

Lowndes County Fire Rescue



Medical and Trauma Protocols

Effective _____, _____

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GENERAL INFORMATION

Purpose

The purpose of this document is to provide guidelines regarding permissible and appropriate emergency medical services procedures and treatment modalities which may be rendered by personnel to a patient in the out-of-hospital environment.

Professional Judgment

Since each medical emergency must be dealt with on an individual basis and appropriate care determined accordingly, professional judgment is mandatory in determining treatment within the parameters of these guidelines.

Authority

The authority for implementing these guidelines for care of pre-hospital patients is found in state law OCGA 31-11-60.1 (b) and (c), OCGA 31-11-50 (b), and the Rules of the Department of Public Health Chapter 511-9-2.

It is the responsibility of each medic to be familiar with the laws, rules and regulations, and guidelines and adhere to them. Even an order by a physician does not justify procedures not in accordance with laws, rules and regulations.

BODY SUBSTANCE ISOLATION

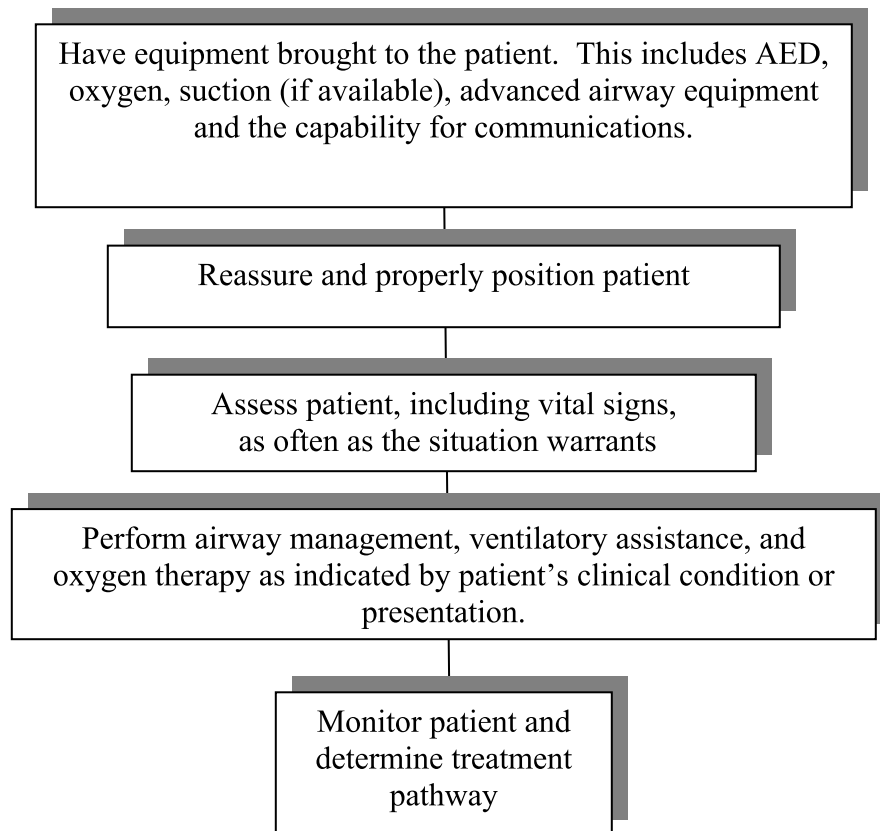
Body Substance Isolation should be used for all patient contacts if the health care provider may be exposed to blood, or other body fluids. Body Substance Isolation assumes that all patients are carriers of infectious contagious diseases.

General recommendations

- ◆ Gloves should be worn when handling blood, body fluids, mucous membranes, non-intact skin, and body tissues. New gloves should be worn for each patient contact. Hands must be washed after glove removal.
- ◆ If a splash of blood or body fluid is anticipated, a full-face shield or goggles and a facemask should be worn.
- ◆ If emergency ventilatory support is necessary, a resuscitation mask should be used.
- ◆ Do not recap needles. Promptly place disposable sharps in a designated puncture resistant container.
- ◆ Place all soiled linen in a clear, plastic bag before sending it to the laundry.
- ◆ Use a solution of 1-part household bleach to 100 parts water to clean equipment, clean up spills, and decontaminate walls and other objects soiled with blood or body fluids.
- ◆ If your skin has a break, cut, abrasion, or dermatitis, use gloves and avoid any contact with blood or body fluids.
- ◆ Be vaccinated against Hepatitis B.
- ◆ Exposure to and possible contamination from blood or body fluids should be reported.

Since there is no reliable, immediate means to identify infected patients, pre-hospital care providers should be equally cautious when caring for all patients.

