Medical

- Allergic Reaction - REACTION Format
- Hypoglycemia - Maryland Format
- Diabetic Emergency
- Cardiac Arrest - NC Format
- Pain Management - James Format
- Epistaxis
- Abuse / Neglect

Allergic Reaction - REACTION Format

This policy applies to: Patients whose chief complaint is itching, rash or allergic reaction.

Exclusion Criteria: None

Recognize

- Itching, hives, flushing, angioedema
- Coughing, wheezing, stridor, or respiratory distress
- Chest or throat constriction
- Difficulty swallowing
- Difficulty phonating
- Nausea / vomiting
- Altered Mental Status
- Hypotension or shock
- Edema

Evaluate

- Onset and trajectory of symptoms
- Anatomic and situational location of exposure
- Insect sting or bite
- Known allergies: food, environmental, medication, other
- Known or suspected exposure: past occurrences and current event
- Known history of sensitivity or allergic reaction
- Past medical and medication history
- New clothing, soap, or detergent
- New medications

Administer Treatment

- Remove allergy trigger if known and present

- Prioritize interventions based on clinical presentation and severity of reaction
- Supplemental oxygen PRN for goal SpO2
- Attentive and prompt airway assessment and management
- Airway Management if indicated per Airway Management PCG (P1)
- If patient has suspected or known exposure and exhibits signs of any: respiratory distress, airway
  restriction, altered mental status or shock, treat accordingly
  - **Epinephrine Auto-Injector 0.3 mg IM** if available
  - Vascular access per Vascular Access PCG
  - Consider **crystalloid fluid bolus 500 mL IV/IO** to support hemodynamics, repeat PRN
  - **Diphenhydramine (Benadryl) 50 mg IM/IV/IO**
  - **Epinephrine** (1mg/1mL) **0.3 mg IM or Epinephrine** (1mg/10mL) **0.1 mg IV/IO** q 3 min PRN for
    MORE SEVERE REACTION
    - Consider **Epinephrine infusion 0.01 mcg/kg/min IV/IO**, titrate to max 0.1 mcg/kg/min
      as an alternative to repeat IM or IV/IO doses
    - Monitor ECG rhythm closely, Epinephrine may potentiate arrhythmias, especially in
      patients over the age of 40
  - **Methylprednisolone (Solu-Medrol) 125 mg IV/IO**
  - **Albuterol (2.5 mg/3 mL) nebulized** for wheezing or shortness of breath

---

Consider Differentials

- Urticaria (rash only)
- Anaphylaxis (severe systemic effect)
- Shock (severe vascular effect)
- Angioedema (drug induced or infection)
- Aspiration / airway obstruction
- Vasovagal event
- Asthma or COPD
- Infection (ex: retropharyngeal abscess, bacterial tracheitis, croup, epiglottitis, strep)
- Pulmonary edema or CHF
- Metabolic disorders

Transport Considerations

- During transport, maintain astute airway, breathing, circulation and mental status assessment with
  prompt intervention as needed. Stability can quickly change to instability in these

patients.
- Consider early airway management, reference Airway Management PCG (P1)

