



Airway/Respiratory Management

BLS PROCEDURE BP-01

INDICATION	<p>A patient who is unable to maintain adequate oxygenation.</p>
PROCEDURE	<ul style="list-style-type: none"> • If respirations are adequate and $SpO_2 < 94\%$, consider administering oxygen 2 – 6 LPM by nasal cannula. <ul style="list-style-type: none"> • Titrate oxygenation of COPD patients' SpO_2 between 88% – 92%. • If respirations are inadequate <u>or</u> $SpO_2 < 94\%$, consider high-flow oxygen 15 liters per minute by non-rebreather mask. • If respirations are inadequate <u>and</u> $SpO_2 < 94\%$, consider: <ul style="list-style-type: none"> • Clearing the airway as necessary. This may include placing the patient on his/her side (left lateral position) and suctioning. • Assisting in ventilations high-flow oxygen 15 liters per minute by Bag Valve Mask and oropharyngeal/nasopharyngeal adjunct. • If available and within scope of practice, apply Waveform Capnography AP-12. After 3 ventilations, $ETCO_2$ should be >10 or comparable to pre-intubation values. If <10, check for adequate circulation, equipment, and ventilatory rate. • If unable to manage airway with BLS measures, reassess the patient's airway problems and BLS skills application. Paramedics should consider utilizing Endotracheal Intubation AP-01 on age/size appropriate patients. • Do not delay transport for advanced airway skills if an adequate BLS airway exists.
KEY CONCEPTS	<ul style="list-style-type: none"> • Some patients may require low flow or no oxygen depending on clinical state and SpO_2 levels. • Oxygen should be titrated so that $SpO_2 > 94\%$. • Effective use of the BVM often requires 2 people.



Mechanical Chest Compression Device

BLS PROCEDURE BP-02

INDICATION	<ul style="list-style-type: none"> • Non-traumatic cardiac arrest, where manual CPR is indicated. • Locally approved mechanical chest compression devices: <ul style="list-style-type: none"> • Physio-Control LUCAS. • Zoll Auto-Pulse.
CONTRAINDICATION	<ul style="list-style-type: none"> • Age Restrictions: <ul style="list-style-type: none"> • Auto-Pulse: < 18 years old. • LUCAS: < 15 years old. • Traumatic arrest. • Patients who do not fit with the device due to being too small or too large.
PROCEDURE	<ul style="list-style-type: none"> • Initiate resuscitative measures according to <u>Cardiac Arrest Management C-01</u>. <ul style="list-style-type: none"> • Manual chest compressions must be initiated immediately while the mechanical chest compression device is being placed on the patient. • Limit interruption in chest compressions to 10 seconds or less. • Remove all clothing from the front and back of the patient's torso. • Follow manufacturer recommendations for application and use of mechanical compression device.
KEY CONCEPTS	<ul style="list-style-type: none"> • Defibrillation can be performed with a mechanical chest compression device in place. There is no need to stop the device for the purpose of defibrillation. • In the event of a disruption or malfunction of the mechanical chest compression device, immediately revert to manual CPR. • Mechanical chest compression devices can and should be used during transport of the patient.



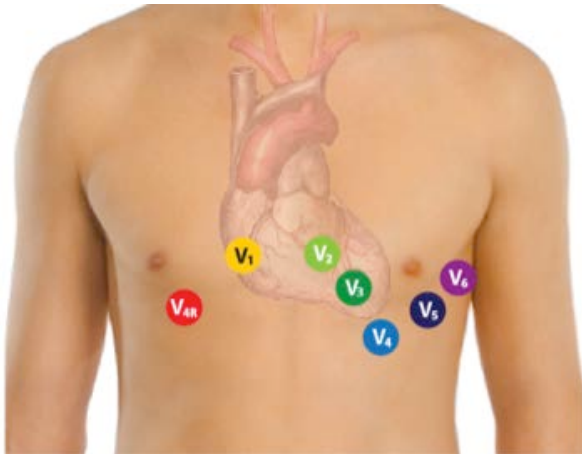
12-Lead

INDICATION

- A 12-Lead ECG should be performed when a patient presents with 1 or more of the signs or symptoms of acute coronary syndrome (ACS) including:
 - Chest pain.
 - Discomfort or tightness radiating to the jaw, shoulders or arms.
 - Nausea/vomiting.
 - Diaphoresis inconsistent with environment.
 - Dyspnea (a prominent symptom in women).
 - Syncope, near syncope or dizziness.
 - Epigastric pain.
 - General weakness.
 - Palpitations
- New onset cardiac dysrhythmias
- Adult cardiac arrest if ROSC is achieved.
- Any patient the provider feels would benefit from a 12-Lead ECG assessment.