ROUTINE MEDICAL CARE



The following procedures will be performed on all non-traumatic medical emergencies.

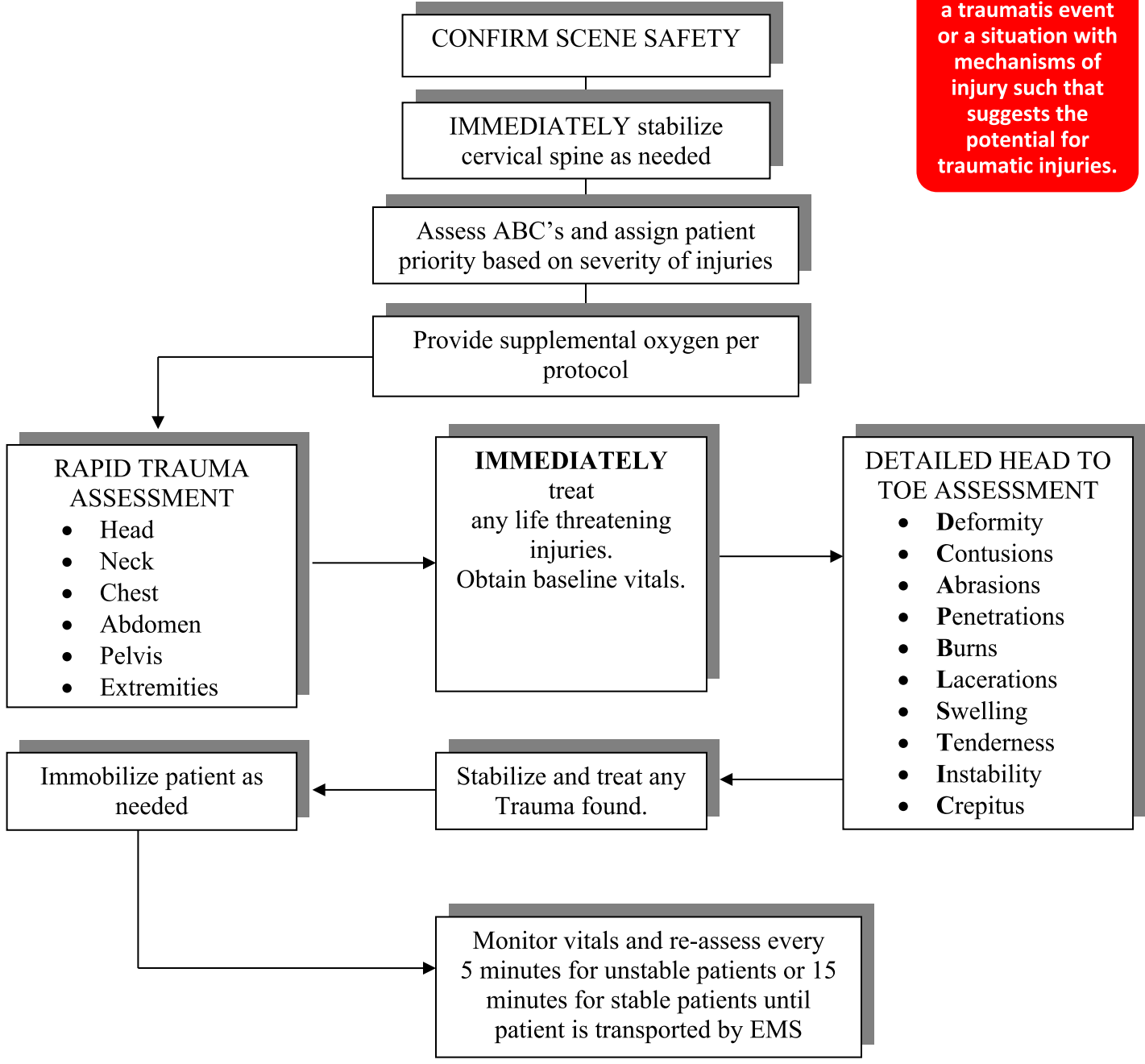
Multiple Patient Procedures

If a potential multi-casualty incident (MCI) exists, contact Dispatch and have EMS and law enforcement notified as soon as possible. (See Procedures Protocols Page 22)

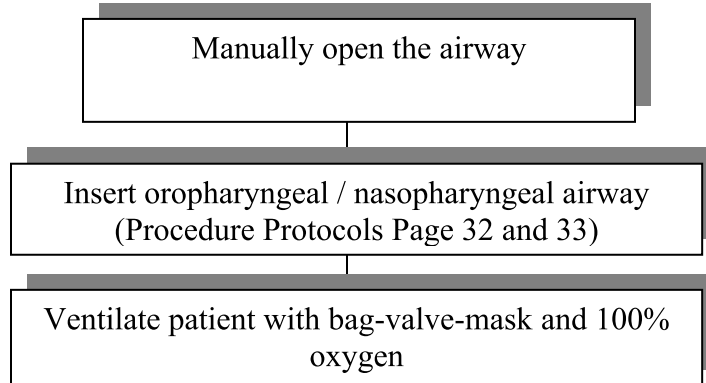
The Medical Control Physician is authorized to make all protocols standing orders during the MCI.

