

Adult Airway

B	Optimize airway positioning	
	Airway adjuncts	
	Suction prn	
	Oxygen Titrate to SpO ₂ 94-99%	
	Consider CPAP / PEEP 5-15 cmH ₂ O pressure	

Exit at any level to maintain:
SpO₂ = 94-99%
EtCO₂ = 35-45 mmHg
A patent airway

↓

Requires ventilation

↓

B	Optimal BVM management	
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↓

Difficulty oxygenating and or ventilating
& no gag

↓

B	i-GEL Airway	
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- IF ASSISTING IN RSI / DSI:
METHODS OF CONFIRMATION
PROPER ENDOTRACHEAL TUBE PLACEMENT
(three methods required)*
- Visualization of ETT passing through the cords into the trachea
 - Waveform EtCO₂ (required)
 - Improved or maintained SpO₂
 - Holdup with Bougie
 - Auscultation of all lung fields confirm adequate lung exchange
 - Absence of sounds over the epigastrium
 - Bilateral & symmetrical chest wall excursion on ventilation

Pediatric Airway

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Adult Respiratory Illness

Key Information:

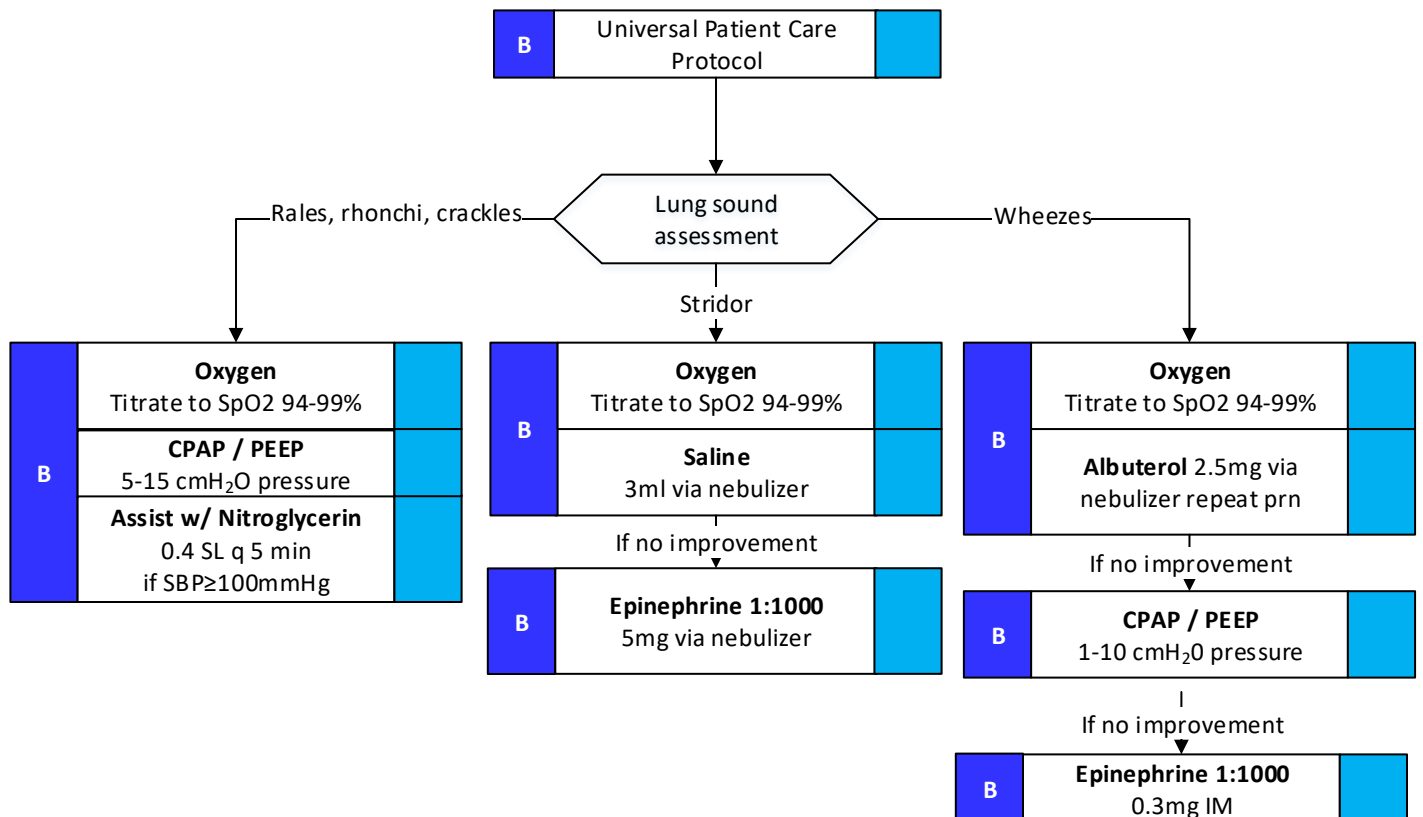
- Past medical history
- Medications (digoxin, lasix)
- Viagra, Levitra, Cialis
- Cardiac history --past myocardial infarction
- Asthma; COPD – chronic bronchitis, emphysema
- Congestive heart failure
- Home treatment (oxygen, nebulizer, CPAP)
- Medications (theophylline, steroids, inhalers)
- Toxic exposure, smoke inhalation

Key Information Continued:

- Respiratory distress, bilateral rales
- Apprehension, orthopnea
- Jugular vein distention
- Pink, frothy sputum
- Peripheral edema, diaphoresis
- Hypotension, shock
- Chest discomfort
- Shortness of breath
- Pursed lip breathing
- Decreased ability to speak
- Increased respiratory rate & effort
- Wheezing, rhonchi, rales, stridor
- Use of accessory muscles
- Fever, cough
- Tachycardia

Differential:

- Asthma/COPD (Emphysema, Bronchitis)
- Anaphylaxis
- Aspiration
- Pleural effusion
- Pneumonia
- Pulmonary embolus
- Pneumothorax
- Cardiac (MI or CHF)
- Pericardial tamponade
- Hyperventilation
- Inhaled toxin (Carbon monoxide, etc.)
- TB
- Cystic Fibrosis



Pediatric Respiratory Illness

Key Information:

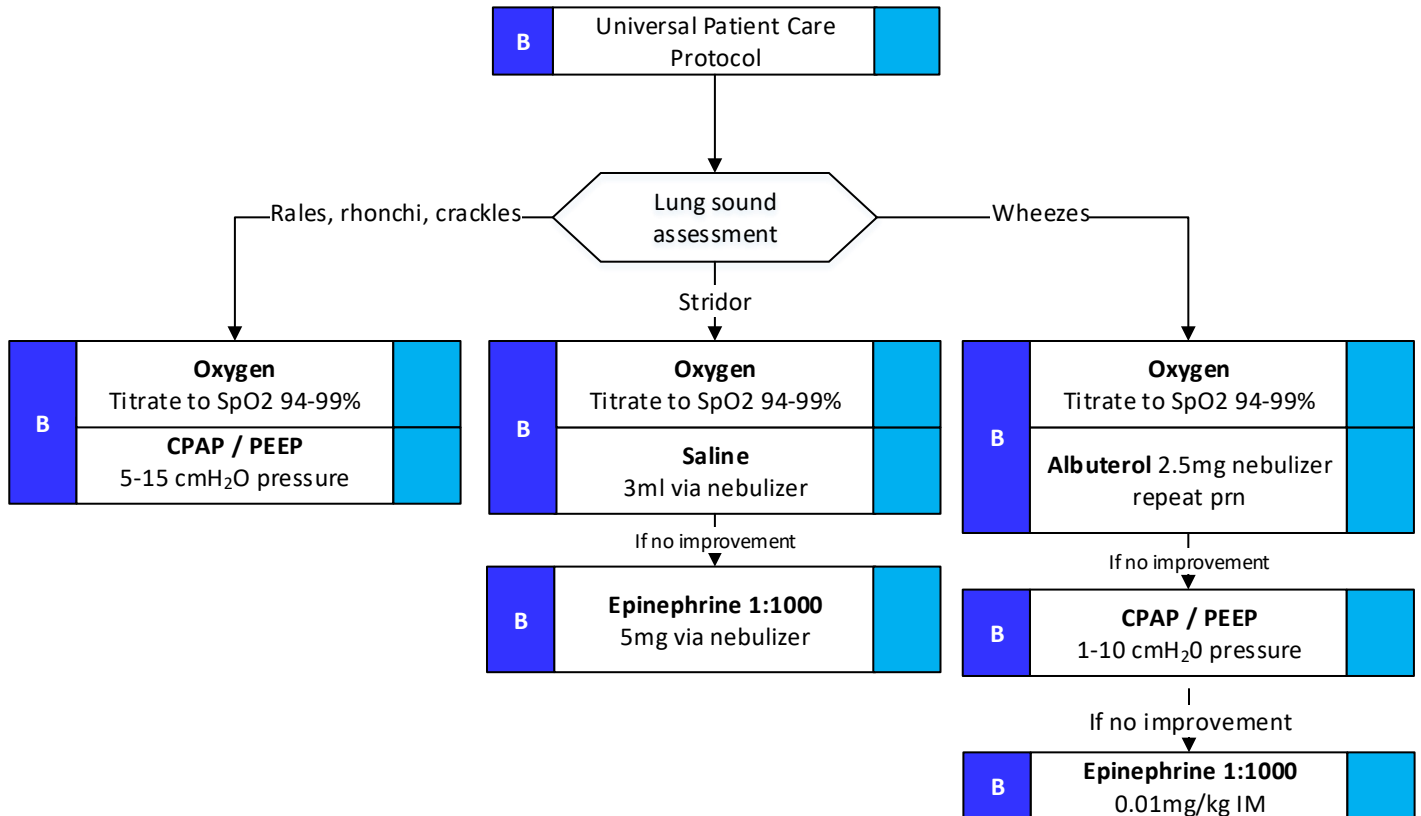
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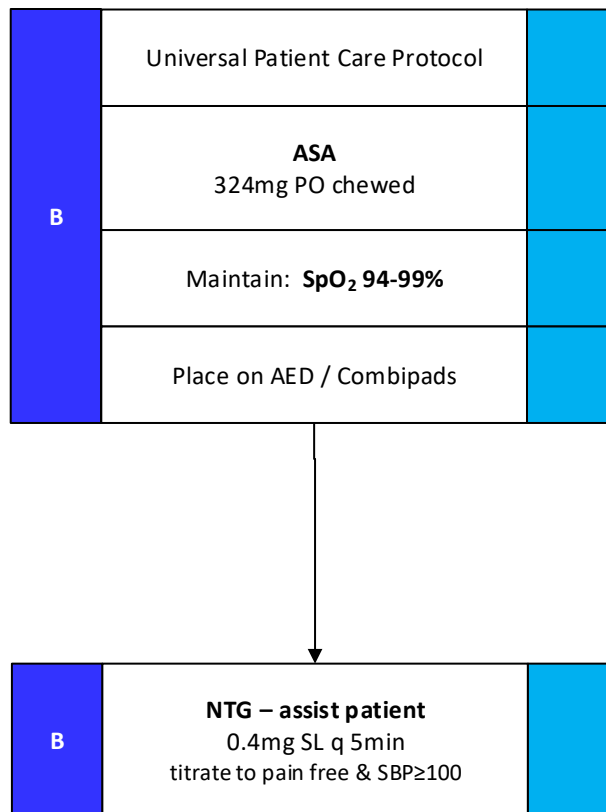
Differential:

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- Cardiac (MI or CHF)
- Pericardial tamponade
- Hyperventilation
- Inhaled toxin (Carbon monoxide, etc.)
- TB
- Cystic Fibrosis



Suspected Acute Coronary Syndrome

Key Information:	Key Information Continued:	Differential:
<ul style="list-style-type: none"> • Hypertension • Hyperlipidemia • Recent physical exertion • Smoker • Stimulants • AICD • Time of onset • Unexplained anxiety 	<ul style="list-style-type: none"> • Chest discomfort ex. <ul style="list-style-type: none"> -pain -pressure -aching -vice-like tightness • Nausea, vomiting, dizziness • Shortness of breath • Pale, diaphoresis • Location <ul style="list-style-type: none"> -substernal -epigastric -arm -jaw -neck -shoulder • Radiation of pain • Obesity 	<ul style="list-style-type: none"> • Trauma vs. Medical • Angina vs. Myocardial Infarction • Pericarditis • Pulmonary embolism • Asthma/ COPD • Pneumothorax • Aortic dissection or aneurysm • GI reflux or hiatal hernia • Esophageal spasm • Chest wall injury or pain • Pleural pain • Overdose esp. stimulants

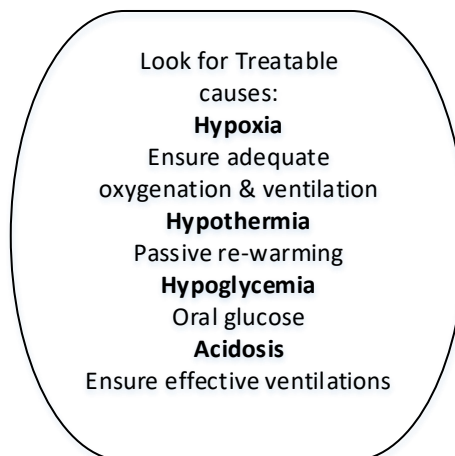
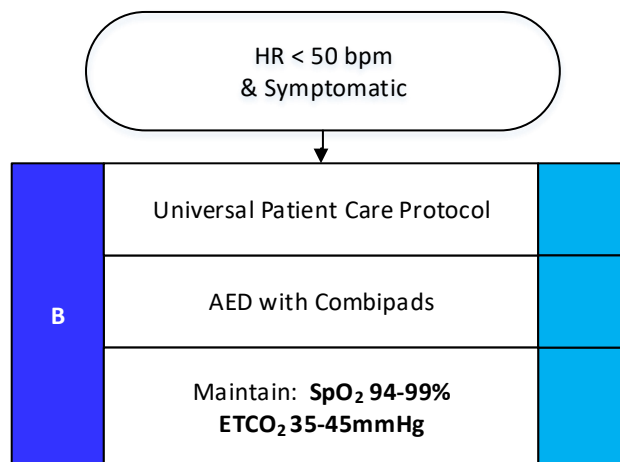


NTG Contraindicated:
<ul style="list-style-type: none"> • Avanafil -Stendra • Sildenafil -Revatio -Viagra • Tadalafil -Adcirca -Cialis • Vardenafil -Levitra -Staxyn • Riociguat -Adempas

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Adult Bradycardia

<u>Key Information:</u>	<u>Key Information Continued:</u>	<u>Differential:</u>
<ul style="list-style-type: none"> Past History Medications: <ul style="list-style-type: none"> -Beta blockers -Calcium Channel Blockers -Digoxin -Cholinergics -Clonidine Pacemaker Events leading to current state 	<ul style="list-style-type: none"> Heart Rate <50 bpm with: <ul style="list-style-type: none"> -Hypotension SBP<90 mmHg -Acute Altered LOC -Chest Discomfort -CHF -Seizure -Syncope 	<ul style="list-style-type: none"> Acute MI Pacemaker Failure Sinus Bradycardia Electrolyte abnormality (K, Ca, Na, Mg) Stroke Increased ICP Head Injury Spinal Cord lesion AV block (1st, 2nd, 3rd) Toxic exposure / ingestion



Pediatric Bradycardia

Key Information:

- Past History
- Medications:
 - Beta blockers
 - Calcium Channel Blockers
 - Digoxin
 - Cholinergics
 - Clonidine

Pacemaker

- Events leading to current state

Key Information Continued:

- Heart Rate <60 bpm with:
 - poor perfusion in spite of O₂ & ventilation
 - Acute Altered LOC
 - Chest Discomfort
 - CHF
 - Seizure
 - Syncope

Differential:

- Pacemaker Failure
- Sinus Bradycardia
- Electrolyte abnormality (K, Ca, Na, Mg)
- Stroke
- Increased ICP
- Head Injury
- Spinal Cord lesion
- AV block (1st, 2nd, 3rd)

B	Universal Patient Care Protocol	
	Assess & Treat Underlying Cause	
	AED with Combipads	
	Maintain: SpO ₂ 94-99%	



HR < 60 bpm
With poor perfusion despite
oxygenation and ventilation



B	CPR	
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Look for Treatable

causes:

Hypoxia

Ensure adequate
oxygenation & ventilation

Hypothermia

Passive re-warming

Hypoglycemia

Oral Glucose

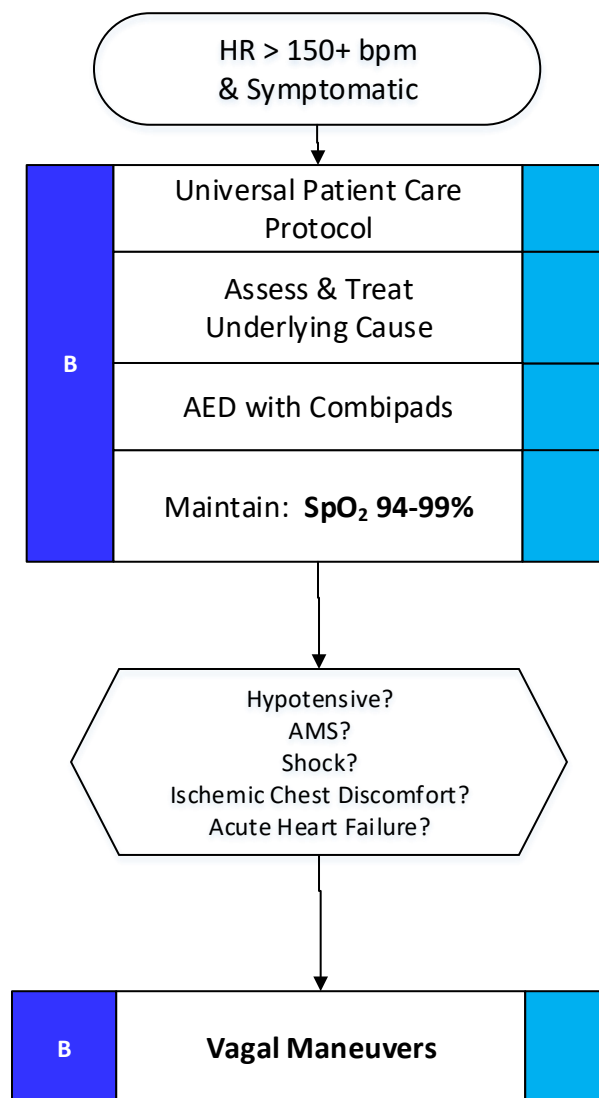
Acidosis

Ensure effective
ventilations

- Hypotension can be defined as a SBP < 70 + (age x 2)

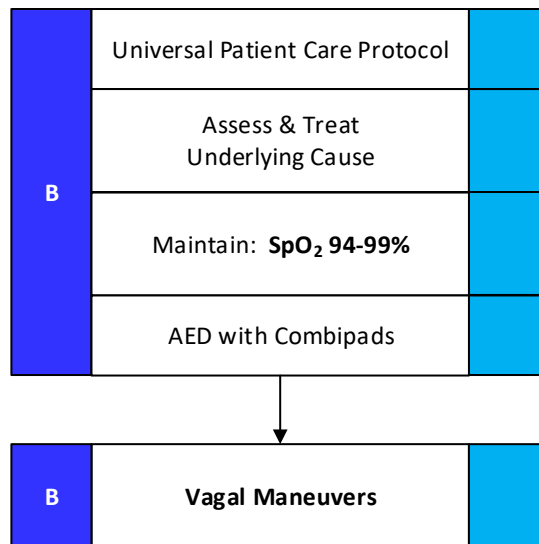
Adult Tachycardia

<u>Key Information:</u>	<u>Key Information Continued:</u>	<u>Differential:</u>
<ul style="list-style-type: none"> • Medications <ul style="list-style-type: none"> -Aminophylline -Diet pills -Thyroid supplements -Decongestants -Digoxin • Diet (caffeine, chocolate) • Drugs (nicotine, cocaine) • Hx of palpitations/ heart racing • Implantable pacemaker or AICD 	<ul style="list-style-type: none"> • Heart rate >150/min • Systolic BP <90mmHg • Dizziness • Chest discomfort • SOB • Diaphoresis • Syncope/ near syncope • CHF • Potential presenting rhythm <ul style="list-style-type: none"> -Atrial/ Sinus Tachycardia -Atrial fibrillation/ flutter -Multifocal Atrial Tachycardia 	<ul style="list-style-type: none"> • Heart disease • Sick sinus syndrome • Myocardial Infarction • Electrolyte imbalance • Exertion • Pain • Emotional stress • Fever • Hypoxia • Hypovolemia or Anemia • Drug effect/ overdose • Hyperthyroidism • Pulmonary embolus



Pediatric Tachycardia

Key Information:	Key Information Continued:	Differential:
<ul style="list-style-type: none"> Medications <ul style="list-style-type: none"> -Aminophylline -Diet pills -Thyroid supplements -Decongestants -Digoxin Diet (caffeine, chocolate) Drugs (nicotine, cocaine) History of palpitations/ heart racing <ul style="list-style-type: none"> Implantable pacemaker or AICD 	<ul style="list-style-type: none"> Heart rate >150/min SBP < 70 + (age x2) Dizziness Chest discomfort SOB Diaphoresis Syncope/ near syncope CHF Potential presenting rhythm <ul style="list-style-type: none"> -Atrial/ Sinus Tachycardia -Atrial fibrillation/ flutter -Multifocal Atrial Tachycardia 	<ul style="list-style-type: none"> Heart disease Sick sinus syndrome Electrolyte imbalance Exertion Pain Emotional stress Fever Hypoxia Hypovolemia or Anemia Drug effect/ overdose Hyperthyroidism Pulmonary embolus



Probable Sinus Tach
<ul style="list-style-type: none"> Compatible history w/ known cause P waves present / normal Variable R-R; constant PR Infants: HR usually <220/min Child: HR usually <180/min

Probable SVT
<ul style="list-style-type: none"> Vague history, history abrupt HR Δ P waves absent / abnormal HR NOT variable Infants: HR usually >220/min Child: HR usually >180/min

Adult Hypotension / Shock

<u>Key Information:</u>	<u>Key Information Continued:</u>	<u>Differential:</u>
<ul style="list-style-type: none"> Blood loss: <ul style="list-style-type: none"> - Vaginal -Gastrointestinal -AAA -Ectopic pregnancy Fluid Loss: <ul style="list-style-type: none"> - Vomiting -Diarrhea -Fever Infection Cardiac ischemia (MI, CHF) Pregnancy 	<ul style="list-style-type: none"> Restlessness, confusion Poor oral intake Weakness, dizziness Weak, rapid pulse Pale, cool, clammy skin Delayed capillary refill Hypotension Coffee-ground emesis Tarry stools JVD Lactate >4mmol/L 	<ul style="list-style-type: none"> Low Volume <ul style="list-style-type: none"> -Dehydration -Hemorrhage High Space <ul style="list-style-type: none"> -Neurogenic -Sepsis -Anaphylaxis Mechanical <ul style="list-style-type: none"> -Heart failure -Tamponade -Pneumothorax Vasovagal event

B	Universal Patient Care Protocol	
	Blood Glucose Procedure	
	Place on combipads / AED	

Pearls:

- Hypotension can be defined as a SBP <90mmHg. This is not always reliable and should be interpreted in context of the patient's typical BP if known.

Pediatric Hypotension / Shock

<u>Key Information:</u>	<u>Key Information Continued:</u>	<u>Differential:</u>
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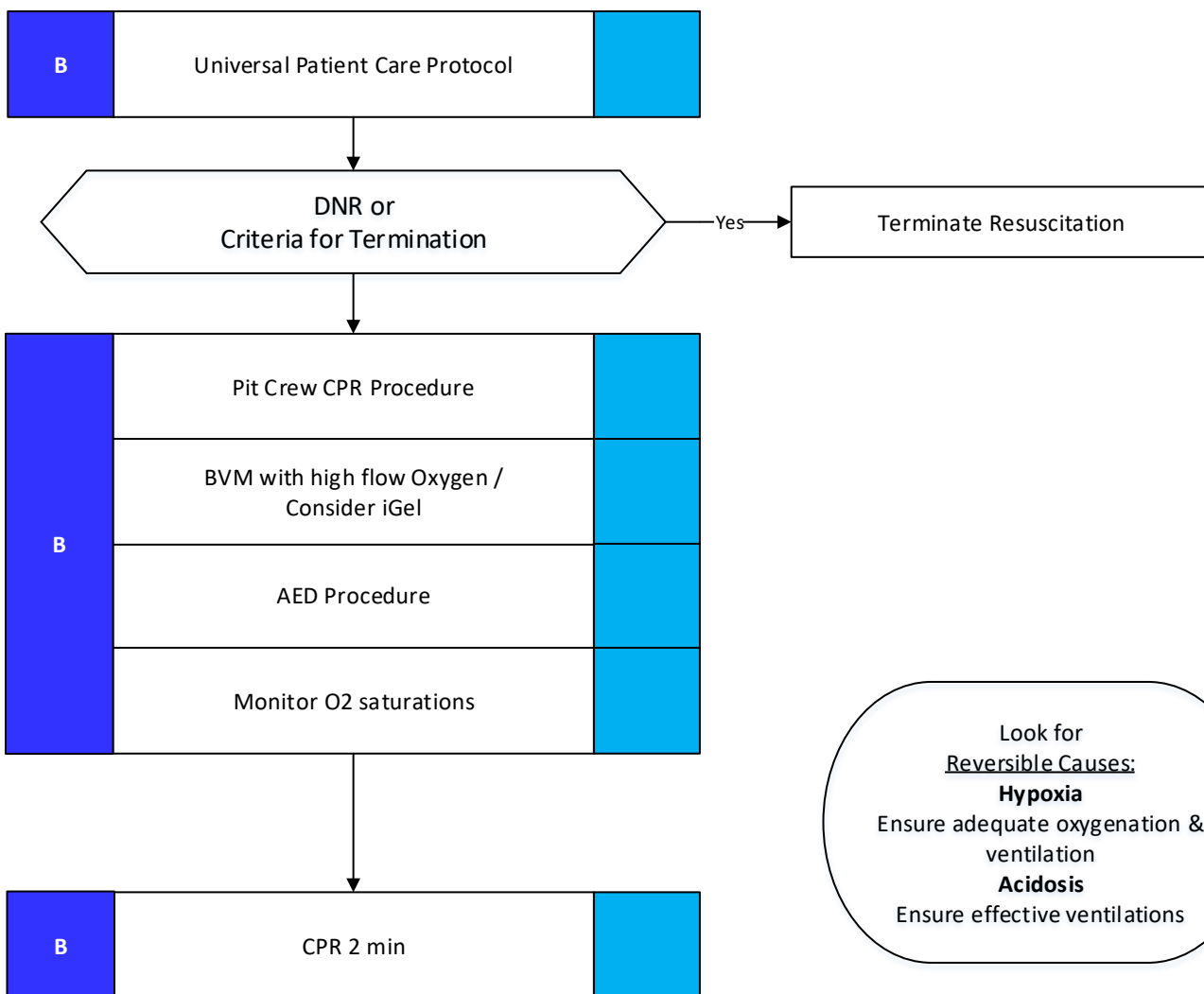
B	Universal Patient Care Protocol	
	Blood Glucose Procedure	
	AED with Combipads	

Pearls:

- Hypotension can be defined as a SBP $<70 + \text{age} \times 2$. This is not always reliable and should be interpreted in context of the patient's typical BP if known.

