STATE OF IDAHO

EMS PHYSICIAN COMMISSION

STATEWIDE PROTOCOLS

Corresponding to Idaho EMS Scope of Practice 2020-1
* Including EMSPC required Protocols and Procedures

Published July 1, 2020

Adopted by ________________________________ (Agency Name)

Medical Director Name ________________________________

Medical Director Signature ___________________ Date _________
ACKNOWLEDGMENTS

The Idaho Emergency Medical Services Physician Commission (EMSPC) is dedicated to serving the EMS system and providers throughout Idaho with EMS specific medical expertise and through open communication. The EMSPC continues to add resources for improved patient care with the development of the “Statewide Protocols”. The protocols were developed with the expertise of the physicians assigned to the protocol subcommittee of the EMSPC, adhoc subcommittee members with extensive clinical and field experience, and the support of the Idaho Bureau of EMS & Preparedness. The protocol subcommittee utilized professionally recognized resources for content while focusing on the skills and interventions available to Idaho licensed providers according to the most current (2020-1) scope of practice adopted by the EMSPC. The treatments outlined in these protocols were developed from the latest evidence-guided recommendations from EMS and medical organizations which include the National Association of EMS Physicians (NAEMSP), American Heart Association (AHA), American Stroke Association (ASA), American College of Cardiology (ACC), and the American College of Surgeons Committee on Trauma (ACS-COT). A special thanks for the countless hours, expertise, and commitment to quality the following individuals contributed to the project:

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INTRODUCTION TO STATEWIDE TREATMENT PROTOCOLS

The EMSPC is pleased to provide these protocols for use by EMS providers of Idaho. The protocols may be adopted by the EMS agency medical director for use within their agency or system. Specific protocols that are identified in the EMSPC standards manual as required to be used for specific interventions are identified and included in this publication. The protocols represent an acceptable standard of care for managing patient injuries or illness in a manner consistent with the scope of practice established by the EMSPC. The protocols work collectively to guide treatment decisions for rapid interventions to ultimately deliver the patient to the receiving hospitals in an improved clinical state whenever possible. Each protocol has an entry or starting point which is followed by defined steps to guide decision making. The protocols are a guide to assist the sound clinical judgment of the provider. The EMSPC has taken extreme caution to ensure all information is accurate and in accordance with professional standards in effect at the time of publication. Since written protocols cannot feasibly address all patient care situations that may develop, the EMSPC expects EMS providers to use their training and judgment regarding any protocol-driven care and consider that some interventions could be harmful to a patient. When the EMS provider believes that following a protocol is not in the best interest of the patient or themselves, the provider should contact an online medical control physician if possible. Cases where deviation from protocols are justified are rare. The reasons for any deviation should be documented and reviewed by the agency medical director. Changes to the protocols can be requested by agency medical directors by submitting a written description of the change directly to the EMSPC by email at EMSPhysicianComm@dhw.idaho.gov. EMS providers are also encouraged to provide feedback and recommendations to the EMSPC at any time. The EMSPC will review the protocols on a regular basis to incorporate changes as the scope of practice or clinical interventions continue to evolve in EMS. The most current version of the protocols will be maintained on the EMSPC web site through the Bureau web site at www.IdahoEMS.org. EMS providers are responsible for knowing the interventions allowed within their scope of practice and which their medical director has credentialed them to perform. Providers should be familiar with the use of these protocols as adopted by their agency medical director.

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Idaho EMSPC Protocol Legend

These flow chart style protocols utilize standardized symbols, letters, colors, shapes, and formatting to provide the reader with a significant amount of information. The following definitions are to be applied to the protocol content for consistency and accuracy of interpretation.

Symbol Definitions
- The stethoscope requires an assessment which can be focused or general in nature.
- The question mark identifies a targeted assessment finding.
- The pill symbolizes a medication intervention.
- The stacked blocks indicate a procedural intervention.
- An arrow points to the next step in a sequence.
- An arrow with a qualifier such as “Yes”, “No”, “>60”, or other qualifiers points to a conditional step if the condition is present.
- The square grid identifies a box as a protocol.
- The exclamation mark identifies a protocol or procedure that is required to be followed for SOP interventions designated with a “Requires EMSPC Protocol - 4” in the EMSPC standards manual.

Color and Shape Definitions
- The square green side bar with an “R” indicates the intervention is within the floor scope of practice (SOP) of an Idaho Emergency Medical Responder (EMR) – 2011.
- The round green shape with an “R” indicates the intervention is an optional module (OM) available to an EMR – 2011 which has additional requirements for use.
- The square blue shape with an “E” indicates an intervention is within the floor SOP for an Idaho Emergency Medical Technician (EMT) – 2011.
- The round blue shape indicates the intervention is an OM available to an EMT – 2011 which has additional requirements for use. This is also a floor SOP for Advanced EMT-85 who has also transitioned to EMT – 2011.
- The square yellow shape with an “A” indicates the intervention is an optional module available to an Advanced EMT – 2011.
- The round yellow shape with an “A” indicates the intervention is an OM available to an Advanced EMT – 2011.
- The gold side bar with a “P” indicates the intervention is within the floor SOP of an Idaho Paramedic – 2011.
- The dark blue round shape with a “P” indicates that the intervention is an optional module available to a Paramedic – 2011.
- The grey side bar with a white circle indicates the intervention is an OM for all levels of Idaho personnel.
- The red side bar with an “M” indicates an intervention requires contacting medical control.

Formatting Definition Samples

Universal Patient Care; Protocol G-1

Complete all steps in the protocol identified
Go to next step
Provide O2 which is in the EMR SOP
AEMT or EMT credentialed for OM, assesses BGL following defined procedure.

If BGL is >250 go to next step
AEMT or EMT if credentialed for OM, obtains vascular access and administers NS as indicated
When dose is weight based it is applies to adults and pediatrics

Consider Procedural Sedation

Etomidate
0.1mg/kg IV
Ketamine
1mg/kg IV

Consider

Blind Insertion of an Airway Device (BIAD)
Orotracheal Intubation
Nasotracheal Intubation
Universal Patient Care

- Assess Scene Safety and the Need for Additional Resources
- Bring All Necessary Equipment to the Patient’s Side
- Demonstrate Professionalism and Courtesy

PPE (If Indicated, Consider Airborne or Droplet PPE)

Immediate Life Threat?

Refusing Care?

Vital Signs

POST, Living Will, Advanced Directive

Special Healthcare Need

Supplemental Oxygen

Possible Procedures

Adult Assessment

Pediatric Assessment

Pulse Oximetry

Blood Glucose

12-Lead EKG

Cardiac Monitor

Pain Scale

Go to Specific Protocol as Appropriate

Consider

Airway, Adult; Protocol A-1

Airway, Pediatric; Protocol A-5

Vascular Access; Protocol Ci-4

Selective C-Spine Clearance; Protocol T-10

Termination of Resuscitation Trauma Arrest; Protocol C-11

Refusal Of Care; Protocol G-10

ALS Rendezvous Protocol G-3

Air Medical; Protocol G-2

Contact Medical Control if Patient Does Not Fit a Specific Protocol or if There Is a Need to Deviate from a Specific Protocol

Pearls

- All patient contacts require completion of a patient care report (PCR); including refusals of care, treatand-releases, and other scenarios that result in non-transport by EMS.
- Pulse oximetry and temperature documentation is dependent on the specific complaint.
- The patient is considered pediatric if they are < 12 years of age or they fit on the BroselowLuten tape. If a patient does not fit either criteria, they are considered an adult for the purposes of these protocols.
- The timing of a transport should be based on the patient’s clinical condition.
- 12-Lead EKG acquisition should not delay stabilization of the ABCs or patient transport.
- Never hesitate to contact Medical Control for the patient who refuses transport.
- Ask if the patient has a Medical Emergency Health Care Information form, especially if they have special healthcare needs.
- Does the patient have a POST, Living Will, or other Advance Directive?
Air Medical Utilization

Clinical criteria indicates the patient would benefit from the clinical level of care provided by the available Air Medical Service.

When associated with clinical criteria the following conditions exist:
• Extremes in age or
• Pregnancy

And

Air medical response to the scene and transport to an appropriate medical facility will be significantly shorter than ground?

Access to time sensitive procedures will be achieved for optimum patient care?

Additional resources are needed for multi-patient incident?

Remote location of incident or patient slows ground response?

Local Air Medical Utilization Guidelines require activation?

Activate or request air medical services according to local protocol or procedure

Notify Receiving Facility

Go to Specific Protocol as Appropriate

Pearls
• Activate air medical services as soon as possible when indicated.
• Air medical services can be activated prior to arrival at the scene when the incident or mechanism indicates patient condition will meet criteria for air medical utilization.
• EMS personnel must complete a patient assessment prior to canceling an air medical response.

Performance Improvement Suggestions
• Review over/under triage of air medical requests
• Documentation of clinical criteria for air medical utilization

Protocol G-2 – 2020 Air Medical Utilization
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ALS Rendezvous

History
- “High Risk” patients include:
  - Extremes in age
  - Significant trauma
  - Significant / complex medical issues

Signs & Symptoms
- Airway compromise
- Shock
- Chest pain (suspicous of cardiac etiology)
- Combative behavior or altered level of consciousness

Differential
- None

Pearls
- DO NOT delay patient transportation on-scene; begin the transport and set up a rendezvous location while en route.
- ALS rendezvous agreements should be established and integrated with dispatch procedures.
- Consider a preemptive ALS rendezvous early in the call rather than waiting for the patient’s condition to deteriorate.

Performance Improvement Suggestions
- Correct utilization of an ALS rendezvous dependent upon the patient condition
- Patient care needs correlate to dispatch protocols (run reviews)

Protocol G-3 – 2020 ALS Rendezvous
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Use of Lights and Sirens

Universal Patient Care; Protocol G-1

R. Respond to known or suspected patient with:
- Cardiac Arrest
- Active Seizure
- Respiratory Distress
  - Hanging
  - Submersion
  - Choking
- Severe Bleeding
- Chest Pain
- Stroke
- Life Threatening Trauma

R. No
- No lights or sirens

Yes

Use of lights and sirens appropriate

Transport to Hospital or Rendezvous

E. Patient in need of immediate intervention not available by crew

Pearls
- Use of lights and sirens creates a greater risk of motor vehicle crashes to responders and public.

Performance Improvement Suggestions
- Review of patient conditions for appropriate use

Protocol G-4 – 2020 Use of Lights and Sirens

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Universal Patient Care; Protocol G-1

Chief complaint is non-significant OR chronic & unchanged?

Physical exam unchanged from baseline or isolated minor injury?

Vital signs within normal limits or unchanged from baseline?

Non-significant mechanism of injury?

Behavior and mental status unchanged from baseline?

Evidence of intoxication without significant likelihood of deterioration.

Evidence of intoxication with responsible adult present who agrees to supervise patient.

Age ≥18 years or age <18 years with responsible adult present?

All of the above are either true or not applicable. Consider non-transport

Patient is not a non-transport candidate

Go to Specific Protocol as Appropriate

Notify Receiving Destination

Consider Medical Control

Pearls
- This protocol does not apply to a patient-initiated refusal of care.
- In general, a person becomes a patient when he/she or another responsible party requests an EMS response. This request implies consent for assessment and treatment. When a person is unconscious or is otherwise incapable of providing consent, EMS may initiate an assessment if a reasonable person would ordinarily consent to assessment and treatment under similar circumstances.
- At times, EMS may be dispatched to a medical or trauma scene where multiple persons are present and its unclear for whom EMS was requested. A person who declines EMS at such a scene (e.g., “I’m okay but you should check that person over there.”) is not considered a patient as long as that person is well-appearing and appears capable of medical decision-making.
- Consider medical control prior to non-transport to help reduce the likelihood of not transporting a patient with potentially serious illness or injury.
- Non-transported minors must be released to a responsible adult.

Performance Improvement Suggestions
- Documentation of applicable non-transport criteria

Protocol G-5 – 2020 Non-Transport
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Consider Anxiolysis
- Diazepam 1-2mg IV, Max 5mg
- Lorazepam 0.5-2mg IV, Max 5mg 2-4mg IM
- Midazolam 0.5-2mg IV, Max 5mg 2-5mg IM 5-10mg IN

Consider Procedural Sedation
- Etomidate 0.1mg/kg IV
- Ketamine 1mg/kg IV 4mg/kg IM

Consider Antiemetic
- Ondansetron 4-8mg PO
- Ondansetron 4-8mg IV/IM

Consider Antiemetic
- Ondansetron 4-8mg PO
- Ondansetron 4-8mg IV/IM

Pain Management
- Ibuprofen 600mg PO
- Acetaminophen 500-1000mg PO
- Nitrous Oxide

Pain Scale
- R

Analgesia
- Morphine 2-5mg IV/IM
- Fentanyl 25-50mcg IV/IM 50-100mcg IN
- Hydromorphone 0.5-1mg IV/IM
- Ketamine 0.25mg/kg IV

Pulse Oximetry
- E
- Reassess Patient Every Fifteen (15) Minutes after Medication & Repeat as needed.

Notify Receiving Facility or Return to Previous Protocol

Pearls
- Prioritize patient care – the stabilization of ABCs is more important than pain management.
- Pain severity (on a scale of 0-10) is a vital sign to be recorded at disposition and pre- and post-medication delivery.
- Administer narcotics with caution in patients presenting with hypotension or an altered mental status.
- All patients should have drug allergies documented prior to administering pain medications.
- The administration of a narcotic medication in combination with a benzodiazepine may result in synergistic or excessive sedation and/or respiratory depression. The narcotic should be administered first and its effects assessed prior to benzodiazepine administration.
- Limit IN medications to 1mL per nostril; if more than 2mL is required, additional medications may be given IN after 10 minutes.
- If needed, Narcan (Naloxone) should be carefully titrated to reverse respiratory depression without completely reversing analgesia.
- Consider procedural sedation for short-term events that may cause extreme pain (e.g. splinting, extrication, etc.).

Performance Improvement Suggestions
- Documentation of pain severity
- Need for narcotic reversal

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Ibuprofen
10mg/kg PO max. 600mg

Performance Improvement Suggestions
• Documentation of pain severity
• Need for narcotic reversal

Pearls
• Prioritize patient care – the stabilization of ABCs is more important than pain management.
• The pediatric pain scale is a vital sign to be recorded pre- and post-medication delivery and at disposition.
• Administer narcotics with caution in patients presenting with hypotension or an altered mental status.
• All patients should have drug allergies documented prior to administering pain medications.
• The administration of a narcotic in combination with a benzodiazepine may result in synergistic or excessive sedation and/or respiratory depression. The narcotic should be administered first and its effects assessed prior to benzodiazepine administration.
• Limit IN medications to 1mL per nostril; if more than 2mL is required, additional medications may be given IN after 10 minutes.
• If needed, Narcan (Naloxone) should be carefully titrated to reverse respiratory depression without completely reversing analgesia.
• Consider procedural sedation for short-term events that may cause extreme pain (e.g. splinting, extrication, etc.).

