

PROFESSIONAL RESPONDER CHEAT SHEET



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Assessment Model

Scene Assessment

Hazards – BSI/PPE	Environment	Mechanism	# Patients	Additional Resources
<ul style="list-style-type: none"> Are there any hazards? Are you wearing Body Substance Isolation PPE? 	<ul style="list-style-type: none"> What are your surroundings? Is it safe to stay? 	<ul style="list-style-type: none"> What is going on? How did it happen? Likely Injuries? 	<ul style="list-style-type: none"> How many people require assistance? Bystanders? 	<ul style="list-style-type: none"> Are more people or equipment needed?

Primary Assessment

General Impression	What appears to be going on? What is bothering the patient the most right now?
Precautionary SMR?	Are Spinal Motion Restriction measures needed as you conduct your assessment? (based on Mechanism)

LOR	A	B	C	RBS	Critical Interventions
Level of Responsiveness	Airway	Breathing	Circulation	Rapid Body Survey	
A (fully alert) V (responds to verbal) P (responds to pain) U (unresponsive)	<ul style="list-style-type: none"> Airway clear? OPA/NPA if Unresponsive 	<ul style="list-style-type: none"> Adequate? O2 needed? Assisted Vents? 	<ul style="list-style-type: none"> Radial Pulse present? (Carotid if Unresponsive) Cap Refill & SpO2 	<ul style="list-style-type: none"> Skin condition Major Bleeding Obvious Injuries 	<ul style="list-style-type: none"> Manage life-threatening problems Treat for shock

Decision Point

Chief Complaint	What is the patient's main concern? What are your most urgent considerations?
Initial Transport Decision	Urgent/Rapid Transport Category (RTC) or Delayed (Non-Urgent) Transport? Continue/Discontinue SMR?
Pre-Hospital Report	Update receiving medical center. Call Medical Oversight as needed. Check ABCs after any movement.

Secondary Assessment

Interview

S	A	M	P	L	E
Signs & Symptoms	Allergies	Medications	Past Medical Hx	Last Oral Intake	Events Leading Up
<ul style="list-style-type: none"> Chief Complaint Pain/Discomfort 	<ul style="list-style-type: none"> Allergic to anything? Recent exposures? 	<ul style="list-style-type: none"> Take medication? Wrong dose? New med/dose? 	<ul style="list-style-type: none"> Relevant medical incidents or conditions ie...Diabetes 	What and when did you last eat/drink?	What were you doing when this started?

O	P	Q	R	S	T
Onset	Provoke/Palliate	Quality	Region/Radiate	Severity	Timing
Did this happen suddenly or gradually?	What makes the pain better or worse?	Type of pain? (ie...squeezing, dull, sharp, throbbing)	Does the pain radiate from one region to another?	Scale of 1-10	When did it start? Is it constant or does it come and go?

Vital Signs (every 5 minutes if Urgent or 15 minutes if Non-Urgent)

GCS	Blood Pressure	Respiration	Pulse	SpO2	Pupils	CapBgl
Glasgow Coma Scale	Palpation or Auscultation	Rate Rhythm Character	Rate Rhythm Character	Pulse Oximeter	Pupils equal and reactive to light? (PEARL)	Glucometer if relevant

Head to Toe Examination

Skin	Palpate	Auscultate	Distal Extremities
Color/Moisture/Temp Core Temperature if relevant	Thoroughly and methodically feel for injuries	Listen to breathing with stethoscope (6 points min)	Bilateral radial & pedal pulses Motor/Sensory deficits?

Ongoing Assessment

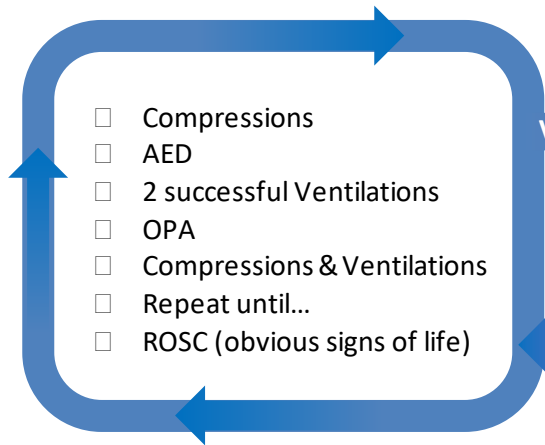
Treatment & Reassessment	Documentation
<ul style="list-style-type: none"> Provide medications and interventions as appropriate Continuously monitor and re-evaluate patient, decisions and circumstances 	<ul style="list-style-type: none"> Ensure patient care report is complete and accurate Notify receiving medical center of significant updates Concise and accurate verbal report upon hand-over



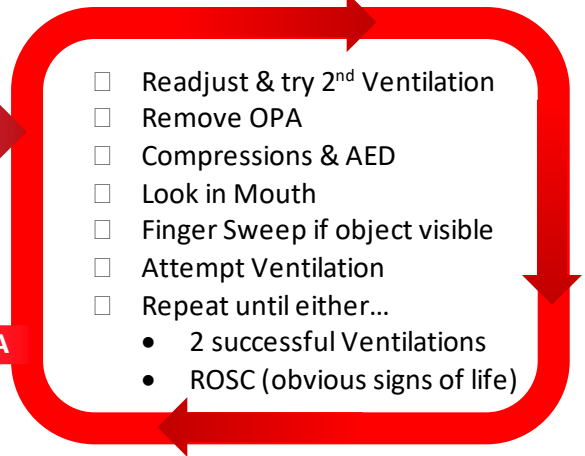
CPR Compression to Ventilation Ratios

	Adult (over 9)	Child (1-8)	Infant (1mo -1 yr)	Neonate (under 28 days)
One Rescuer	30:2	30:2	30:2	3:1
Two Rescuer		15:2	15:2	<ul style="list-style-type: none"> No AED CPR if below 60 bpm
<ul style="list-style-type: none"> If patient is Hypothermic: Check pulse 45-60 seconds before starting CPR, and one AED shock max Once compressions have been started, continue CPR until Return of Spontaneous Circulation (ROSC) 				

High Performance “Pit Crew” CPR CPR (Airway Clear)



CPR (Airway Obstructed)



Ventilation doesn't go in

2 Ventilations go in... OPA

CPR in transport - Treatable CPR

Condition	Causes	Action
Hypoxia	Asthma, COPD, CHF, Anaphylaxis or Tension Pneumothorax	Consult Medical Oversight (CliniCall)
Hypovolemia	Caused by Trauma, GI bleed, ruptured abdominal aortic arch	
Known Acidosis	Sepsis, Diabetic Ketoacidosis, Post Workout	
Hyperkalemia	Kidney failure, Pressure Sores, Crush Injury, Burns	
Hypothermia	Submersion, Cold Weather, Found on floor	
Toxins	Ingestion, Injection, Inhalation	
Tamponade (Cardiac)	Post Cardiac Surgery, Infectious, IV Drug User, Trauma	
Tension Pneumothorax	Trauma, COPD, Asthma, Marfan's	
Thrombosis (Pulmonary)	Sudden Death, IVDU, Pregnancy, Fractures, Flights, Bed Rest, Cancer	
Thrombosis (Coronary)	Sudden Death, Coronary Artery Disease	