Adult Cardiac Arrest

<p>Key Information:</p> <ul style="list-style-type: none"> • Events leading to arrest • Estimated downtime • Existence of terminal illness • DNR • Unresponsive • Abnormal breathing (agonal or gasping) 	<p>Key Information Continued:</p> <ul style="list-style-type: none"> • Apneic • Pulseless • Hypothermia • Lividity • Rigor 	<p>Differential:</p> <ul style="list-style-type: none"> • Medical vs, Trauma • V Fib or Pulseless V Tach • Asystole • PEA • 2 minutes of high quality chest pressons, pause for pulse check every 2 minutes
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Pediatric Cardiac Arrest

Key Information:

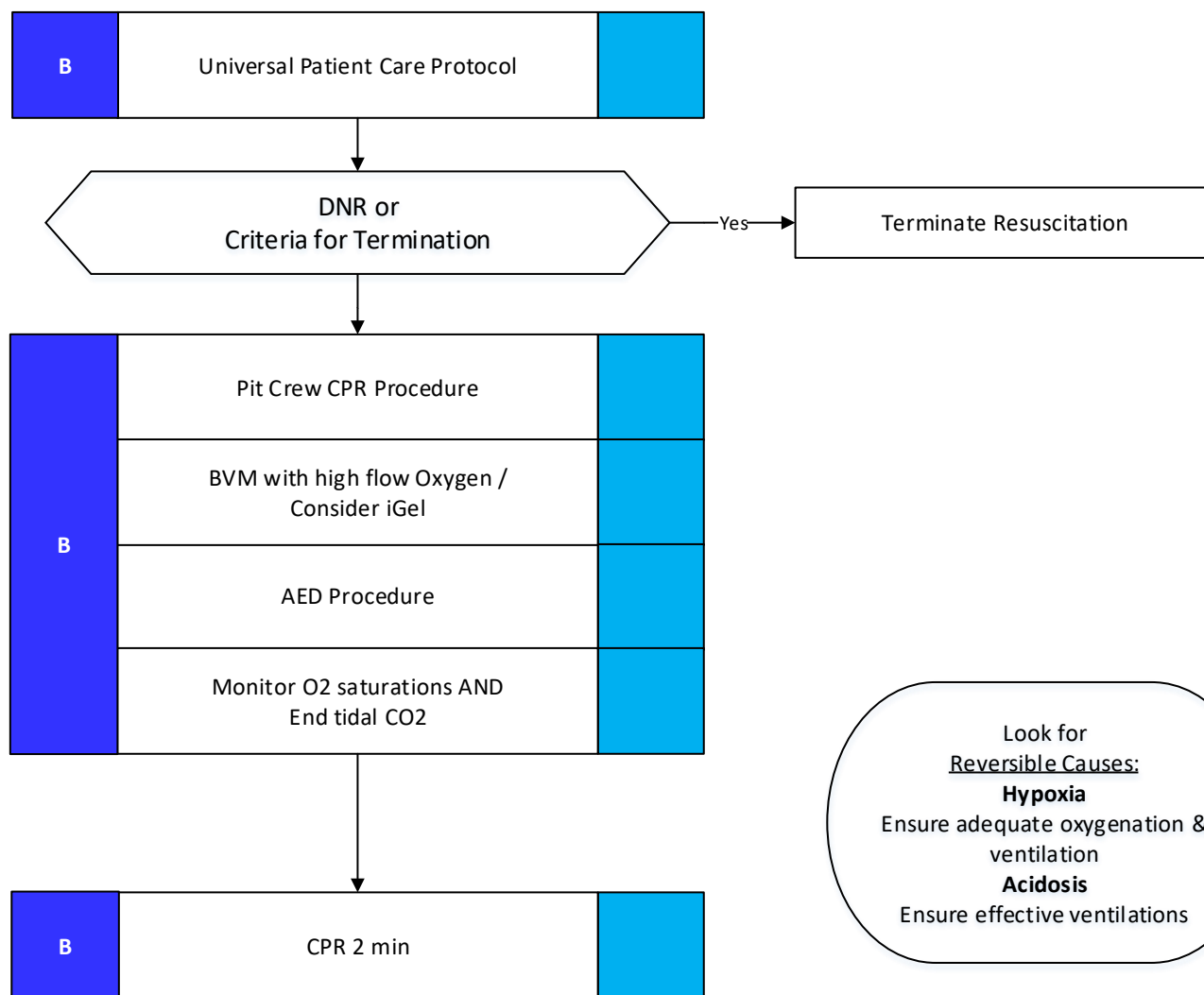
- Events leading to arrest
- Estimated downtime
- Existence of terminal illness
- DNR
- Unresponsive
- Abnormal breathing (agonal or gasping)

Key Information Continued:

- Apneic
- Pulseless
- Hypothermia
- Lividity
- Rigor

Differential:

- Medical vs, Trauma
- V Fib or Pulseless V Tach
- Asystole
- PEA

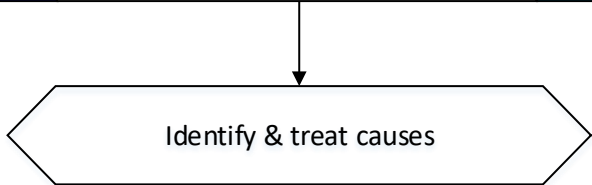


Adult Post Resuscitation

<p>Key Information:</p> <ul style="list-style-type: none"> Respiratory Arrest Cardiac Arrest 	<p>Key Information Continued:</p> <ul style="list-style-type: none"> Return of pulse 	<p>Differential:</p> <ul style="list-style-type: none"> Continue to address specific differentials (H's and T's) associated with the original dysrhythmia.
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Return of Spontaneous Circulation (ROSC)

B	Universal Patient Care Protocol	
	Optimize Airway	
	Maintain: SpO₂ = 94-99%	
	AED /Pads	
	Declare Resuscitation Alert	



- Look for Treatable causes:
- Hypoxia**
Ensure adequate oxygenation & ventilation
 - Hypovolemia**
 - Hypothermia**
Passive re-warming
 - Hypoglycemia**
Oral Glucose
 - Acidosis**
Ensure effective ventilations
 - Hyperkalemia**
 - Calcium Channel Blocker OD**
 - Tension pneumothorax**
 - Toxins**

Pediatric Post Resuscitation

Key Information:

- Respiratory Arrest
- Cardiac Arrest

Key Information Continued:

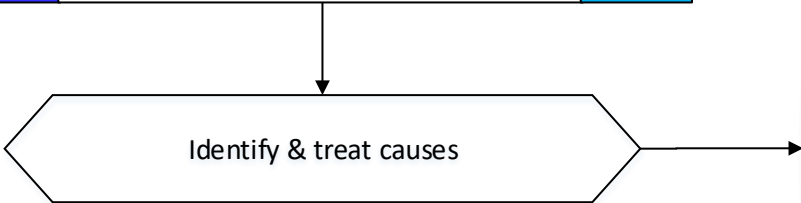
- Return of pulse

Differential:

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Return of Spontaneous Circulation (ROSC)

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	Maintain: SpO₂ = 94-99%	
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- Look for Treatable causes:
- Hypoxia**
 - Ensure adequate oxygenation & ventilation
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 - Hypoglycemia**
 - Oral Glucose
 - Acidosis**
 - Ensure effective ventilations
 - Hyperkalemia**
 - Calcium Channel Blocker OD**
 - Tension pneumothorax**
 - Toxins**

Target SBP = (age in years)x2+80

Adult Allergic Reaction

Key Information:

- Onset and location
- Medication history
- Food allergy/exposure
- Past history of reactions
- New clothing/soap/detergent
- Insect bite/sting
- Details of previous reactions
- Prescribed Epi-Pen/use?

Key Information Continued:

- Edema/voice changes
- Pruritis (itching) or Urticaria (hives)
- Coughing/wheezing/respiratory distress/stridor
- Chest or throat constriction
- Difficulty swallowing
- Shock/Hypotension
- Erythema (reddened skin)
- Facial or oral mucosal swelling
- Edema
- Nausea/Vomiting

Differential:

- Urticaria
- Anaphylaxis (systemic effect)
- Shock (vascular effect)
- Drug induced Angioedema
- Aspiration/Airway obstruction
- CHF
- Asthma or COPD
- Hyperventilation Syndrome

B

Universal Patient Care Protocol

Mild

Hives / rash only
No Respiratory distress

B

Diphenhydramine
25-50mg PO

Moderate

Mild signs & symptoms &
wheezing / stridor

B

Epinephrine 1:1000
0.3mg IM

Albuterol 2.5mg via
nebulizer repeat prn

Diphenhydramine
25-50mg PO

Severe

Severe Respiratory distress
and/or Hypotension

B

Epinephrine 1:1000
0.3mg IM

Albuterol 2.5mg via
nebulizer repeat prn

Diphenhydramine
25-50mg PO

No improvement

B

AED with pads

Consider CPAP
Start at 5cm H₂O pressure

No improvement

B

Epinephrine 1:1000
0.3mg IM repeat prn up to
0.9 total dose

- Use Epinephrine with caution in patients with increased HR and BP.
- Deliver Epinephrine IM deep in a large muscle mass, preferably the lateral thigh.
- The shorter the onset from exposure to symptoms, the more severe the reaction.

Pediatric Allergic Reaction

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- Medication history
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Differential:

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- Anaphylaxis (systemic effect)
- Shock (septic, metabolic, traumatic)
- Drug induced Angioedema
- Aspiration/Airway obstruction
- CHF
- Asthma or COPD
- Hyperventilation Syndrome

B

Universal Patient Care Protocol

Mild

Hives / rash only
No Respiratory distress

B

Diphenhydramine
1mg/kg PO

Moderate

Mild signs & symptoms &
wheezing / stridor

B

Epinephrine 1:1000
.01mg/kg IM

Albuterol 2.5mg via
nebulizer repeat prn

Diphenhydramine
1mg/kg PO

Severe

Severe Respiratory distress
and/or Hypotension

B

Epinephrine 1:1000
.01mg/kg IM

Albuterol 2.5mg via
nebulizer repeat prn

Diphenhydramine
1mg/kg PO

No improvement

B

AED with pads

Consider CPAP
Start at 5cm H₂O pressure

No improvement

B

Epinephrine 1:1000
.01mg/kg IM

Repeat prn to 3 total doses

- Use Epinephrine with caution in patients with increased HR and BP.
- Deliver Epinephrine IM deep in a large muscle mass, preferably the lateral thigh.
- The shorter the onset from exposure to symptoms, the more severe the reaction.

Behavioral Emergencies

Key Information:

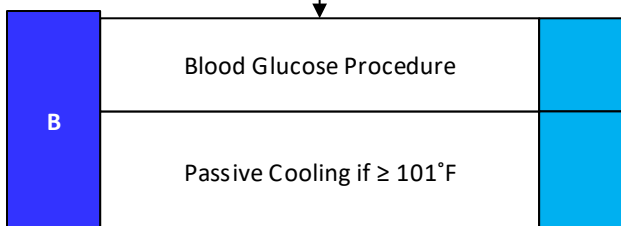
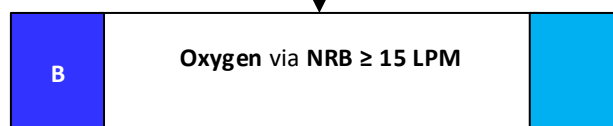
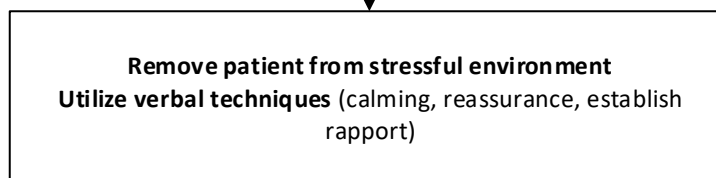
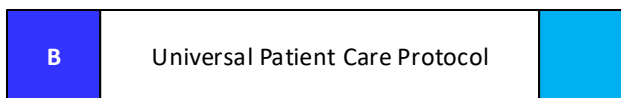
- Situational Crisis
- Psychiatric illnesses/ medications
- Injury to self or threat to others
- Medic alert tag
- Substance abuse/ overdose
- Diabetes
- PTSD
- Alzheimers
- Dementia

Key Information Continued:

- Anxiety/ agitation/ confusion
- Affect change/ hallucinations
- Delusional thoughts/ bizarre behavior
- Combative or violent
- Expression of suicidal/ homicidal thoughts
- Very hot to touch
- Super human strength

Differential:

- Hypoxia
- Intoxication
- Medication effect/ overdose
- Withdrawal syndrome
- Depression
- Bipolar (manic-depressive)
- Schizophrenia/ anxiety disorders
- See Altered Mental Status differential



Excited Delirium syndrome

Paranoia—disorientation
 extremely aggressive or violent—hallucinations—
 tachycardia—increased strength—hyperthermia—
 clearly a danger to self or others

Or

Agitated, belligerent, disruptive behavior with little or no response to verbal techniques

Await PD and EMT-P

Pearls:

- Assess for underlying pathology as soon as control of pt has been established. Always check BGL.
- All diagnostics should be applied after pt has calmed and presents no threat.

Pediatric Behavioral Emergencies

Key Information:

- Situational Crisis
- Psychiatric illnesses/ medications
- Injury to self or threat to others
- Medic alert tag
- Substance abuse/ overdose
- Diabetes
- PTSD

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Differential:

- Hypoxia
- Intoxication
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- Withdrawal syndrome
- Depression
- Bipolar (manic-depressive)
- Schizophrenia/ anxiety disorders
- See Altered Mental Status differential

B Universal Patient Care Protocol

Remove patient from stressful environment
Utilize verbal techniques (calming, reassurance, establish rapport)

B Oxygen via NRB ≥ 15 LPM

When patient calms

B Blood Glucose Procedure

B Passive Cooling if $\geq 101^\circ\text{F}$

Excited Delirium syndrome

Paranoia—disorientation
extremely aggressive or
violent—hallucinations—
tachycardia—increased
strength—hyperthermia—
clearly a danger to self or
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Or
Agitated, belligerent, disruptive
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Await PD and EMT-P

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Adult Diabetic

Key Information:

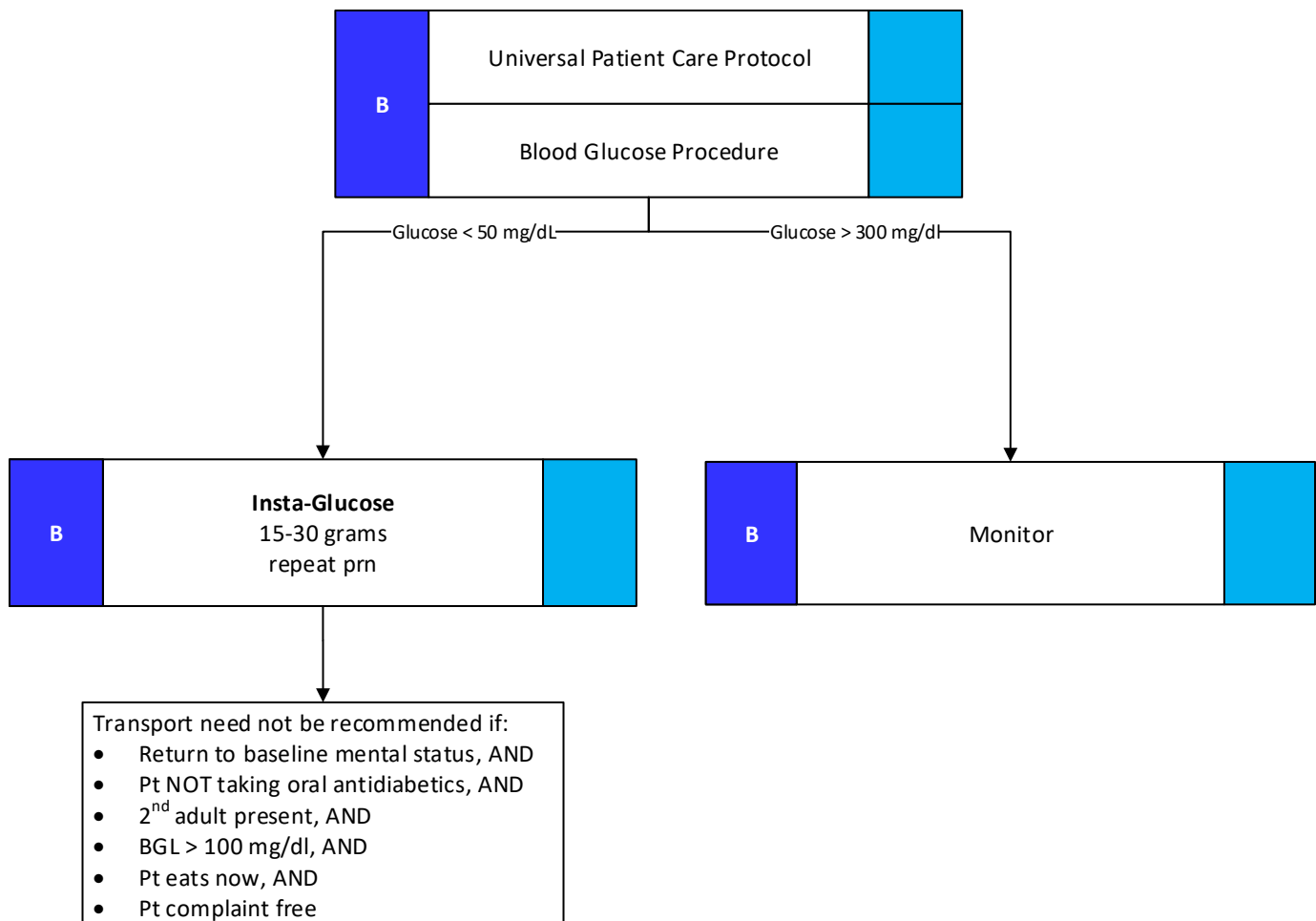
- Known diabetic, medic alert tag
- Drugs, drug paraphernalia
- Report of illicit drug use or toxic ingestion
- History of trauma
- Change in condition
- Syncope
- Insulin use or Oral Hypoglycemic medications
- Hyperventilation Syndrome
- Last meal

Key Information Continued:

- Decreased mental status
- Change in baseline mental status
- Bizarre behavior (combative, confused, disoriented)
- Hypoglycemia (cool, diaphoretic skin)
- Hyperglycemia (warm, dry skin; fruity breath;
- Kussmaul respirations
- Signs of dehydration
- Seizures
- Abdominal pain
- Nausea/ vomiting
- Weakness

Differential:

- Head trauma
- CNS (stroke, tumor, seizure, infection)
- Cardiac (MI, CHF), Dysrhythmias
- Infection
- Thyroid (hyper / hypo)
- Shock (septic, metabolic, traumatic)
- Toxicologic
- Acidosis / Alkalosis
- Environmental exposure
- Pulmonary (Hypoxia)
- Electrolyte abnormality
- Behavioral



Pediatric Diabetic

Key Information:

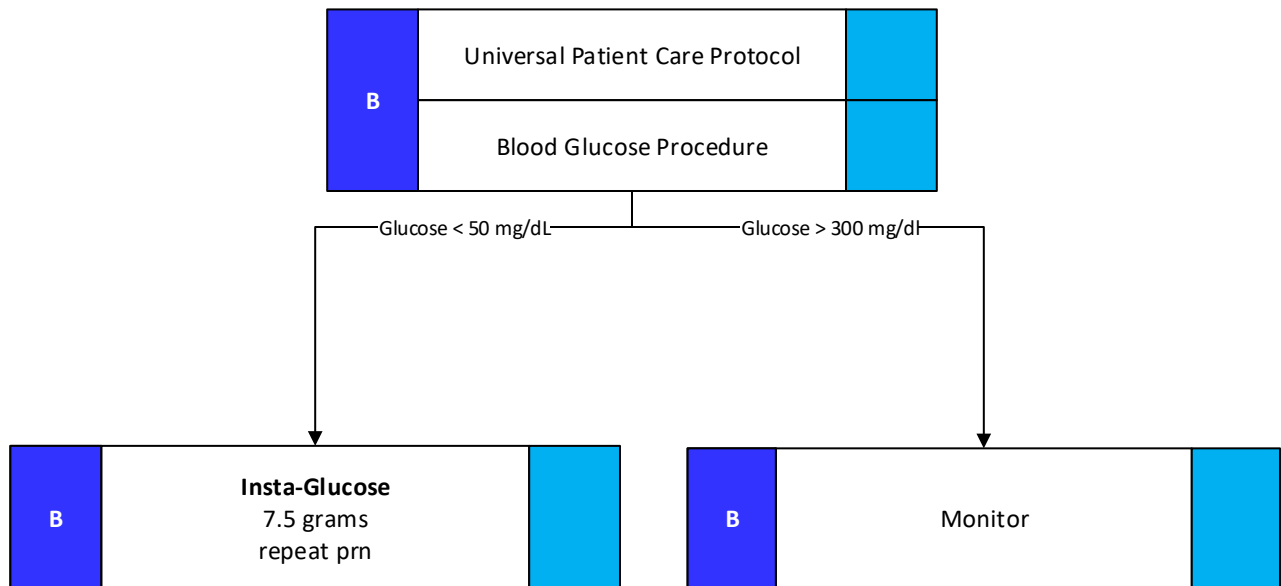
- Known diabetic, medic alert tag
- Family Hx of diabetes (mother had gestational diabetes while pregnant)
- Drugs, drug paraphernalia
- Report of illicit drug use or toxic ingestion
- History of trauma
- Change in condition
- Syncope
- Insulin use or Oral Hypoglycemic medications
- Hyperventilation Syndrome
- Last meal

Key Information Continued:

- Decreased mental status
- Change in baseline mental status
- Bizarre behavior (combative, confused, disoriented)
- Hypoglycemia (cool, diaphoretic skin)
- Hyperglycemia (warm, dry skin; fruity breath;
- Kussmaul resp; signs of dehydration)
- Seizures
- Abdominal pain
- Nausea/ vomiting
- Weakness

Differential:

- Head trauma
- CNS (stroke, tumor, seizure, infection)
- Cardiac (MI, CHF), Dysrhythmias
- Infection
- Thyroid (hyper / hypo)
- Shock (septic, metabolic, traumatic)
- Toxicologic
- Acidosis / Alkalosis
- Environmental exposure
- Pulmonary (Hypoxia)
- Electrolyte abnormality
- Behavioral



Pearls:

- Neonates can have normal blood glucose levels as low as 40 mg/ dl.

Adult Dialysis/ Renal Failure

Key Information:

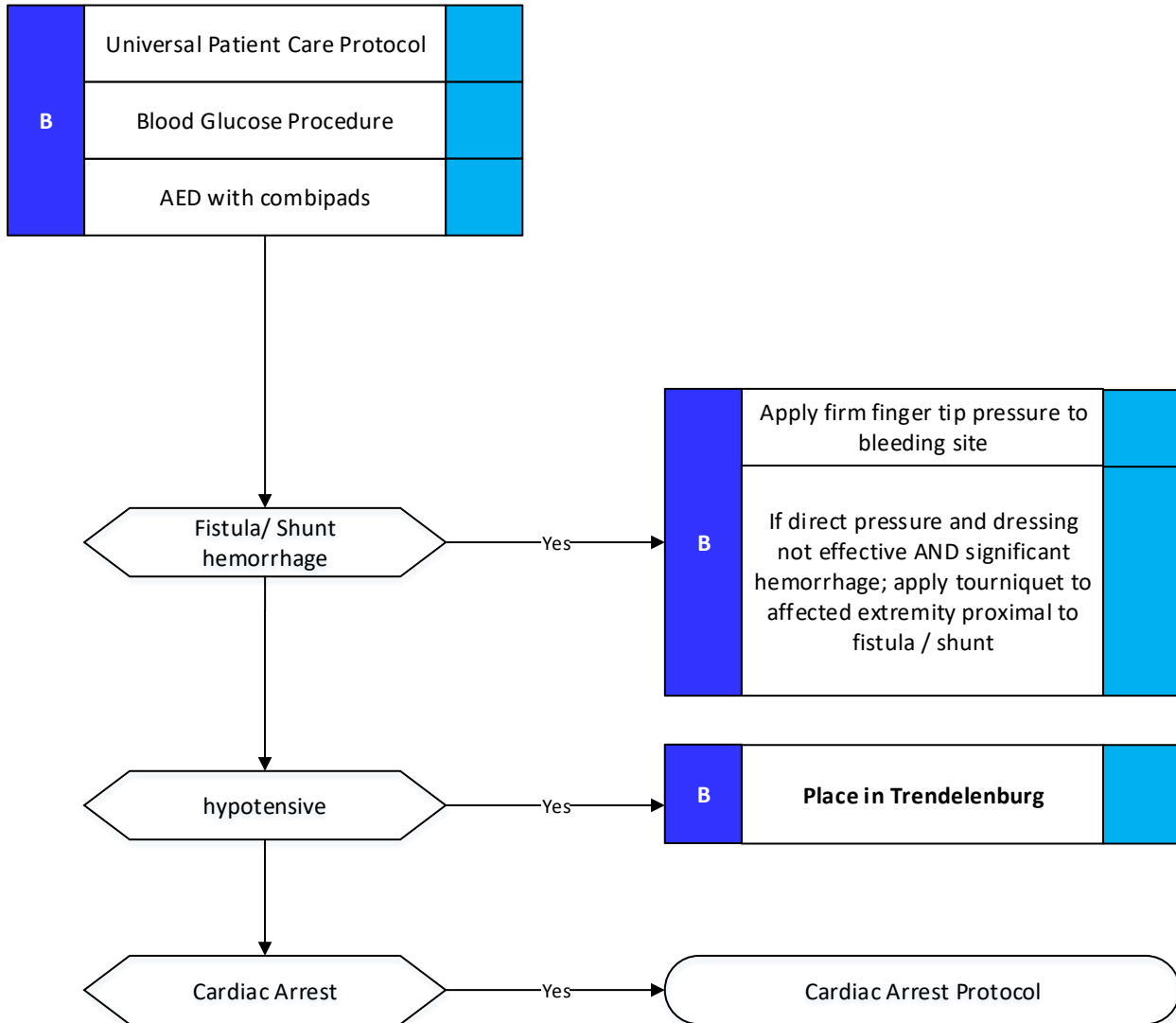
- Peritoneal or Hemodialysis
- Anemia
- Catheter access noted
- Shunt access noted
- Hyperkalemia

Key Information Continued:

- Hypotension
- Bleeding
- Fever
- Electrolyte Imbalance
- Nausea and/or vomiting
- Altered Mental Status
- Seizure
- Dysrhythmia

Differential:

- Congestive Heart failure
- Pericarditis
- Diabetic emergency
- Sepsis
- Cardiac tamponade



Pearls:

- Do not take Blood pressure or start IV in an extremity which has a active fistula/ shunt in place.

Pediatric Dialysis/ Renal Failure

Key Information:

- Peritoneal or Hemodialysis
- Anemia
- Catheter access noted
- Shunt access noted
- Hyperkalemia

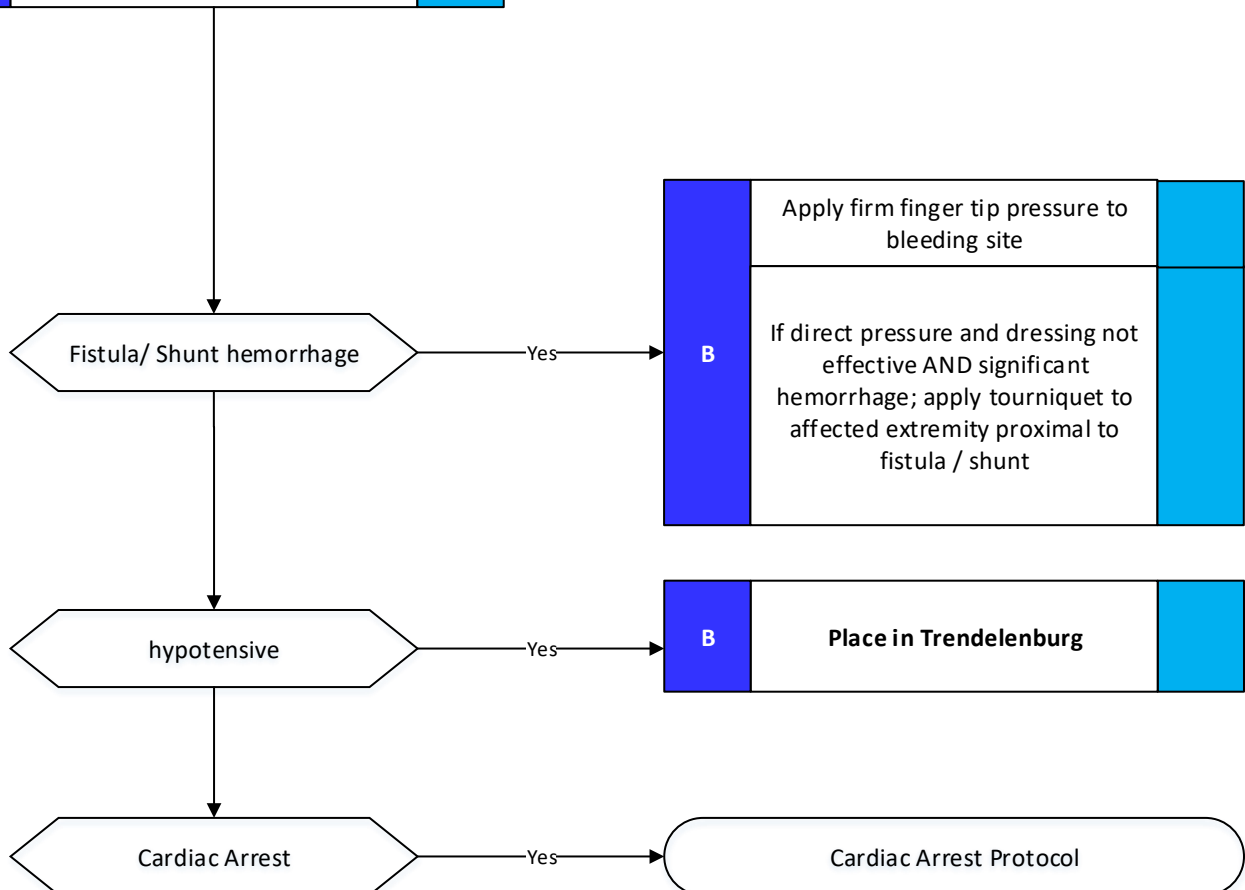
Key Information Continued:

- Hypotension
- Bleeding
- Fever
- Electrolyte Imbalance
- Nausea and/or vomiting
- Altered Mental Status
- Seizure
- Dysrhythmia

Differential:

- Congestive Heart failure
- Pericarditis
- Diabetic emergency
- Sepsis
- Cardiac tamponade

B	Universal Patient Care Protocol	
	Blood Glucose Procedure	
	AED with combipads	



Epistaxis

Key Information:

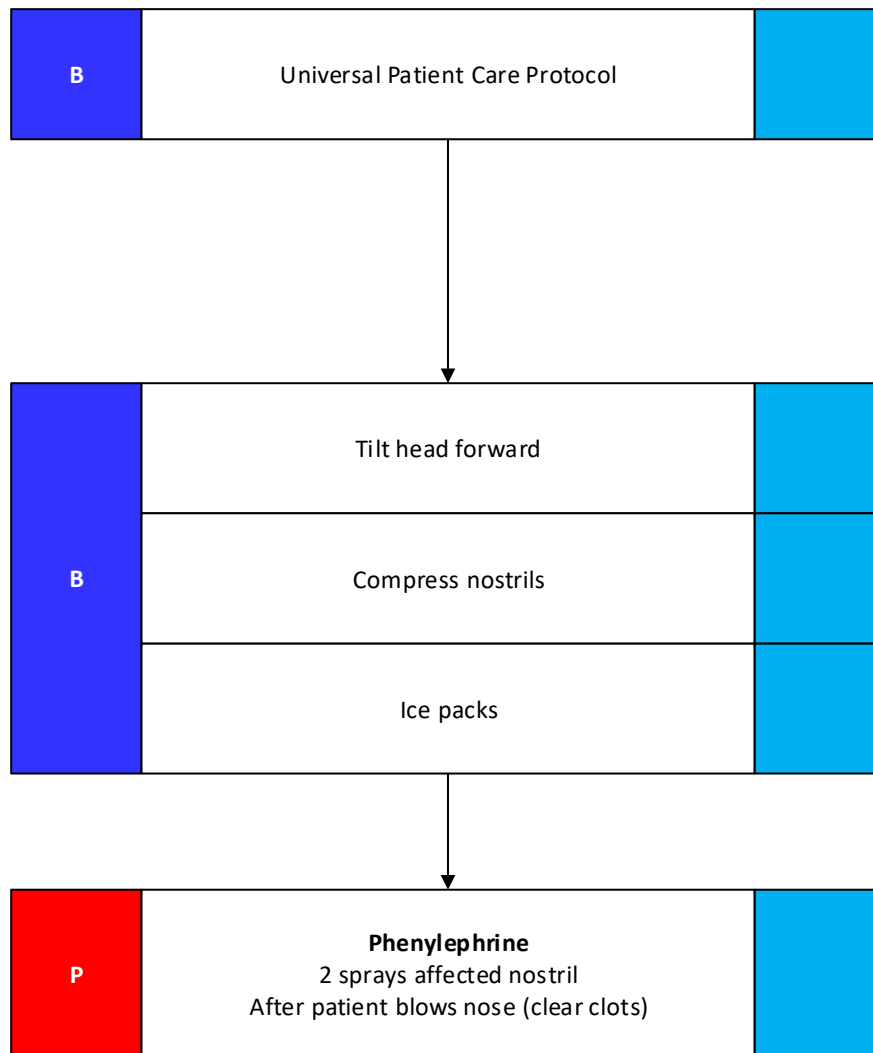
- Previous episodes
- Anticoagulants
- Trauma
- Duration of bleeding
- Quantity of bleeding