Protocol G-7 – 2020 Pain Management, Pediatric

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**Police Custody**

**History**
- Traumatic injury
- Drug abuse
- Cardiac history
- History of asthma
- Psychiatric history

**Signs & Symptoms**
- External signs of trauma
- Palpitations
- Shortness of breath
- Wheezing
- Altered mental status
- Agitation

**Differential**
- Agitated delirium
- Substance abuse
- Traumatic injury
- Closed head injury
- Asthma exacerbation
- Cardiac dysrhythmia

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**Scene Safety!**

- **Use of Pepper Spray or Taser?**
  - Yes → **Go to Specific Protocol as Appropriate**
  - No → **Use Appropriate PPE**

**Use Appropriate PPE**

- **Tetracline Ophthalmic 0.5% Drops**
  - Yes → **Taser Barb Removal**
  - No → **Morgan Lens Irrigation**

**Taser Barb Removal**

- **Evidence of Traumatic Injury or Medical Illness?**
  - Yes → **Go to Specific Protocol as Appropriate**
  - No → **Taser**

**Taser**

- **Significant Injury or Fall after Taser use?**
  - Yes → **Go to Specific Protocol as Appropriate**
  - No → **Ischemic Chest Pain or Dysrhythmia?**
    - Yes → **Go to Specific Protocol as Appropriate**
    - No → **Agitated Delirium?**
      - Yes → **Consider**
        - **Behavioral; Protocol M-5**
      - No → **Discuss Patient Disposition with Law Enforcement**

**Respiratory Distress, Pediatric Protocol A-8**

**Respiratory Distress, Adult Protocol A-7**

**Dyspnea?**

- Yes → **Respiratory Distress, Pediatric Protocol A-8**
- No → **Consider**

**Non Transport; Protocol G-5**

**Notify Receiving Facility**

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**Pearls**
- This protocol may also be used when a patient is not in police custody or when a patient is not under arrest.
- Agitated delirium is characterized by marked restlessness, irritability and/or high fever. Patients exhibiting these signs are at higher risk for sudden death and should be transported to the hospital - avoid prone positioning.
- Patients restrained by law enforcement devices may not be transported in the ambulance without a law enforcement officer in the patient compartment who is capable of removing the devices.

**Performance Improvement Suggestions**
- Documentation of taser probe location
- Documentation of eye irrigation duration & volume of eye irritant

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**Protocol G-8 – 2020 Police Custody**

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**General**
Patient Destination

Universal Patient Care; Protocol G-1

Transport to Stroke Center

Patient Preference?

Special Patient or System Considerations?

Mass Casualty Incident?

Immediately Life-Threatening Condition?

STEMI?

Stroke?

Transport to Closest Appropriate Facility

Transport Determined by Incident Commander or Designee

Transport to Closest Appropriate Facility

Transport in Accordance to Patient Preference

Transport to Closest Appropriate Facility

Contact Medical Control when the closest appropriate facility is unclear.

Pearls
- Stroke patients: Consult with your local stroke center for specific patient criteria.
- Consult with your local stroke center to determine their stroke capabilities (e.g., IV TPA, IA TPA, mechanical thrombectomy).
- If the patient requests transport to a facility not consistent with this protocol, honor the request only after informing the patient why the EMS system recommends another facility (e.g., available medical capability or capacity, shorter transport time, "time is muscle") and after the patient verbalizes understanding (informed refusal). If the patient demonstrates impairment of judgment related to injury, shock, drug effects, or emotional instability, act in the patient's best interest and transport the patient to the most appropriate facility as determined by this protocol.
- EMS may decline transport to the patient's preferred facility when transport time or distance will adversely affect local EMS resource availability. Additional EMS system or geopolitical considerations (e.g., county boundaries) may also preclude transport to the patient's preferred facility.

Performance Improvement Suggestions
- Documentation of criteria used to determine patient destination
- Documentation of informed refusal, if applicable
- For STEMI and strokes, EMS transport time to receiving facility and door-to-reperfusion time at receiving facility

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**Refusal of Care**

**Universal Patient Care; Protocol G-1**

- **Is a POST or Advance Directive Present?**
  - POST / advance directive is valid
  - Patient’s refusal of care is consistent with POST / advance directive

- **Is Patient a Minor?**
  - Age < 18 years

- **Is Patient Unable to Comprehend Nature of Illness / Injury, Recommended Treatment and / or Risks of Refusal?**
  - Evidence / suspicion of acute psychiatric illness (e.g., hallucinations, delusions, homicidal ideation, suicidal ideation or gesture)
  - Evidence of intoxication, head injury, or change from baseline mental status
  - Evidence of hypoxemia or acute respiratory failure
  - Evidence of hypoglycemia or abnormal vital signs compromising decision-making capacity

- **Any Other Contributors to the Refusal of Care?**
  - Any other circumstance(s) or condition(s) that may impair patient’s comprehension or decision-making capacity
  - Other circumstance(s) or condition(s) that suggests the expressed refusal of care is a result of coercion

- **Honor Refusal of Care**
  - Perform physical exam and emphasize documentation to support EMS assessment of patient’s decision-making capacity and ability to comprehend
  - Explain your concerns or possible complications concerning a refusal of care and document that patient understands
  - Encourage patient to seek care with their personal physician / healthcare provider, if applicable

- **Consider**
  - Contact Medical Control for Advice / Guidance

**Pearls**

- A patient who refuses care must be able to receive information, process the received information, and demonstrate understanding of the information as well as the consequences of refusing care.
- A patient’s denial of illness, financial constraints, and/or fear of hospitalization may contribute to a refusal of care.
- Enlist family, coworkers, friends, and/or medical control to help convince patients to receive appropriate care and transport
- Voluntary consent to treatment is greatly preferred over conflict, law enforcement involvement, or physical restraint.

**Performance Improvement Suggestions**

- Documentation that patient understands risk of refusing care
- Documentation of law enforcement’s participation, if applicable

**Protocol G-10 – 2020 Refusal of Care**

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Targeted Temperature Management

History
- Non-traumatic cardiac arrest with return of spontaneous circulation
- Adult > 16 years of age
- Initial temperature > 93°F / 33.9°C

Signs & Symptoms
- Glasgow Coma Scale < 8
- No purposeful response to pain

Differential
- Continue to address specific differentials associated with the original dysrhythmia

If Shivering
- Go to Specific Protocol as Appropriate

Return of Spontaneous Circulation; Protocol C-7

Intubated?

Yes

Target temperature of 92°-94° F

Return of Spontaneous Circulation; Protocol C-7

No

Consider

Airway, Drug Assisted Intubation; Protocol A-3

Orotracheal Intubation
Nasotracheal Intubation

Yes

Targeted Temperature Management

If ROSC Is Lost, Discontinue Targeted Temperature Management

Pearls
- Overcooling is common and should be avoided.
- Avoid hyperventilation; keep the EtCO₂ at 40.
- Do not delay transport for cooling.
- External cooling measures with ice packs is the preferred method.

Performance Improvement Suggestions
- Documentation of temperature on arrival

Protocol G-11 – 2020 Targeted Temperature Management

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Pearls

- For the purposes of this protocol, a secure airway is when the patient is receiving appropriate oxygenation and ventilation.
- Do not assume hyperventilation is psychogenic – use oxygen, not a paper bag.
- If an effective airway is being maintained by BVM with continuous pulse oximetry values of ≥90, it is acceptable to continue with basic airway measures instead of using a BIAD or intubation.
- An ‘intubation attempt’ is defined as insertion of the laryngoscope blade into the mouth or insertion of the endotracheal tube through the nares.
- Paramedics should consider using a BIAD rather than intubation if a difficult airway is anticipated.
- Paramedics should consider drug-assisted intubation in patients that are awake as well as patients who, despite sedation, are persistently combative.
- Ear-to-sternal notch patient positioning will improve your laryngoscopic view; however, maintain C-spine immobilization for patients with a suspected spinal injury.
- Sellick’s maneuver, BURP maneuver (Back [posterior], Up, and to pt’s Right Pressure), and/or external laryngeal manipulation should be used to assist with difficult intubations.
- Although EtCO2 detection is the preferred method to confirm ET and BIAD placement, multiple methods must be used such as an esophageal tube detector device, auscultation of breath sounds, absence of epigastric sounds, ETT misting, chest rise, and patient response (e.g., pulse oximetry, skin color, heart rate).
- If first intubation attempt fails, make an adjustment and try again:
  - Use a different laryngoscope blade size/type or a different ET size
  - Apply external laryngeal manipulation: e.g. BURP maneuver
  - Gum Elastic Bougie
  - Change head positioning to achieve ear-to-sternal notch patient positioning (unless c-spine immobilization indicated)
- It is important to secure the ET and BIAD well; consider a C-collar to better maintain placement.
- If breath sounds are decreased on the left side after intubation, check your ET depth & consider right mainstem intubation.

Performance Improvement Suggestions

- Documentation of ventilatory rate
- Documentation of pulse oximetry

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Airway, Adult – Failed

**Pearls**
- Continuous EtCO₂ monitoring should be initiated in all patients with an ETT or BIAD.
- Notify receiving facility AS EARLY AS POSSIBLE when you encounter a difficult or failed airway.

**Performance Improvement Suggestions**
- Number of intubation attempts prior to BIAD or cricothyrotomy
- Incidence of inappropriate hyperventilation
- Cricothyrotomy success rate
- Documentation of pulse oximetry

**Protocol A-2 – 2020 Airway, Adult - Failed**
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Consider
Rapid-Sequence Intubation

*Peds < 2 years only*
Atropine
0.02mg/kg IV

Preoxygenate 100% O₂
Passive QI

Placement Verified with EtCO₂

Vascular Access; Protocol Ci-4

Induction

Etomidate
0.3mg/kg IV
Usual adult dose, 20mg

Ketamine
2mg/kg IV

Midazolam
1-5mg IV
(0.1mg/kg IV)

Paralysis

Paralytic Agent per Agency Formula

Succinylcholine
1.5 mg/kg
Do not repeat

Rocuronium
1mg/kg IV-Loading

Advanced Airway

Oropharyngeal Intubation
Nasopharyngeal Intubation

Placement Verified including EtCO₂ Using Multiple Methods

Airway, Adult; Protocol A-1
Airway, Pediatric; Protocol A-5

Consider
Sedation Only

*Peds < 2 years only*
Atropine
0.02mg/kg IV

Airway, Post-Intubation & Post-BIAD; Protocol A-4

Pearls

- Once a patient has been given a paralytic drug, YOU ARE RESPONSIBLE FOR VENTILATIONS AND ADEQUATE SEDATION!
- All equipment, including suction, must be in place and ready for use prior to administering any drugs.
- Prepare rescue airway device when you anticipate a difficult airway.
- Each patient may only receive one dose of succinylcholine. Rocuronium may be repeated.
- Although EtCO₂ detection is the preferred method to confirm ETT and BIAD placement, multiple methods must be used such as an esophageal tube detector device, auscultation of breath sounds, absence of epigastric sounds, ETT misting, chest rise, and patient response (e.g., pulse oximetry, skin color, heart rate).
- If 1st intubation attempt fails, make an adjustment and try again:
  - Use a different laryngoscope blade size/type or a different ETT size
  - Apply external laryngeal manipulation: e.g. BURP maneuver
  - Gum elastic bougie
  - Change head positioning to achieve ear-to-ternal notch patient positioning (unless C-spine immobilization indicated).
- If breath sounds are decreased on the left side after intubation, check your ETT depth & consider right mainstem intubation.

Performance Improvement Suggestions

- Number of Provider/EMS Agency attempts prior to Airway, Adult – Failed; Protocol A-2 -OR- Airway, Pediatric – Failed; Protocol A-6
- Placement verified with EtCO₂ detection & multiple methods

Protocol A-3 – 2020 Airway, Drug Assisted Intubation

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© Idaho EMS Physician Commission (EMSPC) This protocol may not be altered without written approval from the Idaho EMSPC.
Administer sedation when a patient is chemically paralyzed.

Documentation of the indication for a long-action paralytic.

An intubated patient (especially one who has been paralyzed) needs appropriate sedation.

If breath sounds are decreased on one side, recheck your ETT depth; the ETT may have migrated into a mainstem bronchus.

It is important to secure the ETT or BIAD well; consider a C-collar to better maintain placement.

Once a patient has been given a paralytic drug, performance improvement suggestions are necessary.

Continuous EtCO2 detection is the preferred method to confirm ETT and BIAD placement, multiple methods must be used such as an esophageal tube detector device, auscultation of breath sounds, absence of epigastric sounds, ETT misting, chest rise, and patient response (e.g., pulse oximetry, skin color, heart rate).

Continuous EtCO2 capnography and pulse oximetry are strongly recommended for the monitoring of all patients with a BIAD or ETT.

Initial ventilatory rates should be 10-12/minute to maintain an EtCO2 of 35-40. (Peds: 30/minute, age < 1 yr; 25/minute, 1-5 yrs; 20/minute, 6-12 yrs). Avoid hyperventilation except in cases of impending herniation - in cases of impending herniation, maintain an EtCO2 between 25-30. (Peds: 35/minute, age < 1 yr; 30/minute 1-5 yrs; 25/minute 6-12 yrs.)

An orogastric or nasogastric tube will reduce the risk of aspiration and may improve oxygenation and ventilation. Gastric tube placement should be considered in all intubated and BIAD patients, if available.

Long-acting paralytics may be needed post-intubation and post-BIAD insertion to protect the patient from self-extubation and to improve ventilation.

Chemical paralysis precludes a neurologic assessment at the receiving destination, which may adversely affect patient management, especially for patients with a head injury. Chemical paralysis will also delay the recognition of seizures. For these and other reasons, long-acting paralytics should not be used routinely.

Perform and document a neurologic exam prior to the administration of a long-action paralytic.

Once a patient has been given a paralytic drug, YOU ARE RESPONSIBLE FOR VENTILATIONS AND ADEQUATE SEDATION!

It is important to secure the ETT or BIAD well; consider a C-collar to better maintain placement.

If breath sounds are decreased on one side, recheck your ETT depth; the ETT may have migrated into a mainstem bronchus.

An intubated patient (especially one who has been paralyzed) needs appropriate sedation.

Performance Improvement Suggestions:
- Documentation of the indication for a long-acting paralytic
- Administration of sedation when a patient is chemically paralyzed
- Verification of ETT & BIAD position after patient transfers
- Incidence of inappropriate hyperventilation

Protocol A-4 – 2020 Airway, Post-Intubation & Post-BIAD
© Idaho EMS Physician Commission (EMSPC) This protocol may not be altered without written approval from the Idaho EMSPC.
Airway, Pediatric

**Universal Patient Care; Protocol G-1**

- Assess ABCs
  - respiratory rate
  - effort
  - adequacy

**Basic Airway Procedures**

- open airway
- nasal / oral airway
- BVM/O2

**Supplemental Oxygen**

**Continue BLS Airway**

**Pulse Oximetry**

**Consider**

- Foreign Body Obstruction

**Direct Laryngoscopy**

**Alert**

- Airway, Pediatric – Failed; Protocol A-6

**Airway, Post-Intubation & Post-BIAD; Protocol A-4**

- Successful
- Unsuccessful

**Notify Receiving Facility**

**Performance Improvement Suggestions**

- Documentation of pulse oximetry
- Documentation of ventilatory rate

**Pearls**

- For the purposes of this protocol, pediatric is defined as < 12 years of age or any patient who can be measured on the Brosebw-Luten tape and a secure airway is when the patient is receiving appropriate oxygenation and ventilation.
- Do not assume hyperventilation is psychogenic – use oxygen, not a paper bag.
- If an effective airway is being maintained by BVM with continuous pulse oximetry values of ≥ 90, it is acceptable to continue with basic airway measures instead of using a BIAD or intubation.
- An ‘intubation attempt’ is defined as insertion of the laryngoscope blade into the mouth or insertion of the endotracheal tube through the nares.
- Paramedics should consider using a BIAD rather than intubation if a difficult airway is anticipated.
- Paramedics should consider drug-assisted intubation in patients that are awake as well as patients who, despite sedation, are persistently combative.
- Ear-to-sternal notch patient positioning will improve your laryngoscopic view; however, maintain C-spine immobilization for patients with a suspected spinal injury.
- Sellick’s maneuver, BURP maneuver (Back [posterior], Up, and to pt’s Right Pressure), and/or external laryngeal manipulation should be used to assist with difficult intubations.
- Although EtCO₂ detection is the preferred method to confirm ETT and BIAD placement, multiple methods must be used such as an esophageal tube detector device, auscultation of breath sounds, absence of epigastric sounds, ETT misting, chest rise, and patient response (e.g., pulse oximetry, skin color, heart rate).
- If first intubation attempt fails, make an adjustment and try again:
  - Use a different laryngoscope blade size/type or a different ETT size
  - Apply external laryngeal manipulation: e.g. BURP maneuver
  - Gum elastic bougie
  - Change head positioning to achieve ear-to-sternal notch patient positioning (unless c-spine immobilization indicated)
  - It is important to secure the ETT and BIAD well; consider a C-collar to better maintain placement.
- If breath sounds are decreased on the left side after intubation, check your ETT depth & consider right main stem intubation.