Oxygen Cylinder Calculations

$\text{Duration of Flow} = \frac{(\text{gauge pressure} - 200 \text{ psi}) \times C}{\text{Flow Rate (lpm)}}$		
C = Cylinder Constant		
D-Cylinder: C = 0.16 L/psi (most commonly used on scene)	E-Cylinder: C = 0.28 L/psi	M-Cylinder: C = 1.56 L/psi

Oxygen Flow Rates

Device	BC EMALB	Canadian Red Cross Emergency Care Manual	O2 %
Standard (Simple) Mask	6 – 15 lpm	6-10 lpm	40-60 %
Non-Rebreather Mask	8 – 15 lpm	10+ lpm	90+ %
Bag Valve Mask	15 lpm	10+ lpm	90+ %
Nasal Canula	2 – 4 lpm	1 – 4 lpm	24-36 %
Resuscitation Mask (Pocket Mask)	N/A	6+ lpm	35-55 %
Normal Room Air			20.7 – 21 %
Exhaled Air			16%

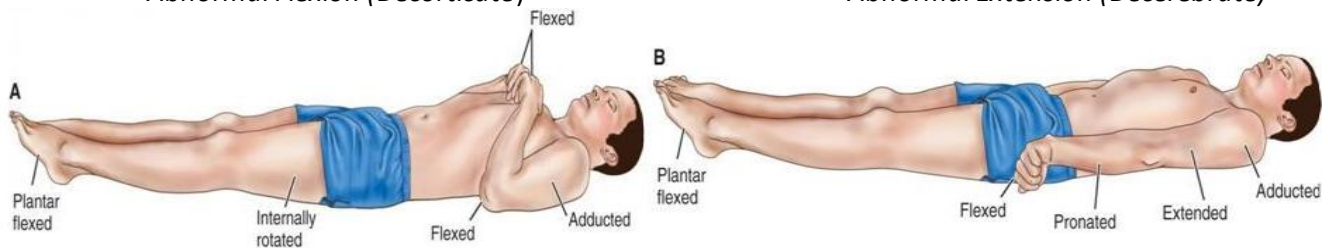
Glasgow Coma Scale

Eye Opening		Best Verbal Response		Best Motor Response	
				6	Obeys commands
		5	Oriented	5	Localizes to pain
4	Spontaneously	4	Confused	4	Withdraws to pain
3	To voice	3	Inappropriate words	3	Flex to pain (Decorticate)
2	To pain	2	Incomprehensible sounds	2	Extend to pain (Decerebrate)
1	No response	1	No response	1	No response

Eye + Verbal + Motor = GCS (3-15) GCS 13 or less is Rapid Transport

Abnormal Flexion (Decorticate)

Abnormal Extension (Decerebrate)



APGAR

	0	1	2
Activity	Limp	Some extremity flexion	Active Movement
Pulse	Absent	Below 100 bpm	100 bpm or higher
Grimace	No response	Grimace	Cough, sneeze, cry
Appearance	Body/Extremities Blue/Pale	Body Pink – Extremities Blue	Completely pink
Respiration	Absent	Slow and Irregular	Strong, crying

7-10 is "Normal ... 4-6 is "Fairly Low" ... 0-3 is "Critically Low"



Administration of Medications vs Assisting with Medications

BC EMALB Licensed Responders Administer the following medications adhering to specific Administration Protocols

- | | |
|-------------------------------|--|
| 1. Entonox | 7. Naloxone (Narcan) |
| 2. Oxygen | 8. Salbutamol (Ventolin)* |
| 3. Nitroglycerin* | 9. Epinephrine by Auto-Injector (Epi-Pen) |
| 4. Acetylsalicylic Acid (ASA) | 10. Epinephrine by Intramuscular Injection (IM)* |
| 5. Glucagon | 11. Acetaminophen |
| 6. Glucogel | 12. Ibuprofen |

*EMR ONLY

If patient requires any other medications, responder may **Assist** the patient while adhering to the 6 Rights

6-Rights of Medication

Follow the 6-Rights when “Assisting” with medications

1	Person	Does this person have a prescription
2	Medication	Have they had it before...no Contraindications...is this their Medication
3	Time	When was the last dose taken...is it needed now
4	Dose	How much should they take
5	Route	How should they take/use it
6	Documentation	Record the time and effects of each dose

RTC Critical Interventions Requiring History and/or Vital Signs

Some patients may be RTC, but need critical interventions that require “Secondary” information before transport

Intervention	Information Required
ASA for Cardiac Chest Pains	<ul style="list-style-type: none"> • Indications/Contraindications
Naloxone for Opioid Overdose	<ul style="list-style-type: none"> • Indications/Contraindications • full set of Vital Signs
Glucogel/Glucagon to correct Hypoglycemia	<ul style="list-style-type: none"> • Indications/Contraindications • full set of Vital Signs including CapBgl
Epinephrine by Auto-Injector for Anaphylaxis	<ul style="list-style-type: none"> • Indications/Contraindications • Patient Age/Estimated weight • full set of Vital Signs • Chest Auscultation
Epinephrine by weight-based intramuscular injection for Anaphylaxis <ul style="list-style-type: none"> • EMR only 	<ul style="list-style-type: none"> • Indications/Contraindications • Estimated patient weight • full set of Vital Signs • Chest Auscultation
Salbutamol for Bronchospasm <ul style="list-style-type: none"> • EMR only 	<ul style="list-style-type: none"> • Indications/Contraindications • Estimated patient weight • full set of Vital Signs • Chest Auscultation
Nitroglycerin for Cardiac Chest Pains <ul style="list-style-type: none"> • EMR only 	<ul style="list-style-type: none"> • Indications/Contraindications • full set of Vital Signs • Chest Auscultation



Common Units of Measurement

Unit	Abbreviation	Used for measuring...
Millimeters of Mercury	mmHg	Blood Pressure
Millimoles per Litre	mmol/L	Blood glucose levels
Milligrams	mg	Medications such as ASA and Nitro
Litres per minute	lpm	Oxygen flow rates
Drips per millilitre	gtts/ml	How many droplets it takes to make 1 ml (Dripset Size)
Drips per minute	gtts/minute	How many droplets go through the dripset in one minute

Assisted Ventilations

Problem	Ventilation Rate		
	Adult	Child / Infant	
Respirations Absent but Pulse Present	1 breath every 5-6 seconds	1 breath every 3-5 seconds	Timed between or with patient's own breaths OPA/NPA after first 2 successful Ventilations
Breathing too Fast • greater than 30 breaths per minute			
Breathing too Slow • less than 10 breaths per minute			
Signs of Hypoxia or Respiratory Distress			

Weight Estimation for Pediatric Patients

Estimated age-based weight for patients up to 10 years old

- $2x (\text{age in years}) + 8 = \text{est. weight in kg}$

Parent or caregiver estimations are generally more accurate than age-based calculations.