PROCEDURE

- Attach ECG leads to the patient and perform 12-Lead.



- V₁** 4th intercostal space to the right of the sternum
- V₂** 4th intercostal space to the left of the sternum
- V₃** Directly between leads V₂ & V₄
- V₄** 5th intercostal space at the midclavicular line
- V₅** Level with V₄ at the left anterior axillary line
- V₆** Level with V₅ at the left midaxillary line
(directly under the midpoint of the armpit)
- V_{4R}** 5th intercostal right of the midclavicular line

- 12-lead ECG should remain on the patient, as the cardiac monitor will repeat serial 12-lead ECG in the background to identify ST changes.

TRANSMISSION

- ALS Providers: Immediately transmit all ECGs positive for STEMI (Acute MI) AND ECGs that are questionable or that paramedic judgment determines that there is a reasonable possibility of STEMI.
- Approved BLS Providers: Immediately transmit all ECGs to the closest most appropriate STEMI Receiving Center for physician interpretation.
- Transmission Failure: Describe 12-Lead findings to base hospital physician and transport as indicated.



Intranasal Administration

BLS PROCEDURE BP-04

INDICATION	<ul style="list-style-type: none"> The intranasal (IN) route is to be used as a route for medication administration.
CONTRAINDICATION	<ul style="list-style-type: none"> Epistaxis. Nasal congestion or discharge. Obvious septal abnormality Significant nasal trauma
PROCEDURE	<ul style="list-style-type: none"> Draw up appropriate medication into a syringe. Expel any air within the syringe. Attach mucosal atomizer device (MAD) to syringe. Compress the syringe plunger rapidly to administer half of the medication dose into the nare, directed posteriorly, toward level of ear, repeat on the other nares. <ul style="list-style-type: none"> You should ask the patient to inhale through their nose during administration.
KEY CONCEPTS	<ul style="list-style-type: none"> Use caution when administering subsequent doses of medication via the intranasal route. The intranasal administration route has longer onset times than IV/IO.