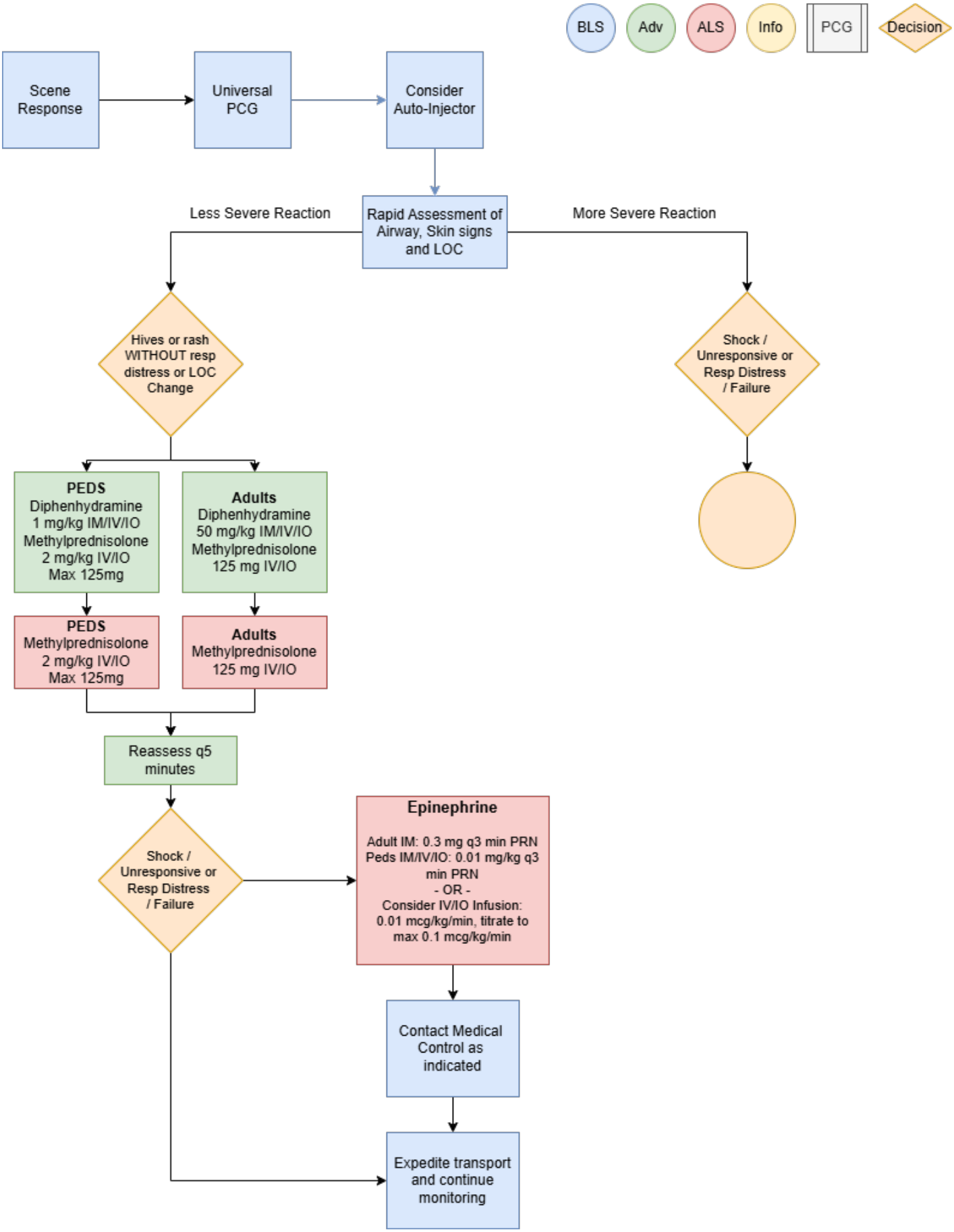
Information

- Typically, the shorter the interval from exposure to symptoms, the more severe the reaction
- Hemodynamic instability may recur up to 24 hours after initial stabilization

Other Populations

- Neonatal/ Pediatric drug dosing:
  - Pediatric **Epinephrine Auto-Injector JR dose is 0.15 mg** for patients 15-30 Kg
  - **Diphenhydramine (Benadryl) 1 mg/Kg IM/IV/IO** over 5 min max dose 50 mg
  - **Epinephrine** (1mg/1mL) **0.01 mg/Kg IM/IV/IO** q3 min until stable or infusion started
    - Max 0.5 mg per dose (Intentionally larger than adult dosing)
    - **Epinephrine infusion 0.01 mcg/Kg/min IV/IO**, titrate to max 1 mcg/kg/min
  - **Methylprednisolone (Solu-Medrol) 2 mg/Kg IV/IO** max dose 125mg
  - **Albuterol for 15 Kg or more, use adult dose**
  - **Albuterol for less than 15 Kg (1.25mg/ 3ml) nebulized** with O2 at 6 lpm

Navigate


BLS
Adv
ALS
Info
PCG
Decision
Scene Response
Universal PCG
Consider Auto-Injector
Rapid Assessment of Airway, Skin signs and LOC
Less Severe Reaction
More Severe Reaction
Hives or rash WITHOUT resp distress or LOC Change
Shock / Unresponsive or Resp Distress / Failure
PEDS
Diphenhydramine
1 mg/kg IM/IV/IO
Methylprednisolone
2 mg/kg IV/IO
Max 125mg
Adults
Diphenhydramine
50 mg/kg IM/IV/IO
Methylprednisolone
125 mg IV/IO
PEDS
Methylprednisolone
2 mg/kg IV/IO
Max 125mg
Adults
Methylprednisolone
125 mg IV/IO
Reassess q5 minutes
Shock / Unresponsive or Resp Distress / Failure
Epinephrine
Adult IM: 0.3 mg q3 min PRN
Peds IM/IV/IO: 0.01 mg/kg q3 min PRN
- OR -
Consider IV/IO Infusion:
0.01 mcg/kg/min, titrate to max 0.1 mcg/kg/min
Contact Medical Control as indicated
Expedite transport and continue monitoring

References

Campbell, Ronna. “Anaphylaxis: Emergency Treatment.” UpToDate, January 2022.
Sicherer, Scott. “Prescribing Epinephrine for Anaphylaxis Self-Treatment.” UpToDate, January 2022.
“U.S. Army Medevac Critical Care Flight Paramedic Standard Medical Operating Guidelines.” Jan. 2020.

Hypoglycemia - Maryland Format

> **Applies to:** Blood glucose less than 70 mg/dL or greater than 300 mg/dL

- Patient-reported low or high blood glucose
- Diabetic patients with other medical symptoms (e.g., vomiting)
- Altered mental status
- Alcohol intoxication, suspected
- Seizure
- Stroke symptoms
- Unresponsive patients
- Cardiac arrest

BLS

- Check blood glucose level
- If blood glucose is less than 70 mg/dL, administer 10-15 grams of oral glucose between the patient's gum and cheek.
- Administer additional dose of 10-15 grams of oral glucose if not improved after 10 minutes.