Key Information Continued:

- Pain
- Nausea
- Vomiting

Differential:

- Trauma
- Infection (viral URI or sinusitis)
- Allergic rhinitis
- Lesions (polyps, ulcers)
- Hypertension
-



Pediatric Epistaxis

Key Information:

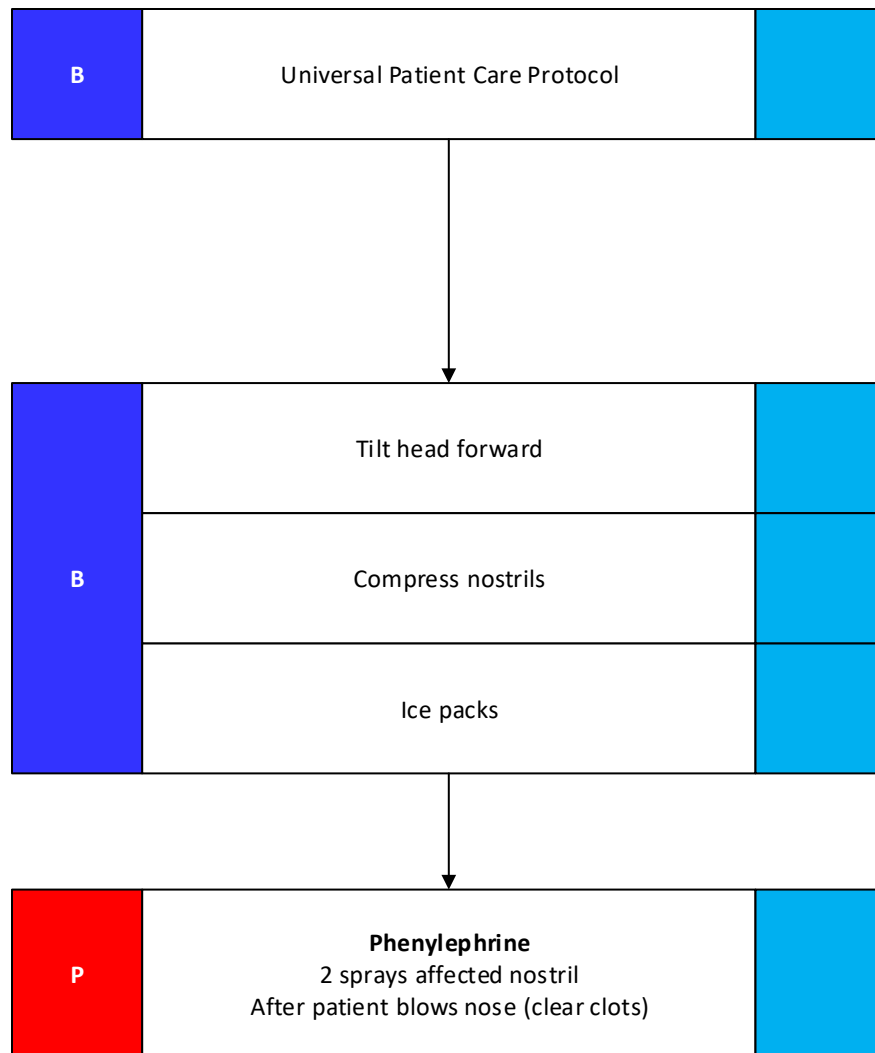
- Previous episodes
- Anticoagulants
- Trauma
- Duration of bleeding
- Quantity of bleeding

Key Information Continued:

- Pain
- Nausea
- Vomiting

Differential:

- Trauma
- Infection (viral URI or sinusitis)
- Allergic rhinitis
- Lesions (polyps, ulcers)
- Hypertension
-



Adult Fever

Key Information:

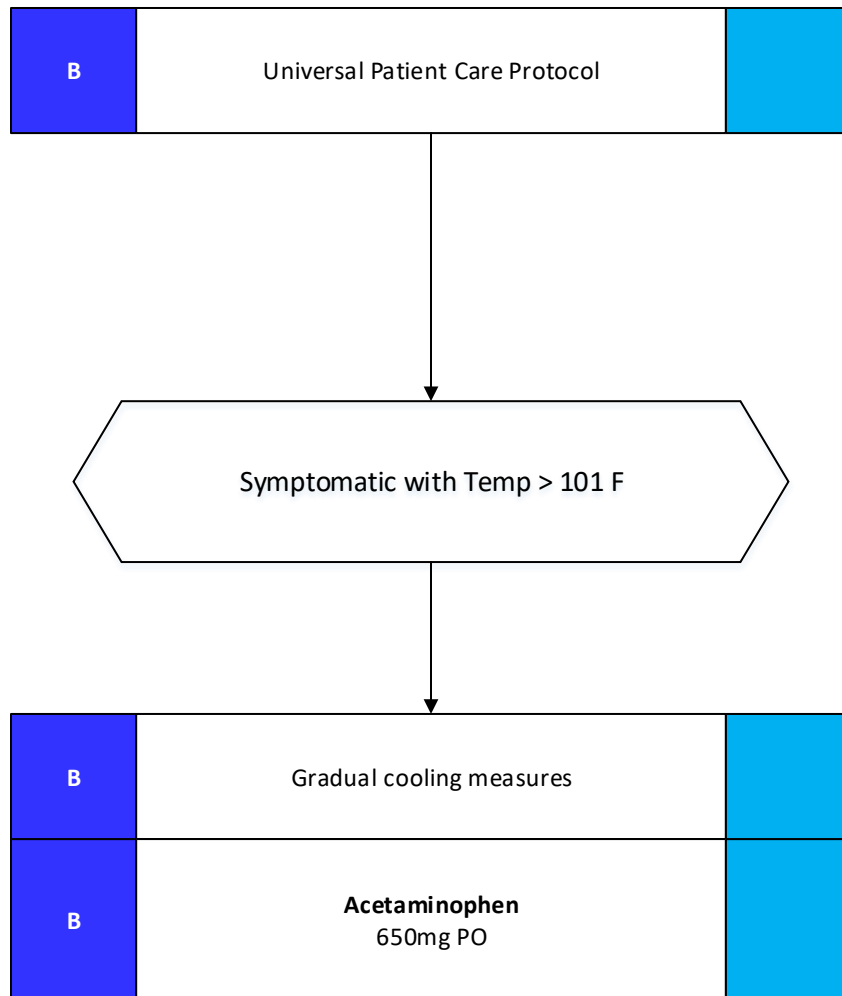
- Age
- Exposure to increased temperatures and/or humidity
- Time and duration of fever
- Poor PO intake or extreme exertion
- Fatigue and/or muscle cramping
- Last antipyretic administration

Key Information Continued:

- Mental status
- Skin condition & turgor
- Chills / Rigors
- Seizures
- Nausea/Vomiting
- Malaise, cough, chest pain, headache, dysuria, rash / petichiae, stiff neck

Differential:

- Fever
- Infection (viral, bacterial, etc)
- Dehydration
- Medications
- Hyperthyroidism (Thyroid Storm)
- Excited Delirium
- Heat exposure



Pediatric Fever

Key Information:

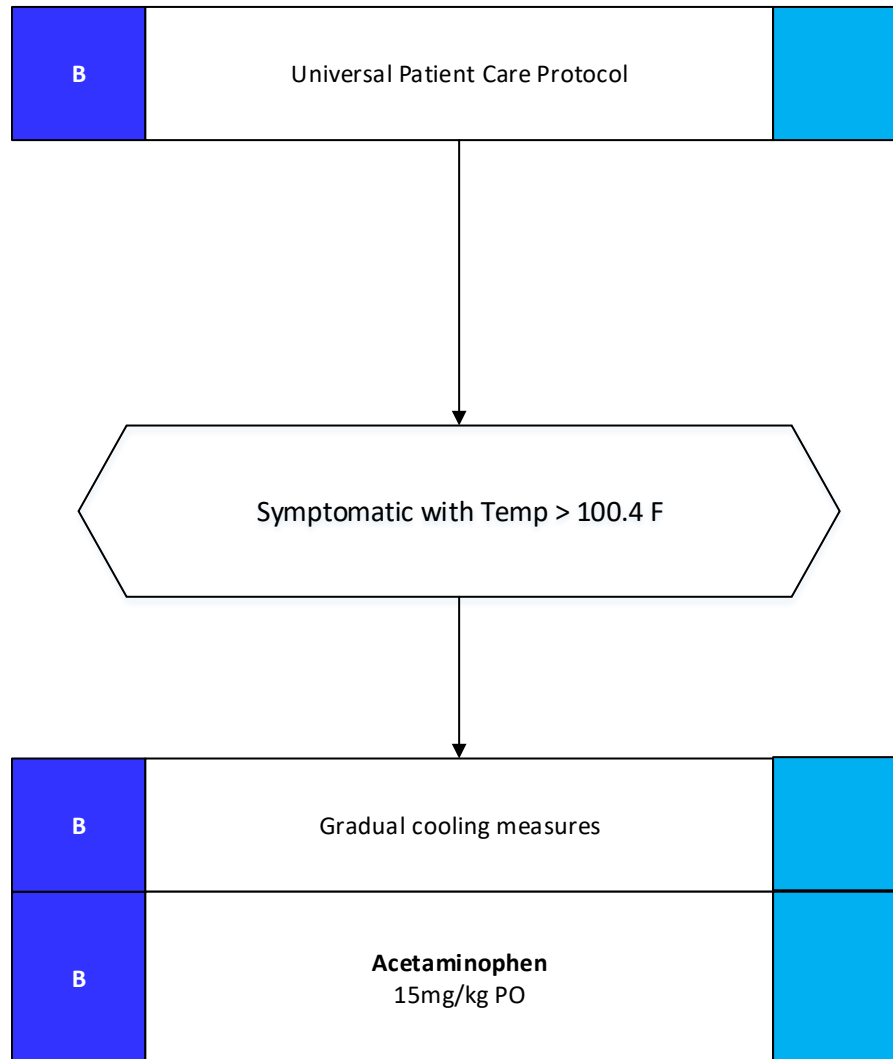
- Age
- High ambient temperature
- Contact with sick persons
- Time and duration of fever
- Poor PO intake or exertion
- Number of wet diapers
- Fatigue and/or muscle cramping
- Last antipyretic administration

Key Information Continued:

- Mental status
- Skin condition & turgor
- Chills / Rigors
- Seizures
- Nausea/Vomiting
- Malaise, cough, chest pain, headache, dysuria, rash / petichiae, stiff neck

Differential:

- Fever
- Infection (viral, bacterial, etc)
- Dehydration
- Medications
- Hyperthyroidism (Thyroid Storm)
- Excited Delirium
- Heat exposure



Adult Overdose / Toxic Exposure

Key Information:

- Substance exposed to
- Route of entry:
 - Injection
 - Inhalation
 - Ingestion
 - Absorption
- Duration of exposure
- Time since exposure
- Reason if known
 - Suicidal
 - Accidental
 - Criminal

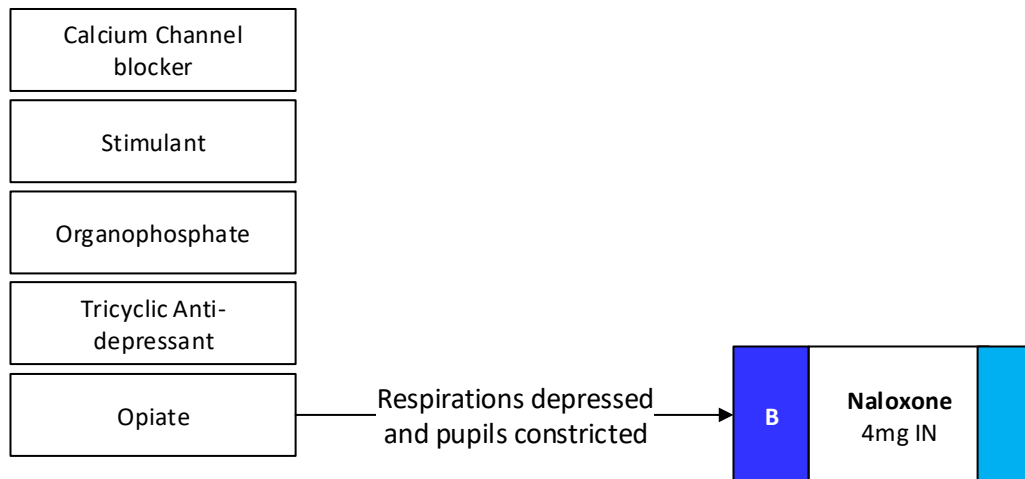
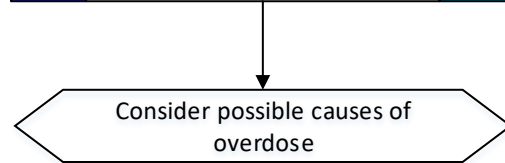
Key Information Continued:

- Treatment prior to arrival
- Secondary Device(s)
- Available medication(s) in home
- Decontamination performed
- Mental status changes
- Hypotension/ hypertension
- Decreased respiratory rate
- Tachycardia, dysrhythmias
- Seizures
- SLUDGEM
- DUMBBELLS

Differential:

- Stroke
- MI
- Asthma/COPD
- Other chemical weapon
- Biological weapon
- Overdose
- Food borne illness
- Airborne irritant (hydrogen sulfide, chlorine, etc)
- Tricyclic antidepressants
- Acetaminophen (Tylenol)
- Depressants
- Stimulants
- Anticholinergic
- Cardiac medications
- Solvents, alcohols, cleaning agents
- Insecticides (organophosphates)

B	Universal Patient Care Protocol	
	Blood Glucose Procedure	
	Place AED with combipads	
	Remove wet clothing Dry / warm patient	



Pediatric Overdose / Toxic Exposure

Key Information:

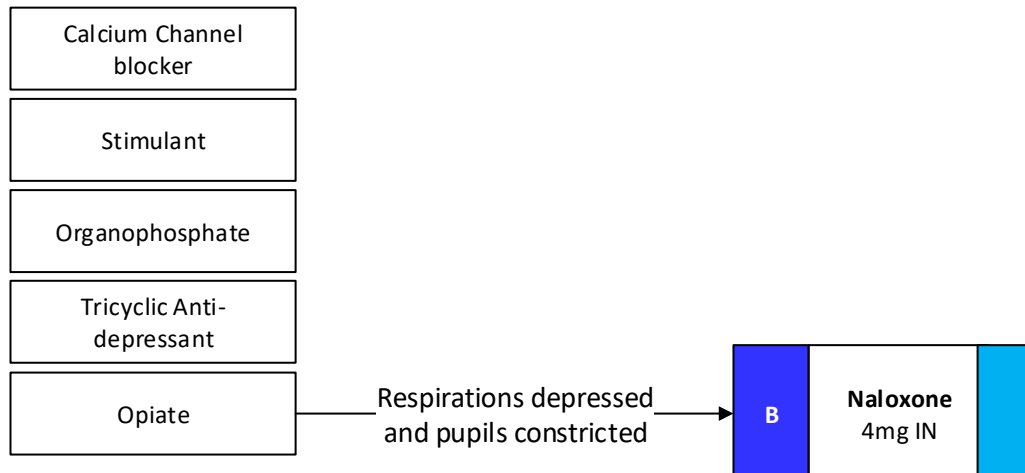
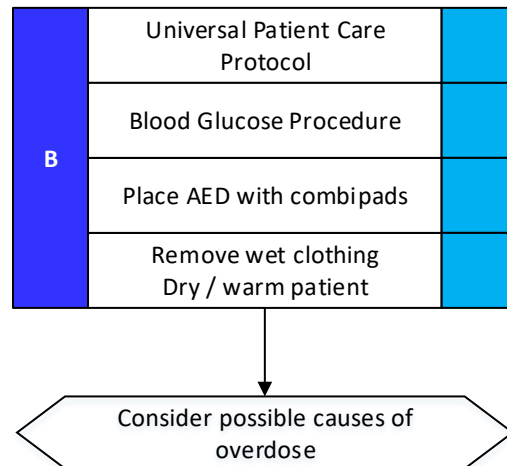
- Substance exposed to
- Route of entry:
 - Injection
 - Inhalation
 - Ingestion
 - Absorption
- Duration of exposure
- Time since exposure
- Reason if known
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 - Accidental
 - Criminal

Key Information Continued:

- Treatment prior to arrival
- Secondary Device(s)
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Pain Management

Key Information:

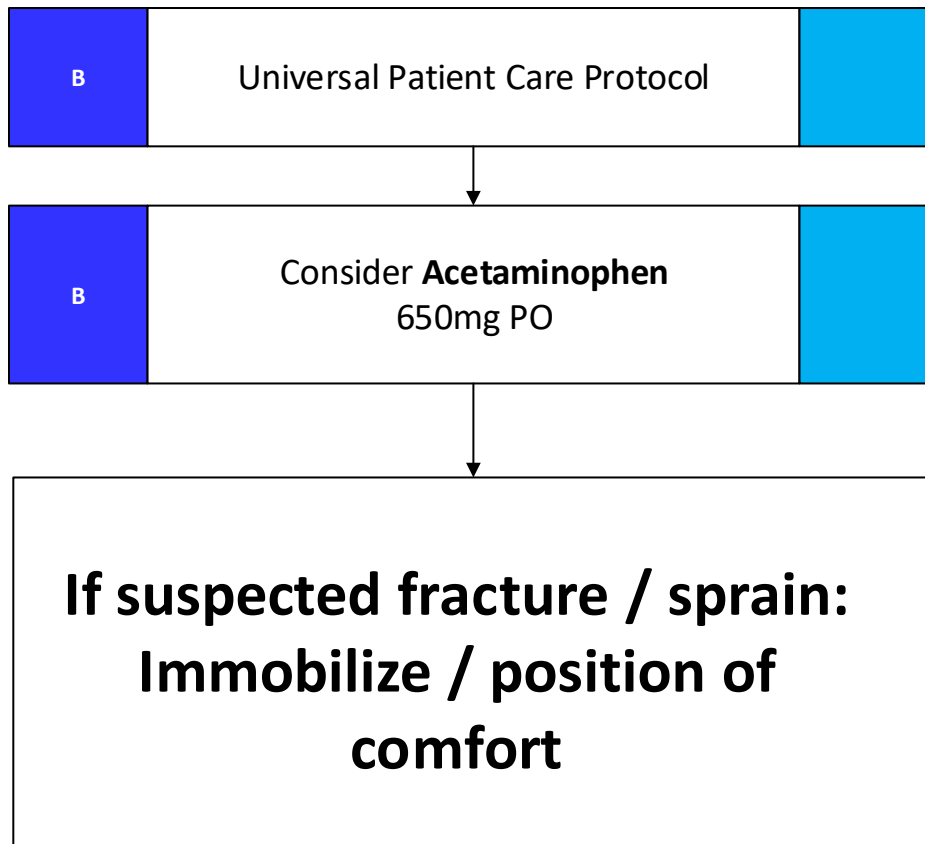
- Age
- Location
- Duration
- Severity
- Drug Allergies
- Medications taking prior to EMS arrival
- Past surgical history
- Traumatic Mechanism
- Fever
- Urinary Retention or incontinence
- Saddle parasthesia

Key Information Continued:

- Severity (pain scale)
- Quality
- Radiation
- Relation to movement, respiration
- Increased with palpation of area
- Pain (para-spinous or spinous process)
- Extremity weakness
- Shooting pain into an extremity
- Bowel/bladder dysfunction

Differential:

- Per specific protocol
- Musculoskeletal
- Visceral (abdominal)
- Cardiac
- Pleural/Respiratory
- Neurogenic
- Renal (colic)
- Muscle spasm/strain
- Herniated disc w/nerve compression
- Sciatica
- Spine Fracture
- Aneurysm
- Epidural abscess
- Kidney Stone



Pediatric Pain Management

Key Information:

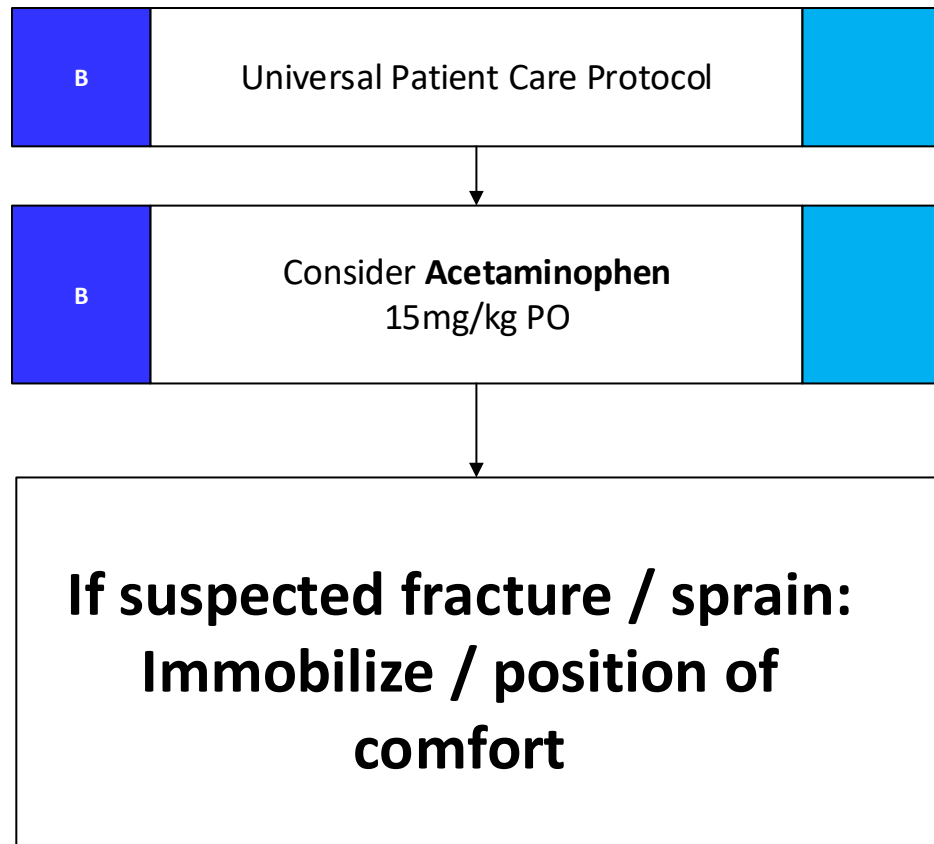
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- Location
- Duration
- Severity
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Differential:

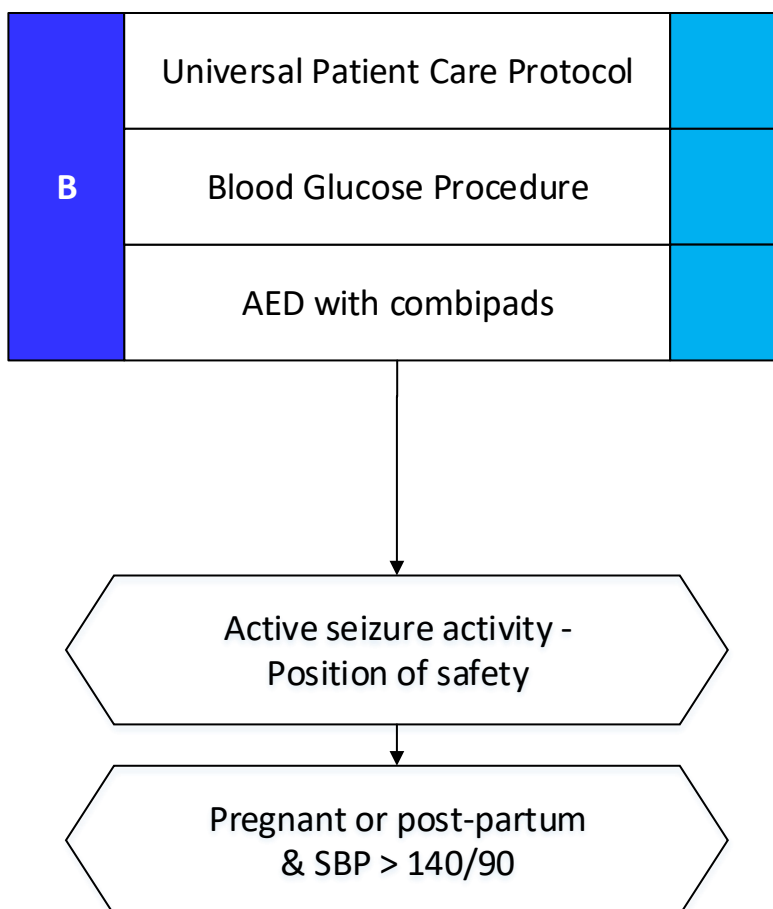
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- Musculoskeletal
- Visceral (abdominal)
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- Neurogenic
- Renal (colic)
- Muscle spasm/strain
- Herniated disc w/nerve compression
- Sciatica
- Spine Fracture
- Epidural abscess
- Kidney Stone



Never exceed 15mg/kg Acetaminophen

Adult Seizure

<u>Key Information:</u>	<u>Key Information Continued:</u>	<u>Differential:</u>
<ul style="list-style-type: none"> • Reported/witnessed seizure activity • Previous seizure history • Medical Alert Tag information • Seizure medications • History of: <ul style="list-style-type: none"> -Trauma -Diabetes -Pregnancy • Time of onset 	<ul style="list-style-type: none"> • Decreased mental status • Sleepiness • Incontinence • Observed seizure activity • Evidence of trauma • Unconsciousness • Number of Seizures • Fever • Alcohol/Drug usage • Bit tongue? • Incontinence? 	<ul style="list-style-type: none"> • CNS (Head Trauma) • Tumor • Metabolic, Hepatic, or Renal Failure • Hypoxia • Electrolyte abnormality (Na, Ca, Mg, K) • Drugs, Medications compliance • Infection/Fever • Alcohol withdrawal • Eclampsia • Stroke • Hyperthermia • Hypoglycemia



Pediatric Seizure

Key Information:

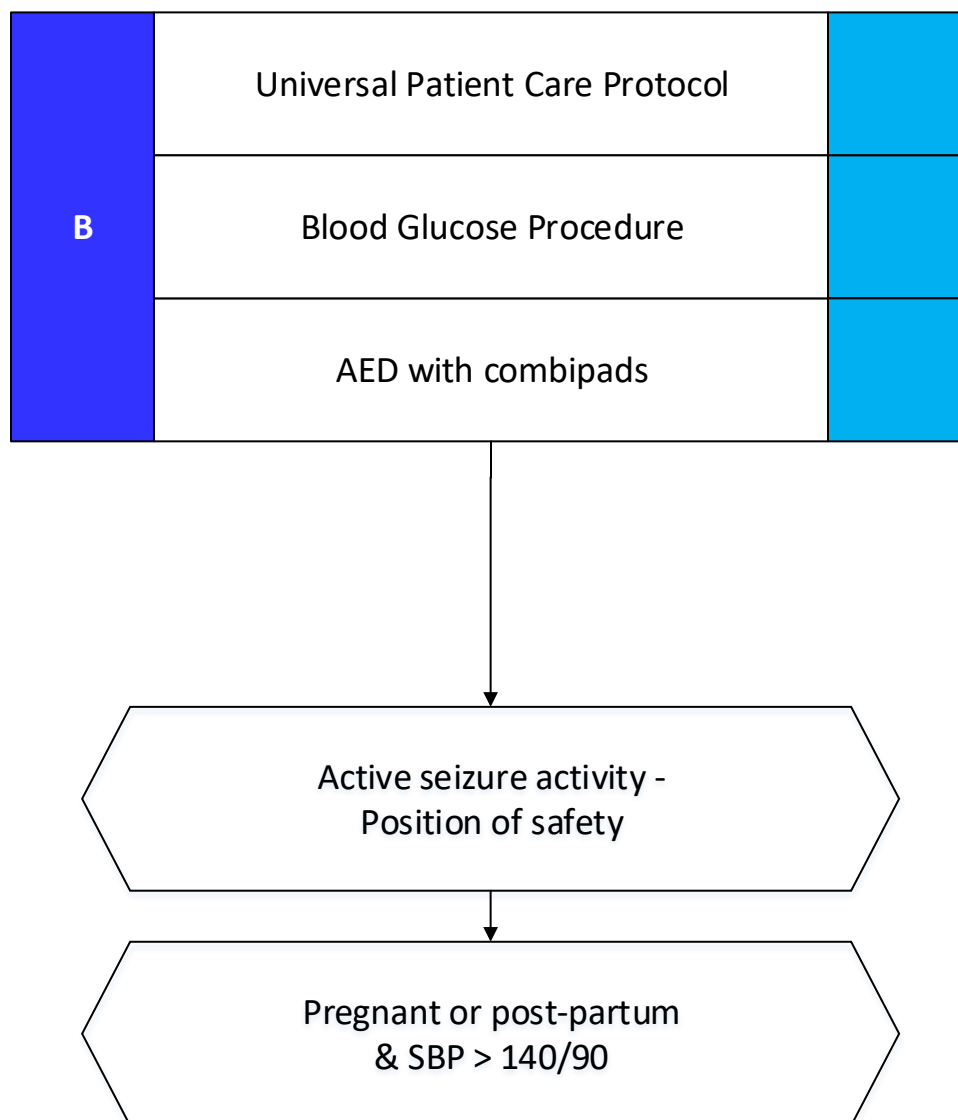
- Reported/witnessed seizure activity
- Previous seizure history
- Medical Alert Tag information
- Seizure medications
- History of:
 - Trauma
 - Diabetes
 - Pregnancy
- Time of onset
- Temperature

Key Information Continued:

- Decreased mental status
- Sleepiness
- Incontinence
- Observed seizure activity
- Evidence of trauma
- Unconsciousness
- Number of Seizures
- Alcohol/Drug usage
- Bit tongue?
- Incontinence?

