CSF	Cerebrospinal Fluid
CVA	Cerebrovascular Attack
DNR	Do Not Resuscitate
DOA	Dead on Arrival
EKG	Electrocardiogram
ETA	Estimated Time of Arrival
ETT	Endotracheal Tube
GCS	Glasgow Coma Scale
GI	Gastrointestinal
GSW	Gun Shot Wound
GYN	Gynecological
H/A	Headache
HR	Heart Rate
HTN	Hypertension
ICP	Intracranial Pressure
IDDM	Insulin Dependent Diabetes Mellitus
IM	Intramuscular
IO	Intraosseous

IV	Intravenous
LOC	Loss of Consciousness
LZ	Landing Zone
MDI	Metered Dose Inhaler
MOI	Mechanism of Injury
NC	Nasal Cannula
NG	Nasogastric
NKDA	No Known Drug Allergies
NOI	Nature of Illness
NPA	Nasopharyngeal Adjunct
npo	nothing by mouth
NRB	Non-Rebreather Mask
NTG	Nitroglycerin
N/V	Nausea / Vomiting
O2	Oxygen
OB	Obstetrics
OD	Overdose
OPA	Oropharyngeal Adjunct
\bar{p}	after
PE	Physical Exam
PNS	Peripheral Nervous System
po	by mouth
POLST	Physicians Orders for Life-Sustaining Treatment
PPE	Personal Protective Equipment
PRN	as needed
q	every
ROSC	Return of Spontaneous Circulation
RR	Respiratory Rate
RSI	Rapid Sequence Intubation
\bar{s}	without
SL	Sublingual
SOA	Short of Air
SOB	Shortness of Breath
SPO2	Pulse Oximetry
SQ	Subcutaneous
TCP	Transcutaneous Pacing
TIA	Transient Ischemic Attack
VS	Vital Signs
y/o	years old