ALS

- **HYPOglycemia**: If blood glucose is less than 70 mg/dL, administer 10% dextrose in 50 mL (5 gram) boluses, 1 minute apart, to a maximum of 250 mL OR 25 grams of 50% dextrose IVP, until:
  - the patient has a return to normal mental status, and
  - the patient's blood glucose is at least 90 mg/dL
- If patient has persistently altered mental status and blood glucose less than 90 mg/dL despite treatment, repeat dosing regimen above.
- If unable to initiate an IV and blood glucose is less than 70 mg/dL, administer glucagon 1 mg IM/IN.
  - If the patient has persistently altered mental status and blood glucose less than 90 mg/dL at 15 minutes, transport to the hospital should not be delayed.
- **HYPERglycemia**: If blood glucose is greater than 300 mg/dL, administer 10 mL/kg Lactated Ringer's bolus unless rales, wheezing, pedal edema, or history of renal

failure or CHF is present.

MC

- Not Applicable

Diabetic Emergency

Applies to: Blood glucose less than 70 mg/dL or greater than 300 mg/dL **and**

- Patient-reported low or high blood glucose
- Diabetic patients with other medical symptoms (e.g., vomiting)
- Altered mental status
- Alcohol intoxication, suspected
- Seizure
- Stroke symptoms
- Unresponsive patients
- Cardiac arrest

Exclusion Criteria: None

History

- Past medical history
- Medications
- Drug allergies
- Last Meal
- Last BGA check

Signs and Symptoms

- Altered mental status
- Combative / irritable
- Diaphoresis
- Seizures
- Abdominal pain
- Nausea / vomiting
- Weakness
- Dehydration
- Deep / rapid breathing