Differential:

- CNS (Head Trauma)
- Tumor
- Metabolic, Hepatic, or Renal Failure
- Hypoxia
- Electrolyte abnormality (Na, Ca, Mg, K)
- Drugs, Medications compliance
- Infection/Fever
- Stroke
- Hyperthermia
- Hypoglycemia



Stroke / TIA

Key Information:

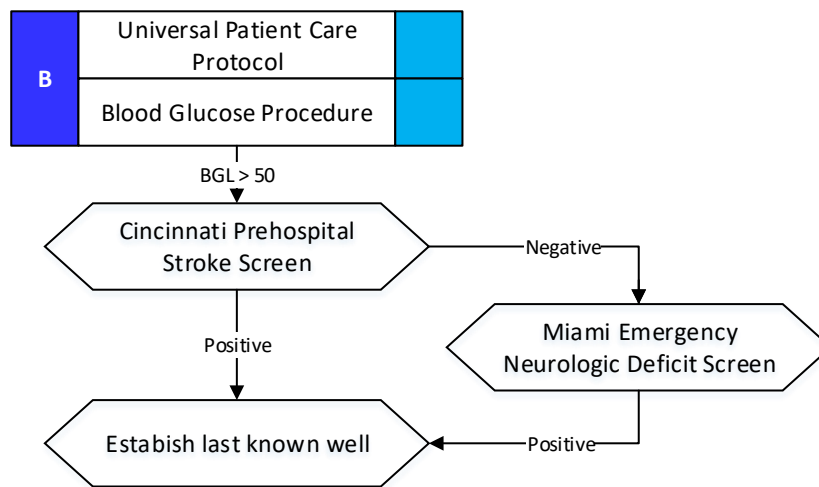
- Previous strokes or TIA's
- Previous cardiac or vascular surgery
- Atrial Fibrillation
- Medications (blood thinners)
- History of trauma
- DNR status
- Associated Diseases
 - -Diabetes
 - -HTN
 - -CAD

Key Information Continued:

- Altered Mental Status
- Weakness/ Paralysis
- Acute visual changes or other sensory loss
- Aphasia/ Dysarthria
- Syncope
- Vertigo/ Dizziness
- Vomiting
- Headache
- Seizures
- Respiratory pattern change
- Hypertension/hypotension
- Limb ataxia

Differential:

- TIA
- Seizure
- Hypoglycemia
- Hypoxia/Hypercarbia
- Stroke
- Tumor
- Trauma
- Todd's paralysis
- Bell's palsy
- Dialysis/ Renal Failure



Cincinnati Prehospital (below in gray) Miami Emergency Neurologic Deficit Screen

MENTAL STATUS

- Level of Consciousness (AVPU)
- Speech: "You can't teach an old dog new tricks"
- Questions (age, month)
- Commands (close, open eyes)

CRANIAL NERVES

- Facial Droop (show teeth or smile)
- Visual Fields (four quadrants)
- Horizontal Gaze (side to side)

LIMBS

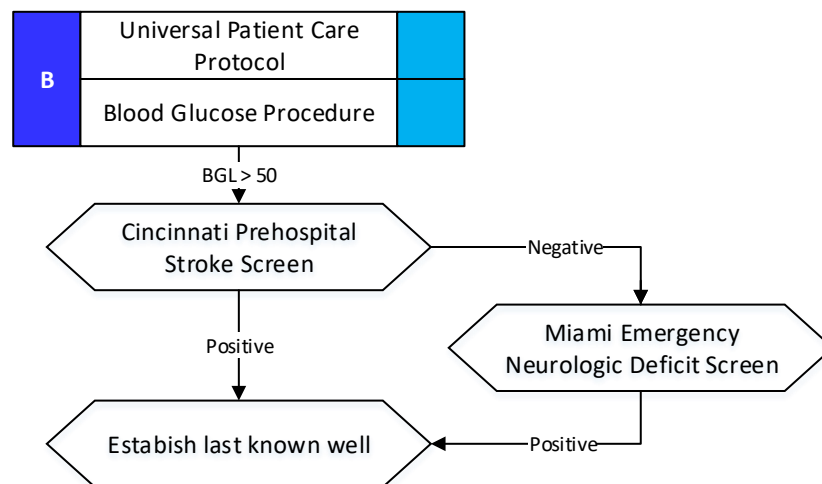
- Motor – Arm Drift (close eyes-hold out arms)
Leg Drift (open eyes-lift each leg separately)
- Sensory – Arm, Leg (close eyes & touch, pinch)
- Coordination – Arm, Leg (finger-nose, heel-shin)

Pearls:

- Whenever possible, a family member that knows patient medical history should ride with EMS crew, if not possible obtain cell phone number of family member who can provide the patient's medical history.
- Miami is screening tool above in white. Cincinnati is in gray.

Pediatric Stroke / TIA

<u>Key Information:</u>	<u>Key Information Continued:</u>	<u>Differential:</u>
<ul style="list-style-type: none"> • Previous strokes or TIA's • Previous cardiac or vascular surgery • Preganacy • Hx of Sickle Cell • Medications (blood thinners) • History of trauma • DNR status • Associated Diseases <ul style="list-style-type: none"> • -Diabetes • -HTN 	<ul style="list-style-type: none"> • Altered Mental Status • Weakness/ Paralysis • Acute visual changes or other sensory loss • Aphasia/ Dysarthria • Syncope • Vertigo/ Dizziness • Vomiting • Headache • Seizures • Respiratory pattern change • Hypertension/hypotension • Limb ataxia 	<ul style="list-style-type: none"> • TIA • Seizure • Hypoglycemia • Hypoxia/Hypercarbia • Stroke • Tumor • Trauma • Todd's paralysis • Bell's palsy • Dialysis/ Renal Failure



Cincinnati Prehospital (below in gray)
Miami Emergency Neurologic Deficit Screen

MENTAL STATUS

- Level of Consciousness (AVPU)
- Speech: "You can't teach an old dog new tricks"
- Questions (age, month)
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LIMBS

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 Leg Drift (open eyes-lift each leg separately)
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Pearls:

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- Miami is screening tool above in white. Cincinnati is in gray.

Syncope

<u>Key Information:</u>	<u>Key Information Continued:</u>	<u>Differential:</u>
<ul style="list-style-type: none"> • Occult blood loss (GI, ectopic) • Females <ul style="list-style-type: none"> -LMP -Vaginal bleeding • Fluid loss <ul style="list-style-type: none"> -Vomiting -Diarrhea • Chest pain/ palpitations • SOB • Past Medical History of Cardiac, Stroke, Seizure • New medications 	<ul style="list-style-type: none"> • Loss of consciousness with recovery • Lightheadedness or dizziness • Palpitations • Pulse irregularity • Hypotension 	<ul style="list-style-type: none"> • Vasovagal • Orthostatic hypotension • Cardiac syncope • Micturition/ Defecation syndrome • Psychiatric • Stroke • Hypoglycemia • Seizure • Shock • Toxicologic or Alcohol • PE • AAA

B	Universal Patient Care Protocol	
	Blood Glucose Procedure	
	Place Combipads	

Pediatric Syncope

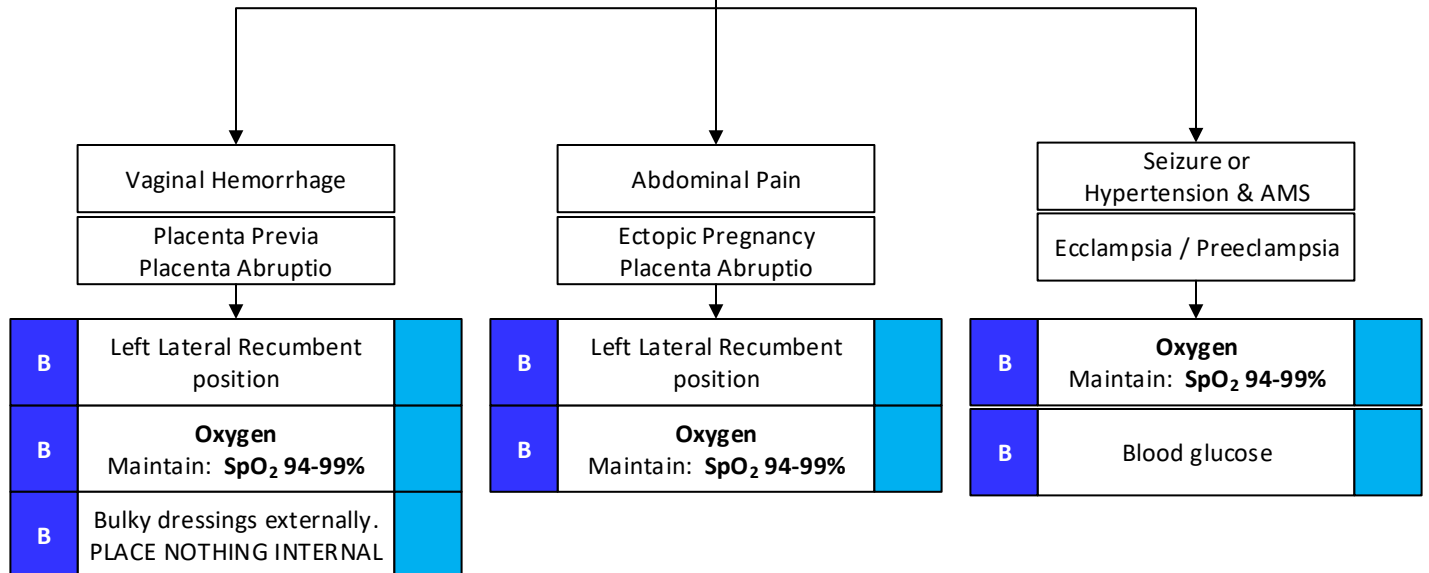
<u>Key Information:</u>	<u>Key Information Continued:</u>	<u>Differential:</u>
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B	Universal Patient Care Protocol	
	Blood Glucose Procedure	
	Place Combipads	

Obstetrical Emergency

<p>Key Information:</p> <ul style="list-style-type: none"> • Due date & gestational age • Rupture of membranes • Time/amount of vaginal bleeding • Sensation of fetal activity • Past medical and delivery history • Gravida/Para/Abortus status • Delivery Difficulties • Medications (maternal) • Maternal risk factors <ul style="list-style-type: none"> -Substance abuse -Smoking • Episodic vs constant Pain 	<p>Key Information Continued:</p> <ul style="list-style-type: none"> • Vaginal discharge or bleeding • Crowning or urge to push • Meconium • Assessment of patient during contraction • Hypertension • Seizures • Severe headache • Visual changes • Edema to hands and face • High risk pregnancy (known) 	<p>Differential:</p> <ul style="list-style-type: none"> • Maternal: <ul style="list-style-type: none"> -Pre-eclampsia/Eclampsia -Placenta previa -Abruptio placenta -Spontaneous abortion -Premature labor -Prolapsed cord • Newborn: <ul style="list-style-type: none"> Abnormal presentation -Buttock -Foot -Hand
--	---	--

B Universal Patient Care Protocol



• Eclamptic seizures may occur up to 2 months post partum. Always consider in pregnant/recently pregnant seizing patient.

Active Labor

Key Information:

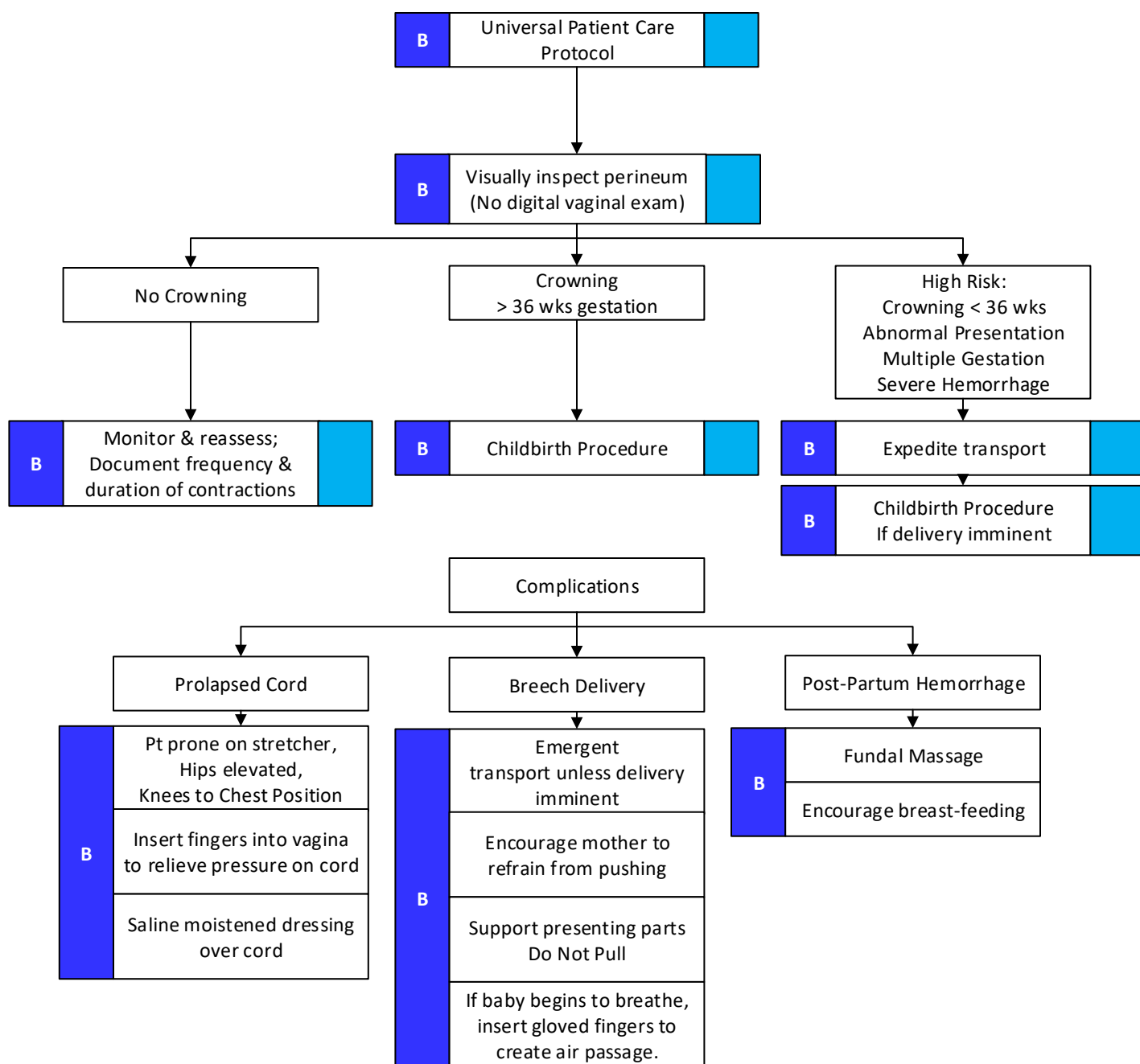
- Due date & gestational age
- Time contractions started & frequency
- Rupture of membranes
- Time/amount of any vaginal bleeding
- Sensation of fetal activity
- Past medical and delivery history
- Gravida/Para/Abortus status
- Medications (maternal)
- High risk pregnancy (known)
- Maternal risk factors
 - Substance abuse
 - Smoking

Key Information Continued:

- Maternal:
 - Episodic Pain
 - Vaginal discharge or bleeding
 - Crowning or urge to push
 - Meconium

Differential:

- Breech presentation
- Prolapsed Cord
- Placenta Previa
- Abruptio Placenta
- Premature Labor



Neonatal Resuscitation

Key Information:

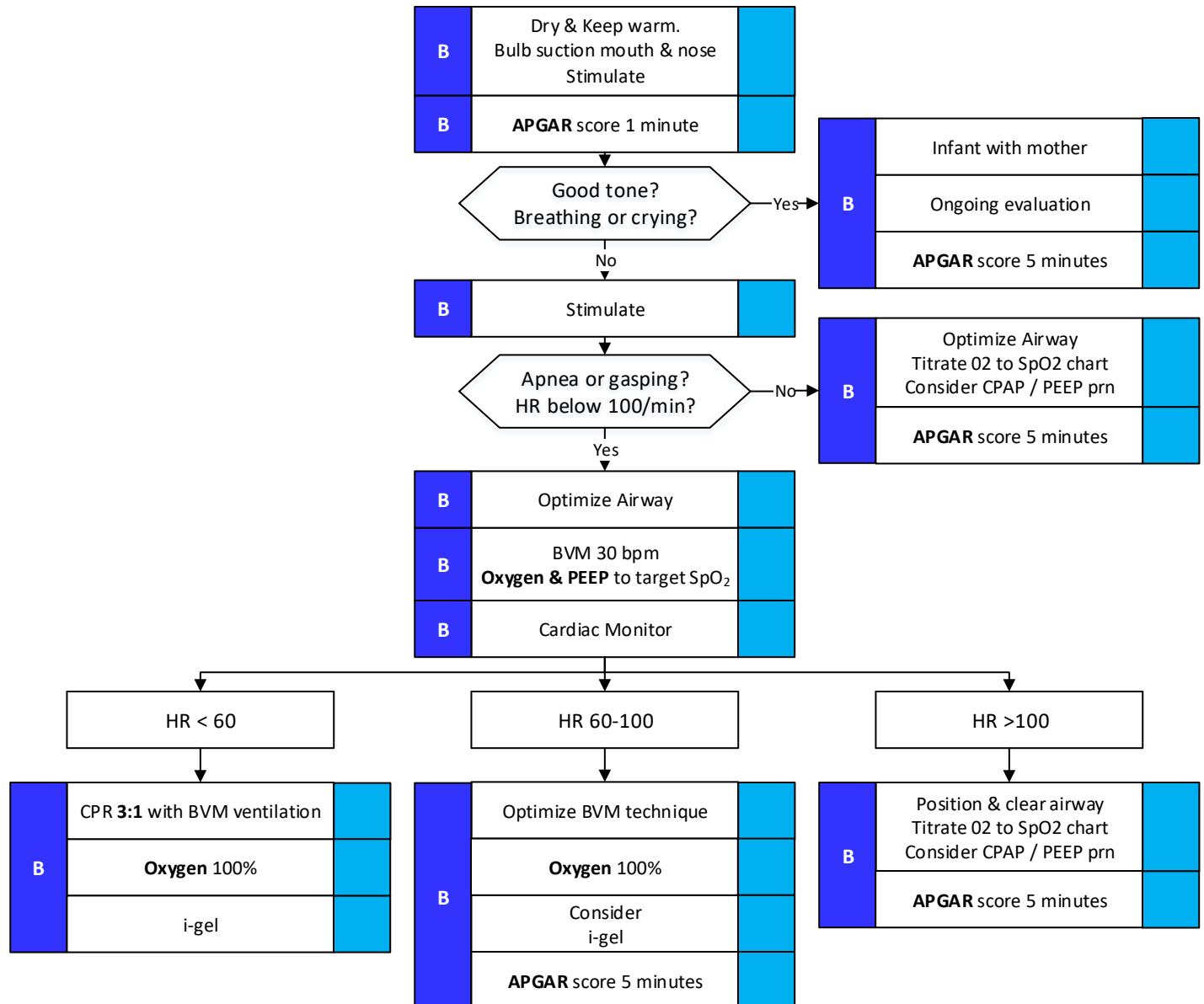
- Due date & gestational age
- Multiple gestation
- Meconium
- Delivery difficulties
- Congenital disease
- Medications (maternal)
- Maternal risk factors
 - Substance abuse
 - Smoking

Key Information Continued:

- Respiratory Distress
- Peripheral cyanosis or mottling
- Central cyanosis (abnormal)
- Altered level of responsiveness
- Bradycardia

Differential:










- Airway secretions
- Respiratory drive
- Infection
- Maternal med effect
- Hypovolemia
- Hypoglycemia
- Congenital Heart Disease
- Hypothermia



Neonatal Resuscitation

APGAR

Test Scoring

	Score 0	Score 1	Score 2
A ppearance	 Blue all over	 Blue only at extremities	 No blue coloration
P ulse	No pulse	<100 beats/min.	>100 beats/min.
G rimace	 No response to stimulation	 Grimace or feeble cry when stimulated	 Sneezing, coughing, or pulling away when stimulated
A ctivity	 No movement	 Some movement	 Active movement
R espiration	No breathing	Weak, slow, or irregular breathing	Strong cry

Targeted Preductal SpO₂ After Birth

1 min	60%-65%
2 min	65%-70%
3 min	70%-75%
4 min	75%-80%
5 min	80%-85%
10 min	85%-95%

Blood Glucose Assessment

B

EMT

Clinical Indications:

- Any patient with an altered mental status
- Patients with metabolic or endocrine disorders, and presenting with non-specific complaints
- Bradycardia or hypothermia in infants

Procedure:

1. Gather and prepare equipment.
2. Blood samples for performing glucose analysis may be obtained either through a finger stick (capillary) or from IV catheter (venous). Aseptically prepare the skin site.
3. Remove a new test strip from the vial.
4. Insert the test strip into the slot on the meter.
5. Ensure cap is secure tightly to strip container after use.
6. The meter should automatically power on.
7. When the blood drop symbol flashes you are ready to perform a test.
8. Obtain a drop of blood
9. With the strip in the meter, touch and hold the drop of blood to the edge of the strip. The blood will be drawn into the strip automatically.
10. When enough blood has been obtained from the strip a box will rotate on the screen to let you know the machine is performing the test.
11. The blood glucose result is displayed on the meter.
12. Remove the test strip and dispose of in a biohazard container.
13. Dispose of the lancet (if used) in a sharps container.
14. Turn the meter off.
15. Document the glucometer reading and treat the patient accordingly.
16. Repeat glucose analysis as indicated for re-assessment after treatment, if required.

BVM Management

B

EMT

Indications:

- Patient requires respiratory/ventilatory support

Storage in Airway Kit

Bag-Valve-Mask should be stored fully assembled with PEEP valve port attachment, EtCO₂ filter line, and mask. This should allow more rapid deployment of the device when needed. A PEEP valve should be stored with the device, and perhaps attached but set to ZEEP (Zero End Expiratory Pressure; PEEP = 0) for storage. A right angle adjunct (flexible or rigid) should also be stored with the BVM.

Procedure

1. Place the patient in the ear to sternal notch positioning, with the neck flexed and head extended.
2. Place oral and nasal airways as indicated yet not contraindicated. (One oral airway and two nasal airways preferable.)
3. Separate the mask from the assembly above and place it on the patient's face. The mask side goes to the patient's face.
4. Create an effective mask seal with a two-handed, thumbs forward technique, using the fingers to pull the jaw anterior to the maxilla (jaw thrust) and thus into the mask. This naturally maintains good head and neck positioning.
5. Have an assistant attach the bag assembly and squeeze the bag as necessary, with slow breaths and only until chest rise is seen.
6. Utilize PEEP valve per protocol.
7. Switch the face mask for an appropriately sized and placed laryngeal mask airway (LMA/igel) as soon as possible. An igel is biased to oxygenate and ventilate the respiratory system only, where a face mask naturally oxygenates and ventilates both the respiratory and gastric systems.
8. Be certain that the bag assembly is connected to oxygen flowing at an appropriate rate. A nasal cannula should be placed under the face mask as soon as possible to augment oxygenation.

Direct Vascular Occlusion

B

EMT

Clinical Indications:

- Uncontrolled external hemorrhage not amenable to tourniquet

Procedure:

1. Examine wound and identify the specific point of bleeding. This may require momentarily wiping away excess blood.
2. Occlude the specific point of bleeding with your finger(s).
3. Lifting the aforementioned finger(s) momentarily, use your other hand to pack gauze directly over the source of the bleeding. (Gauze impregnated with a hemostatic agent is preferable for this, when available.)
4. This should be repeated piece by piece or inch by inch to maximize use of the gauze, maximize occlusion of the vessel, and minimize the surface area over which the force is applied while remaining effective.
5. Pack the entire package of hemostatic gauze (if available) into the wound, and apply 2-3 minutes of direct pressure to set the dressing.
6. (Should the dressing become fully saturated or active bleeding resume, remove it and repack using steps 1-5 again.)
7. Use an elastic bandage to wrap the dressing.

i-GEL Airway Device

B

EMT

Clinical Indications:

- Unsecured airway.

Contra-indications:

- Patients who are conscious or who have an intact gag reflex.
- Trismus (lockjaw).
- Limited mouth opening, retropharyngeal abscess, epiglottitis, trauma or mass. (relative)
- Do not leave the device in place for more than 4 hours.

Notes / Precautions:

- The patient should always be in the 'sniffing-the-morning air' position prior to insertion with the assistant helping to open the patient's mouth, unless head/neck movements are considered inadvisable or are contraindicated.
- The leading edge of the i-gel O2's tip must follow the curvature of the patient's hard palate upon insertion.
- After insertion, i-gel O2 may be secured using twill tape with clove hitch, adhesive tape maxilla to maxilla, or Thomas device.
- High airway pressures may divert gas either to the stomach or to the atmosphere.
- During transition to spontaneous ventilation; airway manipulations, sedation, other adjuncts or methods may be needed to maintain airway patency.
- Do not use excessive force to insert the device or suction tube.

Procedure:

1. Use appropriate PPE.
2. Prepare, position and oxygenate the patient.
3. Choose the appropriate i-gel airway based on the patients ideal body weight or height.
4. Place the securing device behind the patients head in preparation to secure the i-Gel airway.
5. Lubricate distal tip, anterior, posterior, lateral and medial aspects with water soluble jelly.
6. Grasp the lubricated i-gel firmly along the integral bite block. Position the device so that the i-gel cuff outlet is facing towards the chin of the patient.
7. The patient should be in a "sniffing" position with head extended and neck flexed unless contraindicated. The chin should be gently distracted prior to insertion
8. Introduce the leading soft tip into the mouth of the patient in a direction toward the hard palate .
9. Glide the device downwards and backwards along the hard palate with a continuous but gentle push until a definitive resistance is felt.
 - a. If resistance or difficulty is met, regress i-gel airway partially and rotate 90° counterclockwise. Re-insert until resistance is met(hypopharynx), then rotate 90° clockwise and insert until definitive resistance is met. Settle into place.
10. Confirm the patient's incisors are resting on the integral bite block and secure in place
11. Apply EtCO₂ device if available.
12. Confirm proper position by auscultation, chest movement.
13. Following successful placement of the i-gel airway an appropriately sized cervical collar may be applied for stability. In the event a C-collar will not fit, manual inline stabilization may be substituted and if transported; blankets, towels and tape should be used appropriately to restrict motion of the head / neck.
14. Continue assessment and documentation per Airway protocol and Documentation of Patient Care report standard .

B

EMT

Clinical Indications:

- Patient in cardiac arrest

Contra-indications:

- Patients not in cardiac arrest

Notes / Precautions:

- Focus is on:
 - a. Minimally interrupted compressions
 - b. Appropriate depth and quality of compressions
 - c. Consider compressor fatigue and change compressors every 2 minutes
 - d. Team approach
- Infants and small children may require modification of the procedure due to size

Goals:

1. First arriving providers:
2. Establish prior to arriving at patient's side, the following responsibilities:
 - 1. Chest Compressor 1**
 1. Assesses Responsiveness & Pulse
 2. Initiates Compressions if unresponsive with no pulse
 - a. rate of 100-120 bpm
 - b. depth of at least 2" in adults and children
 - c. depth of at least 1.5" in infants
 - d. 1/3rd the depth of the chest wall in children and infants
 - e. allows full chest re-coil
 - f. minimizes interruptions in chest compressions
 - g. rotates out at least every two (2) minutes or sooner if fatigue occurs
 - 2. Chest Compressor 2**
 1. Applies AED / monitor
 2. Switches with Position 1 above
 3. Ventilates with BVM during off cycle. See BVM Management.
 - 3. Airway Operator**
 1. Manages airway
 - a. Initiates ideal airway positioning
 - b. For BLS airway, inserts adjuncts and holds face mask seal
 - c. Inserts advanced airway
 - d. Suctions prn
 - e. Coordinates ventilation efforts with off-cycle compressor
 - 4. Team Lead**
 1. communicates/interfaces with providers performing CPR
 2. operates AED / monitor
 3. makes all patient treatment decisions
 4. coordinates next compressors
 - 5. Code Recorder**
 1. Uses time keeping device to keep team on track
 2. Announces clearly and loudly two (2) minute time periods
 3. Summarizes treatment provided at the discretion of the team leader

Procedure:

1. Assess the patient's level of responsiveness (touch and talk, shake and shout).
2. If no response assess for responsiveness, movement, breathing, and pulse (carotid for adults and children, brachial for infants)-no more than 10 seconds.
3. If no pulse, begin chest compressions at 100-120 per minute. **Chest compressions should be provided in an uninterrupted manner. Only interrupt at 2 minute intervals for analysis of rhythm.**
4. Provide 10 breaths per minute with the BVM.
5. Document the time and procedure in the Patient Care Report (PCR).

Age	Location	Hand Position	Depth	Rate / Ratio
Neonate (birth – 30 days)	Over sternum 2-3 finger breadths below inter mammary line (lower half of the sternum)	Thumb encircling technique	1/3 the anterior / posterior depth of the chest wall	120/minute 3:1 ratio
Infant 30 days to 12 months	Over sternum 2-3 finger breadths below inter mammary line (lower half of the sternum)	Two (2) fingers for one (1) rescuer or Thumb encircling technique for two (2) rescuers	1/3 the anterior / posterior depth of the chest wall or at least 1.5"	100-120/minute 30:2 for one (1) rescuer 15:2 for two (2) rescuers
Child 1 year of age to the onset of puberty or adolescence	Over sternum Between the nipples (lower half of the sternum)	Heel of one or two (2) hands)	1/3 the anterior / posterior depth of the chest wall or at least 2"	100-120/minute 30:2 for one (1) rescuer 15:2 for two (2) rescuers
Adult	Over sternum Between the nipples (lower half of the sternum)	Two (2) hands heel and interlocking	2-2.4"	100-120/minute 30:2 for one (1) or two (2) rescuers

Tourniquet

B

EMT

Clinical Indications:

- Life threatening extremity hemorrhage that can not be controlled by other means.
- Life threatening condition(s) that require immediate attention and significant extremity hemorrhage where the use of a tourniquet is more expedient than standard hemorrhage control.
- Uncontrolled bleeding from a medical catheter, such as a dialysis shunt.