**Protocol A-5 – 2020 Airway, Pediatric**

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Airway, Pediatric – Failed

### Airway, Pediatric; Protocol A-5

- **Three (3) Unsuccessful Attempts by Provider or Five (5) Unsuccessful Attempts by Agency**

  - **E Pulse Oximetry**
  - **E**
  - **R Continue BVM**
  - **R**

  - **E SPO$_2$ $\geq$ 90% with BVM Ventilations?**
    - **No**
    - **R Facial Trauma or Swelling?**
      - **Yes**
      - **P Percutaneous Needle Cricothyrotomy**
      - **P Surgical Cricothyrotomy**
      - **P**
    - **No**
      - **E SPO$_2$ < 90% or Difficulty Ventilating**
      - **P Blind Inserted Airway Device - Pediatric**

  - **P Continuous ETCO$_2$ Ventilate at 10-12/Min; Maintain ETCO$_2$ between 35-40 and SPO$_2$ $\geq$ 90%**

  - **E Airway, Post-Intubation & Post-BIAD; Protocol A-4**

---

**Pearls**
- Continuous ETCO$_2$ monitoring should be initiated in all patients with an ETT or BIAD.
- Notify receiving facility AS EARLY AS POSSIBLE when you encounter a difficult or failed airway.
- Initial ventilatory rate should be:
  - < 1 yr: 30/minute
  - 1-5 yrs: 25/minute
  - 6-12 yrs: 20/minute

**Performance Improvement Suggestions**
- Number of intubation attempts prior to BIAD or cricothyrotomy
- Cricothyrotomy success rate
- Documentation of pulse oximetry
- Incidence of inappropriate hyperventilation

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Respiratory Distress, Adult

**History**
- Asthma, emphysema, congestive heart failure, COPD/chronic bronchitis
- Home treatment (oxygen, nebulizer)
- Medications
  - Theophylline
  - Steroids
  - Inhalers
  - Toxin / smoke inhalation
  - Trauma

**Signs & Symptoms**
- Shortness of breath
- Purse lip breathing
- Decreased ability to speak
- Increased respiratory rate & effort
- Wheezing, rhonchi
- Use of accessory muscles
- Fever, cough
- Tachycardia
- Tripod position
- Sniffing position

**Differential**
- Asthma / Allergy / Anaphylaxis
- Foreign body / epiglottis
- Aspiration
- COPD (emphysema, bronchitis)
- Pleural effusion
- Pneumothorax
- Pneumonia / pulmonary embolus
- Cardiac (MI or CHF)
- Pericardial tamponade
- Hyperventilation
- Toxin / smoke inhalation

---

**Universal Patient Care; Protocol G-1**

**Airway Compromise?**
- Yes → **Airway, Adult; Protocol A-1**
- No

**Possible Allergic Reaction?**
- No

**Rales or Signs of CHF?**
- No

**If Wheezing**
- Bronchodilator
  - Beta Agonist MDI
    - Albuterol 2.5mg SVN
    - Ipratropium/Albuterol 0.5mg/2.5mg nebulized

**If No Improvement, Consider**
- Continuous Positive Airway Pressure

**If Stridor**
- Yes → **Epinephrine 1:1000 5.0mL nebulized**
- No

**R** Position Patient for Comfort

**M** Methylprednisolone 125mg IV/IM

**E** Epi Auto-injector 1 adult dose

**A** Epinephrine 1:1000 0.5mg IM
- May repeat q 3-5 minutes

**Notify Receiving Facility**

---

**Pearls**
- A silent chest in respiratory distress is a sign of pre-respiratory arrest.
- When the patient presents with stridor, anticipate the patient having a difficult airway.
- Congestive heart failure may present with wheezing.

**Performance Improvement Suggestions**
- Documentation of reassessment after nebulizer treatment
- Documentation of pulse oximetry

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Respiratory Distress, Pediatric

History
- Time of onset
- Possibility of foreign body in airway
- Past medical history
- Medications
- Fever or respiratory infection
- Ill siblings / family members
- History of trauma

Signs & Symptoms
- Wheezing or stridor
- Respiratory retractions
- Increased heart rate
- Altered level of consciousness
- Anxious appearance
- Nasal flaring
- Drooling
- Tripod or sniffing position

Differential
- Allergic reaction
- Asthma
- Foreign body airway obstruction
- Aspiration
- Infection
  - Pneumonia
  - Croup
  - Epiglottitis
- Congenital heart disease
- Inhaled toxin
- Pneumothorax

Universal Patient Care; Protocol G-1

Airway, Pediatric; Protocol A-5

If Wheezing
- Bronchodilator
  - Beta Agonist MDI
  - Albuterol 2.5mg SVN
  - Ipratropium/Albuterol 0.5mg/2.5mg nebulized

If No Improvement, Contact Medical Control for Possible Auto-Injector or IM Epinephrine

If Stridor
- Epinephrine 1:1000 2.5mL nebulized
- Methylprednisolone 2mg/kg IV/IM; - max. 125mg

Notify Receiving Facility

Pearlys
- Never force a conscious child into a position; they will protect their airway by their body position.
- Avoid unnecessary agitation in a pediatric patient in respiratory distress; agitation (i.e. IV initiation) may worsen an airway obstruction.
- Airway control is the most important component of treatment for respiratory distress.
- Transmitted upper airway sounds may mimic wheezing and rhonchi.
- Bradycardia is defined as < 80 bpm for infants up to the age of 1 year; < 60 bpm for children ages 1-8.

Performance Improvement Suggestions
- Documentation of pulse oximetry
- Documentation of post-nebulizer treatment assessment

Protocol A-8 – 2020 Respiratory Arrest, Pediatric

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Asystole & Pulseless Electrical Activity

History
- Age
- Past medical history
- Medications
- Events leading to arrest
- End-stage renal disease
- Estimated “downtime”
- Suspected hypothermia
- Suspected overdose
- DNR or POST form

Signs & Symptoms
- Pulseless
- Apneic
- EKG rhythm
- No auscultated heart tones

Differential
- Medical or trauma
- Hypoxia
- Potassium levels (hypo- / hyper-)
- Drug overdose
- Acidosis
- Hypothermia
- Device / lead error
- Death

Termination of Resuscitation
Cardiac Arrest; Protocol C-10
Termination of Resuscitation
Trauma Arrest; Protocol C-11

If Trauma Consider
Hypovolemia

Normal Saline or Lactated Ringers
1L IV bolus (20mL/kg IV bolus)

Pneumothorax
Needle-Chest Decompression

Vasopressor
Epinephrine
1mg IV/IO Repeat q 3-5 (.01 mg/Kg)

Treat Reversible Causes

Airway, Adult;
Protocol A-1
Airway, Pediatric;
Protocol A-5

ROSC AT ANY TIME
Return of Spontaneous Circulation; Protocol C-7

If Medical Consider
Overdose / Toxic Ingestion;
Protocol M-10
Hypothermia;
Protocol E-4
Dialysis / Hyperkalemia

Asystole > 20 minutes

Consider
Contact Medical Control
To Terminate Resuscitation

Pears
- Always confirm asystole in more than one lead.
- Application of a mechanical CPR device should not delay the initiation of CPR or delay chest compressions.
- Airway management should not interrupt CPR. High quality CPR and defibrillation are the priority in resuscitation.
- Successful resuscitation of asystole or PEA requires the identification and correction of a reversible cause such as:
  - Acidosis
  - Hypoxia
  - Hypovolemia
  - Tamponade
  - Hypertension
  - Hypothermia
  - Hypokalemia
  - Overdose (narcotics, tricyclic antidepressants, calcium channel blockers, beta blockers)

Performance Improvement Suggestions
- Administration of Epinephrine every 3-5 minutes
- Documentation of EKG rhythm & rhythm strip present

Protocol C-1 – 2020 Asystole & Pulseless Electrical Activity
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Bradycardia, Adult

**History**
- Past medical history
- Medications
  - Beta-blockers
  - Calcium channel blockers
  - Clonidine
  - Digoxin
  - Pacemaker
  - Insecticide exposure
  - Renal failure / dialysis

**Signs & Symptoms**
- Heart rate < 60 bpm
- Hypotension
- Acute altered mental status
- Chest pain
- Acute congestive heart failure
- Syncope
- Respiratory distress

**Differential**
- Acute myocardial infarction
- Hypoxia
- Pacemaker failure
- Hypothermia
- Sinus bradycardia
- Athleticism
- Elevated intracranial pressure (head injury, stroke)
- Spinal cord injury
- Heart block
- Overdose
- Hyperkalemia

**Universal Patient Care; Protocol G-1**
- **Cardiac Monitor**

**Protocol C-2 – 2020 Bradycardia, Adult**
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Bradycardia, Pediatric

**History**
- Past medical history
- Respiratory distress or arrest
- Suspected choking victim
- Apnea
- Possible toxic or poison exposure
- Congenital disease
- Medication (maternal or infant)

**Signs & Symptoms**
- Decreased heart rate
- Delayed capillary refill / cyanosis
- Mottled, cool skin
- Hypotension
- Altered level of consciousness

**Differential**
- Respiratory failure:
  - Foreign body airway obstruction
  - Secretions
  - Infection (croup, epiglottitis)
- Hypovolemia (dehydration)
- Congenital heart disease
- Trauma
- Tension pneumothorax
- Hypothermia
- Toxin or medication reaction

**Universal Patient Care; Protocol G-1**
- Supplemental Oxygen
- Basic Airway Procedures with Ventilations
- Consider

**Airway, Pediatric; Protocol A-5**
- Overdose / Toxic Ingestion; Protocol M-10

**Cardio-Pulmonary Compromise**
- Decreased Heart Rate Causing:
  - poor perfusion
  - decreased blood pressure
  - respiratory insufficiency
  - altered mental status

**Monitor Heart Rate & Reassess**
- Pulse Oximetry

**Vascular Access; Protocol Cl-4**
- Normal Saline or Lactated Ringers
  - 20mL/kg IV bolus

**Epinephrine 1:10,000**
- 0.01mg/kg IV/IO
- Repeat 3-5 min PRN

**Atropine**
- 0.02mg/kg;
  - May repeat q 3-5 min.
  - Max. 0.5mg

**Transcutaneous Pacing**

**Complete Heart Block or Sinus Node Dysfunction**

**Increased Vagal Tone or Primary AV Conduction Block**

**Notify Receiving Facility**

**Pearls**
- Bradycardia in pediatric patients is usually due to airway problems and hypoxia.
- Use the Broselow-Luten tape for drug dosages and normal range of vital signs.

**Performance Improvement Suggestions**
- Documentation of the presence / absence of overdose or toxic exposure
- Documentation of response to treatment
- Documentation of pacing energy level at capture

**Protocol C-3 – 2020 Bradycardia, Pediatric**
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Cardiogenic Pulmonary Edema

**History**
- History of congestive heart failure or pulmonary edema
- History of hypertension
- History of myocardial infarction
- Past medical history
- Medications
  - Lasix
  - Digoxin
  - Viagra, Levitra, or Cialis use

**Signs & Symptoms**
- Respiratory distress
- Bilateral rales
- Orthopnea
- Jugular vein distention
- Pink, frothy sputum
- Peripheral edema
- Diaphoresis
- Hypotension / shock
- Chest pain
- Apprehension

**Differential**
- Myocardial infarction
- Congestive heart failure
- Asthma
- Anaphylaxis
- Aspiration
- COPD
- Pleural effusion
- Pneumonia
- Pulmonary embolus
- Pericardial tamponade
- Toxic exposure
- Non-cardiogenic pulmonary edema
- Renal failure / dialysis

---

### Pearls
- Due to potential severe hypotension, avoid Nitroglycerin for any patient who has used Viagra or Levitra in the past 24 hours or Cialis in the past 36 hours.
- Even though it has historically been a mainstay of EMS treatment, Furosemide and narcotics have NOT been shown to improve the outcomes of prehospital patients with pulmonary edema and are no longer recommended for treatment.
- If a patient has taken Nitroglycerin without relief, consider the potency of the medication.
- Consider the risk of myocardial infarction in patients presenting with pulmonary edema; diabetics and geriatric patients often present with atypical pain or only have generalized complaints.
- Carefully monitor the level of consciousness, blood pressure, and respiratory status with any interventions used.
- Discontinue the use of sublingual Nitroglycerin if Nitropaste is used.
- Allow the patient to be in their position of comfort in order to maximize their breathing efforts.
- Remove Nitropaste if the patient's systolic blood pressure is < 100.
- Limit IV fluids in patients presenting with pulmonary edema.

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### Performance Improvement Suggestions
- Documentation of rate of intubation upon hospital arrival
- Documentation of blood pressure after each Nitroglycerin dose

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### Protocol C-4 – 2020 Cardiogenic Pulmonary Edema

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Chest Pain: Cardiac & STEMI

**History**
- Age
- Cardiac risk factors
- Recent physical exertion
- Palliation / provocation
- Quality (crampy, constant, sharp, dull, etc.)
- Region / radiation / referred
- Severity (1-10 pain scale)
- Time (onset, duration, repetition)

**Signs & Symptoms**
- Chest pain or discomfort
- Location (substernal, epigastric, arm, jaw, neck, shoulder)
- Pale, diaphoretic
- Shortness of breath
- Nausea / vomiting

**Differential**
- Angina versus myocardial infarction
- Pericarditis / pneumothorax
- Pulmonary embolism
- Asthma / COPD
- Aortic dissection or aneurysm
- GE reflux / hiatal hernia
- Esophageal spasm
- Chest wall injury or pain
- Pleural pain / pleurisy
- Cocaine or methamphetamine use

---

**Universal Patient Care; Protocol G-1**

1. **12-Lead EKG**
2. **Supplemental Oxygen**
   - If SpO2 <94%
3. **Aspirin**
   - 325mg PO/81mg q 4 PO chewed

**Vasodilator**

1. **Nitroglycerin 0.4mg SL**
   - if Prescribed & BP >90; May repeat twice q 5 minutes
2. **Nitroglycerin 0.4mg SL/ 1.0 Inch Paste topical**
   - maintaining BP > 90; May repeat twice q 5 minutes

**Vascular Access; Protocol Ci-4**

1. **Consider Second IV En Route**
2. **Pain Management, Adult; Protocol G-6**
3. **Notify Receiving Facility**

---

**Pearls**
- Due to potential severe hypotension, avoid Nitroglycerin for any patient with suspected inferior MI or who has used Viagra or Levitra in the past 24 hours or Cialis in the past 36 hours.
- Patients with ST-Elevation Myocardial Infarction (STEMI) should be transported to the appropriate destination based on the regional EMS STEMI Plan. Depending on local capabilities, the treatment and transport of STEMI patients may be optimized for either percutaneous coronary intervention (PCI) or thrombolytic therapy. The Plan may also incorporate air medical transport to ensure timely reperfusion.
- Diabetic, geriatric, and female patients may have atypical pain or only generalized complaints such as weakness.
- Notify the receiving facility as soon as feasible after STEMI identification.
- Use Morphine with caution. Titrate oxygen to maintain SpO2 at 94% to 99%.

**Performance Improvement Suggestions**
- Documentation of time to first 12-Lead EKG
- Accuracy of STEMI identification on 12-Lead EKG

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**Protocol C-5 – 2020 Chest Pain: Cardiac and STEMI**
Cardiac Arrest, Pediatric

History
- Past medical history
- Time of arrest
- Medications
- Possibility of foreign body in airway
- Hypothermia

Signs & Symptoms
- Unresponsive
- Apneic
- Pulseless

Differential
- Respiratory failure:
- Foreign body airway obstruction
- Secretions
- Infection (croup, epiglottitis)
- Congenital heart disease
- Non-accidental trauma
- Child abuse

Termination of Resuscitation Cardiac Arrest; Protocol C-10

Airway, Pediatric; Protocol A-5

Vascular Access; Protocol Ci-4

Shock Advised?
Ventricular Fibrillation / Tachycardia

Yes

Defibrillate: 1x @ AED
Peds Setting

Defibrillate: 1x @ 2J/Kg

CPR x 2 minutes

No

Asystole / PEA

Vascular Access; Protocol Ci-4

Epinephrine 1: 10,000
0.01mg/kg IV/IO; max 1mg
May repeat q 3-5 min.