Differentials

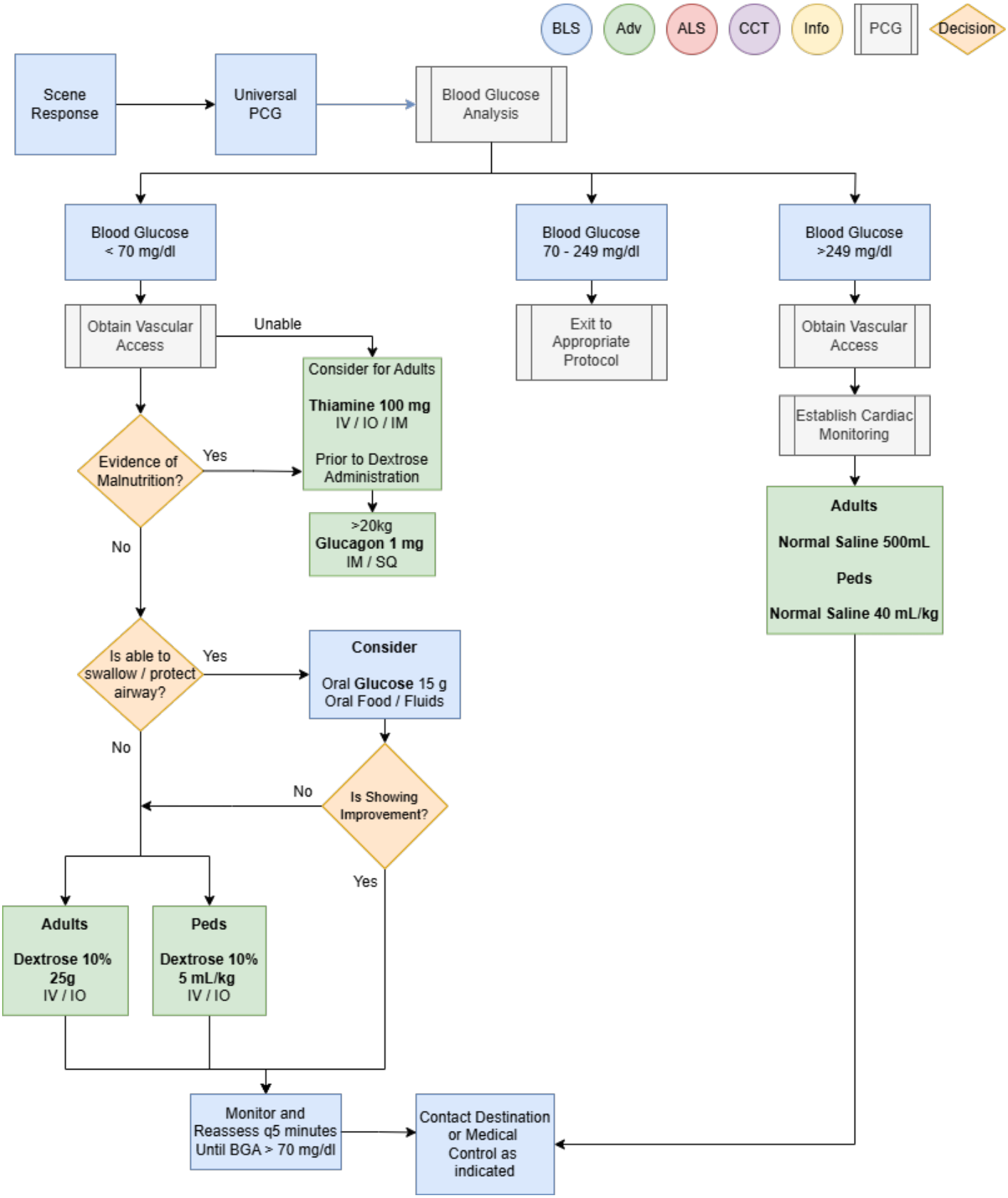
- Alcohol / drug use
- Toxic ingestion

- Trauma; head injury
- Seizure
- CVA
- Altered baseline mental status

Pearls

- Patient’s refusing transport to medical facility after treatment of hypoglycemia:
  - Blood sugar must be ≥ 80, patient has ability to eat and availability of food with responders on scene.
  - Patient must have known history of diabetes and not taking any oral diabetic agents.
  - Patient returns to normal mental status and has a normal neurological exam with no new neurological deficits.
  - Must demonstrate capacity to make informed health care decisions. See Universal Patient Care Protocol UP-1.
    Otherwise contact medical control.
- Hypoglycemia with Oral Agents:
  - Patient’s taking oral diabetic medications should be encouraged to allow transportation to a medical facility.
    They are at risk of recurrent hypoglycemia that can be delayed for hours and require close monitoring even after
    normal blood glucose is established.
  - Not all oral agents have prolonged action so Contact Medical Control or NC Poison Control Center for advice.
    Patient’s who meet criteria to refuse care should be instructed to contact their physician immediately and
    consume a meal.
- Hypoglycemia with Insulin Agents
  - Many forms of insulin now exist. Longer acting insulin places the patient at risk of recurrent hypoglycemia even
    after a normal blood glucose is established.
  - Not all insulins have prolonged action so Contact Medical Control for advice.
  - Patient’s who meet criteria to refuse care should be instructed to contact their physician immediately and
    consume a meal.
- Congestive Heart Failure patients who have Blood Glucose > 250:
  - Limit fluid boluses unless patient has signs of volume depletion such as, dehydration, poor perfusion,
    hypotension, and/ or shock.
- In extreme circumstances with no IV / IO access and no response to glucagon, D50 can be administered rectally,
  Contact Medical Control for advice.

Navigate



References

Protocols

-

Pharmacology

- Dextrose 10%
- Dextrose 50%
- Glucagon
- Glucose

Procedures

- Vascular Access
-

Cardiac Arrest - NC Format

Cardiac Arrest - Adult

This Protocol Applies to:

Exclusion Criteria:

BLS | Adv | ALS | CCT | Decide | Caution | Protocol

AT ANY TIME

Return of Spontaneous Circulation

Go to Post Resuscitation Protocol AC 10

Criteria for Death / No Resuscitation
Review DNR / MOST Form

YES →
Decomposition
Rigor mortis
Dependent lividity
Blunt force trauma
Injury incompatible with life
Extended downtime with asystole

Do not begin resuscitation

Follow Deceased Subjects Policy

NO ↓

Begin Continuous CPR Compressions
Push Hard (≥ 2 inches)
Push Fast (100 - 120 / min)
Change Compressors every 2 minutes
(sooner if fatigued)
(Limit changes / pulse checks ≤ 10 seconds)

Ventilate 1 breath every 6 seconds
30:2 Compression:Ventilation if no Advanced Airway
Monitor EtCO2
if available

ALS Available

NO → AED Procedure *if available*

YES → Cardiac Monitor

AED Procedure *if available*
NO ← Shockable Rhythm → YES
YES → AED Procedure

Cardiac Monitor
NO ← Shockable Rhythm → YES

NO → Asystole / PEA
Protocol AC 1
as indicated
Airway
Protocol(s) AR 1, 2, 3

YES → VF / VT
Protocol AC 9
Tachycardia
Protocol(s) AC 6, 7
as indicated
Airway
Protocol(s) AR 1, 2, 3

Continue CPR
2 Minutes
Repeat and reassess
Airway
Protocol(s) AR 1, 2, 3

Arrest secondary to Opioid OD?

YES → **Naloxone 0.4 – 2 mg IN / IM**
Peds: 0.1 mg/kg IN

Maximum 4 mg

A
Naloxone 0.4 – 2 mg
Peds: 0.1 mg/kg
IV / IO / IM / IN / ETT

Maximum 4 mg

NO ↓

Termination on Scene
Protocol AC 12
as indicated

Notify Destination or Contact Medical Control

Protocols Referenced

test

Medications Referenced

Naloxone

Procedures Referenced

Pain Management - James Format

> **Applies to:** Patient presents with a painful condition that would benefit from treatment with an analgesic. This
> includes DNR/MOLST patients and patients being pre-medicated for a painful procedure.