A-T-M-I-S-T A-M-B-O

ATMIST		Details (what to say during verbal handover)
A	Age	Age, Name, and Date of Birth
T	Time	Time of Onset of Symptoms/Injury
M	Mechanism	Mechanism of Injury/Medical Complaint
I	Injuries	Injuries/Exam Findings
S	Signs	Vitals, GCS
T	Treatment	Treatment(s) given
AMBO		Details (what to say during verbal handover)
A	Allergies	Provide any allergies the patient may have
M	Medication	Verbalize or provide list of medications pertinent to patient care
B	Background	May include social history, family, or notable information
O	Other Information	Any other information relevant to ongoing patient care



ASA & Nitro (Cardiac Chest Pain)

ASA		Nitro (EMR ONLY)	
Indications (must be yes <input checked="" type="checkbox"/> to all to administer)		Indications (must be yes <input checked="" type="checkbox"/> to all to administer)	
Chest Pain (suspected to be Cardiac in nature)		Chest Pain (suspected to be Cardiac in nature)	
ASA Indications Met?		Nitro Indications Met?	
Contraindications (must be no <input checked="" type="checkbox"/> to all to Administer)		Contraindications (must be no <input checked="" type="checkbox"/> to all to Administer)	
Cannot safely chew/swallow tablets		Systolic BP below 110 mmHg	
Already taken full dose for this event		HR below 50 bpm or above 150 bpm	
Allergy/Hypersensitivity to ASA/NSAIDS		Cialis within the past 48 hours	
ASA/NSAIDS previously triggered Asthma		Viagra/Levitra within the past 24 hours	
Pediatric patient		Hypersensitivity/allergy to Nitrates	
ASA Contraindications Ruled Out?		Nitro Contraindications Ruled Out?	
*Cautions	<ul style="list-style-type: none"> Recent internal bleeding Known bleeding diseases Taking Anticoagulant Agents Recent Surgery Possibility of Pregnancy 	*Cautions	<ul style="list-style-type: none"> Hypotension may occur Ensure patient will not fall
*Cautions do not always preclude administration, but extra measures/permission, may be required.		*Cautions do not always preclude administration, but extra measures/permission, may be required.	
Administer ASA? (Yes/No)		Administer Nitro? (Yes/No)	
Oversight permission if no Prescription		Oversight permission if no Prescription	
When	<ul style="list-style-type: none"> Before Transport Before Vital Signs 	When	<ul style="list-style-type: none"> After Vital Signs Gather information while transport is prepared First dose on-scene unless this will unduly delay transport
How Much	<ul style="list-style-type: none"> 162 mg chewed (two 81 mg tablets) 	How Much	<ul style="list-style-type: none"> 0.4 mg (one spray) Sublingual (under the tongue)
How Often	<ul style="list-style-type: none"> One dose only 	How Often	<ul style="list-style-type: none"> Q3-5 to a maximum of 3 doses in a 30-minute period. Irrespective of any Nitro taken by the patient prior to arrival or the presence of a Nitro Patch. If pain completely relieved more than 5 min, then returns, this starts a new 30-minute period.
Entonox (EMR ONLY)			
<ul style="list-style-type: none"> Consider Entonox for chest pain relief if Nitro is contraindicated If you have given Nitro and are now using Entonox, and hospital arrival is not imminent 20 min following your last Nitro, discontinue Entonox, resume high flow O2 and administer additional Nitro as per protocol. 			



BC EMALB Examination Guidelines compared to PAC National Occupational Skill Competency Profiles

Guideline	BC EMALB Examination Guidelines (What we follow in BC)	PAC NOCP (Red Cross Emergency Care Manual)
Minimum Systolic B.P. to give Nitro	110 mmHg and HR between 50-150	100 mmHg
Nitro Dose Frequency	Every 3 minutes (q3)	Every 5 minutes (q5)
Nitro without Prescription	Clini-Call permission	Prescription Mandatory
Realigning Gross Deformity	If circulation compromised	Only if more than 30 minutes to care
Open Chest Wound Treatment	Vented-Occlusive Dressing	Non-Occlusive Dressings Only
Glucogel for Unresponsive Patient	Contraindicated if Unresponsive	Administer if local protocols allow
Burn Cooling	15-20 minutes (on-scene/enroute)	At least 10 minutes
Hypothermic Pulse Check	Check Pulse for up to 45 seconds	Check pulse for 60 seconds
Hypothermic CPR-AED	No Analyze or Shock after 3 Shocks	Follow AED prompts
Stroke Mnemonics	F-A-S-T V-A-N	F-A-S-T (T has different connotation)

Critical Findings

Finding	Implication/Condition	Intervention
GCS 13 or less	Decreased LOC	OPA / NPA and RTC
Breathing over 30 times/minute	Tachypnea	Assist Ventilations
Breathing less than 10 times/minute	Dyspnea/Bradypnea	Assist Ventilations
Adult Blood Pressure less than 80 mmHg Systolic	Hypotension	Position Supine
Blood Glucose less than 4 mmol/L	Hypoglycemia	Glucagon / Glucose
Oxygen Saturation (SpO2) less than 95%	Hypoxia / Hypoxemia	Increase O2 intake
Neonatal pulse less than 60 bpm	Equivalent to Absent	Begin CPR
Body core temperature below 35 - 36 C	Mild Hypothermia	Rewarm slowly
Body core temperature below 30 - 34 C	Moderate Hypothermia	Rewarm slowly
Body core temperature below <30 C	Severe Hypothermia	Rewarm slowly
Body core temperature above 37 C	Hyperthermia	Cool rapidly
APGAR below 4	Unresponsive	RTC
Pulseless limb (Limb-Threatening Injury)	Limb Threatening	RTC
Adult Pulse Rate over 160 bpm	Urgent Tachycardia	RTC
Adult Pulse Rate below 60 bpm	Bradycardia	Consider underlying causes
Adult Pulse Rate slower than normal but > 60 bpm	Brachycardia	Consider underlying causes



Epinephrine Administration – Auto-Injector (Epi-Pen)

Indications	<ul style="list-style-type: none"> • Anaphylaxis • Signs of Anaphylaxis, Hx of Allergic Response, Exposure to Allergen, Unstable (DLOC, or Systolic BP < 90 mmHg or Respiratory Distress)
Contraindications	<ul style="list-style-type: none"> • There are no absolute contraindications to Epinephrine use in life-threatening situations such as anaphylaxis. • Neither an Epi-Pen nor an Epi-Pen Jr. are appropriate for patients under 14 kg
Dose	<p>>30 kg</p> <ul style="list-style-type: none"> • Adult Epi-Pen (0.3 mg) • Q5 up to 3 doses total as needed <p>14- 30 kg</p> <ul style="list-style-type: none"> • Epi-Pen Jr. (0.15 mg) • Q5 up to 3 doses total as needed
Instructions	<p>Confirmation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Ensure indications are met and contraindications are ruled out <input type="checkbox"/> Document full set of Vital Signs <input type="checkbox"/> Auscultate Chest (6 points minimum) <p>Preparation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Ensure Auto-Injector is not expired. <input type="checkbox"/> Examine window in Auto-Injector to ensure fluid is clear. <input type="checkbox"/> Explain procedure to patient. <p>Administration</p> <ul style="list-style-type: none"> <input type="checkbox"/> Remove safety cap. <input type="checkbox"/> Firmly push the tip of the epinephrine auto-injector against the middle third of the patient’s outer thigh. <input type="checkbox"/> A click will be heard when the dose is administered. <input type="checkbox"/> Hold the auto-injector in place for up to 10 seconds to allow time for the medication to enter the patient. <input type="checkbox"/> Remove the auto-injector. <input type="checkbox"/> Rub the injection site for up to 30 seconds, to promote absorption. <p>Documentation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Document medication name, dose, time, route and effects
Notes	<p>Transport</p> <ul style="list-style-type: none"> • Patients in respiratory distress require urgent transport. • Transport may be deferred long enough to administer first dose of Epinephrine on scene as a critical intervention but significant delays in transport should be avoided.