Contra-indications:

- Proximal extremity location where tourniquet application is not practical
- Bleeding is well controlled by other means

Notes / Precautions:

- Do not remove the tourniquet once it is in place.
- It may take more than one (1) tourniquet to control bleeding, especially in larger extremities.
- Failure to adequately tighten the tourniquet to the loss of pulses may cause restriction of venous return and result in a compartment syndrome.

Procedure:

1. Expose the extremity by removing clothing in proximity to the injury, if time allows.
2. Place tourniquet proximal to wound according to manufacturer instructions, at least 2 inches proximal to injury.
3. Route the self adhering band around the extremity
4. Pass the band through the outside slit of the buckle
5. Pull the self adhering band tight, and check that three fingers will not slide between skin and band.
6. Tighten until loss of distal pulses or until arterial bleeding stops. (typically not more than 3 twists).
7. Secure windlass, run band tail through windlass gate, and lock with time tab. Tourniquet should be easily visible on patient.
8. Note time of tourniquet application and communicate this to receiving care providers.
9. Dress wounds per standard wound care protocol.

If priorities indicate (Care Under Fire / Hot Zone, MCI, multi-system trauma) apply tourniquet HIGH & TIGHT in lieu of steps 1-9 above.

Definition of a Patient

B

EMT

DEFINITION OF A PATIENT

The definition of a patient is any human being that:

1. Has a complaint suggestive of potential illness or injury
2. Requests evaluation for potential illness or injury
3. Has obvious evidence of illness or injury
4. Has experienced an acute event that could reasonably lead to illness or injury
5. Is in a circumstance or situation that could reasonably lead to illness or injury

All individuals meeting any of the above criteria are considered “patients” in the TCESD #5 System. These criteria are intended to be considered in the broadest sense. The determination of an individual’s status as a patient requires the input of both the individual and the Provider as well as an assessment of the circumstances that led to the 9-1-1 call.

Application:

1. Anyone that fits the definition of a patient must be properly evaluated by a System credentialed provider and appropriate treatment and transportation offered. (If a patient wishes to refuse offered treatment and/or transport Against Medical Advice (AMA) refer to Refusal of Treatment or Transportation Standard and the Determination of Capacity Standard).
2. Any adult that does not fit the definition of a patient as defined above does not require an evaluation or, completion of a Patient Care Record and, may be designated as “no patient(s)”. Minors with an appropriate consentor on scene or, who have the ability to consent as provided below may be designated as “no patient(s)”. Minors, as defined below and without an appropriate “consentor on scene”; must have refusal documentation completed on a PCR/ePCR and, may not be designated as “no patient (s).” If there is any doubt; an individual should be deemed a patient and an appropriate evaluation should be provided and documented in the PCR/ePCR. If an individual meets the definition of a patient the following apply:

An adult is a person who is 18 years of age or older

Adults have the right to consent to or refuse medical treatment.

A minor is a person under the age of 18 who is not and has never been married or who has not had the disabilities of minority (emancipation) removed for general purposes by a court. *Generally, minors can neither consent to, nor refuse, medical treatment. Some minors however, are considered to be emancipated and have the rights of consent/refusal afforded an adult.* A minor is considered emancipated if he or she has obtained a court order of emancipation from a Texas court. Minors may petition the court for emancipation if he is:

(i) A resident of Texas; (ii) 17 years of age or at least 16 years of age and living separate from his parents, managing conservator or guardian; (iii) Is self-supporting and managing his own financial affairs

Determination of Patient Capacity

Procedure:

1. In order to have decision making capacity the patient must be 18 years of age or if a minor, be emancipated, must not be suicidal or homicidal or have had their decision making capacity removed by determination of a court of law.
2. If the above criteria in #1 have been met the patient must be assessed for their ability to demonstrate the following:
 - Understanding their illness or injury and the benefits of treatment and/or evaluation **AND**
 - Understanding the consequences (including death) of not seeking treatment and/or evaluation for their illness or injury **AND**
 - Understanding the alternatives to immediate care by EMS **AND**
 - Able to describe the above in his own words and provide/ defend a reason for decision not to submit to treatment/transport.
3. Utilize the Determination of Capacity checklist. If there is any uncertainty about the patient's present mental capacity contact On-Line Medical Control.
4. Every individual who has demonstrated present mental capacity has a legal right to refuse medical treatment, even if that refusal is contrary to the beliefs of the provider or may result in potential harm to the patient. It is a healthcare provider's responsibility to provide the patient with information about the risks of refusal and the benefits of treatment and/or evaluation so that their decision is informed.
5. If it is determined that a patient who wishes to refuse care lacks capacity, coordinate efforts with the appropriate law enforcement agency.
6. Document any allowed history and exam, the absence of suicidal or homicidal ideation, the components of the capacity assessment and contact with medical control.

Capacity Checklist:

- Patient is able to express in their own words:
 - An understanding of the nature of their illness
 - An understanding of the risks of refusal including death
 - An understanding of alternatives to EMS treatment/transport
 - Pt can provide rationale for refusal and debate this rationale
- A patient with any of the following **MAY** lack decision making capacity and should be carefully assessed for their ability to perform the above.
 - Orientation to person, place or time that differs from baseline
 - History of drug/alcohol ingestion with appreciable impairment such as slurred speech or unsteady gait
 - Head injury with LOC, amnesia, repetitive questioning
 - Medical condition such as hypovolemia, hypoxia, metabolic emergencies (e.g., diabetic issues); hypothermia, hyperthermia, etc.
- If any question exists about their capacity contact Medical Control

Death, DNR & Termination of Resuscitation



Standard:

- Termination of Resuscitation
- DNR & Advanced Directives:
 - In the event any provider of the EMS System is presented with a completed Out of Hospital Do Not Resuscitate (OOH-DNR) form and/or OOH-DNR ID device, the provider shall withhold CPR and the listed therapies in the event of cardiac arrest. The form and device may be from any (US) State. Refer to DSHS Rule 157.25.

Exceptions:

- A patient that is known to be pregnant (greater than (>) 20 weeks).
- Any indications of un-natural or suspicious circumstances, if potentially salvageable.

Purpose:

- Termination of Resuscitation:
 - to provide a guided structure for discontinuation of pre-hospital resuscitation upon determining further efforts futile.
- DNR:
 - to honor the terminal wishes of the patient and to prevent the initiation of unwanted resuscitation .

Criteria for Death

1. Resuscitation efforts should not be initiated or continued by Travis County Emergency Services District #5 System provider(s) if one (1) or more of the following is present:
 - a. Rigor mortis and/or dependent lividity;
 - b. Decomposition;
 - c. Decapitation or near decapitation;
 - d. Incineration;
 - e. Obviously mortal wounds (severe trauma with obvious signs of organ destruction)
 - f. Patient submersion greater than 20 minutes
 - g. Mass Casualty incident whereas resources do not exist to perform CPR on patients in arrest and would be better served by dedicating to other patients;
 - h. Fetal death with a fetus < 20 weeks by best age determination available at scene, this is considered products of conception and does not require time of death .
2. The Confirmation of Death (COD) time will be recorded.
3. Pregnant patients that are \geq 20 weeks in cardiac arrest, where resuscitation measures can be performed, should be transported for fetal viability.
4. Document in the PCR the specific indications for withholding resuscitation.
 - a. Fetal death < 20 weeks may be documented on mothers PCR
 - b. If fetus is \geq 20 weeks create a separate PCR

****Note:**

If unsure whether the patient meets the above criteria, initiate resuscitation and consider contacting online medical control (OLMC).

Death, DNR & Termination of Resuscitation

Termination of Resuscitation

1. Any System Credentialed Provider, in the following circumstances, may discontinue resuscitation efforts without OLMC:
 - a. Resuscitation efforts were inappropriately initiated when criteria outlined in the Criteria for Death/Withholding Resuscitation Standard were present.
 - b. A valid Out of Hospital Do Not Resuscitate Form (OOH-DNR) and/or OOH-DNR ID device was discovered after resuscitative efforts have been initiated. The form and device may be from any (US) State or Territory (Original or Copy).
2. Document all patient care and interactions with the patient's family, personal physician, medical examiner, law enforcement, and medical control in the EMS patient care report (PCR).

DNR & Advanced Directives

1. When confronted with a cardiac arrest patient, the following conditions must be present in order to honor the DNR request and withhold CPR and ALS therapy:
 - a. Out-of-Hospital Do Not Resuscitate (OOH-DNR) – or – OOH-DNR ID device; (Original or Copy)
 - b. Valid Out-Of-Hospital Do Not Resuscitate Written Order (Original or Copy) or Device from any (US) State or Territory;
 - c. A licensed physician on scene or in contact by telephone orders that no resuscitation efforts are to take place
2. A DNR request may be overridden by:
 - a. The patient or person who executed the order destroying or directing someone in their presence to destroy the form and/or remove the identification device.
 - b. The patient or person who executed the order telling the EMS Providers or attending physician that it is his/her intent to revoke the order.
 - c. The attending physician or physician's designee, if present at the time of revocation, recording in the patient's medical record the time, date and place of the revocation and enters "VOID" on each page of the OOH-DNR.
3. In the event there is a question regarding whether to honor or not honor an OOH-DNR or Advanced Directive, contact OLMC as needed
4. An advanced directive does not imply that a patient refused supportive or palliative care.



Death, DNR & Termination of Resuscitation

Figure: 25 TAC §157.25 (h)(2)

OUT-OF-HOSPITAL DO-NOT-RESUSCITATE (OOH-DNR) ORDER

TEXAS DEPARTMENT OF STATE HEALTH SERVICES

This document becomes effective immediately on the date of execution for health care professionals acting in out-of-hospital settings. It remains in effect until the person is pronounced dead by authorized medical or legal authority or the document is revoked. Comfort care will be given as needed.

Person's full legal name _____ Date of birth _____ Male Female

A. Declaration of the adult person: I am competent and at least 18 years of age. I direct that none of the following resuscitation measures be initiated or continued for me: cardiopulmonary resuscitation (CPR), transcutaneous cardiac pacing, defibrillation, advanced airway management, artificial ventilation.

Person's signature _____ Date _____ Printed name _____

B. Declaration by legal guardian, agent or proxy on behalf of the adult person who is incompetent or otherwise incapable of communication:

I am the: legal guardian; agent in a Medical Power of Attorney; OR proxy in a directive to physicians of the above-noted person who is incompetent or otherwise mentally or physically incapable of communication.

Based upon the known desires of the person, or a determination of the best interest of the person, I direct that none of the following resuscitation measures be initiated or continued for the person: cardiopulmonary resuscitation (CPR), transcutaneous cardiac pacing, defibrillation, advanced airway management, artificial ventilation.

Signature _____ Date _____ Printed name _____

C. Declaration by a qualified relative of the adult person who is incompetent or otherwise incapable of communication: I am the above-noted person's:

spouse, adult child, parent, OR nearest living relative, and I am qualified to make this treatment decision under Health and Safety Code §166.088.

To my knowledge the adult person is incompetent or otherwise mentally or physically incapable of communication and is without a legal guardian, agent or proxy. Based upon the known desires of the person or a determination of the best interests of the person, I direct that none of the following resuscitation measures be initiated or continued for the person: cardiopulmonary resuscitation (CPR), transcutaneous cardiac pacing, defibrillation, advanced airway management, artificial ventilation.

Signature _____ Date _____ Printed name _____

D. Declaration by physician based on directive to physicians by a person now incompetent or nonwritten communication to the physician by a competent person: I am the above-noted person's attending physician and have:

seen evidence of his/her previously issued directive to physicians by the adult, now incompetent; OR observed his/her issuance before two witnesses of an OOH-DNR in a nonwritten manner.

I direct that none of the following resuscitation measures be initiated or continued for the person: cardiopulmonary resuscitation (CPR), transcutaneous cardiac pacing, defibrillation, advanced airway management, artificial ventilation.

Attending physician's signature _____ Date _____ Printed name _____ Lic# _____

E. Declaration on behalf of the minor person: I am the minor's: parent; legal guardian; OR managing conservator.

A physician has diagnosed the minor as suffering from a terminal or irreversible condition. I direct that none of the following resuscitation measures be initiated or continued for the person: cardiopulmonary resuscitation (CPR), transcutaneous cardiac pacing, defibrillation, advanced airway management, artificial ventilation.

Signature _____ Date _____

Printed name _____

TWO WITNESSES: (See qualifications on backside.) We have witnessed the above-noted competent adult person or authorized declarant making his/her signature above and, if applicable, the above-noted adult person making an OOH-DNR by nonwritten communication to the attending physician.

Witness 1 signature _____ Date _____ Printed name _____

Witness 2 signature _____ Date _____ Printed name _____

Notary in the State of Texas and County of _____. The above noted person personally appeared before me and signed the above noted declaration on this date: _____.

Signature & seal: _____ Notary's printed name: _____ Notary Seal

[Note: Notary cannot acknowledge the witnessing of the person making an OOH-DNR order in a nonwritten manner]

PHYSICIAN'S STATEMENT: I am the attending physician of the above-noted person and have noted the existence of this order in the person's medical records. I direct health care professionals acting in out-of-hospital settings, including a hospital emergency department, not to initiate or continue for the person: cardiopulmonary resuscitation (CPR), transcutaneous cardiac pacing, defibrillation, advanced airway management, artificial ventilation.

Physician's signature _____ Date _____
Printed name _____ License # _____

F. Directive by two physicians on behalf of the adult, who is incompetent or unable to communicate and without guardian, agent, proxy or relative: The person's specific wishes are unknown, but resuscitation measures are, in reasonable medical judgment, considered ineffective or are otherwise not in the best interests of the person. I direct health care professionals acting in out-of-hospital settings, including a hospital emergency department, not to initiate or continue for the person: cardiopulmonary resuscitation (CPR), transcutaneous cardiac pacing, defibrillation, advanced airway management, artificial ventilation.

Attending physician's signature _____ Date _____ Printed name _____ Lic# _____

Signature of second physician _____ Date _____ Printed name _____ Lic# _____

Physician's electronic or digital signature must meet criteria listed in Health and Safety Code §166.082(c).

All persons who have signed above must sign below, acknowledging that this document has been properly completed.

Person's signature _____ Guardian/Agent/Proxy/Relative signature _____

Attending physician's signature _____ Second physician's signature _____

Witness 1 signature _____ Witness 2 signature _____ Notary's signature _____

This document or a copy thereof must accompany the person during his/her medical transport.

Death, DNR & Termination of Resuscitation

INSTRUCTIONS FOR ISSUING AN OOH-DNR ORDER

PURPOSE: The Out-of-Hospital Do-Not-Resuscitate (OOH-DNR) Order on reverse side complies with Health and Safety Code (HSC), Chapter 166 for use by qualified persons or their authorized representatives to direct health care professionals to forgo resuscitation attempts and to permit the person to have a natural death with peace and dignity. This Order does NOT affect the provision of other emergency care, including comfort care.

APPLICABILITY: This OOH-DNR Order applies to health care professionals in out-of-hospital settings, including physicians' offices, hospital clinics and emergency departments.

IMPLEMENTATION: A competent adult person, at least 18 years of age, or the person's authorized representative or qualified relative may execute or issue an OOH-DNR Order. The person's attending physician will document existence of the Order in the person's permanent medical record. The OOH-DNR Order may be executed as follows:

Section A - If an adult person is competent and at least 18 years of age, he/she will sign and date the Order in Section A.

Section B - If an adult person is incompetent or otherwise mentally or physically incapable of communication and has either a legal guardian, agent in a medical power of attorney, or proxy in a directive to physicians, the guardian, agent, or proxy may execute the OOH-DNR Order by signing and dating it in Section B. **Section C** - If the adult person is incompetent or otherwise mentally or physically incapable of communication and does not have a guardian, agent, or proxy, then a qualified relative may execute the OOH-DNR Order by signing and dating it in Section C.

Section D - If the person is incompetent and his/her attending physician has seen evidence of the person's previously issued proper directive to physicians or observed the person competently issue an OOH-DNR Order in a nonwritten manner, the physician may execute the Order on behalf of the person by signing and dating it in Section D.

Section E - If the person is a **minor** (less than 18 years of age), **who has been diagnosed by a physician as suffering from a terminal or irreversible condition**, then the minor's parents, legal guardian, or managing conservator may execute the OOH-DNR Order by signing and dating it in Section E.

Section F - If an adult person is incompetent or otherwise mentally or physically incapable of communication and does not have a guardian, agent, proxy, or available qualified relative to act on his/her behalf, then the attending physician may execute the OOH-DNR Order by signing and dating it in Section F with concurrence of a second physician (signing it in Section F) who is not involved in the treatment of the person or who is not a representative of the ethics or medical committee of the health care facility in which the person is a patient.

In addition, the OOH-DNR Order must be signed and dated by two competent adult witnesses, who have witnessed either the competent adult person making his/her signature in section A, or authorized declarant making his/her signature in either sections B, C, or E, and if applicable, have witnessed a competent adult person making an OOH-DNR Order by nonwritten communication to the attending physician, who must sign in Section D and also the physician's statement section.

Optionally, a competent adult person or authorized declarant may sign the OOH-DNR Order in the presence of a notary public. However, a notary cannot acknowledge witnessing the issuance of an OOH-DNR in a nonwritten manner, which must be observed and only can be acknowledged by two qualified witnesses. Witness or notary signatures are not required when two physicians execute the OOH-DNR Order in section F. The original or a copy of a fully and properly completed OOH-DNR Order or the presence of an OOH-DNR device on a person is sufficient evidence of the existence of the original OOH-DNR Order and either one shall be honored by responding health care professionals.

REVOCACTION: An OOH-DNR Order may be revoked at ANY time by the person, person's authorized representative, or physician who executed the order. Revocation can be by verbal communication to responding health care professionals, destruction of the OOH-DNR Order, or removal of all OOH-DNR identification devices from the person.

AUTOMATIC REVOCACTION: An OOH-DNR Order is automatically revoked for a person known to be pregnant or in the case of unnatural or suspicious circumstances.

DEFINITIONS

Attending Physician: A physician, selected by or assigned to a person, with primary responsibility for the person's treatment and care and is licensed by the Texas Medical Board, or is properly credentialed and holds a commission in the uniformed services of the United States and is serving on active duty in this state. [HSC

§166.002(12)].

Health Care Professional: Means physicians, nurses, physician assistants and emergency medical services personnel, and, unless the context requires otherwise, includes hospital emergency department personnel. [HSC §166.081(5)]

Qualified Relative: A person meeting requirements of HSC §166.088. It states that an adult relative may execute an OOH-DNR Order on behalf of an adult person who has not executed or issued an OOH-DNR Order and is incompetent or otherwise mentally or physically incapable of communication and is without a legal guardian, agent in a medical power of attorney, or proxy in a directive to physicians, and the relative is available from one of the categories in the following priority:

1) person's spouse; 2) person's reasonably available adult children; 3) the person's parents; or, 4) the person's nearest living relative. Such qualified relative may execute an OOH-DNR Order on such described person's behalf.

Qualified Witnesses: Both witnesses must be competent adults, who have witnessed the competent adult person making his/her signature in section A, or person's authorized representatives making his/her signature in either Sections B, C, or E on the OOH-DNR Order, or if applicable, have witnessed the competent adult person making an OOH-DNR by nonwritten communication to the attending physician, who signs in Section D. Optionally, a competent adult person, guardian, agent, proxy, or qualified relative may sign the OOH-DNR Order in the presence of a notary instead of two qualified witnesses. Witness or notary signatures are not required when two physicians execute the order by signing Section F. One of the witnesses must meet the qualifications in HSC §166.003(2), which requires that at least one of the witnesses not: (1) be designated by the person to make a treatment decision; (2) be related to the person by blood or marriage; (3) be entitled to any part of the person's estate after the person's death either under a will or by law; (4) have a claim at the time of the issuance of the OOH-DNR against any part of the person's estate after the person's death; or, (5) be the attending physician; (6) be an employee of the attending physician or (7) an employee of a health care facility in which the person is a patient if the employee is providing direct patient care to the patient or is an officer, director, partner, or business office employee of the health care facility or any parent organization of the health care facility.

Report problems with this form to the Texas Department of State Health Services (DSHS) or order OOH-DNR Order/forms or identification devices at (512) 834-6700.

Declarant's, Witness', Notary's, or Physician's electronic or digital signature must meet criteria outlined in HSC §166.011

On-Line Medical Control

Contacting Medical Control Policy:

Medical control will be contacted when any situation occurs that requires clarification, or required deviation, involving the most appropriate care for patients that TCESD #5 EMS personnel provide care to.

- A. Based on medical necessity, Medical Director or Medical Control may choose to deviate from the normal patient care protocols.
- B. If medical care is provided to a patient by TCESD #5 EMS personnel that deviates from the current patient care protocols, The EMS Coordinator or EMS Chief must be contacted in order to initiate the QA/QI process.

II. Steps to contact medical control are:

- A. TCESD #5 Medical Director, Dr. Michael Zimmerman, will be contacted via mobile phone, at 847-293-6556.
If contact is not made on the first attempt, Seton Williamson County ER is to be contacted, see below.
- B. Contact Seton Williamson Medical Center ER (SMCW) by radio or phone.
- C. Await arrival of Austin Travis County EMS.

Adult Bites & Envenomations

Key Information:

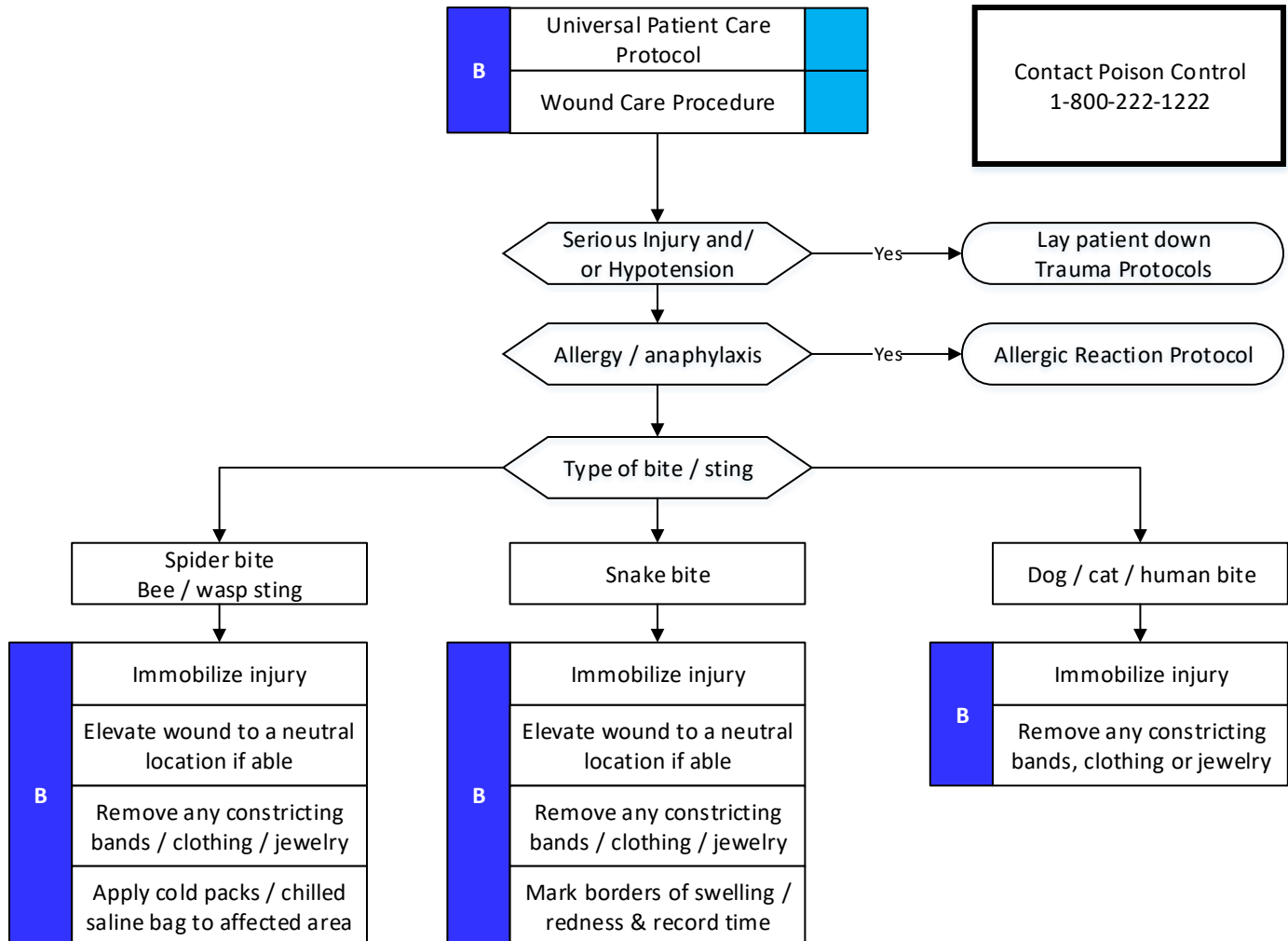
- Type of bite/sting
- Description/photo for identification of animal involved
- Time, location, size of bite/sting
- Previous reaction to bite/sting
- Domestic vs. Wild
- Tetanus and Rabies risk
- Immunocompromised patient

Key Information Continued:

- Rash, skin break, wound
- Pain, soft tissue swelling, redness
- Blood oozing from the bite wound(s)
- Evidence of infection
- Shortness of breath/wheezing/stridor
- Allergic reaction, hives, itching
- Hypotension or shock
- Ecchymosis or any discoloration

Differential:

- Animal Bite
- Human Bite
- Snake Bite (poisonous)
- Spider Bite (poisonous)
- Insect Bite/Sting (Bee, Wasp, Ant, Tick)
- Infection Risk
- Rabies Risk
- Tetanus Risk



Pediatric Bites & Envenomations

Key Information:

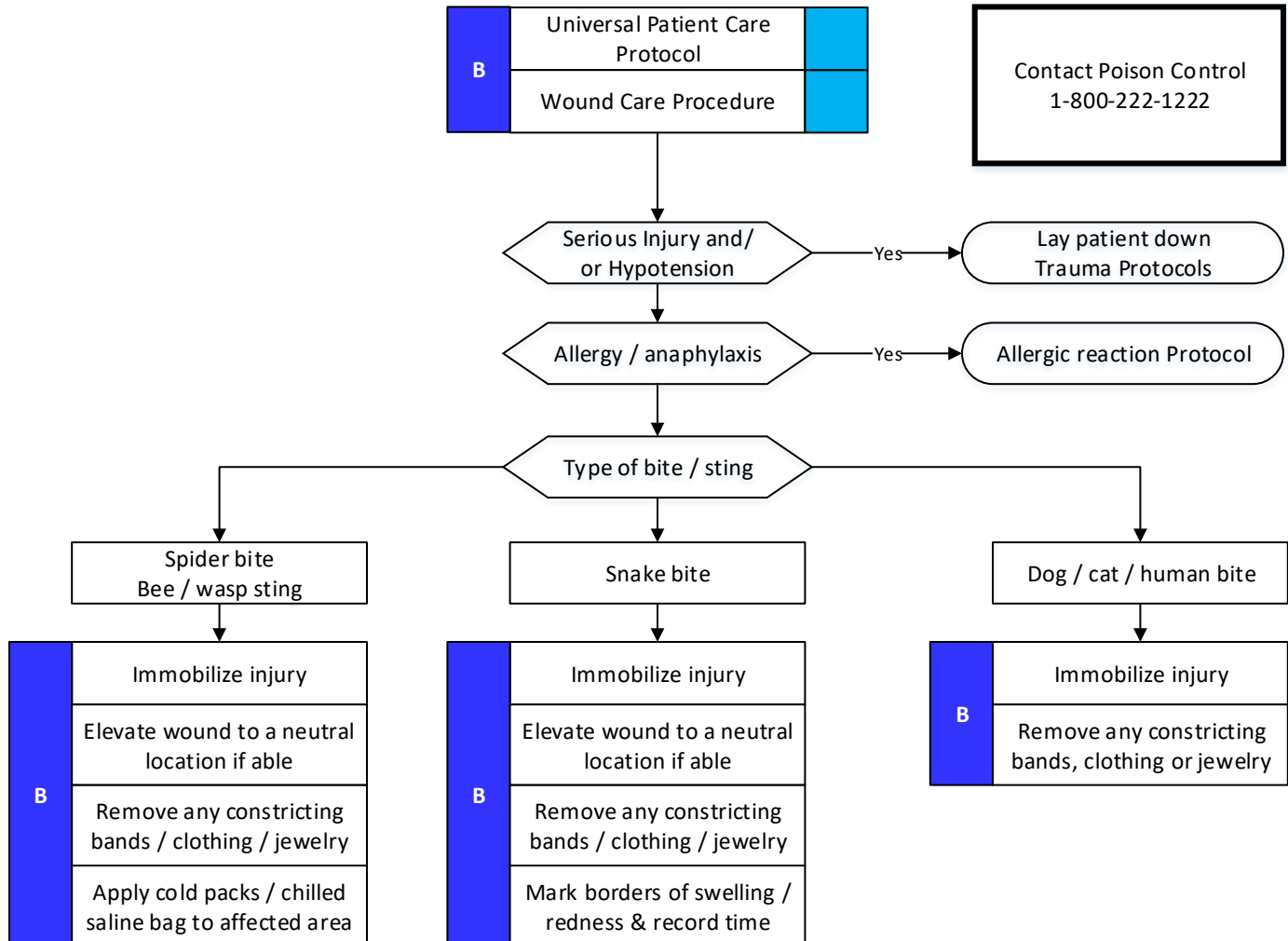
- Type of bite/sting
- Description/photo for identification of animal involved
- Time, location, size of bite/sting
- Previous reaction to bite/sting
- Domestic vs. Wild
- Tetanus and Rabies risk
- Immunocompromised patient

Key Information Continued:

- Rash, skin break, wound
- Pain, soft tissue swelling, redness
- Blood oozing from the bite wound(s)
- Evidence of infection
- Shortness of breath/wheezing/stridor
- Allergic reaction, hives, itching
- Hypotension or shock
- Ecchymosis or any discoloration

Differential:

- Animal Bite
- Human Bite
- Snake Bite (poisonous)
- Spider Bite (poisonous)
- Insect Bite/Sting (Bee, Wasp, Ant, Tick)
- Infection Risk
- Rabies Risk
- Tetanus Risk



Adult Burns

Key Information:

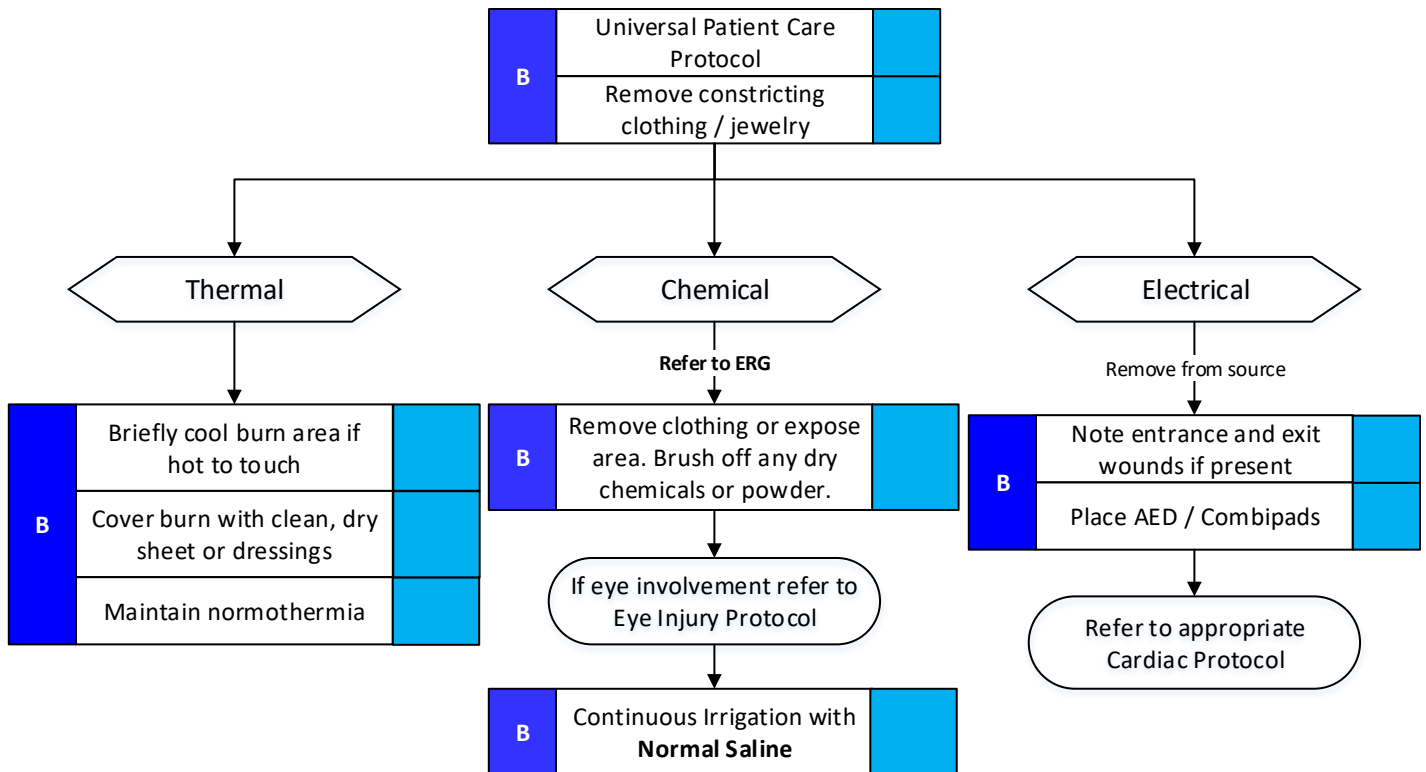
- Type of exposure (heat, gas, chemical, electrical)
- Inhalation injury
- Time of injury
- Other trauma
- Loss of consciousness
- Tetanus/ Immunization status
- Burns, pain, swelling

Key Information Continued:

- Dizziness
- Loss of consciousness
- Hypotension/ shock
- Airway compromise
 - Respiratory distress
 - Singed facial or nasal hair
 - Hoarseness
 - Wheezing or stridor

Differential:

- Superficial - red and painful
- Partial thickness - blistering
- Full thickness - painless and charred or leathery skin
- Chemical
- Thermal
- Electrical
- Radiation



Critical or Serious Burns: Transport to burn center, or trauma center if impractical:

- BSA > 10% Partial Thickness burns
- Any Full Thickness burns
- Circumferential burns of extremities
- Burns to face, eyes, hands or feet or genitalia
- Inhalation injury or respiratory burns
- Chemical burns
- Electrical burns or lightning injuries
- Age >65, or patients with chronic disease

Pediatric Burns

Key Information:

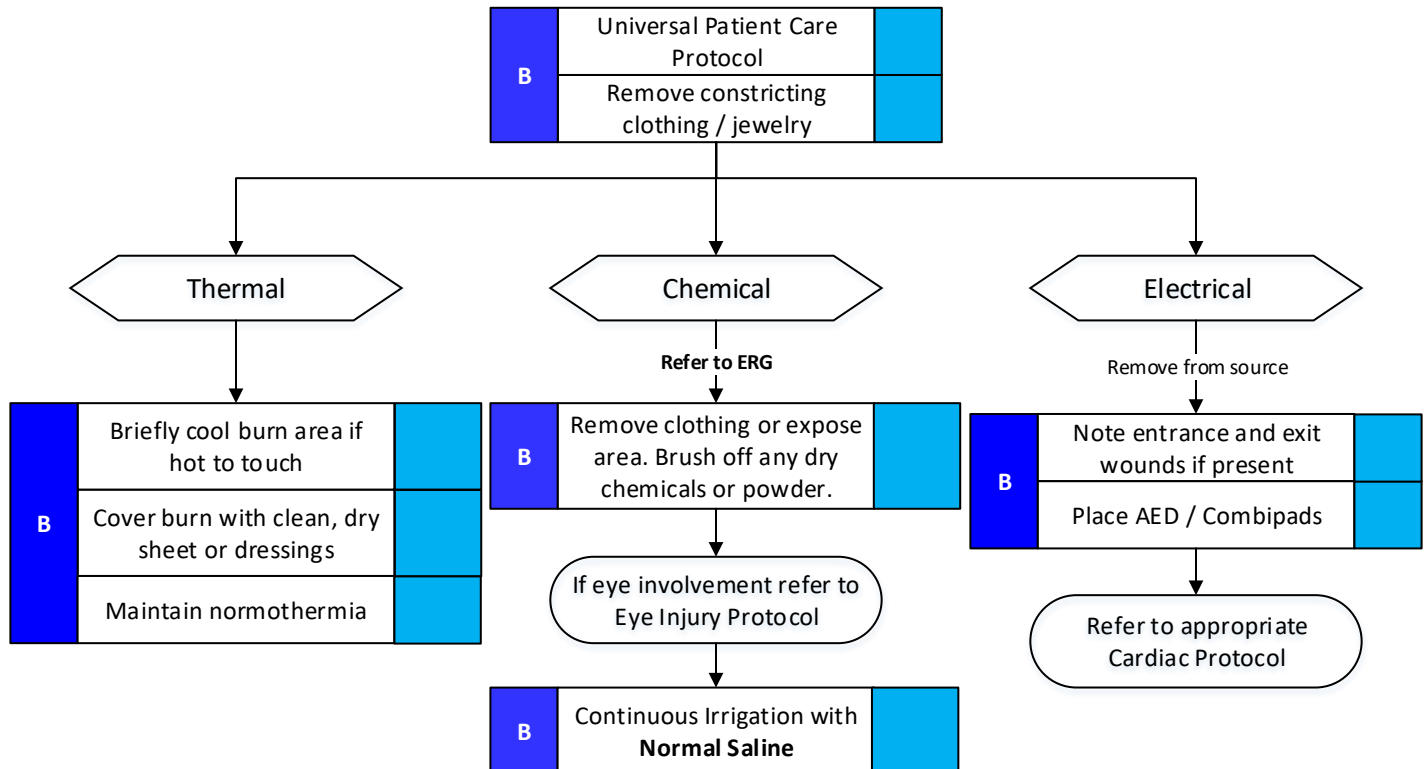
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- Chemical burns
- Electrical burns or lightning injuries

Eye Injury / Complaint

Key Information:

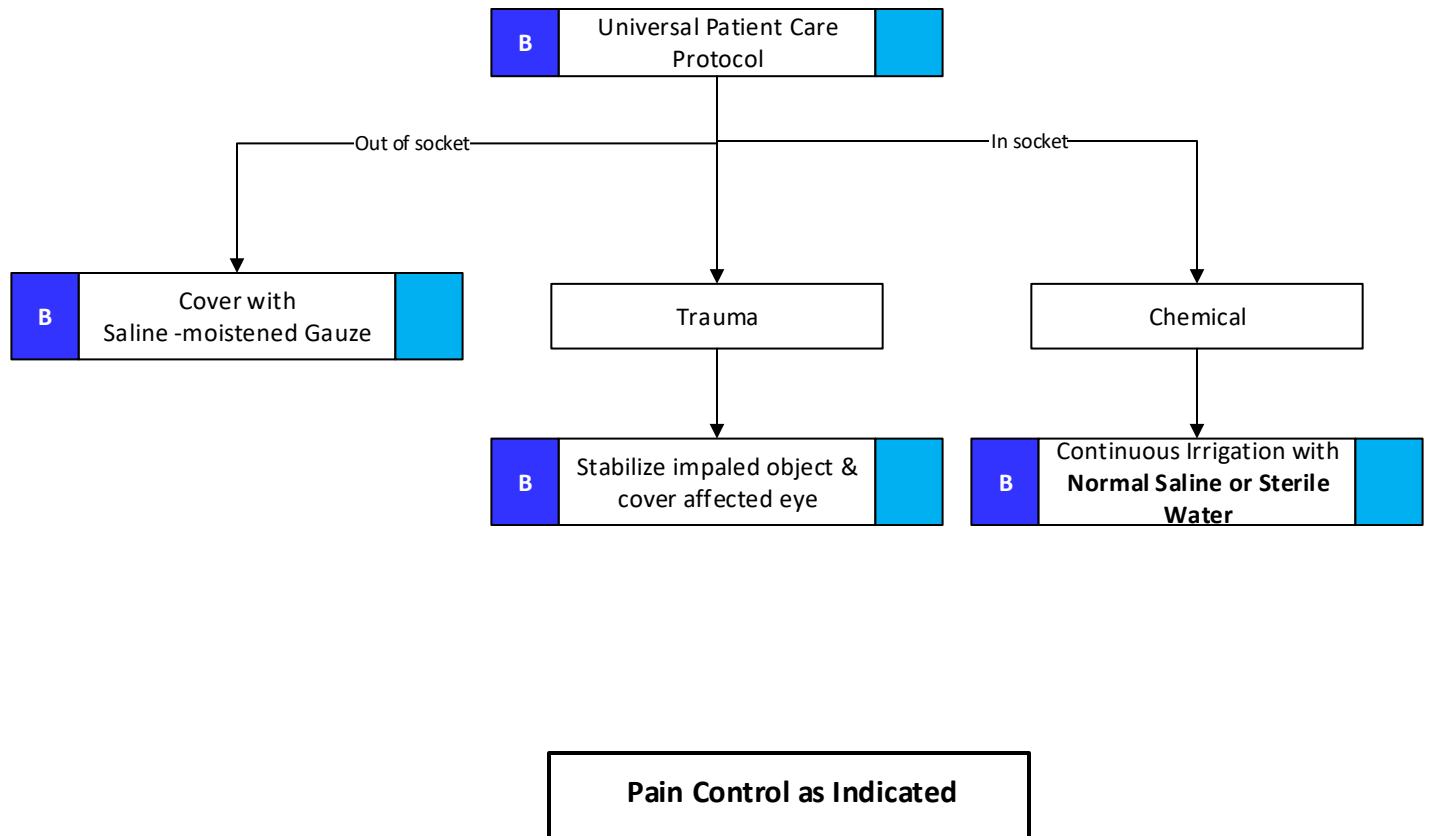
- Blunt/penetrating/chemical
- Open vs. closed injury
- Involved chemicals/MSDS
- Wound contamination
- Tetanus status
- Normal visual acuity
- Pain, swelling, blood
- Asymmetric pupil

Key Information Continued:

- Deformity, contusion
- Visual deficit
- Leaking aqueous/vitreous humour
- Upwardly fixed eye
- "Shooting" or "streaking" light
- Visible contaminants
- Rust ring
- Lacrimation

Differential:

- Abrasion/laceration
- Globe rupture
- Retinal nerve damage
- Chemical/thermal burn
- Orbital fracture
- Orbital compartment syndrome
- Neurologic event
- Acute glaucoma
- Retinal artery occlusion



Pediatric Eye Injury / Complaint

Key Information:

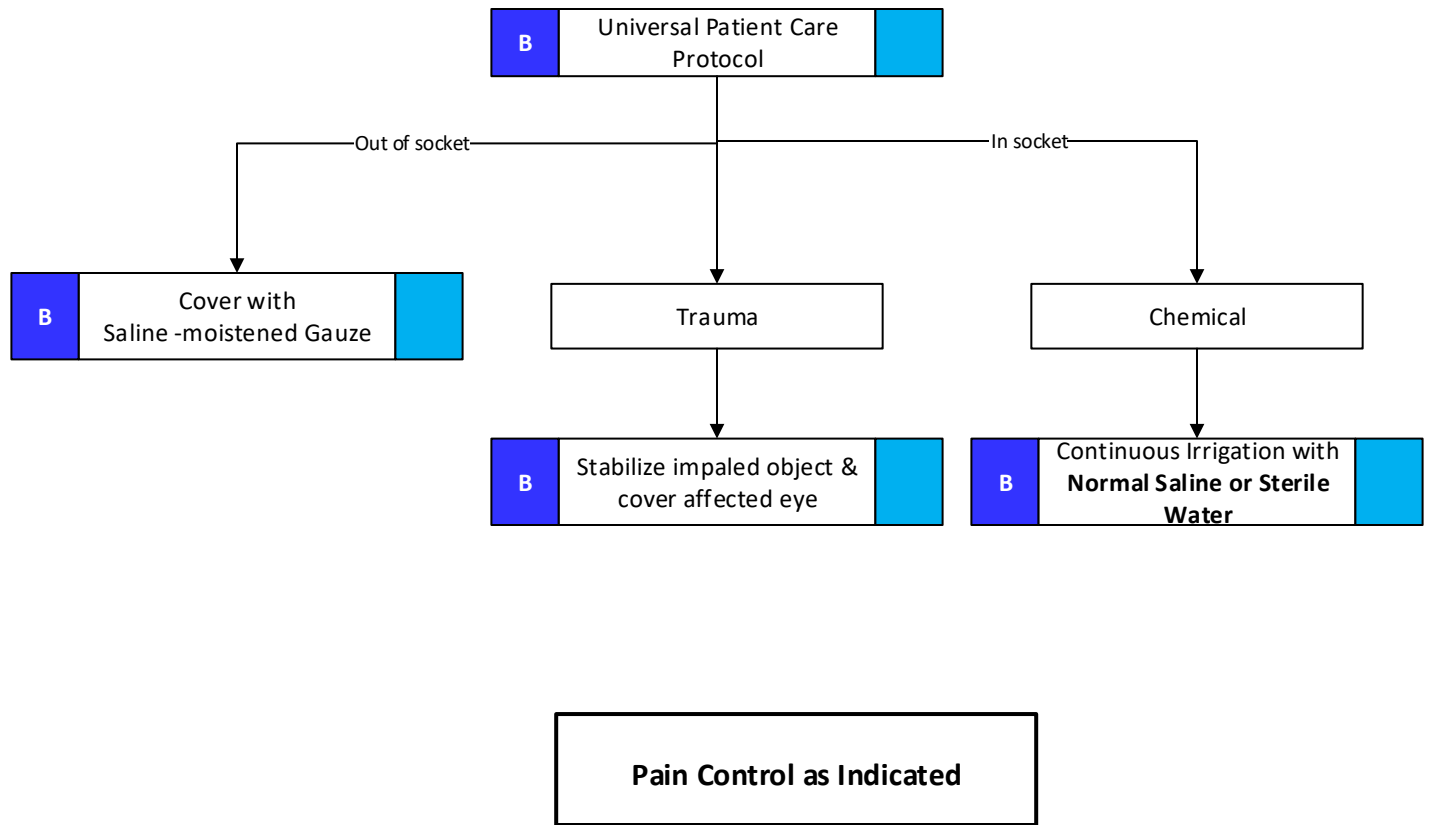
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- Globe rupture
- Retinal nerve damage
- Chemical/thermal burn
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- Retinal artery occlusion



Extremity Trauma

Key Information:

- Type of injury
- Mechanism
 - Crush
 - Penetrating
 - Amputation
- Open vs. closed
- Wound contamination

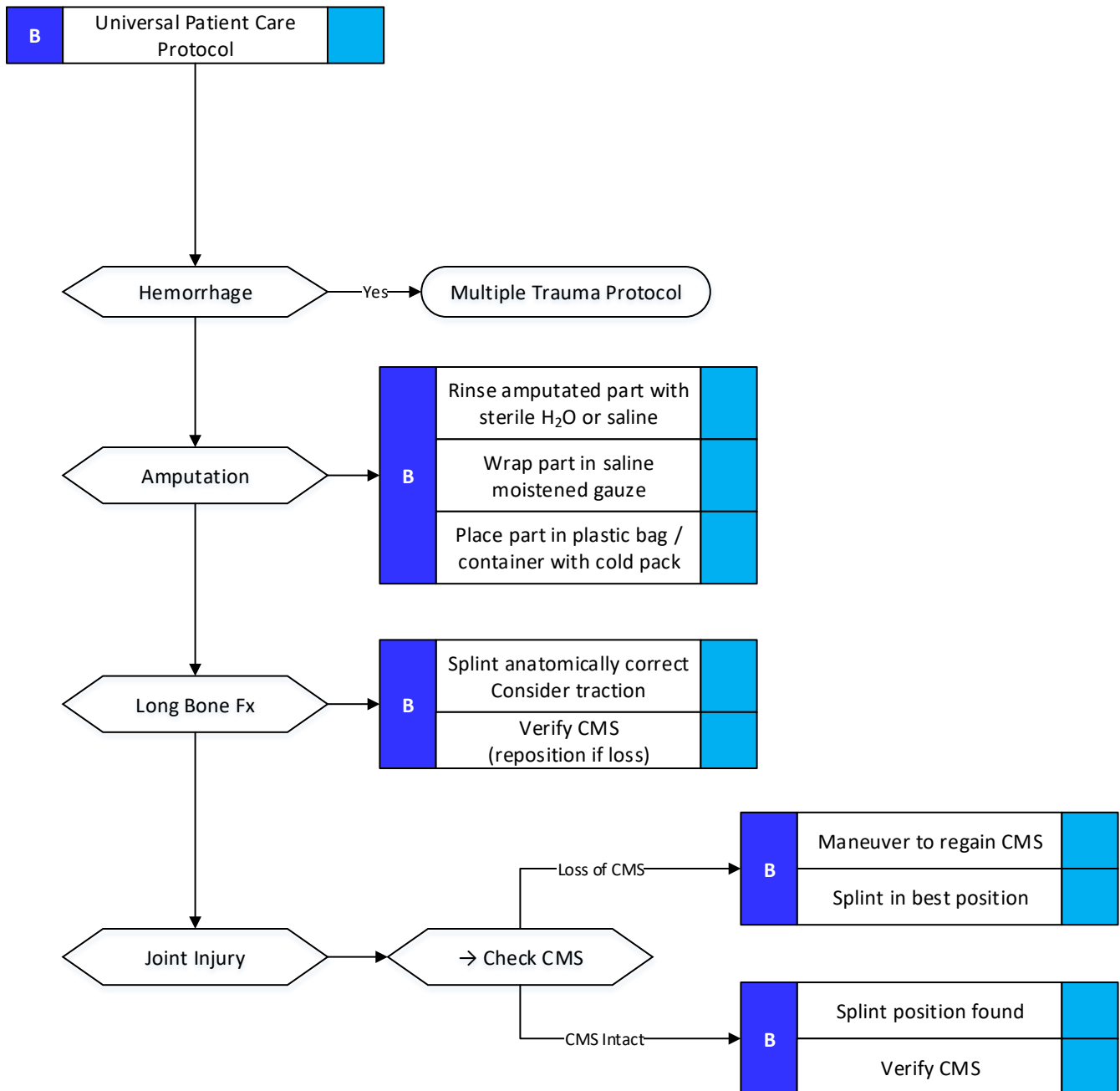
Key Information Continued:

- Time of injury
- Pain, swelling
- Deformity
- Altered sensation/ motor function
- Diminished pulse/ capillary refill
- Decreased extremity temperature

Differential:

- Deformity
- Contusion
- Abrasion
- Puncture/ penetration
- Tenderness
- Laceration
- Swelling
- Amputation

Pain Control as Indicated



Pediatric Extremity Trauma

Key Information:

- Type of injury
- Mechanism
 - Crush
 - Penetrating
 - Amputation
- Open vs. closed
- Wound contamination

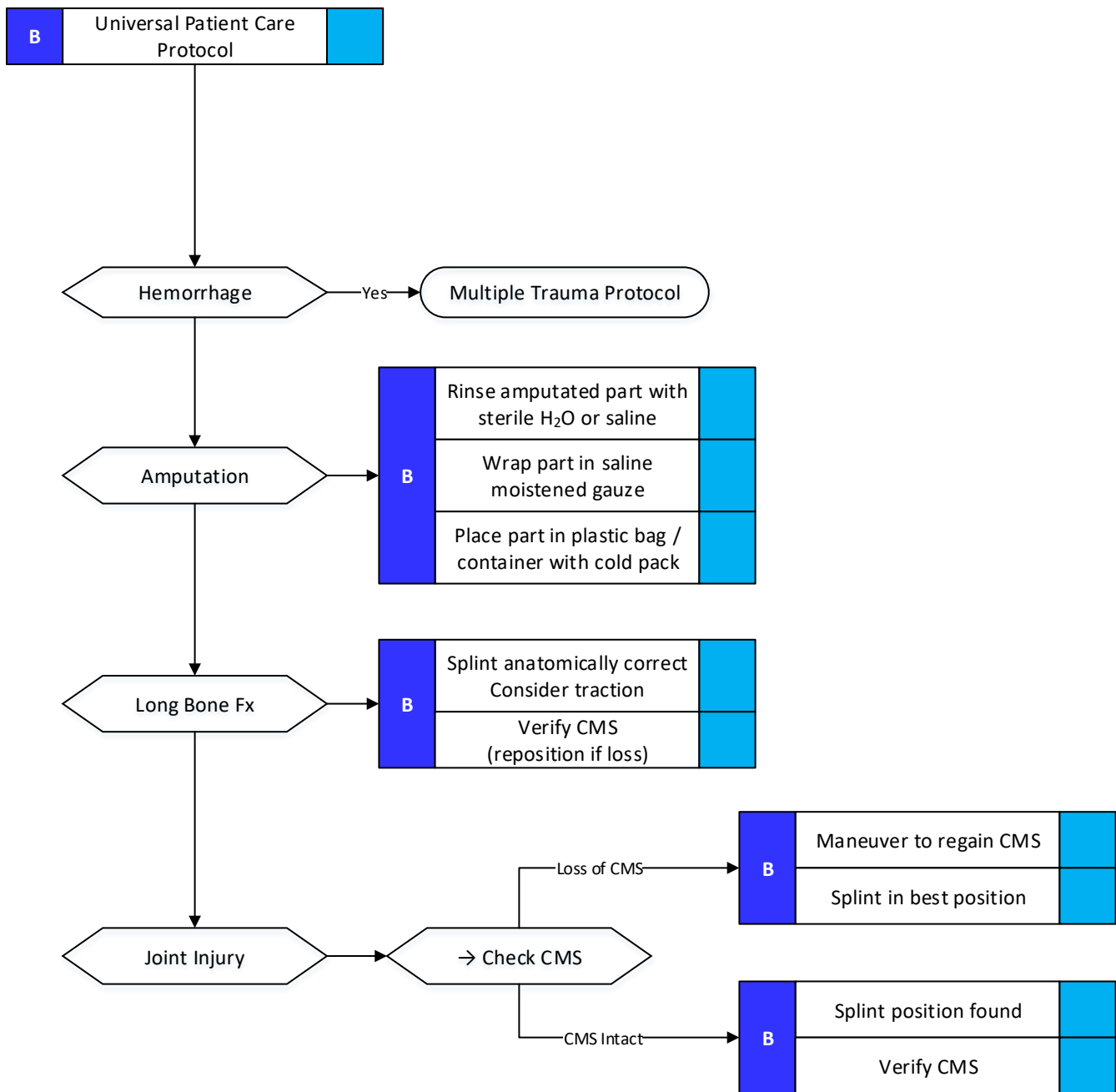
Key Information Continued:

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- Pain, swelling
- Deformity
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- Decreased extremity temperature

Differential:

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- Contusion
- Abrasion
- Puncture/ penetration
- Tenderness
- Laceration
- Swelling
- Amputation

Pain Control as Indicated



Adult Head Trauma

Key Information:

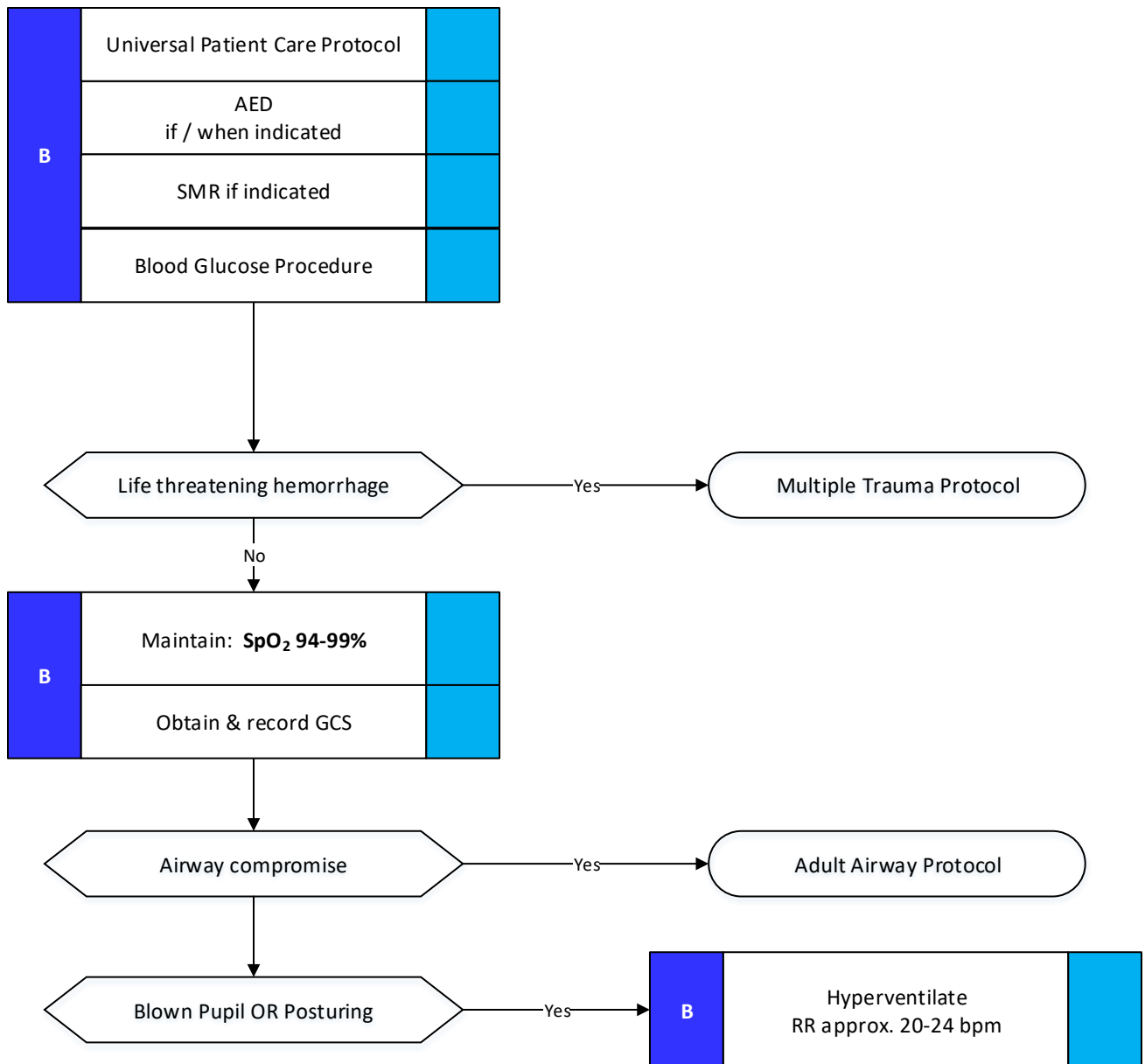
- Time of injury
- Mechanism:
 - Blunt
 - Penetrating
- Loss of consciousness
- Bleeding
- Anticoagulant use
- History of bleeding disorders
- Evidence of multi trauma
- Helmet use or damage to the helmet

Key Information Continued:

- Pain, swelling, bleeding
- Altered mental status
- Unconscious
- Protective equipment
- Respiratory derangement
- Vomiting
- Significant mechanism of injury
- Seizure
- Pupillary abnormalities
- CSF leaking from ears, nose and mouth

Differential:

- Skull fracture
- Brain Injury
 - Concussion
 - Contusion
 - Hemorrhage or laceration
- Epidural hematoma
- Subdural hematoma
- Subarachnoid hemorrhage
- Spinal Injury
- Abuse



Pearls:

- Avoid hypoxia or hyperoxia. Both lead to poor outcome.
- Elevate head of bed 30 degrees if hemodynamically stable.