> **Exclusion Criteria:** Medication specific hypersensitivity/allergy. Active Labor.

History

- Age
- Location
- Duration
- Severity (1 - 10)
- If child use Wong-Baker faces scale
- Past medical history
- Medications
- Drug allergies

Signs and Symptoms

- Severity (Pain scale)
- Quality
- Radiation
- Relation to movement
- Respirations
- Reproducible
- Increased upon palpation

Differentials

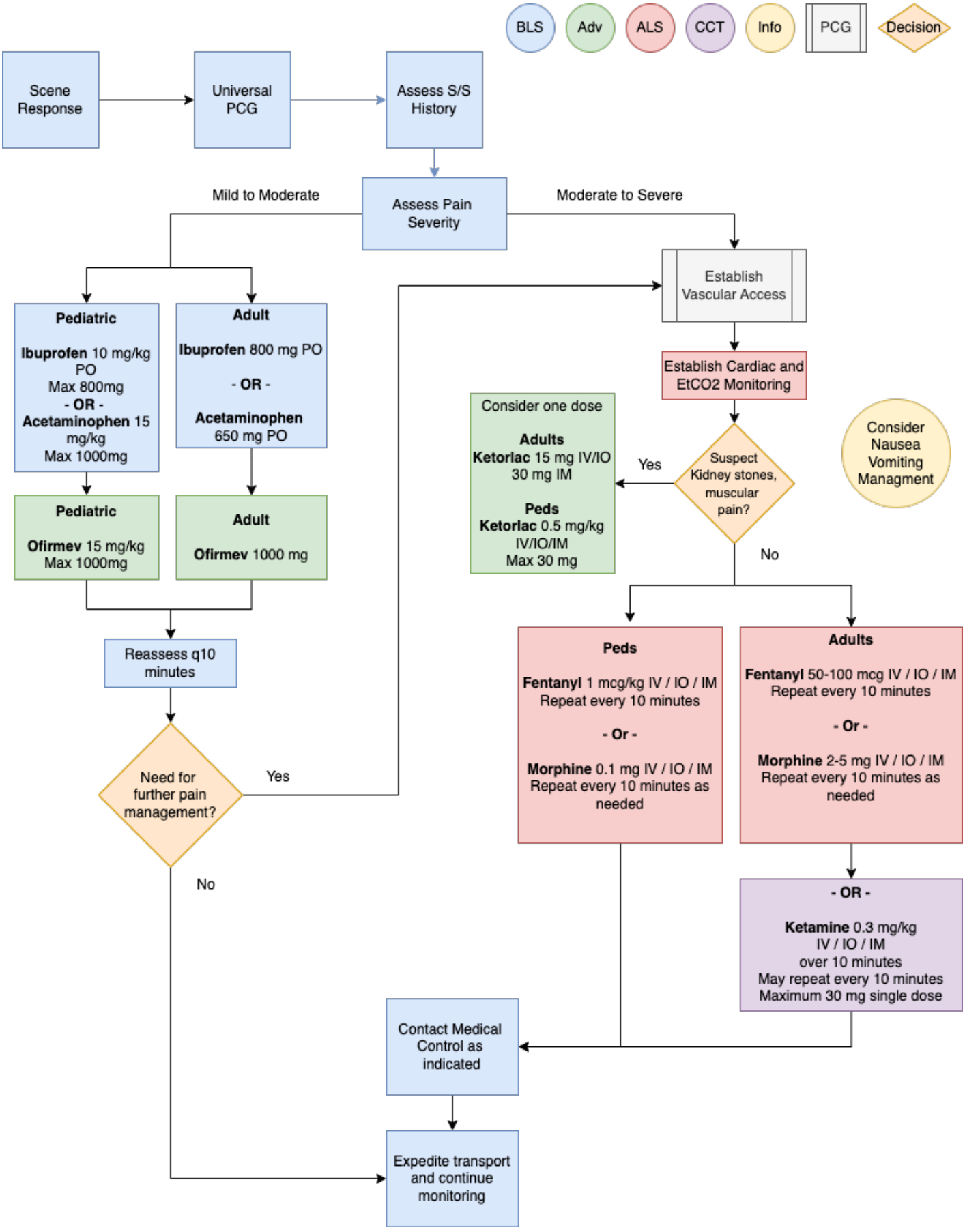
- Per the specific protocol
- Musculoskeletal
- Visceral (abdominal)
- Cardiac
- Pleural/ Respiratory

- Neurogenic
- Renal (colic)

Pearls

- Do not administer Acetaminophen to patients with history of liver disease or known to have consumed large amounts of ETOH.
- Fentanyl, Morphine and Ketamine should be reserved for acute pain.
- For patients in Moderate pain for instance, you may use the combination of an oral medication and parenteral if no contraindications are present.
- **Ketamine**
  - May use Ketamine in combination with opioids to limit total amount of opioid administration
  - Avoid in patients who have cardiac disease or uncontrolled hypertension.
  - Avoid in patients with increased intraocular pressure such as glaucoma.
  - Avoid use in combination with benzodiazepines due to depressed respiratory drive