Acetaminophen Administration

Indications	<ul style="list-style-type: none"> Mild to Moderate Pain
Contraindications	<ul style="list-style-type: none"> Hypersensitivity to acetaminophen or any component of the formulation Severe alcoholic hepatitis or liver dysfunction with active alcohol consumption Acute liver injury Acetaminophen-induced liver disease
Dose	<p>Adult (11 years or older)</p> <ul style="list-style-type: none"> 15 mg/kg PO (Parenteral) to a maximum of 1000 mg Typically available in either 500 mg or 1000 mg tablets. May repeat once after 4 hours. 24 hour maximum of 3000 mg. <ul style="list-style-type: none"> In patients with suspected or known liver dysfunction (e.g., advanced chronic liver disease or cirrhosis), the 24-hour maximum should be lowered to 1,000-2,000 mg. <p>Pediatric (up to 10 years old)</p> <p>< 30 kg</p> <ul style="list-style-type: none"> 15 mg/kg PO (liquid preparation) <p>30 kg – 50 kg</p> <ul style="list-style-type: none"> 500 mg PO (liquid preparation or tablets depending on patient ability) <p>> 50 kg</p> <ul style="list-style-type: none"> 500-1000 mg PO May repeat once after 4 hours 24 hours maximum 75 mg/kg or 1000 mg Do not exceed 5 doses in 24 hours for patients under 12 years old
Instructions	<p>Confirmation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Ensure indications are met and contraindications are ruled out <input type="checkbox"/> Document full set of Vital Signs <p>Preparation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Ensure Acetaminophen is not expired and confirm dosage. <p>Administration</p> <ul style="list-style-type: none"> <input type="checkbox"/> Patient swallows tablets or liquid preparation <input type="checkbox"/> A small sip of water may be appropriate <input type="checkbox"/> Responders may need to provide extra assistance to pediatric patients <input type="checkbox"/> Rub the injection site for up to 30 seconds, to promote absorption. <p>Documentation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Document medication name, dose, time, route and effects
Notes	<ul style="list-style-type: none"> Mild to moderate pain is very subjective The context for this type of oral analgesic is relief of pain such as a toothache, ankle sprain or simple headache. May be used concurrently with ibuprofen for analgesia.



Ibuprofen Administration

Indications	<ul style="list-style-type: none"> Mild to Moderate Pain
Contraindications	<ul style="list-style-type: none"> Hypersensitivity to ibuprofen or other nonsteroidal anti-inflammatory drugs Active GI hemorrhage or ulcers Pregnancy (first, second, or third trimesters)
Dose	<p>Adult (11 years or older)</p> <ul style="list-style-type: none"> 300-400 mg PO (Parenteral) May repeat every 4-6 hours. Maximum daily dose of 1200 mg. <p>Pediatric (up to 10 years old)</p> <ul style="list-style-type: none"> 10 mg/kg PO May repeat once after 6 hours Maximum daily dose of 40 mg/kg/day
Instructions	<p>Confirmation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Ensure indications are met and contraindications are ruled out <input type="checkbox"/> Document full set of Vital Signs <p>Preparation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Ensure Acetaminophen is not expired and confirm dosage. <p>Administration</p> <ul style="list-style-type: none"> <input type="checkbox"/> Patient swallows tablets or liquid preparation <input type="checkbox"/> A small sip of water may be appropriate <input type="checkbox"/> Responders may need to provide extra assistance to pediatric patients <input type="checkbox"/> Rub the injection site for up to 30 seconds, to promote absorption. <p>Documentation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Document medication name, dose, time, route and effects
Notes	<ul style="list-style-type: none"> Mild to moderate pain is very subjective The context for this type of oral analgesic is relief of pain such as a toothache, ankle sprain or simple headache. May be used concurrently with acetaminophen for analgesia.



Glucagon Administration – Intramuscular (IM)

<ul style="list-style-type: none"> Engage Glucagon protocol when there is suspected Hypoglycemia or Unresponsive NYD (not yet diagnosed) and the patient appears incapable of maintaining their own airway. 	
Indications	<ul style="list-style-type: none"> CapBgl < 4mmol Incapable of following instructions or maintaining own airway
Contraindications	<ul style="list-style-type: none"> Known hypersensitivity to glucagon Pheochromocytoma (tumor on adrenal gland)
Intramuscular (IM) Injection	
Dose	<p>If < 25 kg:</p> <ul style="list-style-type: none"> 0.5 mg (one dose only) <p>If ≥ 25 kg</p> <ul style="list-style-type: none"> 1.0 mg (one dose only)
Instructions	<p>Confirmation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Ensure indications met and contraindications ruled out. <input type="checkbox"/> Document full set of Vital Signs including CapBgl. <p>Preparation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Expose injection site (deltoid or thigh) <input type="checkbox"/> Clean area with alcohol swab and allow to air dry. <input type="checkbox"/> Ensure glucagon is not expired or non-viable. <input type="checkbox"/> Remove flip-off seal from glucagon bottle. <input type="checkbox"/> Remove needle protector and inject entire contents of syringe into glucagon bottle. <input type="checkbox"/> DO NOT remove plastic clip from syringe. <input type="checkbox"/> Swirl bottle gently until glucagon dissolves completely. <input type="checkbox"/> Ensure glucagon is clear and has a water-like consistency. <input type="checkbox"/> Using syringe, hold bottle upside down and, making sure the needle tip remains in the solution, gently withdraw all the solution (1mL mark on the syringe) from bottle. <input type="checkbox"/> Holding syringe upright, remove needle from bottle and remove bubbles from syringe. <input type="checkbox"/> Flick/tap syringe until all bubbles move to top and expel air until only medication is left. <p>Administration</p> <ul style="list-style-type: none"> <input type="checkbox"/> Stretch injection site skin using Z-track technique. <input type="checkbox"/> Insert needle at 90° angle to the skin and inject medication into muscle. <p>Documentation</p> <ul style="list-style-type: none"> Document medication name, dose, time, route and effects
Notes	<p>Transport</p> <ul style="list-style-type: none"> Patients with a decreased level of responsiveness require urgent transport. Transport may be deferred long enough to administer Glucagon on scene as a critical intervention but significant delays in transport should be avoided. <p>Effects</p> <ul style="list-style-type: none"> Glucagon does not introduce sugar into the body. Glucagon initiates the release of glycogen stored in the patient's liver into the bloodstream. It can take 8-10 minutes for effects of glucagon to become evident. Effects may be minimal if patient does not have sufficient glycogen stores in their liver. Do not delay transport to see if the patient responds positively.