Defibrillate: 1x @ 2J/Kg

CPR x 2 minutes

Treat Reversible Causes

Asystole in 3 Leads

Asystole > 20 minutes

Chest Compressions by EMS 20 Minutes; BVM
AED Advises No Shock

Termination of Resuscitation Cardiac Arrest; Protocol C-10

Amiodarone 5mg/kg IV/IO; max 300mg
May repeat x2

ROSC AT ANY TIME

Return of Spontaneous Circulation; Protocol C-7

CPR x 2 minutes

Defibrillate: 1x @ > 4J/Kg
max 10J/Kg or adult dose, whichever lower

Rhythm Change

Go to Specific Dysrhythmia Protocol as Appropriate

ROSC AT ANY TIME

Return of Spontaneous Circulation; Protocol C-7

Pearls
- AEDs may have a pediatric attenuating system that should be used for infants and children up to 25kg (approximately 8 years of age). If an attenuator is not available, use an AED with standard electrodes.
- For manual defibrillators, use the largest paddles or self-adhering electrodes that will fit on the chest without touching each other. When possible, leave approximately 3cm between the paddles or electrodes.
- Monophasic and biphasic waveform defibrillators should use the same energy levels noted above.
- Successful resuscitation of asystole or PEA requires the identification and correction of a reversible cause such as:
  - Acidosis
  - Hypoxia
  - Tension Pneumothorax
  - Hypovolemia
  - Tamponade
  - Hypothermia
  - Hyperkalemia
  - Overdose (narcotics, tricyclic antidepressants, calcium channel blockers, beta blockers)

Performance Improvement Suggestions
- Documentation of timeline: dispatch, patient contact, decision to transport, and termination of resuscitation (if applicable)

Protocol C-6 – 2020 Pulseless Arrest, Pediatric

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Return of Spontaneous Circulation

History
- Respiratory arrest
- Cardiac arrest

Signs & Symptoms
- Return of pulse

Differential
- Continue to address specific differentials associated with the original dysrhythmia

Termination of Resuscitation
- Trauma Arrest; Protocol C-11
- Cardiac Arrest; Protocol C-10
- V-Fib & V-Tach, Pulseless Arrest, Pediatric; Protocol C-6
- Asystole & Pulseless Electrical Activity; Protocol C-1

Airway, Adult; Protocol A-1
Airway, Pediatric; Protocol A-5

When feasible, titrate F\textsubscript{2}O\textsubscript{2} to minimum necessary to achieve SPO\textsubscript{2} \geq 94%

Consider
Cardiac Monitor

A
Titrates Ventilations to EtCO\textsubscript{2} of 35-40

R
Systolic BP < 90?

If ROSC was as a result of anti-arrhythmics, continue their use

Patient Follows Commands?

Consider
Targeted Temperature Management; Protocol G-11

Notify Receiving Facility or Return to Previous Protocol

Normal Saline/LR
fluid bolus 1L (20ml/kg)
May repeat x1

If Still Hypotensive after Fluid Bolus, Consider

Dopamine
5-20 mcg/kg/min IV

Epinephrine
2-10 mcg/min IV

Levophed
1-10 mcg/min IV

Pearls
- Hyperventilation is a significant cause of hypotension and recurrence of cardiac arrest in the post-resuscitation phase and must be avoided!
- The condition of post-resuscitation patients fluctuates rapidly and continuously; they will require close monitoring. Stabilize the patient prior to transport. Vital signs should be checked at least every five minutes.
- Common causes of post-resuscitation hypotension include hyperventilation, hypovolemia, pneumothorax, and medication reaction(s) to ALS drugs.
- Documentation of initial rhythm, witnessed arrest, bystander CPR and total down time of patient may facilitate receiving facility in making treatment decisions.

Performance Improvement Suggestions
- Documentation of vital signs every 5 minutes
- Documentation of 12-Lead EKG, if obtained
- Documentation of treatment of hypotension

Protocol C-7 – 2020 Return of Spontaneous Circulation

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Tachycardia With Pulse, Adult

History
- Stimulant use
- Medications
- Diet (caffeine, energy drinks)
- Drugs (nicotine, cocaine)
- Previous myocardial infarction / stents/coronary artery bypass grafting
- History of palpitations / heart racing / atrial fibrillation / supraventricular tachycardia / Wolff-Parkinson-White syndrome
- Pacemaker / Automatic Implantable Cardioverter Defibrillator
- Syncope / near syncope
- Cardiomyopathy / congestive heart failure

Signs & Symptoms
- Heart rate > 150/minute
- QRS duration
- Lightheadedness
- Chest pain
- Dyspnea

Differential
- Sinus tachycardia
- Ventricular tachycardia
- Supraventricular tachycardia
- Atrial fibrillation / flutter
- Wolff-Parkinson-White syndrome
- Multifocal atrial tachycardia
- Myocardial infarction
- Electrolyte imbalance
- Hypoxia / pulmonary embolism
- Hypovolemia / anemia
- Drug effect / overdose
- Thyroid storm

Pre-Arrest (no palpable BP, acutely altered mental status, ischemic chest pain, acute congestive heart failure)

Stable, Wide QRS

Consider Procedural Sedation
- Etomidate 0.1mg/kg IV
- Ketamine 1mg/kg IV
- Midazolam 1-5mg IV
  May titrate up to 10mg

Synchronized Cardioversion
May repeat PRN

Persistent Tachycardia?

No

12-Lead EKG

Notify Receiving Facility

Yes

Vagal Maneuvers

Adenosine 6mg IV
subsequent doses- 12mg IV

Diltiazem 20mg IV

Amiodarone 150mg IV
Repeat PRN if tachycardia returns

Universal Patient Care; Protocol G-1

Stable, Wide QRS

No

Stable, Narrow QRS

Pearls
- Apply an AED if the patient becomes pulseless or unconscious.
- If the patient has a history of Wolff-Parkinson-White (WPW), DO NOT administer Adenosine or a calcium channel blocker (e.g. Diltiazem) without first contacting Medical Control.
- Adenosine may not be effective in atrial fibrillation / flutter, yet it is not harmful.
- Document all rhythm changes with monitor strips and obtain monitor strips with each therapeutic intervention.
- Polymorphic ventricular tachycardia (Torsades de Pointes) may benefit from Magnesium Sulfate—contact Medical Control first.

Performance Improvement Suggestions
- Documentation of initial rhythm with a rhythm strip
- Documentation of response to treatment

Protocol C-8 – 2020 Tachycardia With Pulse, Adult
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**Tachycardia With Pulse, Pediatric**

### History
- Stimulants
- Medications
- Diet (caffeine, energy drinks)
- Drugs (nicotine, cocaine)
- History of heart disease / murmur
- Syncope / near syncope
- Fever
- Vomiting / diarrhea

### Signs and Symptoms
- Infant HR ≥220/min
- Child HR ≥180/min
- QRS duration
- Lightheadedness
- Tachypnea
- Poor perfusion

### Differential
- Sinus tachycardia
- Supraventricular tachycardia
- Atrial fib / flutter
- SVT / WPW / MAT
- Ventricular tachycardia
- Electrolyte imbalance
- Hypoxia / PE / pneumothorax
- Hypovolemia or anemia
- Drug effect / overdose
- Fever / infection / sepsis
- Anxiety / pain / emotional stress

---

**Universal Patient Care; Protocol G-1**

**Vascular Access; Protocol CI-4**

**Stable, Wide QRS**

- **Consider Procedural Sedation**
  - Etomidate 0.1mg/kg IV
  - Ketamine 1mg/kg IV
  - Midazolam 1-5mg IV (0.1mg/kg IV) May titrate up to 10mg

**Wide**

- Synchronized Cardioversion May repeat PRN

**Narrow**

- Persistent Tachycardia?

**No**

- 12-Lead EKG

**Yes**

- Vagal Maneuvers

**Stable, Narrow QRS**

- Adenosine 0.1mg/kg IV, max. 6mg May give 0.2mg/kg, max 12mg as 2nd dose

---

**Pearls**
- Apply an AED if patient becomes pulseless or unconscious.
- 12 lead ECG may assist with rhythm identification but should not delay treatment.
- If patient has history of Wolfe Parkinson White (WPW), DO NOT administer adenosine without contacting Medical Control.
- Document all rhythm changes with monitor strips and obtain monitor strips with each therapeutic intervention.
- Polymorphic ventricular tachycardia (Torsades de Pointes) may benefit from magnesium sulfate - contact Medical Control first.

**Performance Improvement Suggestions**
- Documentation of initial rhythm with a rhythm strip
- Documentation of response to treatment

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Performance Improvement Suggestions
• If resuscitation efforts are terminated, documentation of all required criteria
• Documentation of the timeline: dispatch, patient contact, and decision to terminate resuscitation
• Documentation of asystole confirmed in multiple leads
• Documentation of the application of an AED

Pearls
• During treatment of traumatic arrest patients, neither rescuers nor bystanders should be at risk.
• The decision to transport is influenced by the mechanism of injury, proximity to the hospital, and the patient’s age.
• Manual chest compressions in a moving ambulance are generally ineffective and potentially hazardous to the rescuer(s).
• Special circumstances (i.e. family needs, victim location, maternal arrest) may necessitate transport without the return of spontaneous circulation (ROSC).
Termination of Resuscitation: Trauma Arrest

History
- Events leading up to arrest
- Estimated down-time
- Past medical history
- Medications
- Existence of terminal illness
- DNR, POST, Living Will, Durable Power of Attorney for Health Care
- Bystander CPR

Signs & Symptoms
- Unresponsive
- Apneic
- Pulseless

Differential
- Medical versus trauma
- Ventricular fibrillation versus pulseless ventricular tachycardia
- Asystole
- Pulseless electrical activity (PEA)

Universal Patient Care; Protocol G-1

R Traumatic Arrest?  R

Yes

R Decapitation, Brain Matter, Dependent Lividity, Rigidity, Decomposition?

No

CPR

Yes

Automated defibrillation

No

Hyptothermia; Protocol E-4

R Hypothermia?

Paramedic Present?

No

Specific Protocol, as Appropriate

General Trauma, Adult; Protocol T-5
General Trauma, Pediatric; Protocol T-6
Asystole & Pulseless Electrical Activity; Protocol C-1
V-Fib & V-Tach, Pulseless Adult; Protocol C-12
Pulseless Arrest, Pediatric; Protocol C-6

M Contact Medical Control to Terminate Resuscitation

Notify Receiving Facility

Termination of Resuscitation: Cardiac Arrest; Protocol C-10

P Assess Rhythm

P Asystole in 3 Leads?

Yes

No

- Chest Compressions by EMS 10 Minutes; BVM
- AED Advises No Shock?
- Blind Inserted Airway Device - Adult

Consider

- General Trauma, Adult; Protocol T-5
- General Trauma, Pediatric; Protocol T-6
- ALS Rendezvous; Protocol G-3

Pears

- Survival from traumatic arrest is rare.
- During treatment of traumatic arrest patients, neither rescuers nor bystanders should be at risk.
- The decision to transport is influenced by the mechanism of injury, proximity to the hospital, and the patient's age.
- Manual chest compressions in a moving ambulance are generally ineffective and potentially hazardous to the rescuer(s).
- Special circumstances (i.e. family needs, victim location, maternal arrest) may necessitate transport without the return of spontaneous circulation (ROSC).

Performance Improvement Suggestions

- If resuscitation efforts are terminated, documentation of all required criteria
- Documentation of the timeline: dispatch, patient contact, and decision to terminate resuscitation
- Documentation of asystole confirmed in multiple leads
- Documentation of the application of an AED

Protocol C-11 – 2020 Termination of Resuscitation: Trauma Arrest

Idaho EMS Physician Commission (EMSPC) This protocol may not be altered without written approval from the Idaho EMSPC.
# Ventricular Fibrillation/Tachycardia Pulseless, Adult

## History
- Past medical history
- Time of arrest
- Medications
- Possibility of foreign body in airway
- Hypothermia
- Electrocution
- Drowning
- DNR

## Signs & Symptoms
- Unresponsive
- Apneic
- Pulseless

## Differential
- Medical vs. Trauma
- Artifact or monitor failure
- Asystole

### Signs & Symptoms
- Unresponsive
- Apneic
- Pulseless

### Differential
- Medical vs. Trauma
- Artifact or monitor failure
- Asystole

### Pearls
- For manual defibrillators, use the largest paddles or self-adhering electrodes that will fit on the chest without touching each other. When possible, leave approximately 3cm between the paddles or electrodes.
- Application of a mechanical CPR device should not delay the initiation of CPR or delay chest compressions.

### Performance Improvement Suggestions
- Documentation of timeline: dispatch, patient contact, decision to transport, and termination of resuscitation (if applicable)

### Protocol C-12 – 2020 Ventricular Fibrillation/Tachycardia Pulseless, Adult

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**Termination of Resuscitation Cardiac Arrest; Protocol C-10**

1. CPR
2. Attach AED
3. Cardiac Monitor

**Shockable Rhythm?**

1. Ventricle Fibrillation/Tachycardia

   **Consider**
   - Airway, Adult; Protocol A-1
   - Vascular Access; Protocol Ci-4
   - Return of Spontaneous Circulation; Protocol C-7

   **ROSC AT ANY TIME**

   **Epinephrine 1mg IV/IO; repeat q 3-5 min.**
   - Amiodarone 300mg IV/IO; Repeat 150 mg
   - Lidocaine 1.5mg/kg IV; Repeat x1 q 5 min

   **Notify Receiving Facility**
Hypertension

History
- Documented hypertension
- Related diseases:
  - Diabetes
  - CVA
  - Renal Failure
  - Cardiac disease
  - Pacemaker
  - Insecticide exposure
  - Renal failure / dialysis

Signs & Symptoms
- Headache
- Epistaxis
- Blurred vision
- Dizziness
- Confusion
- Chest pain
- Shortness of breath
- Focal neurological deficit

Differential
- Hypertensive encephalopathy
- Primary CNS injury (Cushing’s response = bradycardia with hypertension)
- Myocardial infarction
- Aortic dissection
- Pre-eclampsia / eclampsia
- Renal failure

Pearls
- Symptomatic hypertension is typically revealed through end-organ damage to the cardiac, CNS, or renal systems (e.g. congestive heart failure, stroke, renal failure).
- Aortic dissection classically presents with the sudden onset of tearing chest pain that radiates to the back with unequal upper-extremity blood pressures.

Performance Improvement Suggestions
- Documentation of blood pressure in both arms when chest pain is present
- Documentation of pregnancy status and gestation

Protocol Ci-1 – 2020 Hypertension

© Idaho EMS Physician Commission (EMSPC) This protocol may not be altered without written approval from the Idaho EMSPC.
**History**
- Blood loss (vaginal / gastrointestinal bleeding / AAA / ectopic)
- Fluid loss (vomiting, diarrhea, fever)
- Infection
- Cardiac history (MI, CHF)
- Medications
- Allergic reaction
- Pregnancy
- History of poor oral intake
- Trauma history
- Age

**Signs and Symptoms**
- Restlessness, confusion
- Weakness, lightheadedness
- Weak, rapid pulse
- Pale, cool, clammy skin
- Delayed capillary refill
- Coffee-ground emesis
- Tarry stools
- Declining stools
- Decreased pulse pressure

**Differential**
- Shock
  - Hypovolemic
  - Cardiogenic
  - Septic
  - Neurogenic
  - Anaphylactic
- Ectopic pregnancy
- Dysrhythmias
- Pulmonary embolus
- Tension pneumothorax
- Medication effect / overdose
- Vasovagal
- Physiologic (pregnancy)

**Universal Patient Care; Protocol G-1**
- Position patient supine; Keep patient warm & dry
- Supplemental Oxygen
- Vascular Access; Protocol Ci-4
- Determine Cause
  - Normal Saline/LR fluid bolus 1L IV/IO
    May repeat x1
  - No Rales Present?
    - Normal Saline/LR fluid bolus (250-500 mL)

**Pearls**
- Consider smaller fluid bolus (250-500 mL) in the elderly, who are at increased risk of tidal overload.
- Anaphylactic shock may not always present with rash or wheezing.
- Shock is defined as decreased end-organ perfusion; Hypotension is not required for the assessment of shock.
- Trendelenberg & leg elevation are ineffective treatments for shock.
- Treat shock with SHOCK:
- If shock is from hemorrhage target MAP of 70.