Pediatric Head Trauma

Key Information:

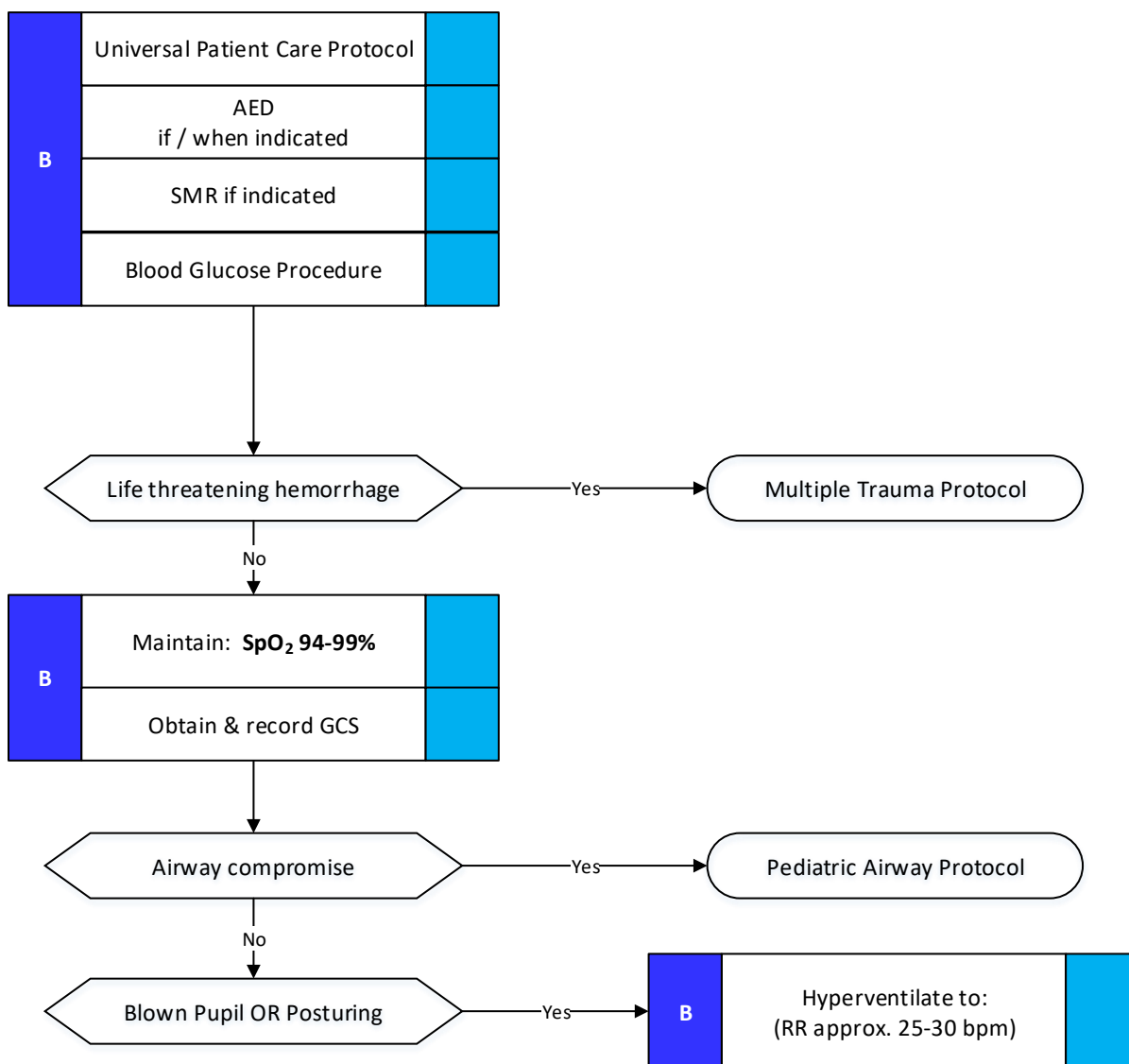
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- Spinal Injury
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Pearls:

- Avoid hypoxia or hyperoxia. Both lead to poor outcome.
- Elevate head of bed 30 degrees if hemodynamically stable.
- Normotension SBP $\geq 80 + (2 \times \text{Age in years})$

Adult Multiple Trauma

Key Information:

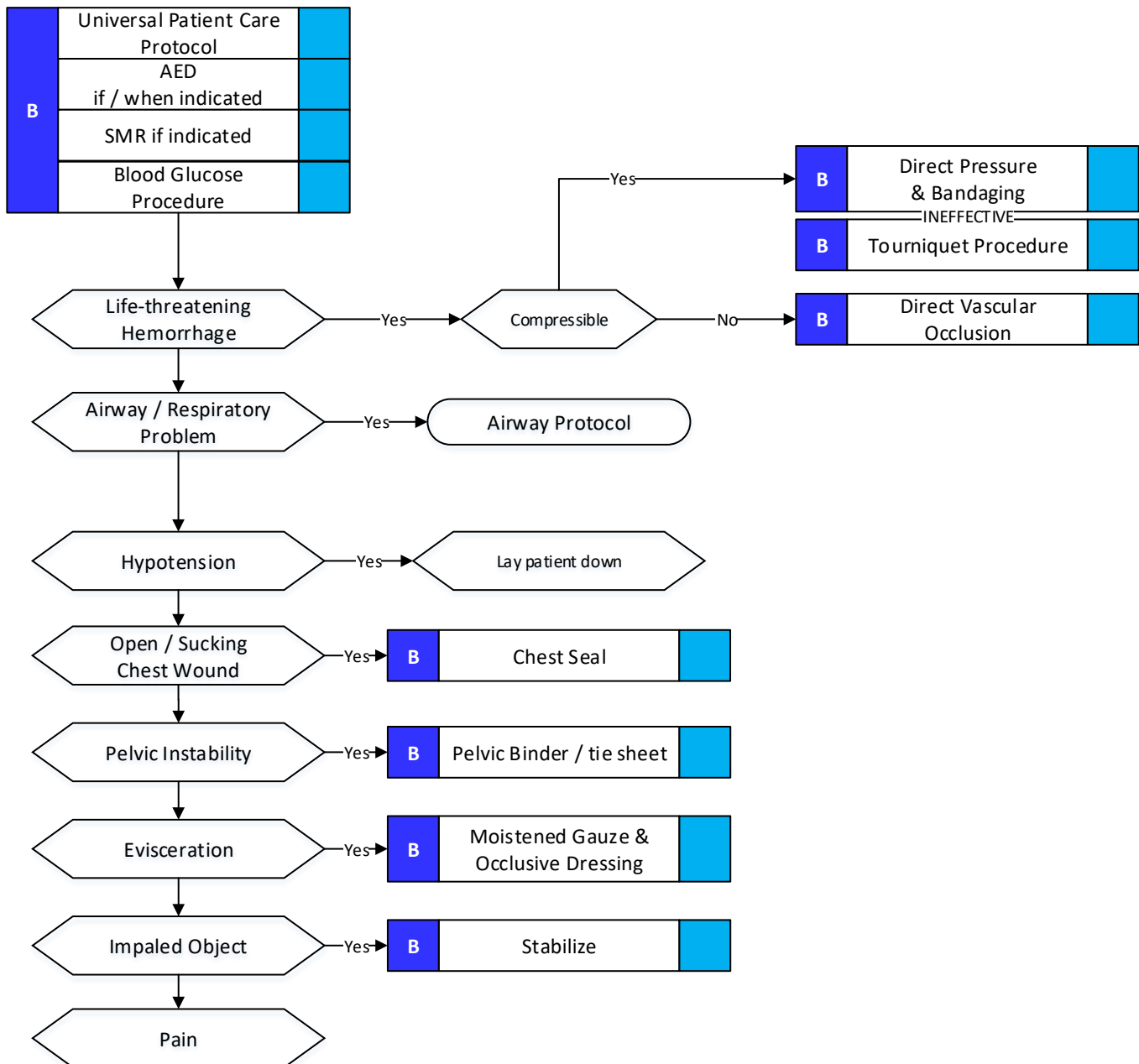
- Time and mechanism of injury
- Damage to structure or vehicle
- Location in structure or vehicle
- Others injured or dead
- Speed and details of MVC
- Restraints/ protective equipment

Key Information Continued:

- Pain, swelling
- Deformity, lesions, bleeding
- Altered mental status or unconscious
- Hypotension/ shock
- Cardiac arrest

Differential:

- Chest
 - Tension pneumothorax
 - Hemothorax
 - Flail chest
 - Pericardial tamponade
 - Open chest wound
- Intra-abdominal bleeding
- Pelvis/ femur fracture
- Spine fracture/ Cord injury
- Head injury see Head Trauma
- Extremity fracture/ dislocation
- Airway Obstruction
- Hypothermia



Pediatric Multiple Trauma

Key Information:

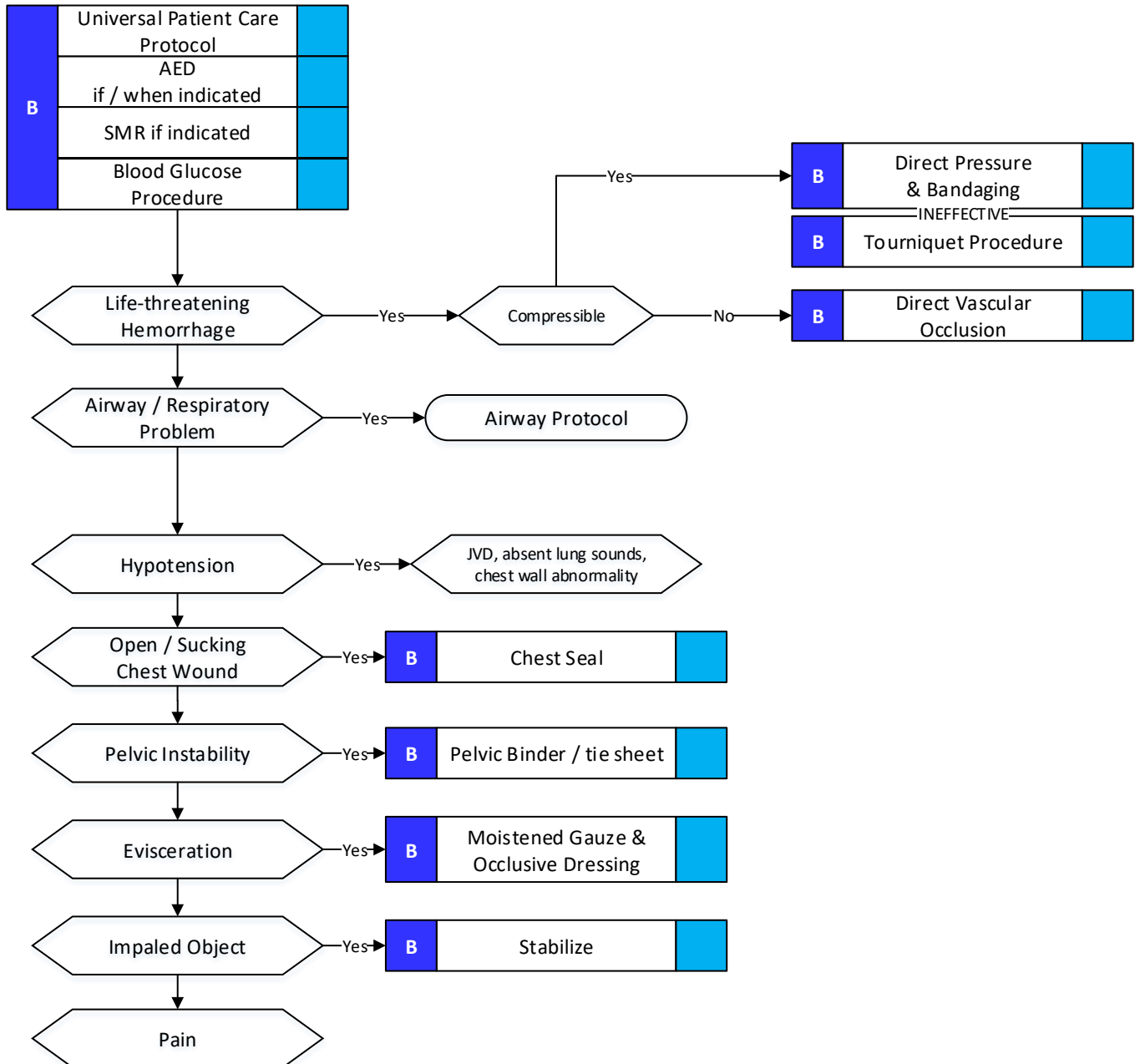
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- Speed and details of MVC
- Restraints/ protective equipment

Key Information Continued:

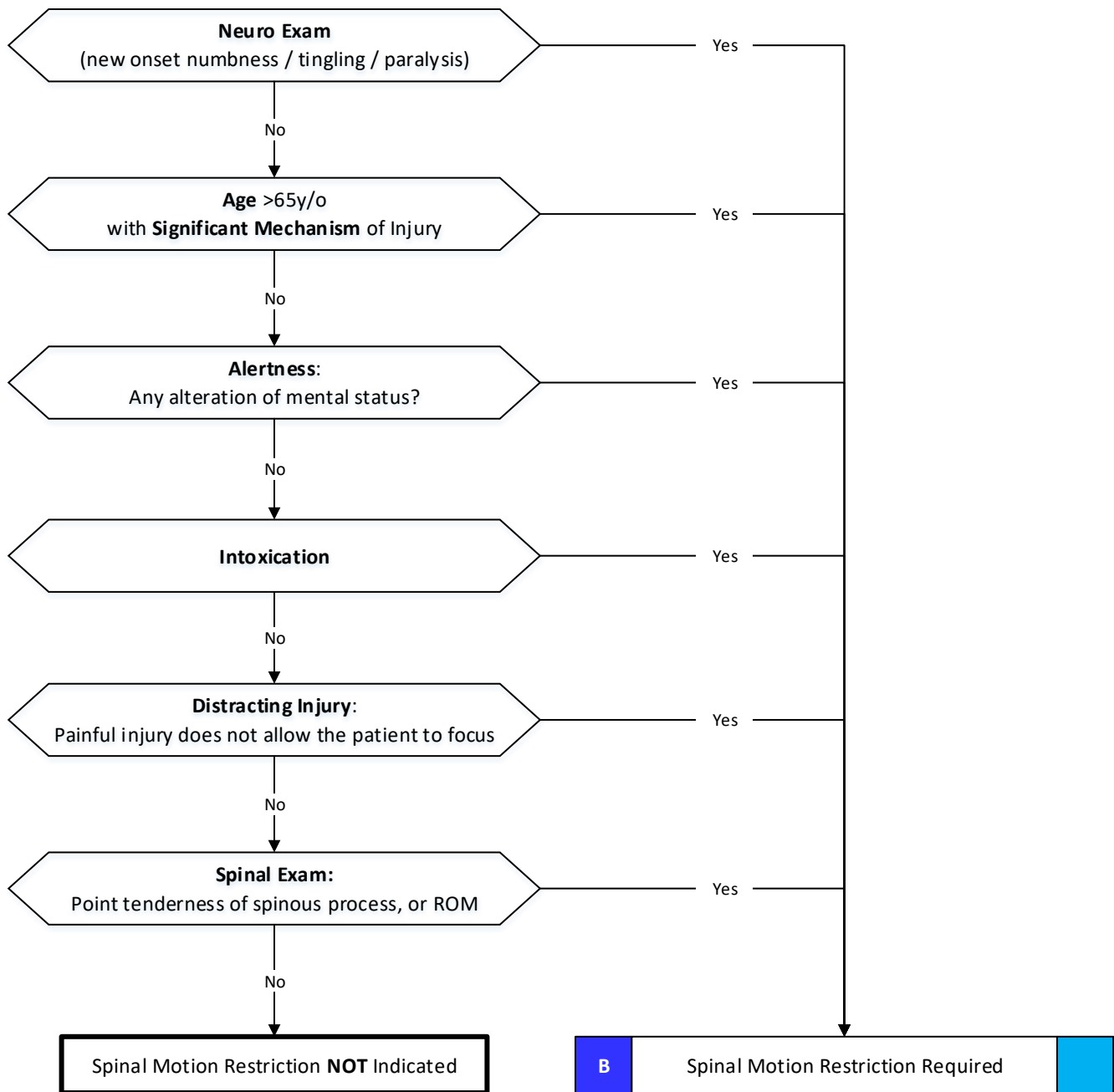
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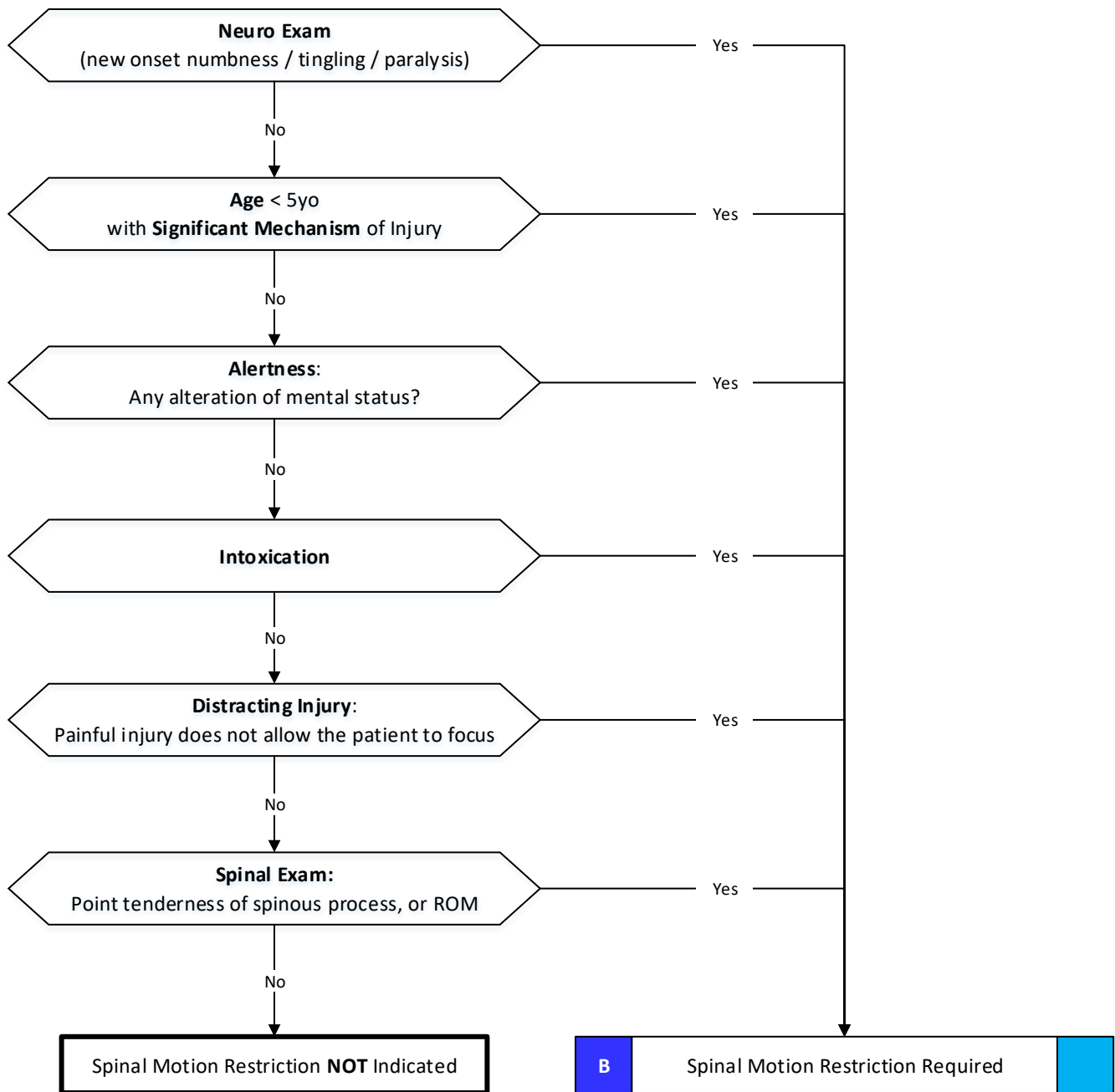
Spinal Motion Restriction (SMR)



Significant Mechanism of Injury Guidelines:

- High velocity MVC ≥ 40 mph at impact
- Unrestrained occupant in MVC
- Passenger compartment intrusion > 12 inches
- Ejection from vehicle
- Motorcycle collision > 20 mph
- Death in same vehicle
- Pedestrian struck by vehicle
- Falls ≥ 3 times the patient's height
- Diving Injury

Pediatric Spinal Motion Restriction



Significant Mechanism of Injury Guidelines:

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- Death in same vehicle
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Submersion Injury

Key Information:

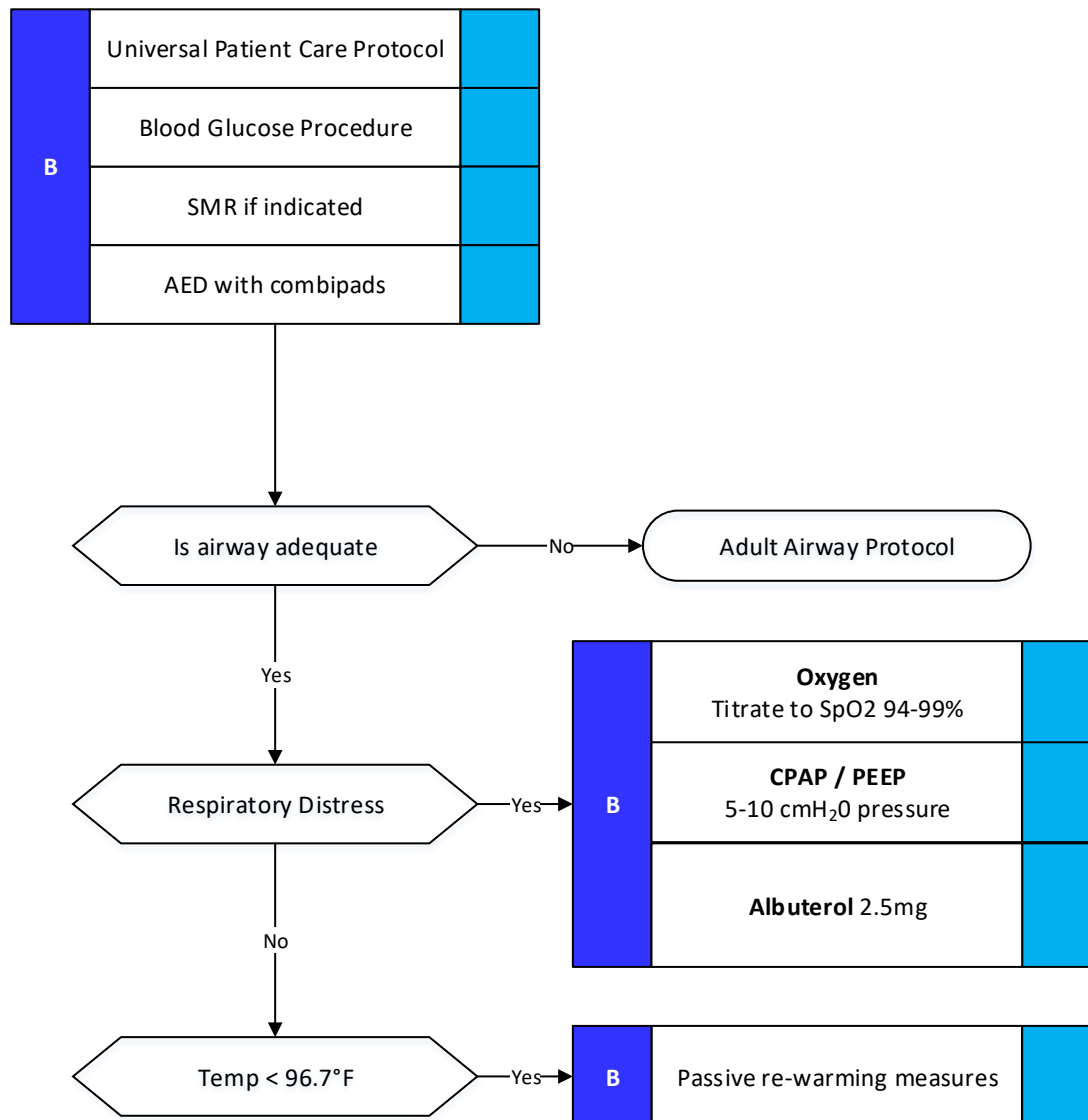
- Submersion in water regardless of depth
- Possible trauma, ex. diving board
- Duration of submersion
- Type of water
 - Warm
 - Cold
 - Fresh
 - Salt
- Recent air travel

Key Information Continued:

- Unresponsive
- Mental status changes
- Decreased or absent vital signs
- Vomiting
- Coughing

Differential:

- Trauma
- Pre-existing medical problem
- Allergic Reaction
- AMI
- Pressure injury (diving)
 - Barotrauma
 - Decompression Illness
 - Nitrogen Narcosis
 - Pulmonary overpressure
 - Pneumomediastinum



Pearls:

- All victims should be transported for evaluation due to potential for worsening over the next several hours.

Pediatric Submersion Injury

Key Information:

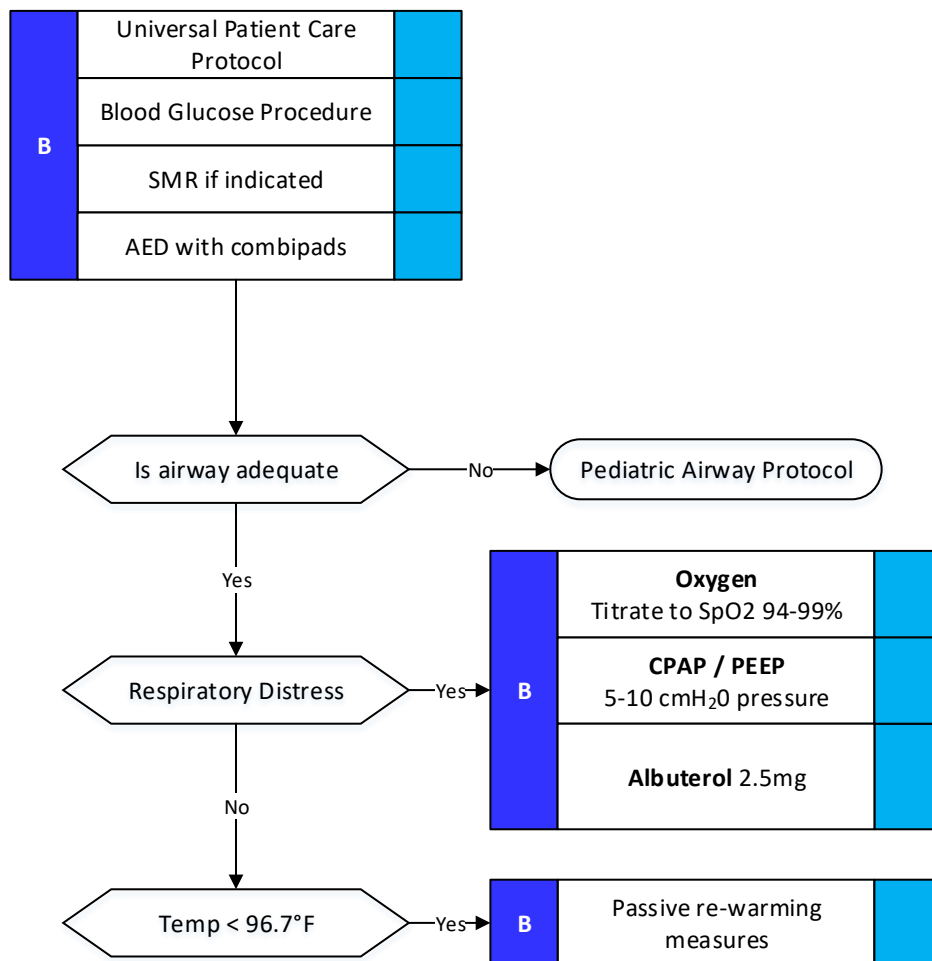
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Pearls:

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Adult Hypothermia / Frostbite

Key Information:

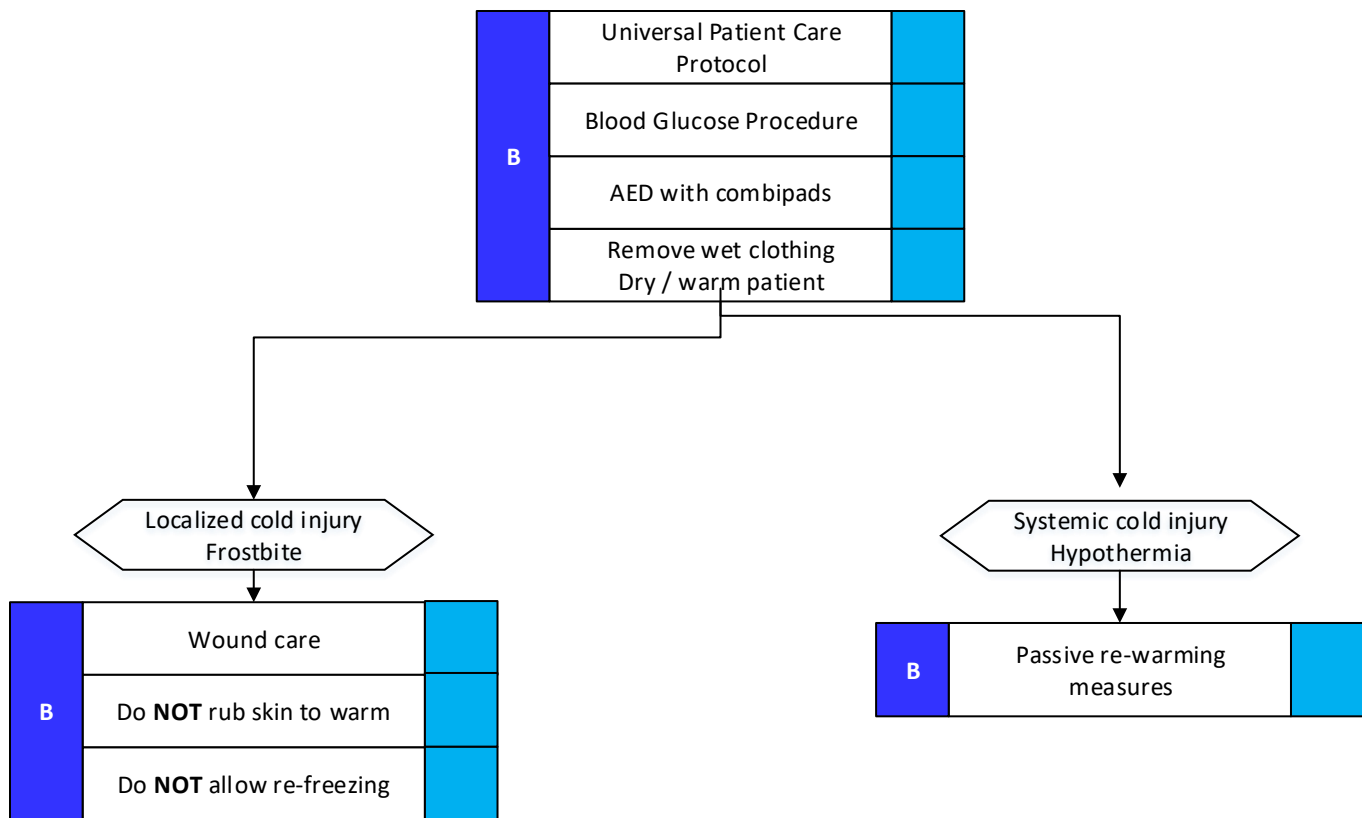
- Age
- Time of exposure to cold and/or wet environment, may occur even in a normothermic environment
- Time of exposure to a windy environment
- Drug use/abuse:
 - -Alcohol
 - -Barbituates
- Infection/sepsis

Key Information Continued:

- Altered mental status
- Shivering
- Extremity pain or sensory abnormality
- Bradycardia
- Hypotension/Shock
- Paralysis
- Paresthesia (pins and needles feeling)
- Blackened extremities
- Blisters

Differential:

- Metabolic disorder
- Toxins
- Environmental exposure
- Sepsis
- Hypoglycemia
- CNS dysfunction
 - -Stroke
 - -Head injury
 - Spinal cord injury
- Frostnip
- Frostbite



Pearls:

- Handle severe hypothermia patients very gently, they are at risk for VF arrest.