Glucagon Administration – Intranasal (IN)

<ul style="list-style-type: none"> Engage Glucagon protocol when there is suspected Hypoglycemia or Unresponsive NYD (not yet diagnosed) and the patient appears incapable of maintaining their own airway. 	
Indications	<ul style="list-style-type: none"> CapBgl < 4mmolL Over 4 years old Incapable of following instructions or maintaining own airway
Contraindications	<ul style="list-style-type: none"> Known hypersensitivity to glucagon Pheochromocytoma (tumor on adrenal gland)
Intranasal (IN) Spray	
Dose	<ul style="list-style-type: none"> 3 mg (one dose only) Must be over 4 years old for Intranasal Spray
Instructions	<p>Confirmation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Ensure indications met and contraindications ruled out. <input type="checkbox"/> Document full set of Vital Signs including CapBgl. <p>Preparation</p> <ul style="list-style-type: none"> Check the glucagon package to ensure it is not compromised and is not expired. Remove packaging from tube, open lid and remove the device. <p>Administration</p> <ul style="list-style-type: none"> <input type="checkbox"/> Hold the device between fingers and thumb: place your 2nd and 3rd fingers on either side of the nozzle and place your thumb on the plunger. <input type="checkbox"/> DO NOT depress the plunger at this time. <input type="checkbox"/> Place the tip of the nozzle into the nostril, inserting the tip until your fingers on either side are resting against the outside of the nose (approx. ¼" into the nostril). <input type="checkbox"/> Firmly depress the plunger with your thumb until the green line disappears. <input type="checkbox"/> Remove the device from the patient's nose. <p>Documentation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Document medication name, dose, time, route and effects
Notes	<p>Transport</p> <ul style="list-style-type: none"> Patients with a decreased level of responsiveness require urgent transport. Transport may be deferred long enough to administer Glucagon on scene as a critical intervention but significant delays in transport should be avoided. Responders must ensure indications are met, contraindications are ruled out, and a full set of Vital Signs including CapBgl are documented prior to first dose. <p>Effects</p> <ul style="list-style-type: none"> Glucagon does not introduce sugar into the body. Glucagon initiates the release of glycogen stored in the patient's liver into the bloodstream. It can take 8-10 minutes for effects of glucagon to become evident. Effects may be minimal if patient does not have sufficient glycogen stores in their liver. Do not delay transport to see if the patient responds positively



Glucogel Administration - Parenteral

<ul style="list-style-type: none"> Engage Glucogel protocol when there is suspected Hypoglycemia with a decreased level of responsiveness and the patient appears capable of maintaining their own airway. 	
Indications	<p>CapBgl < 4mmol</p> <ul style="list-style-type: none"> <input type="checkbox"/> Decreased Level of Responsiveness <input type="checkbox"/> Capable of following instructions and maintaining own airway
Contraindications	<ul style="list-style-type: none"> <input type="checkbox"/> n/a
Dose	<ul style="list-style-type: none"> 12-15 mg glucogel (half of a 30 mg tube) Q5 (up to 4 doses) Consult medical supervision before exceeding 4 doses
Instructions	<p>Confirmation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Ensure indications met and contraindications ruled out. <input type="checkbox"/> Document full set of Vital Signs including CapBgl. <p>Administration</p> <ul style="list-style-type: none"> <input type="checkbox"/> Patient self-administers 15 g Glucogel <input type="checkbox"/> Other sugars/juice/oral carbohydrates may be appropriate <p>Documentation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Document medication name, dose, time, route and effects
Notes	<p>Transport</p> <ul style="list-style-type: none"> Patients with a decreased level of responsiveness require urgent transport. Transport may be deferred long enough to administer first dose of Glucogel on scene as a critical intervention but significant delays in transport should be avoided. <p>Additional Doses</p> <ul style="list-style-type: none"> Remeasure capBgl every 5 minutes Apply another 15 g of Glucogel if still below 4 mmol/L Repeat for up to 4 doses (2 tubes) then consult Medical Supervision



Head to Toe Assessment Mnemonics

Why might a patient have an altered level of consciousness?

A	Alcohol
E	Epilepsy
I	Insulin (Diabetic)
O	Overdose
U	Uremia

T	Trauma
I	Infection
P	Psychiatric
P	Poison
S	Stroke

During a Head to Toe assessment...watch for:

B	Burns
O	Open Wounds
L	Lacerations
D	Deformity

C	Contusions
A	Abrasions
P	Penetrations

S	Swelling
C	Crepitus
R	Rigidity
I	Instability
P	Punctures
T	Tenderness
S	Subcutaneous Emphysema

Relevant S-A-M-P-L-E and Mechanism of Injury Information

MVA

Location of patient	Which vehicle patient was in	How many vehicles involved
Impact speed	Exterior damage	Interior damage
Type of restraints	Initial position of patient	Condition of patient
Loss of consciousness	Condition of other patients	Wearing a seat belt?

Fall

Where from	Height	Free fall or hit other objects
Landing surface	Position of patient at impact	What hit first
Position Found	Loss of consciousness	Cause of fall

Pedestrian Struck

What hit them	Size and weight of object	Velocity of vehicle
Vehicle part that hit patient	Damage to vehicle	Distance patient thrown
Loss of consciousness	Condition of patient	Condition of Vehicle Occupants

Shooting

Type of firearm	Range and Angle	Loss of consciousness
Type of bullet	Entrance and exit wounds	Initial position and condition of patient

Stabbing

Type and size of weapon	Loss of consciousness	Type of wound
Number of wounds	Other injuries	Initial position and condition



Average Vital Signs

Age	Weight	Resting Heart Rate	Resting Respiratory Rate	Systolic Blood Pressure
	Kilograms (kg)	Beats/minute (bpm)	Respirations/minute	mmHg
Neonate (<28 days)	<3	100-160	40-60	Difficult to measure
3 Months	2-3	100-180	30-45	65-100
6 Months	3-4	100-180	25-35	70-110
12 Months	10	100-180	20-30	70-110
2 Years	12	80-160	18-30	70-110
3-4 Years	14-16	70-130	18-24	75-110
5-6 Years	18-20	70-110	18-22	80-110
7-8 Years	22-24	70-110	18-22	80-110
9-10 Years	26-28	70-110	18-22	80-110
11-12 Years	30-32	70-110	16-20	90-120
13 Years & older	>32	60-100	12-20	120+

Hypotension (Low Blood Pressure)

Age Range	Systolic Blood Pressure considered clinically Low/Hypotensive
1 month – 1 year	Below 70 mmHg
1 – 10 years	Below 70 + (2 x age-in-years) mmHg
11 years - Adult	Below 90 mmHg
Anaphylaxis generally causes Systolic blood pressure to drop 30% or more	