Navigate


BLS
Adv
ALS
CCT
Info
PCG
Decision
Scene Response
Universal PCG
Assess S/S History
Assess Pain Severity
Mild to Moderate
Moderate to Severe
Pediatric
Ibuprofen 10 mg/kg PO
Max 800mg
- OR -
Acetaminophen 15 mg/kg
Max 1000mg
Adult
Ibuprofen 800 mg PO
- OR -
Acetaminophen 650 mg PO
Pediatric
Ofirmev 15 mg/kg
Max 1000mg
Adult
Ofirmev 1000 mg
Reassess q10 minutes
Need for further pain management?
Yes
No
Establish Vascular Access
Establish Cardiac and EtCO2 Monitoring
Suspect Kidney stones, muscular pain?
Yes
Consider one dose
Adults
Ketorlac 15 mg IV/IO
30 mg IM
Peds
Ketorlac 0.5 mg/kg
IV/IO/IM
Max 30 mg
No
Consider Nausea Vomiting Managment
Peds
Fentanyl 1 mcg/kg IV / IO / IM
Repeat every 10 minutes
- Or -
Morphine 0.1 mg IV / IO / IM
Repeat every 10 minutes as needed
Adults
Fentanyl 50-100 mcg IV / IO / IM
Repeat every 10 minutes
- Or -
Morphine 2-5 mg IV / IO / IM
Repeat every 10 minutes as needed
- OR -
Ketamine 0.3 mg/kg
IV / IO / IM
over 10 minutes
May repeat every 10 minutes
Maximum 30 mg single dose
Contact Medical Control as indicated
Expedite transport and continue monitoring

References

Protocols

- Nausea / Vomiting

Pharmacology

- Fentanyl
- Morphine
- Ketamine
- Acetaminophen
- Ofirmev
- Ibuprofen

Procedures

- Vascular Access
- Pain Assessment

Epistaxis

> **This policy applies to:** Patients whose chief complaint is severe or prolonged bleeding from the nose.

> **Exclusion Criteria:** Patients with respiratory compromise may first require airway control and mechanical ventilation. Patients with hemodynamic compromise may first require volume and blood product resuscitation.

Recognize

- Severity of Bleeding
- Airway patency
- Distress or Anxiety
- Blood Thinners / Coagulopathies
- Hemodynamic status
- Facial trauma
- Environmental factors

Evaluate

- Medical History and Medications
- Airway patency
- Circulatory status
- Bleeding disorders
- Estimate Blood Loss
- Pain

Administer Treatment

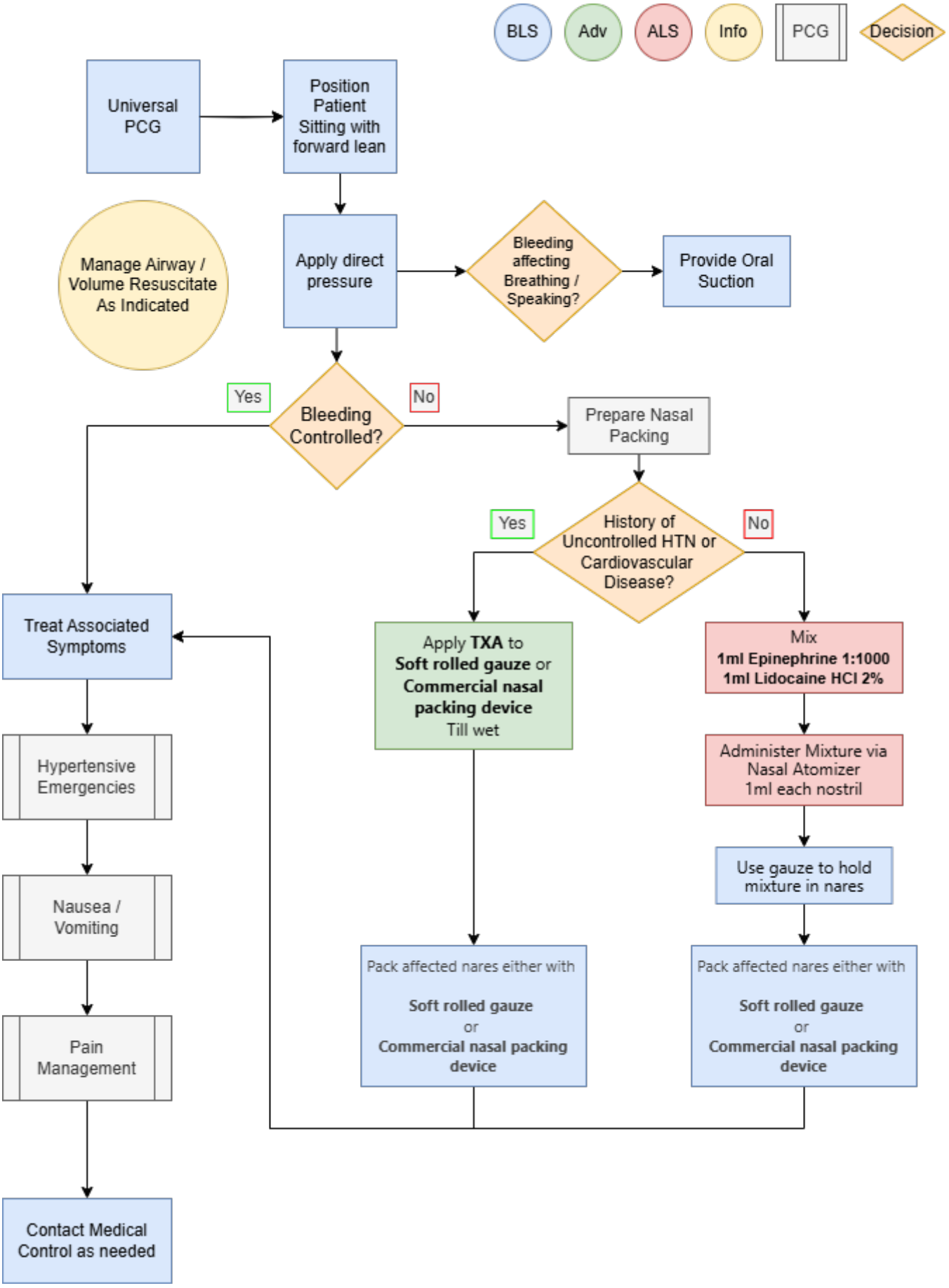
- Patient positioning
  - Place patient in an upright sitting position with a forward lean to prevent ingestion or aspiration of blood.
- Apply direct pressure to the soft part of the nose.
- Provide oral suctioning as needed.
- Manage hypovolemia / shock as indicated.
- Manage airway as indicated