Pediatric Hypothermia / Frostbite

Key Information:

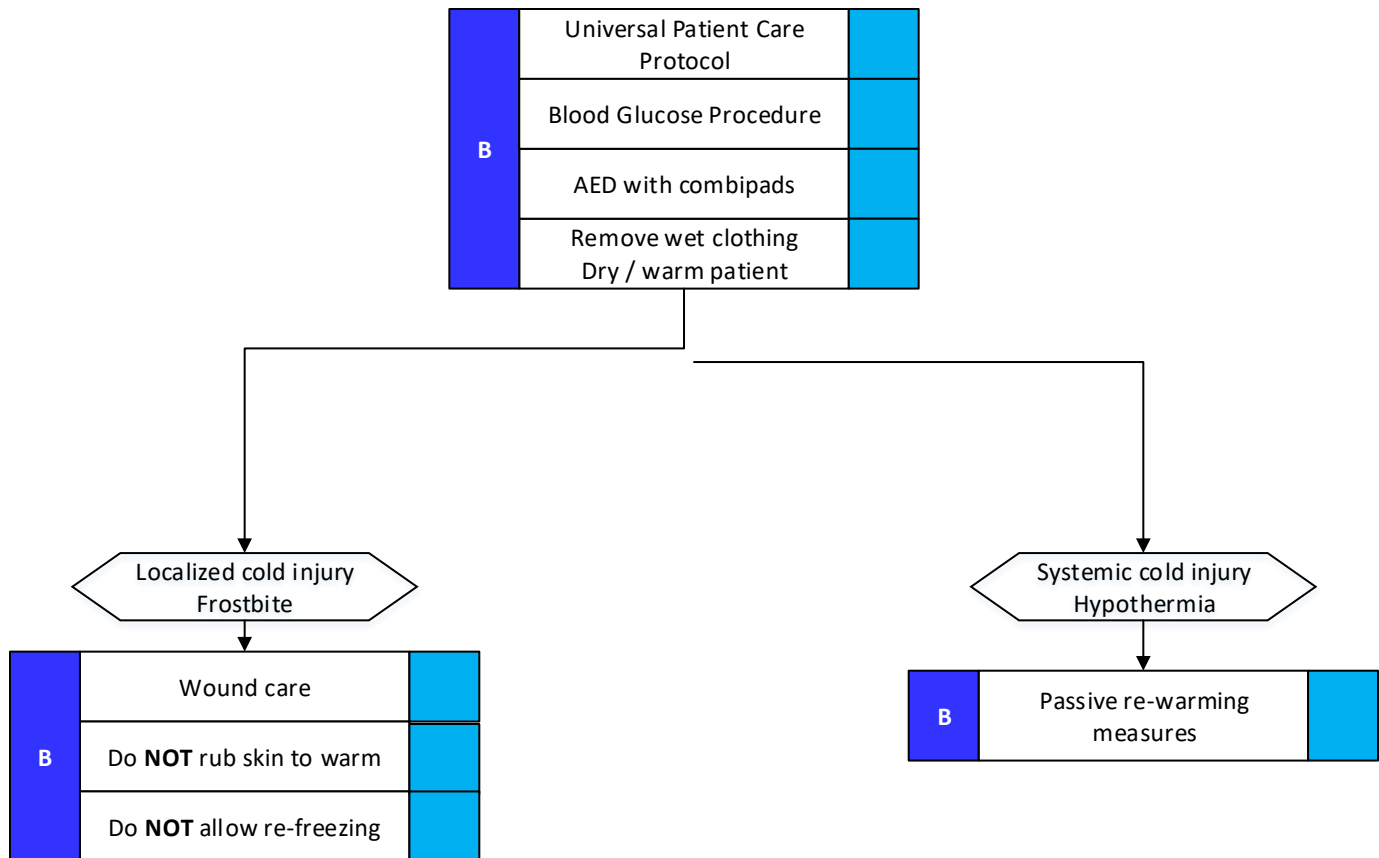
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Pearls:

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Adult Hyperthermia

Key Information:

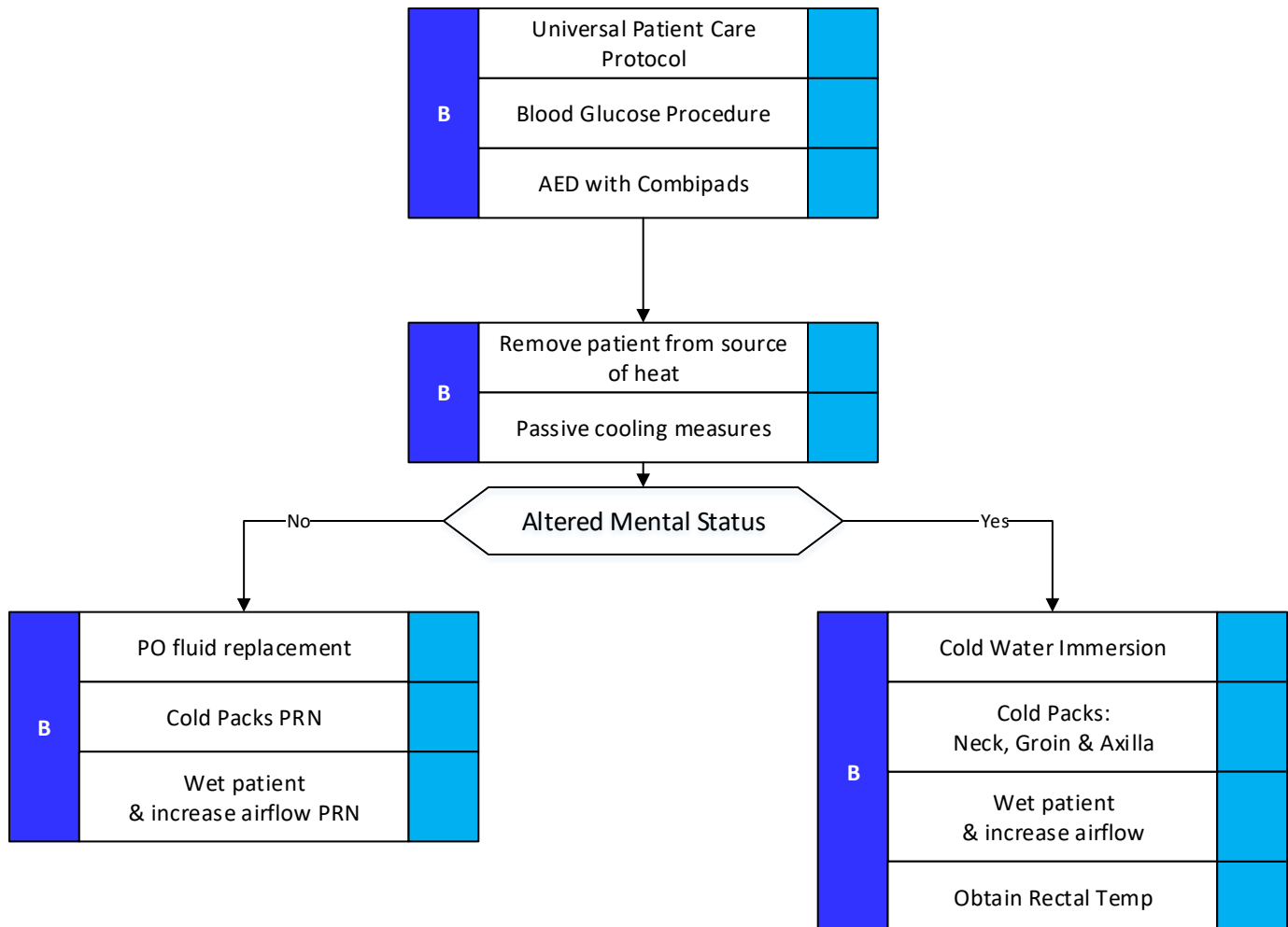
- Age
- Exposure to increased temperatures and/or humidity
- Time and duration of exposure
- Poor PO intake or extreme exertion
- Fatigue and/or muscle cramping

Key Information Continued:

- Altered Mental status
- Hot, dry or sweaty skin
- Hypotension or shock
- Seizures
- Nausea/Vomiting
- Skin turgor

Differential:

- Fever
- Dehydration
- Medications
- Hyperthyroidism (Thyroid Storm)
- Excited Delirium
- Heat cramps/Heat exhaustion/
Heat stroke
- CNS lesion



- Cold Packs may be bags of chilled saline, chilled water, or ice.

Pediatric Hyperthermia

Key Information:

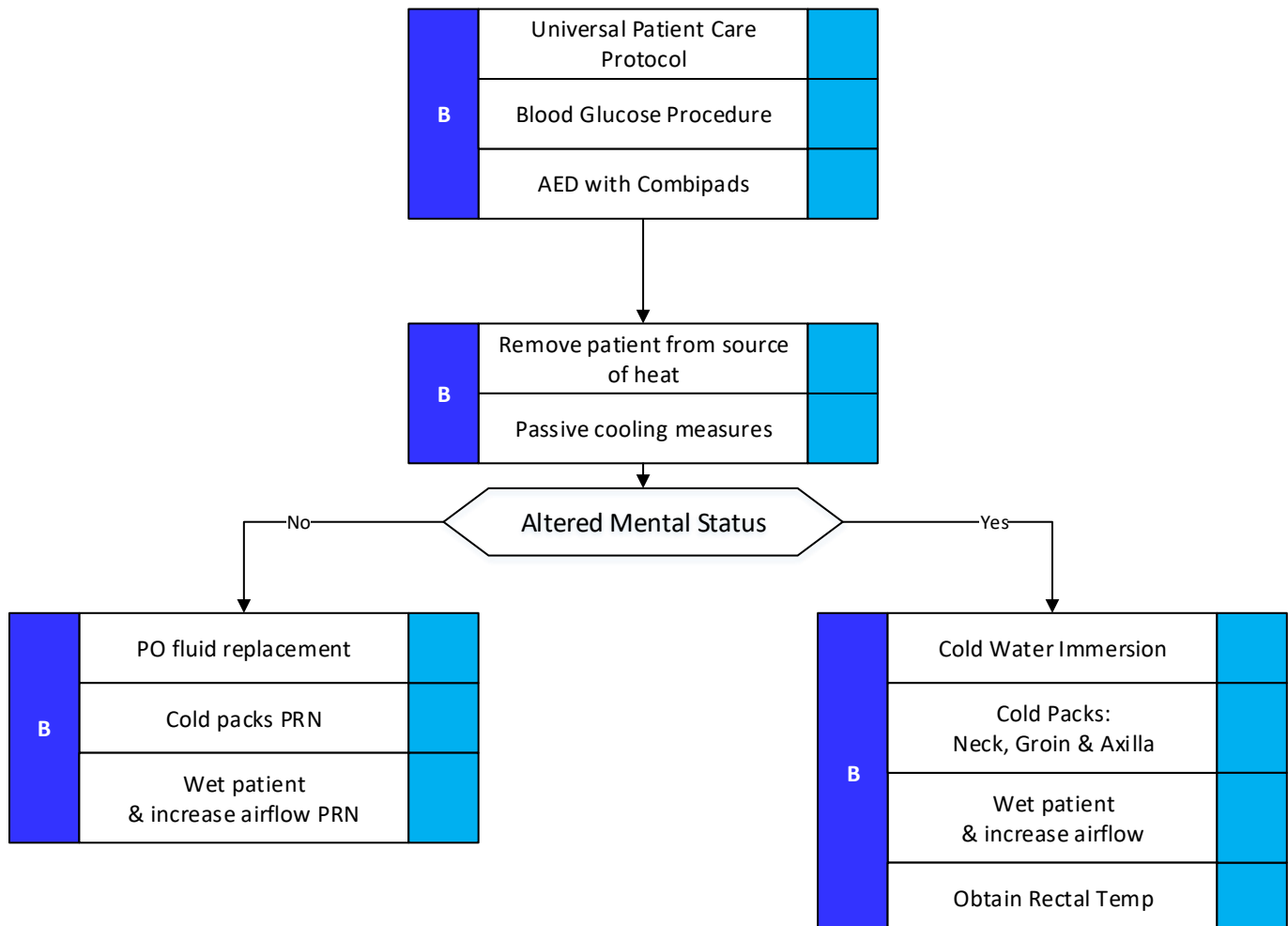
- Age
- Exposure to high ambient temperature
- Time and duration of exposure
- Poor PO intake or exertion
- Number of wet diapers/ restroom usage
- Fatigue and/or muscle cramping

Key Information Continued:

- Altered Mental status
- Hot, dry or sweaty skin
- Hypotension or shock
- Seizures
- Nausea/Vomiting
- Skin turgor

Differential:

- Fever
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- Medications
- Hyperthyroidism (Thyroid Storm)
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- Heat cramps/Heat exhaustion/Heat stroke
- CNS lesion



- Cold packs may be made of chilled saline, chilled water, or ice.

Adult Trauma Arrest

Key Information:

- Patient who has suffered traumatic injury and is now pulseless
- Evidence of penetrating trauma
- Evidence of blunt trauma

Differential:

- Medical condition preceding traumatic event
- Tension pneumothorax

Differential continued:

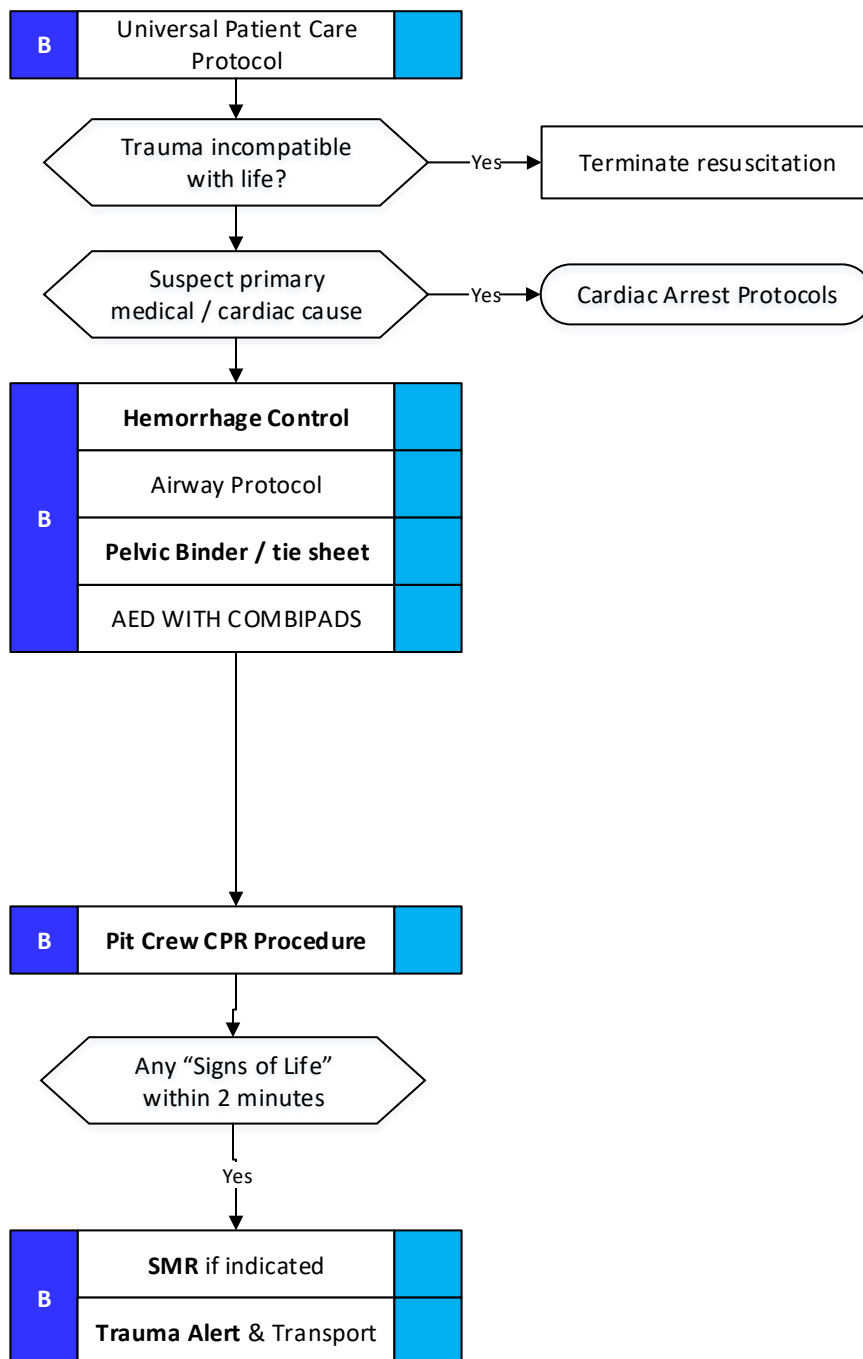
- Hypovolemic shock
 - External hemorrhage
 - Unstable pelvic fracture
 - Displaced long bone fracture(s)
 - Hemothorax
 - Intra-abdominal hemorrhage
 - Retro-peritoneal hemorrhage

Trauma Incompatible with Life:

- Decapitation
- Dependant Lividity
- Rigor Mortis
- Massive Deformation Head / Chest

Signs of Life:

- Pulse
- BP
- Respirations (Spontaneous)
- Movement (Spontaneous)
- Reactive Pupils



Pediatric Trauma Arrest

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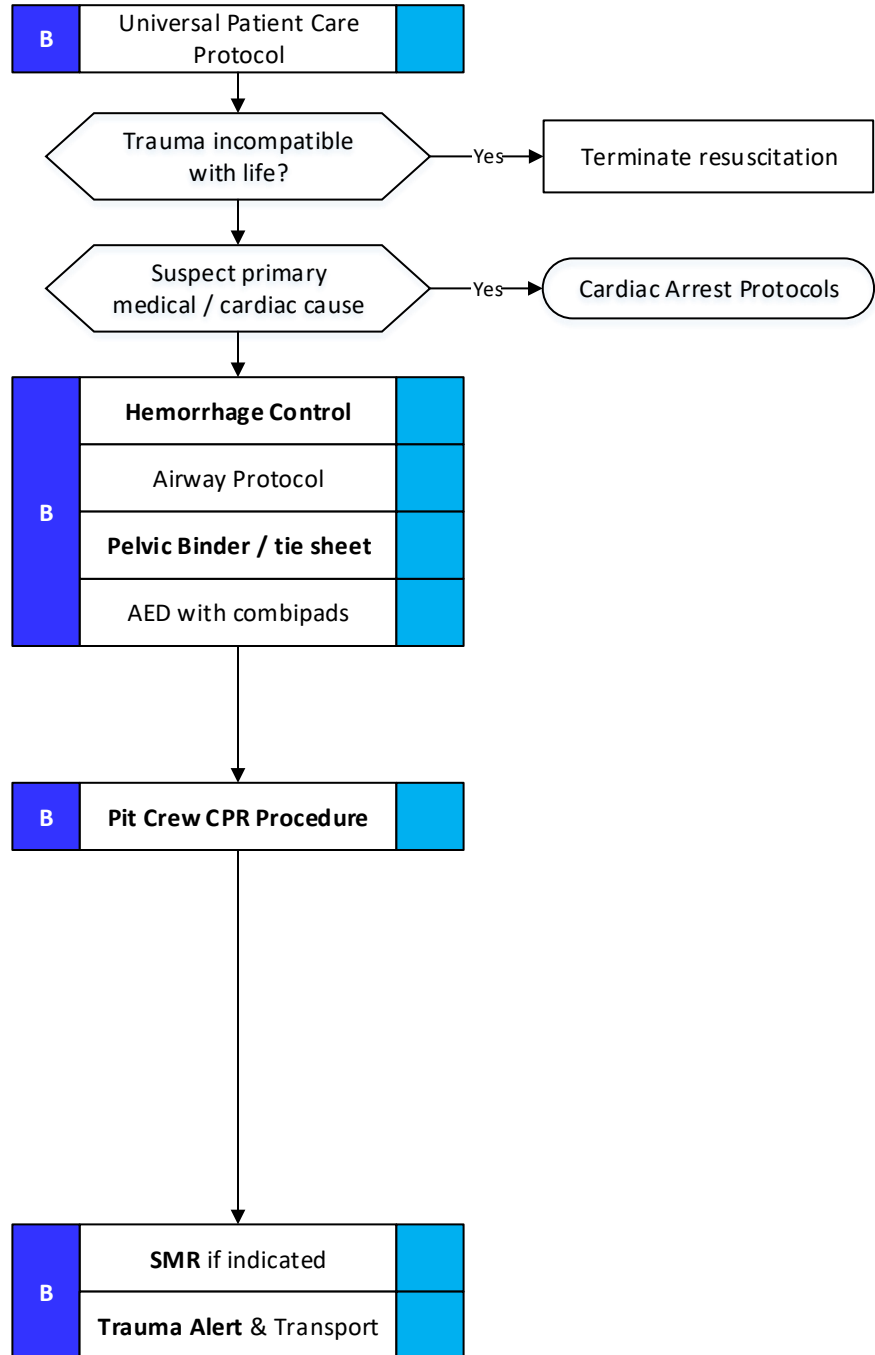
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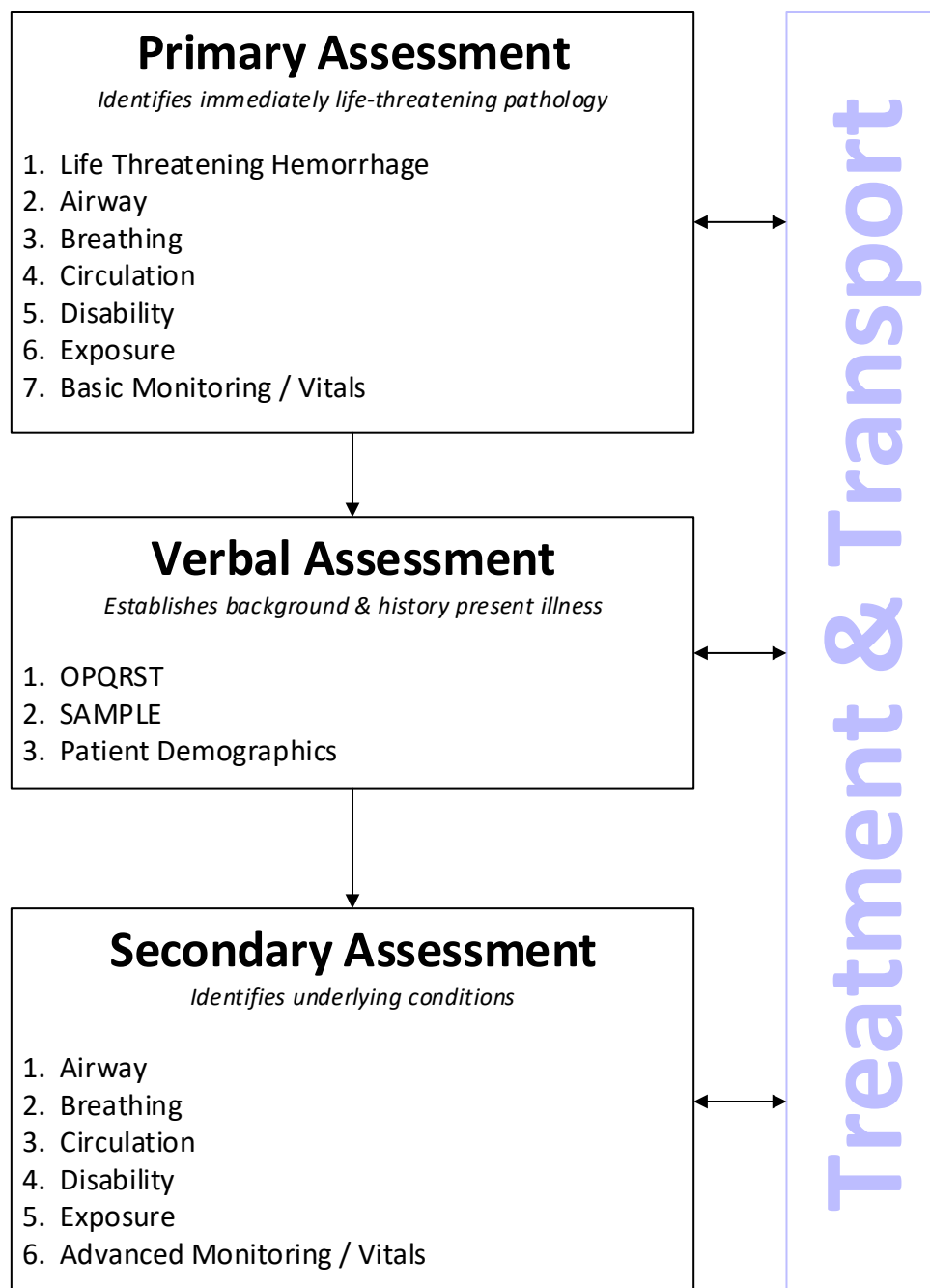


Signs of Life:

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- BP
- Respirations (Spontaneous)
- Movement (Spontaneous)
- Reactive Pupils

Universal Patient Care

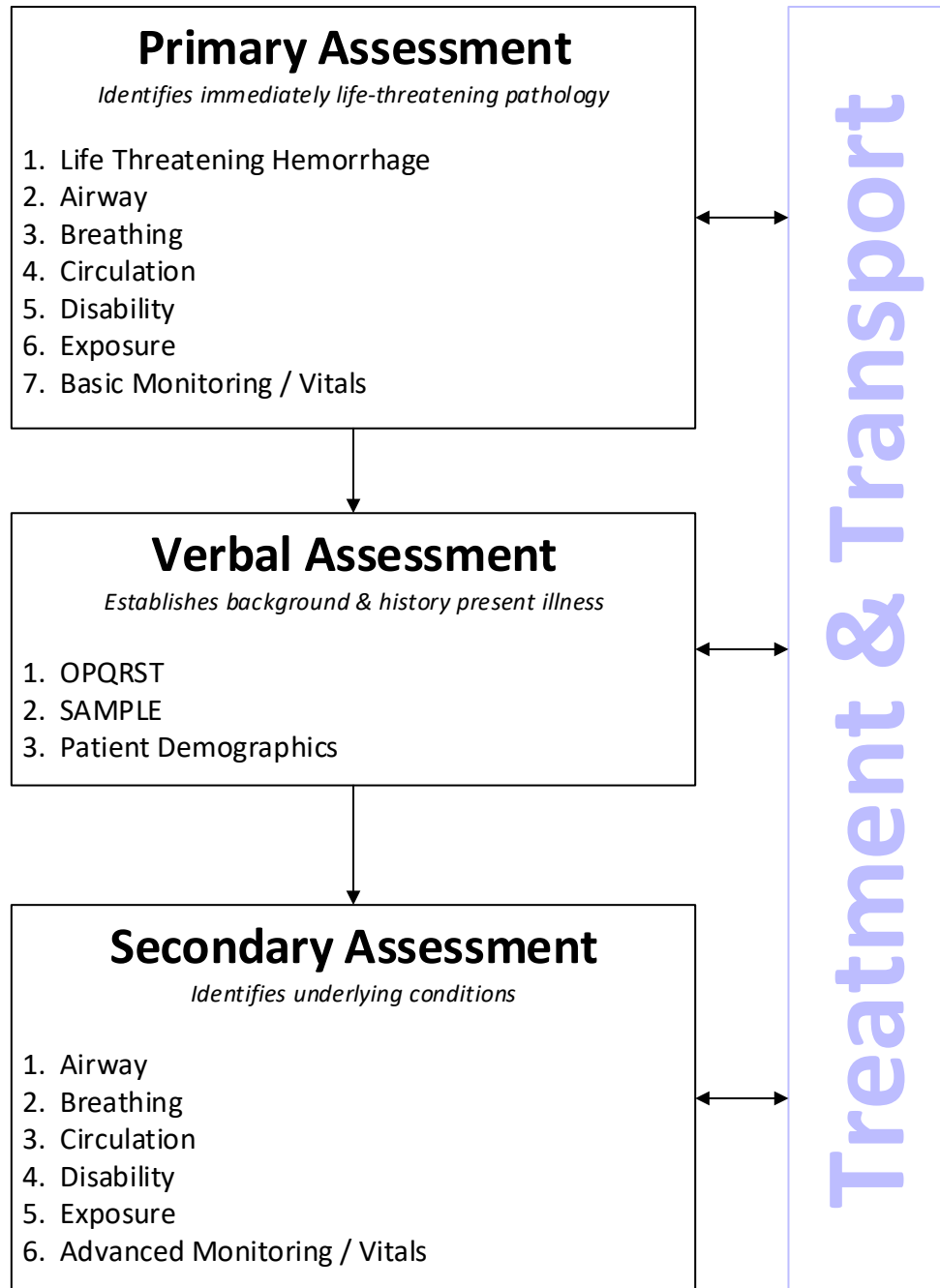
SITUATIONAL AWARENESS
ENVIRONMENT PATIENT
SELF TEAM ENVIRONMENT PATIENT



- To be used in parallel with any and all applicable COGs; with respect to training and clinical judgment of prehospital team.

Universal Patient Care - Pediatric

SITUATIONAL AWARENESS
ENVIRONMENT PATIENT
TEAM
SELF



- To be used in parallel with any and all applicable COGs; with respect to training and clinical judgment of prehospital team.