Spinal Motion Restriction

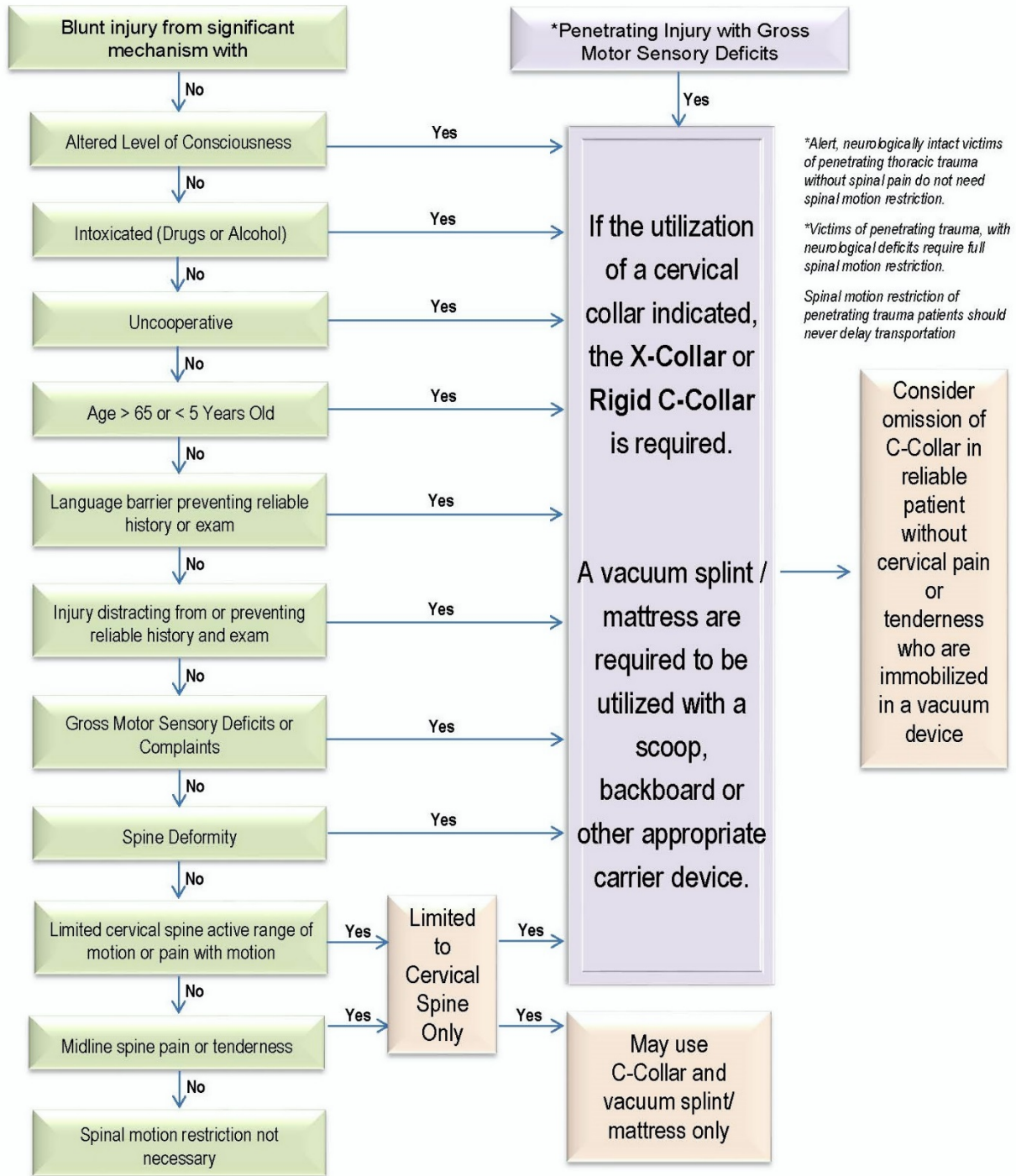
BLS PROCEDURE BP-05

INDICATIONS	<ul style="list-style-type: none"> Blunt or penetrating trauma with possibility of spinal injury. Refer to Spinal Motion Restriction Algorithm for specific guidance.
PROCEDURE	<p>SPINAL MOTION RESTRICTION</p> <ul style="list-style-type: none"> Explain the procedure to the patient; assess and record extremity neuro status & distal pulses. Place the patient in a rigid cervical collar while a second provider is maintaining in-line stabilization of the cervical spine. If indicated, place the patient on a padded backboard or equivalent. Stabilize the patient with straps and head rolls or other similar device. Once the head is secured, the second provider may release manual in-line stabilization. Assess and record extremity neuro status and distal pulses post-procedure. If worse, remove any immobilization devices and reassess. <p>PEDIATRIC SPINAL MOTION RESTRICTION</p> <ul style="list-style-type: none"> Infants restrained in a rear-facing car seat may be immobilized and extricated in the car seat. The child may remain in the car seat if the immobilization is secure and his/her condition allows (no signs of respiratory distress or shock). Children restrained in a car seat (with a high back) may be immobilized and extricated in the car seat; however, once removed from the vehicle, the child should be immobilized. Children restrained in a booster seat (without a back) need to be extricated and immobilized following standard spinal motion restriction precautions. As clinically indicated, utilize padding for the pediatric patient's head, shoulders, and/or torso to facilitate proper neutral spinal motion restriction. When no child restraint device is available or applicable, pediatric patients should be immobilized using a vacuum splint/mattress. <p>HELMET REMOVAL</p> <ul style="list-style-type: none"> High impact helmets (e.g. motorcycle, car racing): Whether the helmet is a closed or open-faced style helmet, the helmet must always be removed while providing spinal precautions. Low impact helmets with shoulder pads (e.g. football, ice hockey, etc.): In those patients wearing a well-fitted helmet which conforms closely to the patient's head, leave the helmet and shoulder pads in place after removing the face mask. If the helmet is removed, the shoulder pads must also be removed to maintain neutral spinal alignment. Low impact helmets without shoulder pads (e.g. baseball, bicycle, rollerblade, etc.): Whether the helmet is a closed or open faced style helmet, the helmet must always be removed while providing spinal precautions. Explain the procedure to the patient, assess and record extremity neuro status & distal pulses before and after helmet removal. While gently removing the helmet, maintain stabilization of the cervical spine. If indicated, place the patient in spinal motion restriction.