**Performance Improvement Suggestions**
- Patient assessment after each fluid bolus
- Documentation of lung sounds

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Hypotension/Shock, Pediatric

**History**
- Blood loss
- Fluid loss (vomiting, diarrhea, fever)
- Infection
- Cardiac history (Congenital, CHF)
- Medications
- Allergic reaction
- History of poor oral intake
- Trauma history
- Age

**Signs and Symptoms**
- Restlessness, confusion
- Weakness, light-headedness
- Weak, rapid pulse
- Pale, cool, clammy skin
- Delayed core capillary refill
- Declining BP
- Lethargy
- Flat/depressed Fontanels
- Decreased Blood Pressure

**Differential**
- Trauma
- Infection
- Dehydration (Vomiting, Diarrhea, Fever)
- Congenital Heart Disease
- Medication or Toxin
- Allergic Reaction

---

**Pearls**
- Consider performing orthostatic vital signs on patients in non-trauma situations if suspected blood or fluid loss.
- Anaphylactic shock may not always present with rash or wheezing.
- Shock is defined as decreased end-organ perfusion; Hypotension is not required for the assessment of shock.
- Differentiate dizziness, is it vertigo or pre-syncope (light-headedness)?
- Trendelenberg & leg elevation are ineffective treatments for shock.
- Treat shock with SHOCK:

**Performace Improvement Suggestions**
- Patient assessment after each fluid bolus
- Documentation of lung sounds

---

**Protocol Ci-3 – 2020 Hypotension/Shock, Pediatric**

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Vascular Access

Universal Patient Care; Protocol G-1

Assess the need for vascular access

Life-threatening condition?

For IO Pain Consider

Lidocaine 40mg IO (0.5mg/kg)

Repeat Lidocaine 20mg IO (0.25mg/kg)

Trauma with Abnormal Vital Signs or GCS?

Two Large-Bore IVs

Three (3) Unsuccessful Vascular Access Attempts by Provider?

Monitor Saline Lock

Monitor Infusion

Notify Receiving Facility

Peripheral IV

Intraosseous Infusion, Adult

Intraosseous Infusion, Pediatric

External Jugular IV

Lidocaine 40mg IO (0.5mg/kg)

Repeat Lidocaine 20mg IO (0.25mg/kg)

Trauma with Abnormal Vital Signs or GCS?

No

Yes

Peripheral IV

Contact Medical Control Prior to Utilizing Alternate Routes for Medication Administration: (Dialysis Shunt, Central Venous Catheter, or Implanted Central IV Port)

Pears

- In the setting of cardiac arrest, any preexisting dialysis shunt or external central venous catheters may be used.
- Any prehospital fluids or medications approved for IV use may be given through an intraosseous (IO) infusion.
- All IV rates should be a KVO (minimal rate to keep the vein open) unless administering a fluid bolus.
- External jugular and IO lines may be attempted initially in life-threatening events where no obvious peripheral sites are noted.
- Any venous catheter that has already been accessed prior to EMS arrival may be used.
- Upper extremity IV sites are preferable to lower extremity sites.
- Lower extremity IV sites are discouraged in patients with vascular disease or diabetes.
- In post-mastectomy patients, avoid IV initiations, blood draws, injections, or taking a blood pressure in the arm on the affected side.

Performance Improvement Suggestions

- Number of vascular access attempts and success rate

Protocol Ci-4 – 2020 Vascular Access

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### Bites & Envenomations

#### History
- Type of bite or sting
- Bring description / photo of animal
  - The actual animal, dead or alive
- Time, location, number, and size of bite(s) / sting(s)
- Previous reaction to bite / sting
- Domestic versus wild animal
- Tetanus and rabies risk
- Immunocompromised patient

#### Signs & Symptoms
- Rash, skin break, wound
- Pain, soft tissue swelling, redness
- Bleeding
- Retained foreign body / stinger
- Evidence of infection
- Shortness of breath, wheezing
- Allergic reaction, hives, itching
- Hypotension / shock

#### Differential
- Animal bite
- Human bite
- Snake bite (poisonous)
- Spider bite (poisonous)
- Insect sting / bite
- Infection risk
- Rabies risk
- Tetanus risk
- Predetermined severe allergic reaction (bees)

---

### Pearls
- Bites from humans have higher infection rates than bites from animals due to normal bacteria in the human mouth; they will require antibiotics for infection prophylaxis. Ambulance transport is not necessarily required.
- In Idaho, bats are the most common carrier of rabies. If the patient awakes to find a bat in their bedroom, rabies prophylaxis is indicated, even in the absence of a bite. Likewise, incidental contact with a bat (e.g. children playing with a bat carcass) will also require rabies prophylaxis.
- In Idaho, the rattlesnake pit viper is the most common poisonous snake. However, exotic snakes are sometimes kept as pets.
  - Do not apply suction or electricity as first aid for snakebites.
  - Do not incise the wound.
  - The amount of envenomation is variable; it is generally worse with larger snakes and bites in early spring.
  - If the patient experiences no pain or swelling, envenomation is unlikely.
- In the absence of systemic symptoms, spider bites do not warrant emergency transportation. Note that some spider bites may delay presentation of systemic symptoms. Black widow bites tend to cause minimal pain but, over a few hours, can cause muscular pain and/or severe abdominal pain.

### Performance Improvement Suggestions
- Documentation of previous allergic reaction(s) to bites or stings
- Documentation of contact with animal control entities

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### Protocol E-1 – 2020 Bites & Envenomations
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History
- An unexplained multi-casualty incident (MCI)
- Symptoms of nerve agent toxicity or organophosphate poisoning

Mild Signs & Symptoms
- Blurred vision, miosis (pinpoint pupils)
- Excessive, unexplained teary eyes
- Excessive, unexplained rhinitis
- Increased salivation / sudden drooling
- Chest tightness or dyspnea
- Tremors / muscular twitching throughout the body
- Nausea / vomiting
- Unexplained wheezing, coughing, or increased airway secretions
- Acute onset of stomach cramps
- Tachycardia or bradycardia

Severe Signs & Symptoms
- Strange or confused behavior
- Severe difficulty breathing or copious amount of secretions from lungs / airway
- Severe muscular twitching and general weakness
- Involuntary urination / defecation
- Convulsions
- Unexplained unconsciousness

Scene Safety!
Consider Appropriate PPE or HazMat Decontamination

Consider Activation of Regional HazMat Team

Universal Patient Care; Protocol G-1

Assess Severity of Symptoms & Determine or Estimate Patient Age

Atropine & Pralidoxime
0-2 yrs: none
2-10 yrs: none
> 10 yrs: 1 dose of each
Max of 3 doses total

Notify Receiving Facility or Return to Previous Protocol

Pears
- Do not administer more than 3 autoinjectors per patient.
- If more than one dose of a MARK1 Kit or DuoDote are needed, give doses in rapid succession.
- At an MCI event, label the patient’s forehead to indicate if they have received a MARK 1 Kit or DuoDote by writing “Mark 1” or “DuoDote” as appropriate. Indicate the number of doses and the time(s) of administration as well. If using triage tags, document the information on the tag.
- Auto-inject the lateral side of the patient’s thigh, midway between the waist and the knee. Massage the injection site for several seconds.
- The auto-injector may inject through clothing; be careful to NOT hit buttons, zippers, etc. Make sure the patient’s pockets are empty.
- Push the needle of the used auto-injector against a hard surface to bend the needle back against the auto-injector.
- Safely store and dispose of the used auto-injector (e.g. biohazard / sharps container).
- If the patient is potentially contaminated, contact the receiving facility to prepare them for possible decontamination.
- Each Chempack Kit contains 600mg Pralidoxime (2-PAM) and 2mg Atropine.

Performance Improvement Suggestions
- Documentation of symptom severity
- Assessment of scene safety

Protocol E-2 – 2020 Chempack Protocol
© Idaho EMS Physician Commission (EMSPC) This protocol may not be altered without written approval from the Idaho EMSPC.
**Environmental Hyperthermia**

**History**
- Past medical history
- Medications
- Age
- Exposure to increased temperatures and/or humidity
- Time and length of exposure
- Extreme exertion
- Poor oral intake
- Fatigue

**Signs & Symptoms**
- Altered mental status
- Unconsciousness
- Hot and dry or sweaty skin
- Hypotension / shock
- Seizures
- Nausea / vomiting

**Differential**
- Heat cramps
- Heat exhaustion / stroke
- Agitated delirium
- Neuroleptic malignant syndrome
- Serotonin syndrome
- Thyrotoxicosis
- Delirium tremens
- Lesions / tumors of the central nervous system

**Pearls**
- Patients in extremes of age are more prone to heat-related emergencies.
- If the patient has had no environmental exposure, consider other causes such as infection (Fever / Infection Control; Protocol M-7).
- Hyponatremia can also mimic a heat emergency.
- Heat Cramps:
  - Consist of benign muscle cramping secondary to dehydration
  - Not associated with an elevated temperature
- Heat Exhaustion:
  - Consists of dehydration, salt depletion, dizziness, fever, headache, cramping, nausea, and vomiting
  - Indicative vital signs may include tachycardia, hypotension, and an elevated temperature
- Heat Stroke:
  - Consists of an altered mental status
  - Indicative vital signs may include tachycardia, hypotension, and a temperature > 104°F (39.5°C)

**Performance Improvement Suggestions**
- Documentation of effective cooling measures used, especially evaporative cooling
- Documentation of temperature trending

---

**Universal Patient Care; Protocol G-1**

- Altered Mental Status? [R]
  - Yes: Consider
    - Altered Mental Status; Protocol M-3
  - No
    - Temperature [R]
      - < 103.0°F (39.5°C)
      - Cardiac Monitor [P]
      - Vascular Access; Protocol Ci-4
        - Normal Saline or Lactated Ringers 1L IV bolus (20mL/kg IV bolus)
          - Monitor & Reassess [A]
            - Notify Receiving Facility

- > 103.0°F (39.5°C)
  - Cooling Measures [R]
    - Remove from heat source / direct sunlight
    - Remove clothing
    - Ice packs to neck, armpits, groin
    - Aggressive evaporative cooling
  - Monitor & Reassess [R]

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Performance Improvement Suggestions
- Documentation of measures taken for patient rewarming

Pearls
- NO PATIENT IS DEAD UNTIL THEY ARE WARM AND DEAD! Termination of resuscitation should not be considered if the patient's temperature is below 93°F (33.9°C).
- Cardiac irritability is increased with severe hypothermia and it may result in ventricular fibrillation. Be sure to handle these patients gently during repositioning, transfers, and intubation.
- Hypothermia may produce severe bradycardia – be sure to take at least 45 seconds to palpate for a pulse; in severe hypothermia, a patient may appear clinically dead.
- Standard ACLS protocol should be followed concurrent with re-warming efforts. Although ACLS may be less effective with patients suffering from severe hypothermia, do not delay ACLS drugs or repeat defibrillation until a certain temperature is reached.
- If available, hot packs should be placed in the armpits and groin – do not place heat packs directly against the patient’s skin.

Protocol E-4 – 2020 Hypothermia
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Performance Improvement Suggestions

- Documentation of immersion time
- Documentation of immersion mechanism

Pearls

- Have a high index of suspicion for possible spinal injuries.
- In Idaho, all natural bodies of water are considered cold water.
- Survival after 1 hour of immersion in cold water is rare; consider transitioning from rescue to recovery.
- Respiratory distress may be delayed; therefore, all drowning patients should be transported for evaluation.
- Decompression illness may require hyperbaric therapy.

Differential

- Trauma
- Intoxication
- Barotrauma
- Decompression sickness
- Post-immersion syndrome
- Hypothermia
Toxic Inhalation

History
- Intentional use of inhalants: paint, amyl nitrate, huffing
- Carbon Monoxide exposure
- Toxic exposure
- Smoke inhalation
- CS spray Asthma; COPD – chronic bronchitis, emphysema, congestive heart failure

Signs and Symptoms
- Shortness of breath, wheezing, rhonchi
- Pursed lip breathing
- Decreased ability to speak, voice changes
- Increased respiratory rate and effort
- Use of accessory muscles
- Cough
- Tachycardia
- “SLUDGE” signs
- Face, Mouth burns

Differential
- Asthma, Anaphylaxis, Aspiration
- MI, CHF, COPD, Pneumonia, PE
- Pleural effusion
- Pneumo, pericardial tamponade
- Inhaled toxin, Cyanide
- Inhaled smoke, w/ burns
- CO Exposure
- HAZMAT
- Intentional inhalation

Consider
- Altered Mental Status; Protocol M-3
- Bradycardia, Pediatric; Protocol C-3
- Respiratory Distress, Pediatric Protocol A-8
- ALS Rendezvous; Protocol G-3

Suspected Cyanide Exposure
- Pulse Oximetry

Consider activation of regional HazMat team

Scene safety, consider PPE and HazMat decontamination
- Universal Patient Care; Protocol G-1

Suspected CO Exposure

- Measure SpCO, if available RAD-57

Transport to ED. With deceased LOC and neurological Impairment, consider facility with hyperbaric chamber & follow local destination protocol.

Transport to ED with or without symptoms.

Without symptoms, no immediate treatment required. Consider source of exposure including smoking and other conditions that warrant ED evaluation and transport as needed

Administer 100% O2 & transport to ED regardless of readings. Consider facility with hyperbaric chamber & follow local destination protocol.

Dopamine if Hypotensive 5-20 mcg/kg/min

Notify Receiving Destination

Pearls
- Pulse oximetry monitors may give falsely normal readings in patients who have been exposed to CO.

Performance Improvement Suggestions
- Documentation of exposure history
- Documentation of vital signs and mental status prior to administration of medications

Protocol E-6 – 2020 Toxic Inhalation
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**Weapons of Mass Destruction: Nerve Agent**

**History**
- Exposure to chemical, biologic, radiologic, or nuclear hazard(s)
- Potential exposure to unknown substance(s) / hazard(s)

**Signs & Symptoms**
- Visual disturbances, headache
- Diaphoresis
- Seizures
- Respiratory distress / arrest
- SLUDGE:
  - Salivation
  - Lacrimation (tears)
  - Urination
  - Defecation
  - Gastrointestinal upset
  - Emesis

**Differential**
- Nerve agent exposure: Sarin, Soman, VX, etc.
- Organophosphate (pesticide) exposure
- Vesicant exposure: mustard gas, etc.
- Respiratory irritant exposure: Hydrogen Sulfide, ammonia, chlorine, etc.

**Pearls**
- Follow local HAZMAT protocols for decontamination and use of personal protective equipment.
- Identification of the causal agent by the regional HAZMAT team may be delayed; initiate treatment based upon the patient's symptoms.
- For patients with severe SLUDGE symptoms, there is no limit for Atropine dosing; Atropine should be given until salivation improves.
- Each Chempack kit contains 600mg Pralidoxime (2-PAM) and 2mg of Atropine.