T-POD/Pelvic Binder Application

<p>Indications</p>	<ul style="list-style-type: none"> • MOI suggestive of possible Pelvic Fracture accompanied by any of the following... <ul style="list-style-type: none"> <input type="checkbox"/> HR above 100bpm or Systolic BP below 90 mmhg (Hemodynamic Instability) <input type="checkbox"/> Pelvic Pain during examination <input type="checkbox"/> Pelvic Instability <input type="checkbox"/> Decreased LOC <input type="checkbox"/> Significant injury which distracts from Pelvic Exam
<p>Contraindications</p>	<ul style="list-style-type: none"> • Suspected Hip Dislocation or Neck-of-Femur Fracture • Simple Falls such as those from a standing height
<p>Procedure</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Ensure T-POD makes direct contact with the skin (Cut & Expose) if possible <input type="checkbox"/> Slide T-POD belt under the supine patient and into position under the pelvis <input type="checkbox"/> Align centre of T-POD belt with the greater trochanter (top of hips). <input type="checkbox"/> Trim T-POD belt so there is a 15-20 cm (6-8 inch) gap centred over the pubic symphysis <div style="text-align: center;"> </div> <ul style="list-style-type: none"> <input type="checkbox"/> Apply the Velcro tension straps <input type="checkbox"/> Slowly draw tension creating simultaneous, circumferential compression until gap is closed <input type="checkbox"/> Compression should be snug enough to provide stability, but loose enough to allow insertion of two fingers between belt and waist <input type="checkbox"/> Secure the belts to ensure constant pressure without accidental release <input type="checkbox"/> Document the application of the T-POD, including date and time of application
<p>Release of T-POD</p>	<ul style="list-style-type: none"> <input type="checkbox"/> If release is required, or occurs accidentally, the time of this event should also be noted



Naloxone (Narcan) Administration

Indications	Suspected Opioid Overdose/Poisoning (Surroundings/Hx/S&S/Vital Signs)			
Toxidrome	Decreased level of responsiveness	Inadequate/Absent Respirations	Pinpoint Pupils	
Contraindications	Confirmed medical allergy to Naloxone			
Adult Dosage	1 st - 0.4 mg	2 nd – 0.4 mg	3 rd – 0.8 mg	4 th - 2.0 mg
Pediatric Dosage (EMR ONLY)	Under 11 yrs old is Pediatric			
	0.1 mg/Kg of body weight (to a maximum of 2.0 mg per dose)			
	Maximum of 4 doses			
	Pediatric doses are larger as withdrawal is unlikely			
Prior to First Dose	First dose administered on-scene			
	Priority given to other immediately life saving measures such as Assisted Ventilations/CPR			
	SAMPLE information to determine probable opioid overdose			
	Full set of Vital Signs			
Preparation	Clean injection site (shoulder or thigh) with alcohol swab. Allow to dry before injection			
	Check ampoule for clarity, expiration date, dose, and type of medication			
	Break ampule open at neck. Gauze may be used to protect hands from sharp edges.			
	Draw entire contents of ampoule into syringe.			
	Hold syringe with needle turned upwards and slowly push all air out of the chamber.			
Injection	Use one hand to spread skin at injection site to stretch the meaty tissues.			
	Use other hand to insert the needle at 90 degrees into the muscle.			
	Depress plunger to inject all medication into the muscle.			
Disposal	Retract/cover needle with appropriate cover.			
	Dispose of syringe and ampoule into sharps container.			
Q3	Every 3 minutes as needed to reverse respiratory depression.			
	Initiate transport after first dose as appropriate.			
	Patient may become combative as consciousness improves			
	4 doses maximum			