KEY CONCEPTS

- Backboards must be appropriately padded to prevent pain and pressure sores.
- Spinal movement and discomfort are reduced by allowing patients to self-extricate when possible and place themselves onto gurneys and spinal motion restriction devices.
- High-risk patients (e.g. elderly, osteoporotic, degenerative disorders, diabetic patients, etc.) may present with minimal or no pain following a spinal injury.
- If the patient is > 20 weeks gestation and full spinal precautions is indicated, take steps to minimize supine hypotension syndrome.

SPINAL MOTION RESTRICTION ALGORITHM





Epinephrine Auto-Injector

BLS PROCEDURE BP-06

INDICATION	Moderate to severe <u>Allergic Reaction/Anaphylaxis M-07.</u>
PROCEDURE	<ul style="list-style-type: none">• Hold the selected auto-injector with your thumb and 2 fingers (pencil writing position). Be careful not to inject yourself.• Follow selected device manufactures recommendations concerning administration.<ul style="list-style-type: none">• Hold the auto-injector with tip near the outer thigh.• Firmly push the tip against the outer thigh until it clicks. Keep the auto-injector firmly pushed against the thigh at a 90° degree angle (perpendicular) to the thigh.• Hold firmly against the thigh for approximately 10 seconds to deliver the drug.• Remove the auto-injector from the thigh. The tip will extend to cover the needle.• Massage the injection site for at least 10 seconds.• There are 2 different sizes of epinephrine auto-injectors; adult and pediatric.<ul style="list-style-type: none">▪ Adult Auto-Injector (> 30 kg): 0.3 mg (0.3 mL) IM.▪ Pediatric Auto-Injector (15 - 30 kg): 0.15 mg (0.3 mL) IM.• Always administer the entire contents of the auto-injector.• Never attempt to use an adult auto-injector on a pediatric patient (15 – 30 kg).• Record time of injection.• Reassess every 2 minutes.• Contact the base hospital physician for online consultation for repeat doses.• If unable to contact the base hospital physician, after 10 minutes, and the patient is still presenting with signs and symptoms of anaphylaxis, administer repeat dose with one or more of the following symptoms:<ul style="list-style-type: none">• Shock (systolic blood pressure < 90mmHg);• Edema to mouth and/or airway causing breathing difficulties; and• Unconsciousness due to airway compromise.
KEY CONCEPTS	<ul style="list-style-type: none">• Administration through clothing is prohibited.• Use caution when using epinephrine in patients over 70 years of age, or patients with history of angina or hypertension.



Pelvic Binder

BLS PROCEDURE BP-07

INDICATION	<ul style="list-style-type: none"> • Pelvic stabilization in the presence of a possible internal/external hemorrhage. A pelvic binder is applied to splint the pelvis and reduce bleeding from bone ends and provide some fracture stability to allow clot to form at sites of venous hemorrhage. • Locally approved pelvic binders: <ul style="list-style-type: none"> • T-POD Pelvic Stabilization Device. • SAM Pelvic Sling II.
CONTRAINDICATION	<ul style="list-style-type: none"> • Pediatric patients.
PROCEDURE	<ul style="list-style-type: none"> • Slide the belt under the supine patient and into appropriate position under the pelvis. • Slowly draw tension on the device, creating simultaneous and circumferential compression of the pelvis. • Secure the tension of the device with the Velcro-backed pull tab (T-POD) or buckle system (SAM Pelvic Sling II). • Ensure documentation of the date and time of application is written on the device.
KEY CONCEPTS	<ul style="list-style-type: none"> • One size fits most physiologies. • Pelvic binders may be very good at controlling pain from a pelvic injury. Pelvic binder should be used along with other pain control techniques to make the patient comfortable.