**Performance Improvement Suggestions**
- Documentation of decontamination procedures
- Documentation of SLUDGE symptom severity

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**Protocol E-7 – 2020 Weapons of Mass Destruction: Nerve Agent**

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### Abdominal Pain

#### History
- Age
- Past medical history
- Past surgical history
- Medications
- Onset of pain / injury
- Palliation / provocation
- Quality (constant, sharp, dull, etc.)
- Region / radiation / referred
- Severity (pain scale)
- Time (duration, repetition)
- Fever
- Last meal eaten
- Last bowel movement / emesis
- Menstrual history (pregnancy)

#### Signs & Symptoms
- Pain (location / migration)
- Tenderness
- Nausea
- Vomiting
- Diarrhea
- Dysuria
- Constipation
- Vaginal bleeding / discharge
- Pregnancy

#### Differential
- Pneumonia or pulmonary embolus
- Liver (hepatitis, CHF)
- Peptic ulcer disease / gastritis
- Cholecystitis (gall bladder)
- Myocardial infarction
- Pancreatitis
- Kidney stones
- Abdominal aneurysm
- Appendicitis
- Bladder / prostate disorder
- Pelvic (PID, ectopic pregnancy, ovarian cyst, etc.)
- Splenomegaly
- Diverticulitis
- Bowel obstruction
- Gastroenteritis (infectious)

#### Pearls
- Abdominal pain in female patients of childbearing age should be treated as an ectopic pregnancy until proven otherwise.
- An abdominal aneurysm should be considered in patients over 50 years of age complaining of abdominal pain.
- Ondansetron (Zofran) is the primary medication for the treatment of nausea. Promethazine (Phenergan) may result in excessive sedation and may cause soft tissue necrosis when given via IV.

#### Performance Improvement Suggestions
- Documentation of vital signs and mental status prior to administration of anti-emetics

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**Protocol M-1 – 2020 Abdominal Pain**

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## Allergic Reaction

### History
- Onset and location of reaction
- Insect sting or bite
- Food allergy / exposure
- Medication allergy / exposure
- New clothing, soap, detergent, etc.
- Past history of reactions
- Past medical history
- Any medications recently taken (Benadryl, Epi-Pen, etc.)

### Signs & Symptoms
- Itching or hives
- Coughing, wheezing, or respiratory distress
- Chest or throat constriction
- Difficulty swallowing (dysphagia)
- Hypotension or shock
- Edema
- Rate of onset of symptoms
- Nausea, vomiting, GI upset

### Differential
- Urticaria (rash / hives)
- Anaphylaxis (systemic effect)
- Shock (vascular effect)
- Angioedema (drug-induced)
- Aspiration / airway obstruction
- Vasovagal event
- Asthma or COPD
- Congestive heart failure

---

### Universal Patient Care; Protocol G-1

### Performance Improvement Suggestions
- Failure to administer epinephrine
- Documentation of oropharyngeal swelling

---

### Protocols

#### 1L IV bolus
- Normal saline or Lactated Ringers
- (20mL/kg IV bolus)

#### Vasopressor
- Epinephrine 1:1000
  - 0.5mg IM
  - (2.5mL nebulized)
  - May repeat q 3-5 min.

#### If Persistent Airway Edema
- Epinephrine 1:1000
  - 0.1mg IV
  - (0.01mg/kg IV)
  - May repeat q 5-10 min.

#### If Persistent Shock
- Epinephrine 1:1000
  - 0.15mg IM
  - (0.015mg/kg IM)
  - May repeat q 3-5 min.

### Pearls
- Anaphylaxis can occur without wheezes or rash.
- The lateral aspect of the thigh is the preferred site for IM epinephrine and the auto-injector.
- IV access should not delay the administration of IM epinephrine.
- Epinephrine is the primary treatment for anaphylaxis / allergic reactions.
- Patients who receive epinephrine that are over the age of 50 or have a history of heart disease need a 12-Lead EKG and should be monitored for cardiac ischemia.

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Altered Mental Status

**History**
- Known diabetic (medical alert tag)
- Drugs or drug paraphernalia
- Evidence of drug or alcohol use or toxin ingestion
- Past medical history
- Medications
- History of trauma
- Changes in feeding / sleeping habits

**Signs & Symptoms**
- Decreased mental status or lethargy
- Change in baseline mental status
- Bizarre behavior
- Hypoglycemia (cool, diaphoretic skin)
- Hyperglycemia (warm, dry skin; fruity breath; signs of dehydration; Kussmaul respirations)
- Irritability

**Differential**
- A: allergies, alcohol, anoxia
- E: epilepsy, endocrine, environmental exposure
- I: infection
- O: overdose, opiates
- U: uremia
- T: trauma
- I: insulin-dependent diabetes mellitus
- P: psychosis, psychiatric, pulmonary
- S: sepsis, stroke, subarachnoid hemorrhage, space-occupying lesion

**Pearls**
- If unable to obtain blood glucometry, treat the altered mental status as hypoglycemia.
- Be aware that an altered mental status may present with signs of an environmental toxin or a hazardous material exposure.
- Never assume the patient is merely intoxicated; alcoholics often develop hypoglycemia and may have unrecognized injuries.
- Consider restraints if it is necessary to secure the protection of the patient and/or EMS personnel.
- Naloxone (Narcan) should be carefully titrated to reverse respiratory depression without inducing agitation or withdrawal.
- Consider the patient's core temperature; hypothermia and hyperthermia may present with an altered mental status.

**Performance Improvement Suggestions**
- Documentation of respiratory rate and response to intervention
- Documentation of blood glucose

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**Protocol M-3 – 2020 Altered Mental Status**

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Back Pain

History
- Age
- Past medical history
- Past surgical history
- Medications
- Onset of pain / injury
- Previous back injury
- Traumatic mechanism
- Location of pain
- Fever
- Improvement or worsening with activity
- History of IV drug abuse

Signs & Symptoms
- Pain (paraspinal, spinous process)
- Swelling
- Pain with range of motion
- Extremity weakness
- Extremity numbness
- Bowel / bladder dysfunction
- Shooting pain into an extremity

Differential
- Muscle spasm / strain
- Herniated disc with nerve compression
- Sciatica
- Spine fracture
- Kidney stone(s)
- Pyelonephritis
- Aneurysm
- Pneumonia
- Spinal epidural abscess
- Metastatic cancer

Pearls
- Abdominal aortic aneurysms (AAA) are a concern in patients over the age of 50.
- Kidney stones typically present with an acute onset of flank pain that radiates forward to the groin area.
- Patients with midline pain over the spinous processes should be evaluated for spinally immobilizing. (Protocol T-10)
- Any bowel or bladder incontinence is a significant finding and requires immediate medical evaluation.
- In patients with a history of IV drug abuse, a spinal epidural abscess should be considered.

Performance Improvement Suggestions
- Documentation of the response to fluid bolus/challenge (if given)
- Documentation of the consideration for spinal immobilization in a trauma setting

Protocol M-4 – 2020 Back Pain
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Performance Improvement Suggestions
• Documentation of the indication for physical or chemical restraint

Protocol M-5 – 2020 Behavioral
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## Epistaxis

### History
- Age
- Past medical history
- Medications
  - Anticoagulants
  - Aspirin
  - Clopidogrel
  - NSAIDs
- Previous episode of epistaxis
- Trauma
- Duration of bleeding
- Quantity of bleeding

### Signs & Symptoms
- Bleeding from nasal passage(s)
- Pain
- Nausea / vomiting
- Dyspnea / respiratory distress

### Differential
- Trauma
- Infection (viral upper-respiratory tract infection or sinusitis)
- Allergic rhinitis
- Lesions (polyps, ulcers, tumors)
- Hypertension

### Universal Patient Care; Protocol G-1
- Position to Protect Airway
- Compress Nostrils
- Tilt Head Forward

### Consider

### Oxymetazoline

### Tranexamic acid (TXA)
1gm topically

### Mechanical packing

### Pearls
- Instruct the patient to not swallow blood; swallowed blood may cause nausea / vomiting.
- The majority of epistaxis is due to anterior bleeding and may be controlled by compressing the nostrils.
- Bleeding may also be occurring posteriorly; evaluate for posterior bleeding by examining the posterior pharynx.
- When compressing the nostrils, maintain constant pressure for at least ten minutes. Compression will be ineffective if it is not continuous. Note that allowing the patient to blow their nose may cause bleeding to restart.
- Packing the nose with tissue paper, cotton balls, tampons, etc. is less effective than compressing the nostrils.

### Performance Improvement Suggestions
- Uninterrupted compression of nostrils
- Documentation of medication history, especially anticoagulants and/or antiplatelet agents

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**Fever / Suspected Sepsis**

### History
- Age
- Duration of fever
- Maximum temperature
- Past medical history
- Medications
- Immunocompromised (transplant, HIV, diabetes, cancer)
- Travel history
- Last acetaminophen or ibuprofen

### Signs & Symptoms
- Warm
- Flushed
- Diaphoretic
- Chills / Rigors

### Associated Symptoms
- Myalgias, cough, chest pain, headache, dysuria, abdominal pain, rash, mental status changes

### Differential
- Infections / sepsis
- Cancer / tumors / lymphomas
- Medication or drug interaction
- Connective tissue disease (arthritis, vasculitis)
- Hyperthyroidism
- Heat stroke
- Meningitis

### Consider Contact, Droplet, and Airborne Precautions

### Universal Patient Care; Protocol G-1

#### Signs of Shock?
- Yes
- No

### Hypotension/Shock, Adult; Protocol Ci-2

### Shock-Hypotension, Pediatric; Protocol Ci-3

### Consider Antipyretic

- **Ibuprofen**
  - 600mg PO (if age > 6 months, 10mg/kg PO)
- **Acetaminophen**
  - 500-1000mg PO (if age > 3 months, 15mg/kg PO)

### Temperature
- Yes
- No

### Cooling Measures
- Yes
- No / Pediatric

### Pearls
- **DO NOT** give aspirin to a child.
- Consider environmental hyperthermia if temperature is > 104-105°F.
- Utilize cooling measures:
  - passive cooling (removal of clothing)
  - active cooling (sponge patient's skin with tepid water)
  - do not use rubbing alcohol, cold water, or ice to cool

### Performance Improvement Suggestions
- Documentation of temperature
- Assessment of end-organ perfusion

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**Protocol M-7 – 2020 Fever / Infection Control**

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[Medical]
Hypoglycemia / Hyperglycemia

History
- Known diabetic, bracelet, or necklace
- Drugs, drug paraphernalia
- Report of drug use or toxic ingestion
- Insulin dependent
- Oral Hypoglycemic Agents

Signs and Symptoms
- Decrease in mental status
- Change in baseline mental status
- Bizarre behavior
- Measured blood glucose
- Dehydration

Differential
- Alcohol
- CNS (increased pressure, headache, stroke, CNS lesions, vestibular)
- Myocardial infarction
- Diabetes
- Sepsis
- Infections

Required protocol for the use of Glucagon designated as 4,OM

Pearls
- Never assume the patient is merely intoxicated.
- If the patient has an altered mental status and blood glucometry is unable to be obtained, treat the patient for hypoglycemia.
- It may take 10-15 minutes for the patient to respond to IM Glucagon. When patient becomes alert, encourage oral carbohydrate intake.

Performance Improvement Suggestions
- Documentation of pre- and post-treatment blood glucometry
- Documentation of patient response to any treatment

Protocol M-8 – 2020 Hypoglycemia / Hyperglycemia
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Hypo/Hyperglycemia; Protocol M-8

Patient is an insulin-dependent diabetic?

Patient is at a baseline with no focal neurologic signs & symptoms?

Patient’s blood glucose level is > 80?

Patient is on oral diabetic medication?

Patient can promptly obtain and eat a carbohydrate meal?

Another competent adult will remain with the patient?

No major co-morbid conditions exist (chest pain, arrhythmias, dyspnea, seizures, etc.)?

Transport Not Required

Transport Required

Notify Receiving Facility

Go to Specific Protocol as Appropriate

Contact Medical Control if Required by EMS Agency

Performance Improvement Suggestions

- Documentation of pre- and post-treatment blood glucometry
- Documentation of specific diabetic medications

Pearls

- Diabetic patients that are treated with sulfonylurea medications (Glipizide, Glyburide, etc.) may prolong hypoglycemia and usually require hospitalization.
- Some diabetic patients may develop recurrent hypoglycemia after treatment; consider remaining on scene to recheck blood glucometry prior to releasing the patient.
History
- Ingestion or suspected ingestion of a potentially toxic substance
- Quantity and route of substance ingested
- Time of ingestion
- Reason of ingestion (suicidal, criminal, accidental)
- Available medications in home
- Past medical history & medications

Signs & Symptoms
- Changes in mental status
- Hypotension or hypertension
- Decreased respiratory rate
- Tachycardia or bradycardia
- Dysrhythmias
- Seizures
- Mucosal burns
- Solvent odor

Differential
- Tricyclic antidepressants (TCAs)
- Acetaminophen or Aspirin
- Depressants
- Stimulants
- Anticholinergic agents
- Cardiac medications
- Solvents, alcohols, cleaning agents
- Insecticides or organophosphates

Pearls
- Do not rely on the patient’s history of ingestion, especially in cases of attempted suicide.
- Make sure the patient is not carrying additional medications or weapons.
- Bring medication bottles, contents, and any emesis to the Emergency Department.
- Consider toxic gas if there are multiple patients in an enclosed space. Do not enter without proper training and equipment.
- Do not induce vomiting or administer Ipecac.
- In suspected tricyclic antidepressant (TCA) overdose, consider early intubation and hyperventilation.
- Notify the receiving facility to prepare for decontamination if the patient is potentially contaminated.

Performance Improvement Suggestions
- Documentation of utilization of antidotes
- Assessment of scene safety

Protocol M-10 – 2020 Overdose / Toxic Ingestion
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# Seizure, Adult

## History
- Reported / witnessed seizure activity
- Previous history of seizures
- Medical alert tag information
- Seizure medications
- History of trauma
- History of diabetes
- History of pregnancy
- Substance abuse

## Signs & Symptoms
- Decreased mental status
- Sleepiness
- Incontinence
- Observed seizure activity
- Evidence of trauma
- Unconscious

## Differential
- Head trauma / tumor / stroke
- Metabolic, hepatic, or renal failure
- Hypoxia
- Electrolyte abnormality (Na, Ca, Mg)
- Hypoglycemia
- Substance abuse / withdrawal
- Medication non-compliance
- Infection / fever
- Eclampsia
- Dysrhythmia

### Universal Patient Care; Protocol G-1

- # Assess Patient
  - P Cardiac Monitor
  - E Blood Glucose

### Anticonvulsant
- Midazolam 1-5mg IV
- 2-5mg IM
- 5-10mg IN
- Diazepam 2-5mg IV
- Lorazepam 2-4mg IV/IM

### May Repeat Medications Once Every 5 Minutes

### Post-Ictal
- BGL < 60
- Hypo/Hyperglycemia; Protocol M-8

### Head Trauma, Adult; Protocol T-7
- Contact Medical Control for Guidance

### Evidence / Suspicion of Head Trauma?
- Yes
- No

### Still Seizing?
- Yes
- No

### Recurrent Seizure?
- Yes
- No

### Notify Receiving Facility or Return to Previous Protocol

## Pearls
- Be prepared to assist ventilations, especially if a benzodiazepine is used.
- Seizures may be secondary to head trauma. Seizures may also be the cause of a head or spine injury.
- The preferred route for Midazolam is IM or IN if IV access is not available.
- Recheck glucometry after giving Dextrose or Glucagon; in the case of hypoglycemia, recheck glucometry if seizure reoccurs.