- Consider **Zofran** IV/IO for nausea associated with blood ingestion. Avoid PO administration.
- Consider analgesia.
- Consider mild sedation due to risk of increased bleeding from anxiety associate hypertension.
- If bleeding unresolved via direct pressure consider nasal packing.
  - Prepare mixture of:
    - **1ml Epinephrine 1:1000**
    - **1ml Lidocaine HCl 2%**
  - For patients with Cardiovascular disease or uncontrolled hypertension:
    - Apply TXA as needed to soft rolled gauze or a commercial nasal packing device till wet.
    - Begin packing affected nares.
  - For all else:
    - Administer 1ml of mixture to each affected nare via nasal atomizer. Using gauze to prevent leaking after administration.
    - Begin packing affected nares either with moistened soft rolled gauze or a commercial nasal packing device.
  - Consider **IV/IO opioids** for pain management. Avoid PO administration.

Consider Differentials

- Facial Fractures
- Uncontrolled Hypertension
- Illicit drug use
- Bleeding Disorders

Navigate


BLS
Adv
ALS
Info
PCG
Decision
Universal PCG
Position Patient Sitting with forward lean
Manage Airway / Volume Resuscitate As Indicated
Apply direct pressure
Bleeding affecting Breathing / Speaking?
Provide Oral Suction
Yes
Bleeding Controlled?
No
Prepare Nasal Packing
Yes
History of Uncontrolled HTN or Cardiovascular Disease?
No
Treat Associated Symptoms
Apply TXA to Soft rolled gauze or Commercial nasal packing device Till wet
Mix 1ml Epinephrine 1:1000 1ml Lidocaine HCl 2%
Administer Mixture via Nasal Atomizer 1ml each nostril
Use gauze to hold mixture in nares
Hypertensive Emergencies
Nausea / Vomiting
Pain Management
Pack affected nares either with Soft rolled gauze or Commercial nasal packing device
Pack affected nares either with Soft rolled gauze or Commercial nasal packing device
Contact Medical Control as needed

References

Protocols

Medications

Procedures

Resources

https://www.youtube.com/embed/9i8qIZ-G1GM?t=01m25s

Abuse / Neglect

This policy applies to: Patients who are suspected of being victims of abuse or neglect.

Exclusion Criteria: None

Recognize

- Injuries or burns in a pattern suggestive of intentional infliction.
- Injuries in various stages of healing or injuries scattered over multiple areas of the body.
- Patient, parent, or caregiver responding in an inappropriate manner to the situation.
- Malnutrition of extreme lack of cleanliness of the patient or environment.
- Infants: bulging of fontanels and altered mental status.