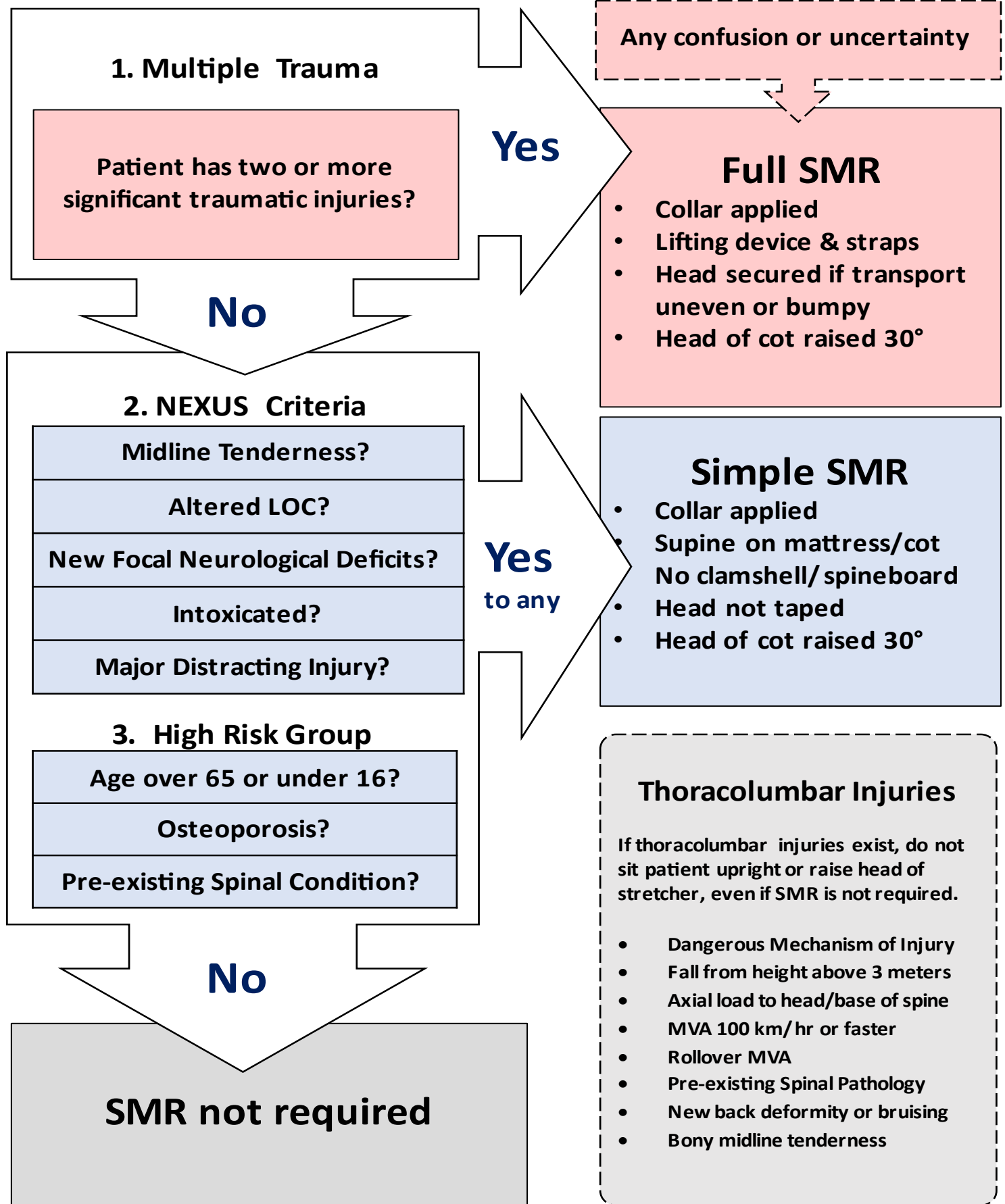


Terminology

Term/Phrase	Meaning
Abruptio Placentae	Premature separation of the placenta from the uterus. Signs/Symptoms include uterine contraction, bleeding, fetal distress
Aspiration	The inhalation of solids/liquids (such as food, vomit or blood) into the lungs
Boiling Point	The temperature at which liquid changes into a vapor/gas
BSI	Body Substance Isolation equipment such as gloves and safety glasses. Also commonly referred to as Personal Protective Equipment (PPE)
CHEMTREC	Provider of emergency Hazardous Materials (HazMat) support
Flashpoint	The lowest temperature at which vapors ignite when exposed to an ignition source
HazMat - Cold Zone	Also known as the Outer Perimeter. An area far enough from the hazardous material that risk of contamination is eliminated.
HazMat – Hot Zone	Also known as the Contaminated Area. The area immediately contaminated by a hazardous material.
HazMat - Warm Zone	Also known as the Inner Perimeter. An area outside the hot zone, which carries a reduced risk of contamination. Typically where responder decontamination procedures occur.
Ignition Temperature	Lowest temperature at which a substance spontaneously ignites without an ignition source.
MSDS	Material Safety Data Sheet which contains information about the potential hazards of a chemical product used in the workplace. Also referred to as Safety Data Sheet (SDS)
Palliate	Ease or lessen discomfort
Placenta Previa	Occurs when the baby's placenta partially or completely covers the mother's cervix, which is the outlet for the uterus. Signs/Symptoms include severe bleeding
Priapism	Sustained erection caused by spinal cord injury
Status Asthmaticus	Acute asthma that remains unresponsive to treatment with bronchodilators
Tidal Volume	The volume of air moved into and out of the lungs during each ventilation cycle. Approximately 500ml per inspiration in a normal healthy adult.
Vehicle Placard	A diamond shaped sign that identifies the class of dangerous goods/hazardous materials on large containers and vehicles.



EMALB NEXUS SMR Decision Matrix for Injuries with Spinal Mechanism





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FAST VAN Stroke Mnemonic

F (Face)	Right-sided droop? Or Left-sided droop?
A (Arm)	Right-sided weakness? Or Left-sided weakness?
S (Speech)	Slurred speech?
T (Time)	Awoke with Signs/Symptoms? Or Signs/Symptoms started less than 6 hours ago?
<ul style="list-style-type: none"> If “Yes” to T and any of the other F-A-S criteria, urgent transport to hospital and continue with VAN questions If “No” to T, but yes to any of the other F-A-S criteria, urgent transport to hospital 	
V (Vision)	Right gaze affected? Or Left gaze affected?
A (Aphasia)	Naming difficulties?
N (Neglect)	Ignoring one side of the body? (typically the left side)
<ul style="list-style-type: none"> If “Yes” to any of the V-A-N criteria, notify receiving hospital of possible large vessel occlusion 	

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IV Drip Set Calculations

Drip Set Sizes		<ul style="list-style-type: none"> gtts = “drips” ml = “milliliters” gtts / ml = “how many drips add up to one milliliter”
Standard (Regular)	15 gtts / ml	
Macro (Adult)	10 gtts / ml	
Micro (Mini)	60 gtts / ml	
$\text{gtts / minute (drips per minute)} = \frac{\text{volume (expressed in milliliters) to be infused} \times \text{gtts / ml}}{\text{Infusion time (expressed in minutes)}}$		

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Common IV Solutions

Solution	Commonly Used For...
Ringer’s Lactate	Blood loss
D5W and D10W	Hypoglycaemia
Normal Saline	Dehydration
2/3 – 1/3	Dehydration

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Common IV Complications

Interstitial
Circulatory Overload
Thrombosis and Thrombophlebitis
Catheter Embolism
Infection of Catheter Site
Allergic Reaction
Air Embolism



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Salbutamol (Ventolin) Administration – Nebulizing Mask

<p>Indications</p>	<ul style="list-style-type: none"> • Shortness of Breath associated with Bronchospasm <ul style="list-style-type: none"> <input type="checkbox"/> eg. Asthma, Bronchitis, Emphysema, COPD
<p>Contraindications</p>	<ul style="list-style-type: none"> • Known hypersensitivity to salbutamol • Hemodynamically significant tachycardia
<p>Dose</p>	<p>Age > 1 year old</p> <ul style="list-style-type: none"> • 5 mg in 5 ml of solution • Repeat as appropriate Q 10 minutes/when each dose is finished <p>Age < 1 year old</p> <ul style="list-style-type: none"> • 2.5 mg in 2.5 ml of solution • Repeat as appropriate Q 10 minutes/when each dose is finished
<p>Instructions</p>	<p>Confirmation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Ensure indications are met and contraindications are ruled out <input type="checkbox"/> Document full set of Vital Signs <input type="checkbox"/> Auscultate Chest <p>Preparation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Ensure salbutamol ampules are not expired. <input type="checkbox"/> Twist off top of ampule and squirt appropriate amount into the well of the nebulizer <input type="checkbox"/> Attach oxygen tubing to bottom of nebulizer and turn up O2 flow meter until medication begins to mist out of mask (usually 6-10 lpm) <p>Administration</p> <ul style="list-style-type: none"> <input type="checkbox"/> Place nebulizer over patient’s mouth and nose and instruct them to breathe as slowly and deeply as possible. <input type="checkbox"/> When salbutamol is finished or after 10 minutes, reassess patient and repeat dose as appropriate. <p>Documentation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Document medication name, dose, time, route and effects
<p>Notes</p>	<p>Transport</p> <ul style="list-style-type: none"> • Patients in respiratory distress require urgent transport. • Transport may be deferred long enough to administer first dose of Salbutamol on scene as a critical intervention but significant delays in transport should be avoided.



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Salbutamol (Ventolin) Administration – Metered Dose Inhaler (MDI)

<p>Indications</p>	<ul style="list-style-type: none"> • Shortness of Breath associated with Bronchospasm <ul style="list-style-type: none"> <input type="checkbox"/> eg. Asthma, Bronchitis, Emphysema, COPD
<p>Contraindications</p>	<ul style="list-style-type: none"> • Known hypersensitivity to salbutamol. • Hemodynamically significant tachycardia. • Under 10 kg
<p>Dose</p>	<p>One MDI spray = 100 micrograms (mcg) which can also be expressed as 0.1 milligrams (mg)</p> <p>Adult (11 years or older)</p> <ul style="list-style-type: none"> • 4 x 100 mcg per course • Repeat as needed <p>Pediatric (up to 10 years old)</p> <p>< 10 kg</p> <ul style="list-style-type: none"> • n/a <p>10-20 kg</p> <ul style="list-style-type: none"> • 5 x 100 mcg per course • Repeat up to 3 times as needed <p>> 20 kg</p> <ul style="list-style-type: none"> • 10 x 100 mcg per course • Repeat up to 3 times as needed
<p>Instructions</p>	<p>Confirmation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Ensure indications are met and contraindications are ruled out <input type="checkbox"/> Document full set of Vital Signs & Auscultate Chest (6 points minimum) <p>Preparation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Ensure Metered Dose Inhaler (MDI) is not expired. <input type="checkbox"/> Shake inhaler and remove cap from inhaler <input type="checkbox"/> Place mouthpiece of inhaler into spacer & remove cap from spacer <p>Administration</p> <ul style="list-style-type: none"> <input type="checkbox"/> MDI upright with mouthpiece at bottom, have the patient tilt their head back slightly and instruct them to breathe out slowly and completely. <input type="checkbox"/> Instruct the patient to place the mouthpiece of the spacer into their mouth. <input type="checkbox"/> Press down on the inhaler to spray one puff of medication into the spacer, and instruct the patient to start breathing in and out slowly. <input type="checkbox"/> Repeat process to the appropriate dose, removing the inhaler from the spacer after each spray to shake it, then re-inserting it to start the next spray/breath in the dose. <p>Documentation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Document medication name, dose, time, route and effects
<p>Notes</p>	<p>Transport</p> <ul style="list-style-type: none"> • Patients in respiratory distress require urgent transport. • Transport may be deferred long enough to administer first dose of Salbutamol on scene as a critical intervention but significant delays in transport should be avoided.