## Performance Improvement Suggestions
- Documentation of glucometry
- Description of witnessed seizure activity

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Performance Improvement Suggestions

- Documentation of glucometry & temperature
- Description of witnessed seizure activity

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**Suspected Stroke**

### History
- Previous cerebrovascular accident or transient ischemic attack
- Previous cardiac or vascular surgery
- Associated diseases:
  - Diabetes
  - Hypertension
  - Coronary artery disease
  - Atrial fibrillation
  - Medications (anticoagulants)
  - History of trauma

### Signs & Symptoms
- Altered mental status
- Unilateral weakness / numbness
- Visual field deficit / cortical blindness
- Aphasia / dysarthria
- Vertigo / ataxia
- Vomiting / headache
- Seizures
- Hypertension / hypotension

### Differential
- Transient ischemic attack
- Seizure / Todd's paralysis
- Hypoglycemia
- Stroke:
  - Thrombotic or Embolic ~85%
  - Hemorrhagic ~15%
  - Tumor
  - Trauma
  - Migraine headache

### Pearls
- The window for tissue Plasminogen Activator (TPA) is typically 3 hours but may be extended to 4.5 hours for certain stroke patients. The window for mechanical thrombectomy is 24 hours. Consult with your local stroke center for specific patient criteria and the facility’s stroke capabilities.
- The phrase *last seen normal* is defined as the last witnessed time the patient was symptom-free. For example, a patient who wakes with stroke symptoms has a *last seen normal* time of the previous night when the patient was symptom-free, not when the patient awoke.
- Hypertension is commonly present with a stroke and is not generally treated unless severe or thrombolytic therapy is anticipated.
- Be alert for airway problems (dysphagia, vomiting, aspiration).
- Hypoglycemia can present as a localized neurologic deficit, especially in the elderly. Once hypoglycemia is corrected, be sure to return to this protocol.

### Performance Improvement Suggestions
- Documentation of Cincinnati stroke screen results and, if applicable, time *last seen normal*
- Documentation of blood glucometry

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Syncope

History
- History of cardiac problems, stroke, seizures
- Occult blood loss: gastrointestinal or ectopic
- Female patients: nausea, vomiting, diarrhea
- Any medications
- Past medical history

Signs & Symptoms
- Loss of consciousness with recovery
- Lightheadedness, dizziness
- Palpitations, slow or rapid pulse
- Pulse irregularity
- Decreased blood pressure

Pearls
- Assess for signs and symptoms of trauma if patient is associated with or had a questionable fall with syncope.
- Consider dysrhythmias, gastrointestinal bleeds, ectopic pregnancy, and seizure as possible causes of syncope.
- Although the patient may appear well at the time of EMS arrival, the patient should still be transported, even if no obvious cause of syncope is apparent.
- More than 25% of syncope in geriatric patients is cardiac dysrhythmia based.

Performance Improvement Suggestions
- Documentation of cardiac rhythm
- Consideration of cervical spine injury in case / setting of fall

Differential
- Vasovagal
- Orthostatic hypotension
- Cardiac syncope
- Micturition / defecation syncope
- Psychiatric
- Pulmonary embolism
- Hypoglycemia
- Seizure
- Shock
- Toxicologic (alcohol)
- Medication side effect: hypertension
- Ectopic pregnancy

Universal Patient Care; Protocol G-1

Consider
- BGL < 60
- Hypo/Hyperglycemia; Protocol M-8
- Orthostatic Vital Signs
- Cardiac Monitor
- 12-Lead EKG
- Blood Glucose

Go to Specific Dysrhythmia Protocol as Appropriate
- Altered Mental Status; Protocol M-3
- Hypotension/Shock, Adult; Protocol Ci-2
- Hypotension/Shock, Pediatric; Protocol Ci-3
- Chest Pain: Cardiac & STEMI; Protocol C-5

Protocol M-14 – 2020 Syncope
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## Vomiting & Diarrhea

### History
- Severity: frequency, quantity, duration
- Recent travel history
- Recent contact with ill persons
- Recent antibiotics / NSAIDs
- Previous abdominal surgery
- Alcohol abuse
- Possible pregnancy
- Abdominal pain

### Signs & Symptoms
- Distention
- Abdominal tenderness
- Bilious, bloody, or coffee ground-like emesis
- Hematochezia or melena
- Fever
- Vertigo

### Differential
- CNS (increased pressure, headache, stroke, CNS lesions, vestibular)
- Myocardial infarction
- Diabetic ketoacidosis
- Appendicitis, bowel obstruction, pyloric stenosis, gastritis / PUD, pancreatitis
- OB/GYN (pregnancy, ovarian cyst, PID)
- Infections (pyelo, colitis, pneumonia)
- Gastroenteritis (viral, bacterial, toxin)
- Renal failure

### Pearls
- Promethazine (Phenergan) may cause sedation, especially in the elderly, as well as other undesirable effects. Ondansetron (Zofran) is preferred over Promethazine.
- Consider cardiac ischemia when the patient presents with vomiting and upper abdominal pain.
- In pediatric patients, assure an appropriate weight-based volume of intravenous fluids is given.

### Performance Improvement Suggestions
- Documentation of pain severity, if present

### Protocol M-15 – 2020 Vomiting & Diarrhea

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### Dental Problems

#### History
- Age
- Past medical history
- Medications
- Onset of pain or injury
- Trauma involving the teeth
- Location of tooth
- Whole versus partial tooth injury

#### Signs & Symptoms
- Bleeding
- Pain
- Fever
- Swelling
- Missing or fractured tooth / teeth

#### Differential
- Decay
- Infection
- Fracture
- Avulsion
- Abscess
- Facial cellulitis
- Impacted teeth (wisdom teeth)
- Temporomandibular Joint Disorder (TMJ) syndrome
- Myocardial infarction

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**Pearls**
- Do not tuck an avulsed tooth into the patient’s cheek if there is a possibility of aspiration.
- Significant soft tissue swelling to the face or oral cavity may represent cellulitis or an abscess.
- On-scene and travel times should be minimized for patients with complete tooth avulsions; re-implantation is possible within four hours if the tooth is handled properly.
- Avulsed teeth may be gently rinsed if grossly contaminated, but should not be scrubbed or brushed.
- Pain associated with the teeth should be assessed for sensitivity to cold or heat and tenderness to touch or tapping.
- Occasionally, cardiac chest pain may radiate to the jaw.

**Performance Improvement Suggestions**
- Proper handling of avulsed teeth
- Documentation of pain management

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Childbirth & Labor

**History**
- Due date
- Time contractions started & interval
- Rupture of membranes
- Duration & amount of any vaginal bleeding
- Sensation of fetal activity
- Past medical & delivery history
- Medications
- Gravida / Para status
- High-risk pregnancy
- Twins, triplets, etc.
- Trauma

**Signals & Symptoms**
- Contractions / pain
- Vaginal discharge or bleeding
- Crowning or mother's urge to push
- Meconium

**Differential**
- Normal childbirth
- Abnormal presentation:
  - Buttocks
  - Foot / hand
  - Prolapsed cord
  - Placenta previa
  - Abruptio placenta

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**Pearls**
- If maternal seizures occur, refer to the Obstetrical Emergencies; Protocol OB-3.
- Some perineal bleeding is normal with any childbirth. Large quantities of blood or free bleeding are abnormal. After delivery massaging the uterus (lower abdomen) will promote uterine contraction and help to control postpartum bleeding.
- In trauma, best care of the baby is best care of the mother.

**Performance Improvement Suggestions**
- Documentation of frequency and duration of contractions, if applicable
- Documentation of the presence or absence of complicating factors
Newborn Child Care

History
- Due date and gestational age
- Multiple gestation (twins etc.)
- Meconium
- Delivery difficulties
- Congenital disease
- Maternal medications
- Maternal risk factors
- Substance abuse
- Smoking

Signs and Symptoms
- Respiratory distress
- Peripheral cyanosis or mottling (normal)
- Central cyanosis (abnormal)
- Altered level of responsiveness
- Bradycardia

Differential
- Airway failure
- Secretions
- Respiratory drive
- Hypothermia
- Maternal medication effect
- Hypovolemia
- Congenital heart disease
- Infection

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Protocol OB-2 – 2020 Newborn Child Care
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Obstetrical Emergency

History
- Past medical history
- Hypertension medications
- Prenatal care
- Prior pregnancies / births
- Gravida / para status
- Last menstrual period (LMP) and estimated due date (EDD)

Signs & Symptoms
- Vaginal bleeding
- Abdominal pain
- Seizures
- Hypertension
- Severe headache
- Visual changes
- New onset of peripheral edema

Differential
- Pre-eclampsia / eclampsia
- Placenta previa
- Placenta abruptio
- Spontaneous abortion

• Universal Patient Care; Protocol G-1
  - Left Lateral Patient Positioning
  - If patient is actively seizing or if patient has a history of seizure or seizure-like activity without suspicion of eclampsia:
    - E Blood Glucose
      - BGL > 60
        - P Magnesium Sulfate 4gm IV, over 15 min.
      - BGL < 60
        - P Magnesium Sulfate 2gm IV, over 3-5 min.
    - Persistent Seizure
      - Anticonvulsant
        - Lorazepam 2-4mg IV/IM
        - Midazolam 1-5mg IV 2-5mg IM 5-10mg IN

• Hypotension/Shock, Adult; Protocol Ci-2
  - Vaginal Bleeding or Abdominal Pain?
    - Yes
      - R Signs of Shock?
    - No
      - Blood Glucose
      - BGL > 60
        - P Magnesium Sulfate 4gm IV, over 15 min.
        - P Magnesium Sulfate 2gm IV, over 3-5 min.
        - Notify Receiving Facility

• Hypo/Hyperglycemia; Protocol M-8
  - Complaint of Labor?
    - Yes
      - Childbirth & Labor; Protocol OB-1
    - No

Pearls
- Maintain the mother in a left lateral position to increase venous return and to minimize the risk of supine hypotensive syndrome.
- With a pregnant patient, hypertension is defined as a blood pressure greater than 140 (systolic) or greater than 90 (diastolic).
- The most common complaint prior to an eclamptic seizure is a severe headache.
- If a pregnant patient > 20 weeks has no pre-existing seizure disorder and presents with a seizure, consider eclampsia – even in the absence of hypertension. Treat non-eclamptic seizures in accordance with Seizure, Adult; Protocol M-11.
- All pregnant patients involved in a motor vehicle collision should be seen immediately by a physician for evaluation and fetal monitoring.
- Magnesium Sulfate may cause hypotension and a decreased respiratory drive. Loss of deep tendon reflexes (areflexia) is usually the first sign of magnesium toxicity which may be reversed with Calcium. Contact Medical Control prior to administering Calcium.

Performance Improvement Suggestions
- Documentation of blood glucometry in seizure patients
- Documentation of last menstrual period and estimated due date

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Protocol OB-3 – 2020 Obstetrical Emergency
Burns, Thermal

History
- Type of exposure (heat, gas, exposure)
- Inhalation / airway injury
- Time of injury
- Past medical history
- Medications
- Associated injury (blunt, blast, penetrating)
- Loss of consciousness

Signs & Symptoms
- Pain, swelling
- Hypotension / shock
- Airway compromise / distress
- Singed facial or nasal hair
- Hoarseness / wheezing

Differential
- Superficial (1st degree): red, painful
- Partial thickness (2nd degree): blistering
- Full thickness (3rd degree): painless charred / leathery skin
- Thermal burns
- Chemical burns
- Electrical burns
- Radiation burns

Universal Patient Care; Protocol G-1

- Remove rings, bracelets, other constricting items
- Cool wound(s) with lactated ringers, normal saline, sterile water, or tap water
- Beware of hypothermia
  - Do not apply cold fluids to patients with burns > 10% BSA
- Cover burns with dry, sterile sheets or dressings

Determine Body Surface Area & Assess Severity

STOP THE BURNING PROCESS

Hypotension / Signs of Shock?
- Yes
  - 2nd or 3rd Degree Burns > 20% BSA?
    - Yes
      - Normal Saline/LR fluid bolus 1L (20ml/kg)
        - May repeat x1
    - No
      - Consider

- No
  - Consider

Pain Management, Adult; Protocol G-6

Pain Management, Pediatric; Protocol G-7

Notify Receiving Facility

Pearls
- Burn patients are trauma patients! Evaluate for multisystem traumas and consider transport to the locally designated trauma center.
- STOP THE BURNING PROCESS!
- Be sure to maintain a high index of suspicion for airway / inhalation injury. Isolated skin burns are not immediately lifethreatening.
- Early intubation is required when the patient experiences significant airway / inhalation injury.
- Circumferential burns to the patient’s extremities are dangerous due to the potential vascular compromise secondary to soft tissue swelling and compartment syndrome.
- Burn patients are prone to hypothermia. Never apply ice to cool burns. Avoid overcooling; if available, administer warm intravenous fluids to help maintain a normal body temperature.
- Consider the possibility of child abuse in pediatric patients.

Burn Center Criteria
- Partial thickness (second degree) burns greater than 10% of the total body surface area (BSA)
- Full thickness (third degree) burns of patients in any age group
- Any airway / inhalation injury
- Burns that involve the face, hands, feet, genitalia, perineum or major joints
- Electrical burns (including lightning injury) and chemical burns

Performance Improvement Suggestions
- Documentation of airway and inhalation exposure
- Documentation of pain assessment and management

Protocol T-1 – 2020 Burns, Thermal

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Burns, Chemical & Electrical

History
- Type of exposure (heat, gas, exposure)
- Inhalation / airway injury
- Time of injury
- Past medical history
- Medications
- Associated injury (blunt, blast, penetrating)
- Loss of consciousness

Signs & Symptoms
- Pain, swelling
- Hypotension / shock
- Airway compromise / distress
- Singed facial or nasal hair
- Hoarseness / wheezing
- Dysrhythmias
- Entry and exit wounds

Differential
- Superficial (1st degree): red, painful
- Partial thickness (2nd degree): blistering
- Full thickness (3rd degree): painless / charred / leathery skin
- Thermal burns
- Chemical burns
- Electrical burns
- Radiation burns

Scene Safety!
- Consider Appropriate PPE or HazMat Decontamination
- STOP THE BURNING PROCESS
- Consider Eye Involvement
- Tetracaine Ophthal. 1-2gtts in affected eye
- Proparacaine Ophthal. 1-2gtts in affected eye
- Morgan Lens Irrigation

Universal Patient Care; Protocol G-1
- Determine Body Surface Area & Assess Severity
- Cardiac Monitor
- Eye Irrigation
- Normal Saline/LR fluid bolus 1L (20ml/kg)
- May repeat x1

Hypotension/Shock, Adult; Protocol Ci-2
- Shock-Hypotension, Pediatric; Protocol Ci-3

Notify Receiving Facility

Pearls
- Burn patients are trauma patients! Evaluate for multisystem traumas and consider transport to the locally designated trauma center.
- STOP THE BURNING PROCESS!
- Chemical Burns:
  - If possible, identify the chemical agent.
  - Do not attempt to neutralize the chemical agent.
  - If the patient is potentially contaminated, notify receiving facility the patient may need decontamination.
- Electrical Burns:
  - Do not touch the patient until you are certain the electrical source has been disconnected.
  - Do not forget the cardiac monitor – anticipate ventricular or atrial irregularity (to include V-tach, V-fib, heart blocks, etc.)
  - Attempt to identify the nature of the electrical source (AC vs. DC), the amount of voltage, and the amperage the patient may have been exposed to during the electrical shock.

Performance Improvement Suggestions
- Identification of chemical or electrical source
- Documentation of pain assessment and management

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Crush Injury Syndrome

**History**
- Mechanism of injury
- Time of onset / duration of entrapment
- Environmental / biological hazards

**Signs & Symptoms**
- Pain
- Swelling
- Deformity
- Neurologic deficits (paralysis, parasthesia)
- Vascular deficits (pallor, pulse deficit)
- Poikilothermia

**Differential**
- Contusion(s)
- Laceration(s)
- Fracture(s) / dislocation
- Amputation / partial amputation
- Compartment syndrome
- Crush injury / crush injury syndrome

**Pearls**
- Crush injury refers to local tissue damage caused by direct injury and prolonged compression. In contrast, crush injury syndrome (CIS) refers to the systemic effects of potassium, myoglobin, and other toxins released from damaged tissue upon reperfusion.
- The likelihood of CIS increases with compression time and the patient’s muscle mass.
- Consider respiratory, hearing, and eye protection for the patient during extrication; prevent hypothermia.
- Signs of hyperkalemia include peaked T-waves, a wide QRS, absent P-waves, bradycardia, and sinusoidal shape.
- Hyperkalemia is treated with Calcium, Sodium Bicarbonate, Insulin / Dextrose, and Albuterol. Calcium and Sodium Bicarbonate should be given in separate IV lines to avoid precipitation.
- Lactated Ringers contains potassium and, therefore, should not be given to CIS patients.
- Normal Saline fluid resuscitation prior to and after extrication will help prevent renal failure in CIS patients.