Evaluate

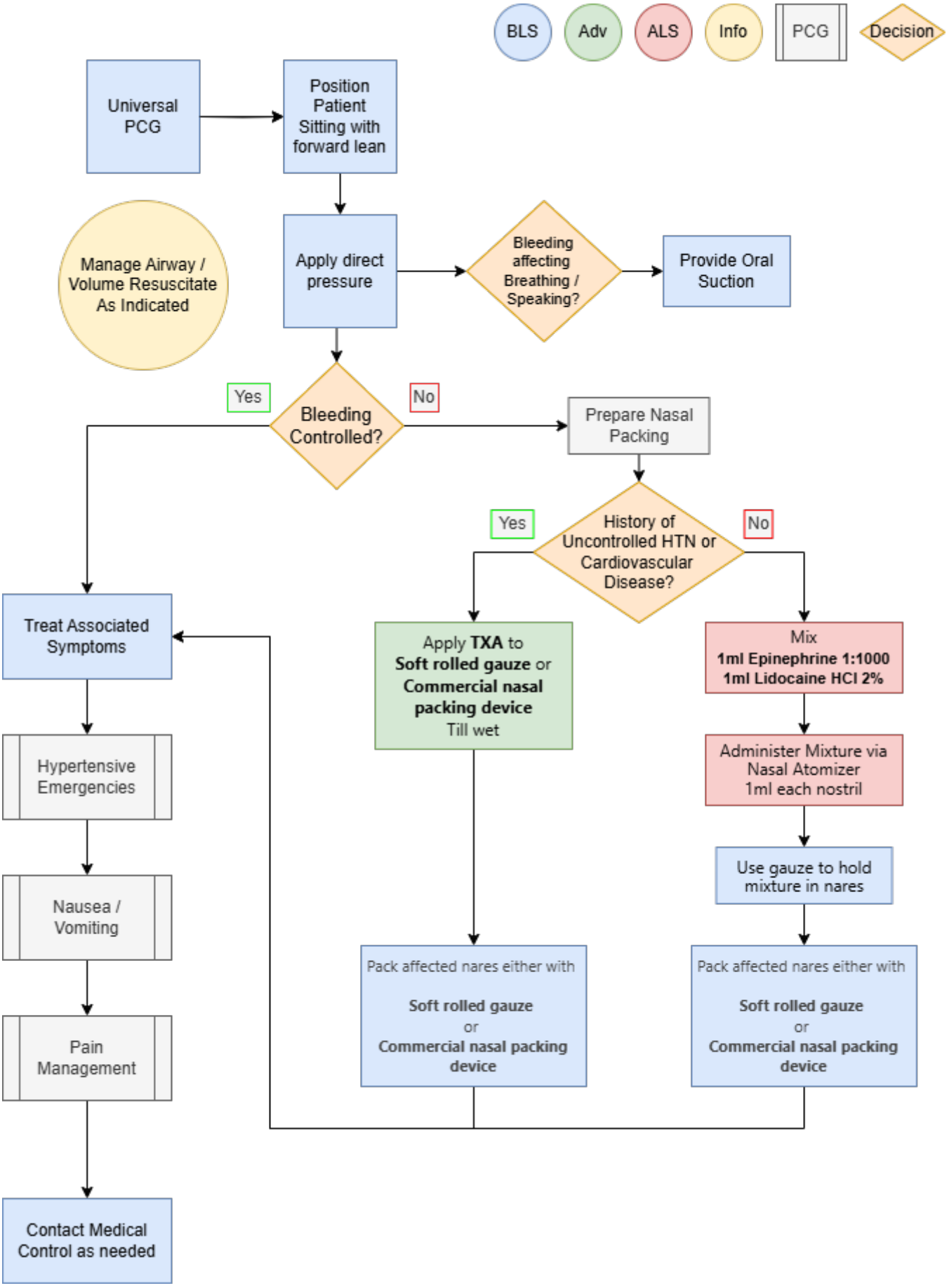
Administer Treatment

- Stabilize and treat injuries according to the appropriate protocol.
- Discourage patient from washing if sexual abuse is suspected.
- Document:
  - All statements made by the patient, parent or caregiver.
  - Any abnormal behavior on the part of the patient, parent or caregiver.
  - The condition of the environment.
  - Time and name of contact when reported to Adult Protective Services.
- Report all suspected cases of abuse / neglect to protective services. Do not initiate report in front of the patient, parent or caregiver.

Consider Differentials

- Not applicable

Navigate


BLS
Adv
ALS
Info
PCG
Decision
Universal PCG
Position Patient Sitting with forward lean
Manage Airway / Volume Resuscitate As Indicated
Apply direct pressure
Bleeding affecting Breathing / Speaking?
Provide Oral Suction
Yes
Bleeding Controlled?
No
Prepare Nasal Packing
Yes
History of Uncontrolled HTN or Cardiovascular Disease?
No
Treat Associated Symptoms
Apply TXA to Soft rolled gauze or Commercial nasal packing device Till wet
Mix 1ml Epinephrine 1:1000 1ml Lidocaine HCl 2%
Administer Mixture via Nasal Atomizer 1ml each nostril
Use gauze to hold mixture in nares
Hypertensive Emergencies
Nausea / Vomiting
Pain Management
Pack affected nares either with Soft rolled gauze or Commercial nasal packing device
Pack affected nares either with Soft rolled gauze or Commercial nasal packing device
Contact Medical Control as needed

References

Protocols

Medications

Procedures

Resources

Adult Protective Services phone: 1-800-252-5400

Adult Protective Services reporting website.