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Epinephrine Administration – Intramuscular Injection (IM)

<p>Indications</p>	<ul style="list-style-type: none"> • Anaphylaxis • Signs of Anaphylaxis, Hx of Allergic Response, Exposure to Allergen, Unstable (DLOC, or Systolic BP < 90 mmHg or Respiratory Distress)
<p>Contraindications</p>	<ul style="list-style-type: none"> • There are no absolute contraindications to Epinephrine use in life-threatening situations such as anaphylaxis
<p>Dose</p>	<p>1 ml of 1:1000 epinephrine hydrochloride solution contains 1 mg of Epinephrine</p> <p>Adult (11 years or older)</p> <ul style="list-style-type: none"> • 0.5 mg in 0.5 ml 1:1000 solution • Q5 up to 3 doses total as needed <p>Pediatric (up to 10 years old)</p> <ul style="list-style-type: none"> • 0.01 mg per kg of body weight in 1:1000 solution • Maximum 0.5 mg per dose • Q5 up to 3 doses total as needed
<p>Instructions</p>	<p>Confirmation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Ensure indications are met and contraindications are ruled out <input type="checkbox"/> Document full set of Vital Signs <input type="checkbox"/> Auscultate Chest (6 points minimum) <p>Preparation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Expose injection site (deltoid or thigh) <input type="checkbox"/> Clean area with alcohol swab and allow to air dry. <input type="checkbox"/> Ensure 1:1000 epinephrine hydrochloride is not expired. <input type="checkbox"/> Calculate desired dose. <input type="checkbox"/> Remove top/cover from ampule/bottle of epinephrine hydrochloride. <input type="checkbox"/> Hold ampule/bottle upright, insert needle and draw solution into syringe. <input type="checkbox"/> Holding syringe upright, remove needle from bottle & remove bubbles from syringe. <input type="checkbox"/> Tap syringe until all bubbles move to top & expel air until only medication is left. <p>Administration</p> <ul style="list-style-type: none"> <input type="checkbox"/> Stretch injection site skin using Z-track technique. <input type="checkbox"/> Insert needle at 90° angle to the skin and inject medication into muscle. <p>Documentation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Document medication name, dose, time, route and effects
<p>Notes</p>	<p>Transport</p> <ul style="list-style-type: none"> • Patients with a decreased level of responsiveness require urgent transport. • Transport may be deferred long enough to administer first dose of Epinephrine on scene as a critical intervention but significant delays in transport should be avoided.



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Entonox Mnemonics

Contraindications	
C	inability to Comply
D	Decompression sickness
C	altered level of Consciousness
P	Pneumothorax
A	Air embolism
I	Inhalation injury
N	Nitroglycerin in the last 5 minutes
Cautions	
S	Shock
A	Abdominal distension
D	Depressant drugs
C	COPD
F	Facial Injuries

- Ensure the area is adequately ventilated, including turning on the vent system in the back of the Ambulance
- Auscultate the Chest to rule out Pneumothorax
- Contraindications mean you cannot administer.
- Precautions mean you need to fix something first, or monitor closely to ensure the Entonox is not creating/exasperating any problems
- 2 Precautions = Contraindicated

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Entonox Administration

Indications	<ul style="list-style-type: none"> • Significant Pain
Rule out Contraindications	<ul style="list-style-type: none"> • C-D-C-P-A-I-N
Note Precautions	<ul style="list-style-type: none"> • S-A-D-C-F • Nasal canula may be utilized to mitigate mild shock symptoms
Completed before administration	<ul style="list-style-type: none"> • SAMPLE, OPQRST and Vital Signs • Contraindications ruled out (requires Chest Auscultation) • Mix bottle if stored improperly • Adequate ventilation secured (vehicle ventilation system activated if available)
Proper Storage	<ul style="list-style-type: none"> <input type="checkbox"/> Not left unused over long periods <input type="checkbox"/> Not stored below -6 Celsius <input type="checkbox"/> Stored horizontally (not vertically, which can cause component separation)
Instructions to Patient	<ul style="list-style-type: none"> <input type="checkbox"/> Self-administered using mask/bite valve <input type="checkbox"/> "Pull" Entonox out of the bottle by inhaling through bite valve <input type="checkbox"/> Pain should be relieved <input type="checkbox"/> May begin to feel light-headed, giddy, drowsy or nauseas <input type="checkbox"/> Stop or start at any time <input type="checkbox"/> Use until pain is relieved or adverse effects are felt
After Discontinuing Entonox	<ul style="list-style-type: none"> <input type="checkbox"/> Supplemental Oxygen with Non-Rebreather Mask at 15 lpm
Cardiac Chest Pain	<ul style="list-style-type: none"> <input type="checkbox"/> Consider Entonox to relieve chest pain if Nitro is contraindicated and has not been administered in the past 5 minutes



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Sager Traction Splint

Utilized for suspected Femur Fractures not involving the hip or knee and with no RTC criteria. In the vast majority of circumstances the Traction Splint will be applied on-scene.	
<ul style="list-style-type: none"> • Traction splint applied after complete secondary survey, including head to toe. 	
Assess injured leg	<input type="checkbox"/> Distal Pulse – check for presence or absence <input type="checkbox"/> Motor-Sensory check <input type="checkbox"/> Look and feel to determine exact location and extent of injury
Analgesia	<input type="checkbox"/> Administer Entonox as appropriate per Entonox protocols
Apply Traction	<input type="checkbox"/> Adjust saddle to ensure short side of saddle hinge is down <input type="checkbox"/> Nestle saddle against injured leg (short hinge down) <input type="checkbox"/> Have helper stabilize splint <input type="checkbox"/> Apply small thigh strap <input type="checkbox"/> Apply ankle harness above malleoli <input type="checkbox"/> Apply traction of 10% body weight <ul style="list-style-type: none"> ○ 15 lbs maximum per limb ○ 5 lbs maximum for open fractures ○ 5 lbs maximum for Pediatric patients <input type="checkbox"/> 30 lbs maximum for Bi-Lateral fractures (15 lbs per leg)
Secure Splint	<input type="checkbox"/> Ensure adequate padding <input type="checkbox"/> 3 straps around splint...above and below injury <input type="checkbox"/> Secure thigh strap...then the other two straps <input type="checkbox"/> Secure Figure 8 Strap
Reassess Injury	<input type="checkbox"/> Reassess all splint straps and Traction Gauge <input type="checkbox"/> Ensure Leg in line with body...same length as other leg <input type="checkbox"/> Recheck presence or absence of Distal Pulse <input type="checkbox"/> Ensure no movement / aggravation of injured limb

S	Saddle Hinge side down
---	---------------------------

T	Thigh strap
---	-------------

check distal circulation

A	Ankle Strap
---	-------------

P	Pull Traction
---	---------------

check distal circulation

L	Leg Straps
---	------------

check distal circulation

E	Evaluate Traction
---	-------------------

S	Stirrup Strap
---	---------------

check distal circulation