**Performance Improvement Suggestions**
- Documentation of presence/absence of hyperkalemia signs on EKG
- Documentation of entrapment duration

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**Protocol T-3 – 2020 Crush Injury Syndrome**

© Idaho EMS Physician Commission (EMSPC) This protocol may not be altered without written approval from the Idaho EMSPC.
History
- Type of injury
- Mechanism: crush / penetrating / amputation
- Time of injury
- Open vs. closed fracture(s)
- Wound contamination
- Past medical history
- Medications

Signs & Symptoms
- Pain, swelling
- Deformity
- Altered sensation / motor function
- Diminished pulse / capillary refill
- Decreased peripheral extremity temperature
- Bony crepitus

Differential
- Abrasions
- Contusions
- Lacerations
- Sprains
- Dislocations
- Fractures
- Amputations
- Crush syndrome

Pearls
- With amputations, time is critical! Notify receiving facility as soon as feasible. Consider contacting Medical Control to help determine an appropriate destination.
- Knee dislocations and elbow dislocations / fractures have a high incidence of vascular compromise.
- Blood loss may be concealed or not apparent with extremity injuries.
- Lacerations should be evaluated for repair as soon as possible.
- Rapid transport is indicated for amputations and vascular compromise.

Performance Improvement Suggestions
- Documentation of distal neurovascular status
- Care of amputated appendage(s)
- Documentation of pain severity

Protocol T-4 – 2020 Extremity Trauma
© Idaho EMS Physician Commission (EMSPC) This protocol may not be altered without written approval from the Idaho EMSPC.
General Trauma, Adult

History
- Time and mechanism of injury
- Height of any fall
- Damage to structures or vehicles
- Location in structure or vehicle
- Others injured or dead-on-scene
- Vehicle speed and details of motor vehicle accident
- Restraints / protective equipment
- Helmet / pads
- Ejection from vehicle
- Weapon type
- Blast / explosion
- Past medical history
- Medications

Signs & Symptoms
- Pain
- Swelling
- Deformities
- Lesions / bleeding
- Altered mental status
- Unconsciousness or loss of consciousness
- Hypotension or shock
- Respiratory arrest
- Cardiac arrest

Differential
- Tension pneumothorax
- Flail chest syndrome
- Pericardial tamponade
- Open chest wound(s)
- Hemorthorax
- Intra-abdominal bleeding
- Pelvis / femur fracture
- Spinal fracture / spinal cord injury
- Head injury
- Extremity fracture / dislocation
- Airway obstruction
- Hypothermia
- Domestic violence / abuse

Universal Patient Care; Protocol G-1

Adult Assessment

Identify and control significant external hemorrhage

Airway, Adult; Protocol A-1

Vital Signs
Glasgow Coma Scale

Patient Destination: Trauma Triage; Protocol T-9

Monitor & Reassess

Notify Receiving Facility

Vascular Access; Protocol Ci-4

Normal Saline or Lactated Ringers
1L IV bolus
May repeat x1 for S/S hypotension or shock

Pain / discomfort

Pearls
- Geriatric patients should be examined with a high level of suspicion. The elderly have limited physiologic reserve and may decompensate with little warning.
- Examine all restraints and protective equipment for damage.
- Prolonged extrications or patients with serious trauma require early activation of air medical resources.
- Scene departure should not be delayed for procedures. If possible, procedures should be performed en route– rapid transport of the unstable trauma patient is the goal.
- Do not overlook the possibility of domestic violence or abuse.
- Bag-Valve-Mask is an acceptable method of managing the patient’s airway if pulse oximetry is maintained above 90% SPO2.

Performance Improvement Suggestions
- Documentation of air medical utilization, appropriate destination of patient, and scene times with consideration of mitigating factors

Protocol T-5 – 2020 General Trauma, Adult
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Trauma
# General Trauma, Pediatric

## History
- Time and mechanism of injury
- Height of any falls
- Damage to structures or vehicles
- Location in structure or vehicle
- Others injured or dead-on-scene
- Vehicle speed and details of motor vehicle accident
- Restraints / protective equipment
  - Car seat
  - Helmet / pads
- Ejection from vehicle
- Weapon type
- Blast / explosion
- Past medical history
- Medications

## Signs & Symptoms
- Pain
- Swelling
- Deformities
- Lesions / bleeding
- Altered metal status
- Unconsciousness or loss of consciousness
- Hypotension or shock
- Respiratory arrest
- Cardiac arrest

## Differential
- Tension pneumothorax
- Flail chest syndrome
- Pericardial tamponade
- Open chest wound(s)
- Hemothorax
- Intra-abdominal bleeding
- Pelvis / femur fracture
- Spinal fracture / spinal cord injury
- Head injury
- Extremity fracture / dislocation
- Airway obstruction
- Hypothermia

## Pearls
- Examine all restraints and protective equipment for damage.
- Prolonged extrications or patients with serious trauma require early activation of air medical resources.
- Scene departure should not be delayed for procedures. If possible, procedures should be performed en route – rapid transport of the unstable trauma patient is the goal.
- Do not overlook the possibility of child abuse.
- Bag-Valve-Mask is an acceptable method of managing the patient’s airway if pulse oximetry is maintained above 90% SPO₂.

## Performance Improvement Suggestions
- Documentation of air medical utilization, appropriate destination of patient, and scene times with consideration of mitigating factors

### Protocol T-6 – 2020 General Trauma, Pediatric

© Idaho EMS Physician Commission (EMSPC) This protocol may not be altered without written approval from the Idaho EMSPC.
Head Trauma, Adult

History
- Time of injury
- Mechanism (blunt v. penetrating)
- Loss of consciousness
- Past medical history
- Medications
- Evidence for multi-systems trauma

Signs & Symptoms
- Pain, swelling, bleeding
- Altered mental status
- Unconsciousness
- Respiratory distress / failure
- Vomiting
- Seizure activity

Differential
- Skull fracture
- Brain injury (concussion, contusion, hemorrhage, laceration)
- Epidural / subdural hematoma
- Subarachnoid hemorrhage
- Spinal injury
- Physical abuse

**Universal Patient Care; Protocol G-1**

**Isolated Head Trauma?**

**Selective C-Spine Clearance; Protocol T-10**

**Glasgow Coma Scale \ AVPU**

**Basic Airway Procedures**

**Pulse Oximetry**

**Titrate Ventilations to EtCO2 of 35-40**

**SPO2 ≥ 90%**

**Seizure Activity?**

**Seizure, Adult; Protocol M-11**

**Airway, Adult; Protocol A-1**

**Monitor & Reassess**

**Notify Receiving Facility**

**Antiemetic**

- **Ondansetron**
  - 4-8mg PO (0.1mg/kg PO)
  - (4mg PO >20kg)

- **Ondansetron**
  - 4-8mg IV/IM (0.1mg/kg IV/IM)

**Pearls**
- If Glasgow Coma Scale (GSC) is < 12, consider air or rapid transport. If GSC is ≤ 8, intubation should be anticipated.
- Avoid hyperventilation, except in cases of impending herniation (blown pupil, decorticate or decerebrate posturing, bradycardia). For impending herniation, maintain EtCO2 between 25-30. In the absence of EtCO2, hyperventilate at a rate of 25 breaths per minute.
- Increased intracranial pressure (ICP) may cause hypertension and bradycardia (Cushing's response).
- Hypotension usually indicates injury or shock unrelated to the head injury and should be treated aggressively.
- Limit intravenous fluids, unless the patient is hypotensive.
- A change in the patient's level of consciousness is the most important item to monitor and document.
- Concussions are periods of confusion associated with trauma and may resolve by the time EMS arrives. If the patient experiences any loss of consciousness or any prolonged confusion or mental status abnormality that does not return to normal within 15 minutes of injury, they should be evaluated by a physician as soon as possible.
- In areas with short transportation times, intubation is not recommended in patients who are spontaneously breathing and who have oxygen saturations greater than 90% with supplemental oxygen.

**Performance Improvement Suggestions**
- Documentation of frequency of GCS assessment
- Intubation in a short time of transportation

**Protocol T-7 – 2020 Head Trauma, Adult**

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Head Trauma, Pediatric

History
- Time of injury
- Mechanism (blunt v. penetrating)
- Loss of consciousness
- Past medical history
- Medications
- Evidence for multi-systems trauma

Signs & Symptoms
- Pain, swelling, bleeding
- Altered mental status
- Unconsciousness
- Respiratory distress / failure
- Vomiting
- Seizure activity

Differential
- Skull fracture
- Brain injury (concussion, contusion, hemorrhage, laceration)
- Epidural / subdural hematoma
- Subarachnoid hemorrhage
- Spinal injury
- Child abuse

Pearls
- If Glasgow Coma Scale (GSC) is < 12, consider air or rapid transport. If GSC is ≤ 8, intubation should be anticipated.
- Avoid hyperventilation, except in cases of impending herniation (blown pupil, decorticate or decerebrate posturing, bradycardia). For impending herniation, maintain EtCO2 between 25-30. In the absence of EtCO2, hyperventilate at a rate of: 35 breaths per minute (age < 1 year); 30 breaths per minute (age 1-5 years); 25 breaths per minute (age 5-12 years).
- Increased intracranial pressure (ICP) may cause hypertension and bradycardia (Cushing’s response).
- Hypotension usually indicates injury or shock unrelated to the head injury and should be treated aggressively.
- Limit intravenous fluids, unless the patient is hypotensive.
- A change in the patient’s level of consciousness is the most important item to monitor and document.
- Concussions are periods of confusion associated with trauma and may resolve by the time EMS arrives. If the patient experiences any loss of consciousness or any prolonged confusion or mental status abnormality that does not return to normal within 15 minutes of injury, they should be evaluated by a physician as soon as possible.
- In areas with short transportation times, intubation is not recommended in patients who are spontaneously breathing and have oxygen saturations greater than 90% with supplemental oxygen.
- Consider the possibility of child abuse in all pediatric trauma victims.

Performance Improvement Suggestions
- Documentation of frequency of GCS assessment
- Intubation in a short time of transportation

Protocol T-8 – 2020 Head Trauma, Pediatric

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**Patient Destination: Trauma Triage**

**Patient Destination; Protocol G-9**

1. **Priority 1**
   - **Airway/Breathing**
     - Actual or potential airway compromise:
       - Acute Hypoxia
       - RR < 10 or > 29 (adult)
       - Severe maxillofacial injuries
       - Intubated/Subglottic Airway/BVM
       - Suspected inhalation injury
   - **Event/Injuries/Findings**
     - Penetrating injury to head, neck, or torso
     - High voltage electrical injury
     - Bilateral femur fractures
     - Complete amputation above wrist or ankle
     - Open skull fracture
     - Child: Flail chest/Pelvic fracture/Pulseless extremity
   - **Circulation**
     - CPR by medical provider
     - Hypotension:
       - Adult: SBP < 90mmHg, HR > 130
       - Child: Age 1-9yrs: SBP ≤ 70 + (2x age in yrs)
       - Age < 1yr: SBP ≤ 70mmHg
       - Child HR: 0-12mths: > 160 or < 80bp
         - ≥ 12mths-5yrs: > 160 or < 60bp
         - 6-10yrs: > 140 or < 60bp
         - ≥ 11yrs: > 120 or < 60bp
       - Any patient receiving blood/vasopressors
   - **Disability**
     - GCS ≤ 12 attributable to trauma
     - Bilateral extremity paralysis or suspected spinal cord injury

   - Transport to Trauma Center
     - (highest level of care in regional trauma system) or refer to regional/local facility bypass policy

   - **Use of Lights & Sirens; Protocol G-4**

2. **Priority 2**
   - **Event/Injuries/Findings**
     - Penetrating injury proximal to elbow/knee
     - Unilateral motor deficit
     - 2 or more broken extremities (any)
     - Application of a tourniquet
     - Open or displaced pelvic fracture
     - Open femur or humerus fracture
     - Crushed or mangled extremity
     - Flail chest and/or palpable crepitus
     - Burn involvement of face, airway, hands, feet, genitalia; OR
       - Adult: > 20% TBSA
       - Child: > 10% TBSA
     - Pregnant(≥ 20wks) with vaginal bleeding
     - Submersion with traumatic mechanism

   - **Assess Special Patient or System Considerations**
     - Older Adults (age > 65yrs)
       - Risk of injury/death increases after age 65yrs
       - SBP < 70 might represent shock after age 65 years
       - Low impact mechanisms (e.g., ground level falls) might result in severe injury
   - **Anticoagulation and Bleeding Disorders**
     - Patients with head injury are at high risk for rapid deterioration
     - Pregnancy > 20wks
     - EMS Provider Judgment

3. **Priority 3**
   - **Event/Injuries/Findings**
     - Penetrating injury distal to elbow/knee
     - Closed isolated femur fracture
     - Loss of consciousness after injury
     - GCS 13-14 after injury
     - Pregnant(≥ 20wks) without vaginal bleeding
     - Burn: Adult: ≤ 20% TBSA
     - Child: ≤ 10% TBSA
     - Amputation of one or more digits
     - Sensory deficit of an extremity
   - **Mechanisms**
     - Motor vehicle crash with Death of co-occupant
     - Broken/bent steering wheel
     - Rollover
     - Extrication time > 20 minutes
     - > 12" intrusion into occupant space
     - Non-enclosed transport accident > 20mph
     - Ejection from enclosed vehicle
     - Motor vehicle vs. pedestrian/bike
     - Fall ≥2 patient’s height
     - Significant animal-related injury

   - Transport to Closest Appropriate Facility

**Pearls**
- Priority 1 (physiologic criteria) and Priority 2 (anatomic criteria) attempt to identify the most seriously injured patients.
- Depending on the local EMS system, the closest trauma center may not be the most appropriate for the patient.
- When in doubt, transport to a trauma center. Certain patients may benefit from air transport to a more distant trauma center.
- *Provider discretion factors include but not limited to: extremes in age, hypothermia/hyperthermia, presence of anticoagulants other than aspirin

**Performance Improvement Suggestions**
- Documentation of criteria used to determine patient destination.
- Documentation of GCS and vital signs.

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Selective C-Spine Restriction

Pearls
- A significant mechanism includes high-energy events such as ejection, high falls, and abrupt deceleration crashes. In the setting of a significant mechanism or extremes of age, consider spinal injury, even in the absence of symptoms.
- Range of motion (ROM) should NOT be assessed if the patient has midline spinal tenderness.
- Allowing the appropriate patients to self extricate and position themselves on a stretcher appears to be the most effective way to protect the spine.
- C-Collars should be used with extreme caution with unstable mandible/facial fracture.
- Long spine boards and scoop stretchers are transfer/extrication devices and should be removed as soon as safely possible.
- Cervical collars can be used without the use of full body immobilization.

Performance Improvement Suggestions
- Documentation of selective criteria

Protocol T-10 – 2020 Selective C-Spine Restriction
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History
- Lived in or traveled from a country with widespread Ebola transmission within the past 21 days, or
- Had contact with an individual with confirmed Ebola within the past 21 days

Signs & Symptoms
- Fever
- Severe headache
- Weakness, fatigue
- Diarrhea, vomiting
- Abdominal pain
- Unexplained hemorrhage (bleeding or bruising)

Differential
- Other febrile illnesses

Signs & Symptoms
- Fever
- Severe headache
- Weakness, fatigue
- Diarrhea, vomiting
- Abdominal pain
- Unexplained hemorrhage (bleeding or bruising)

Differential
- Other febrile illnesses

Idaho EMS and Preparedness Ebola Guidelines
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