TRAUMA CARE PROTOCOL

Trauma assessment is required for any patient involved in a traumatic event or a situation with mechanisms of injury such that suggests the potential for traumatic injuries.

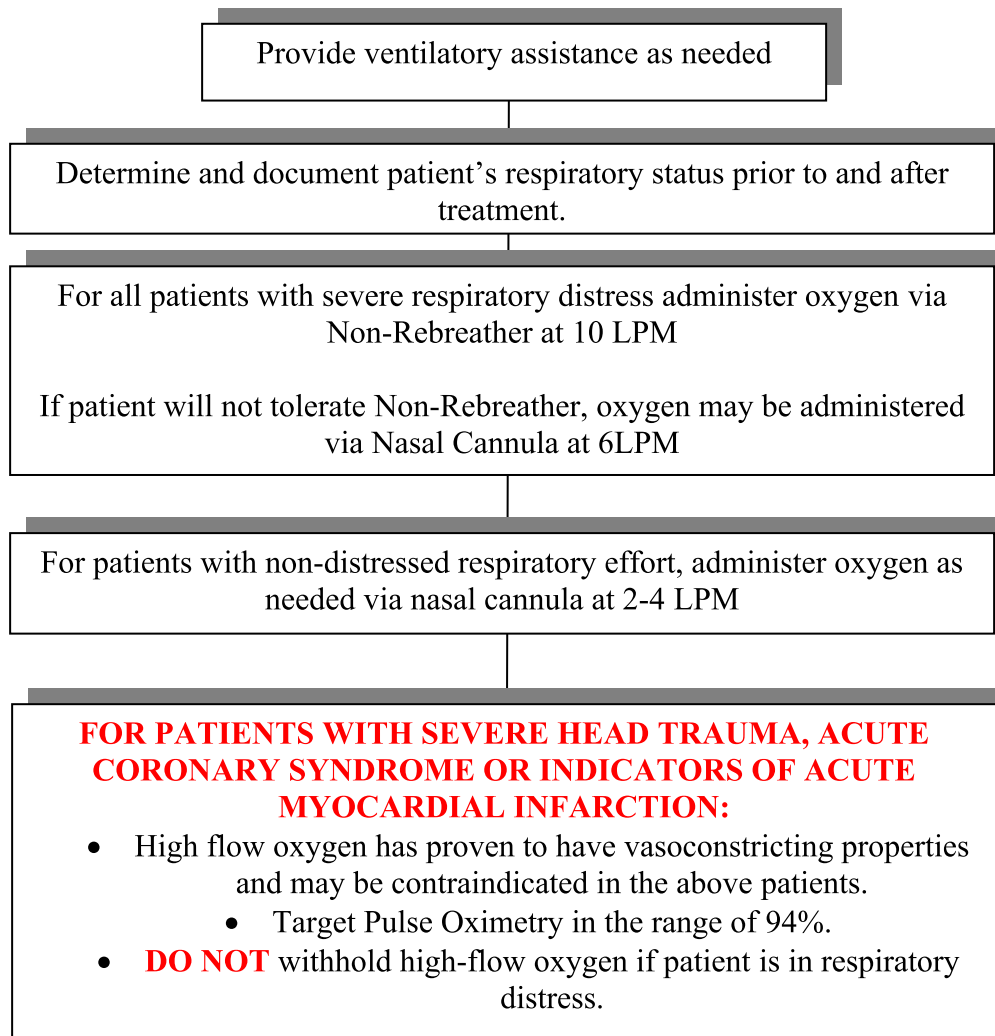


AIRWAY MANAGEMENT



Airway Management is required for any patient exhibiting signs of respiratory compromise involving inability to maintain and manage their own airway.

OXYGEN THERAPY



ALL patients exhibiting respiratory distress or significant medical or traumatic complaints should receive oxygen therapy.

ABDOMINAL PAIN

Routine medical care

Treat any immediately life threatening symptoms first
(hypotension, shock)

Obtain initial vital signs. If vital signs indicate patient is in shock, IMMEDIATELY treat per SHOCK protocol while continuing steps of ABDOMINAL PAIN protocol.

INITIAL TREATMENT

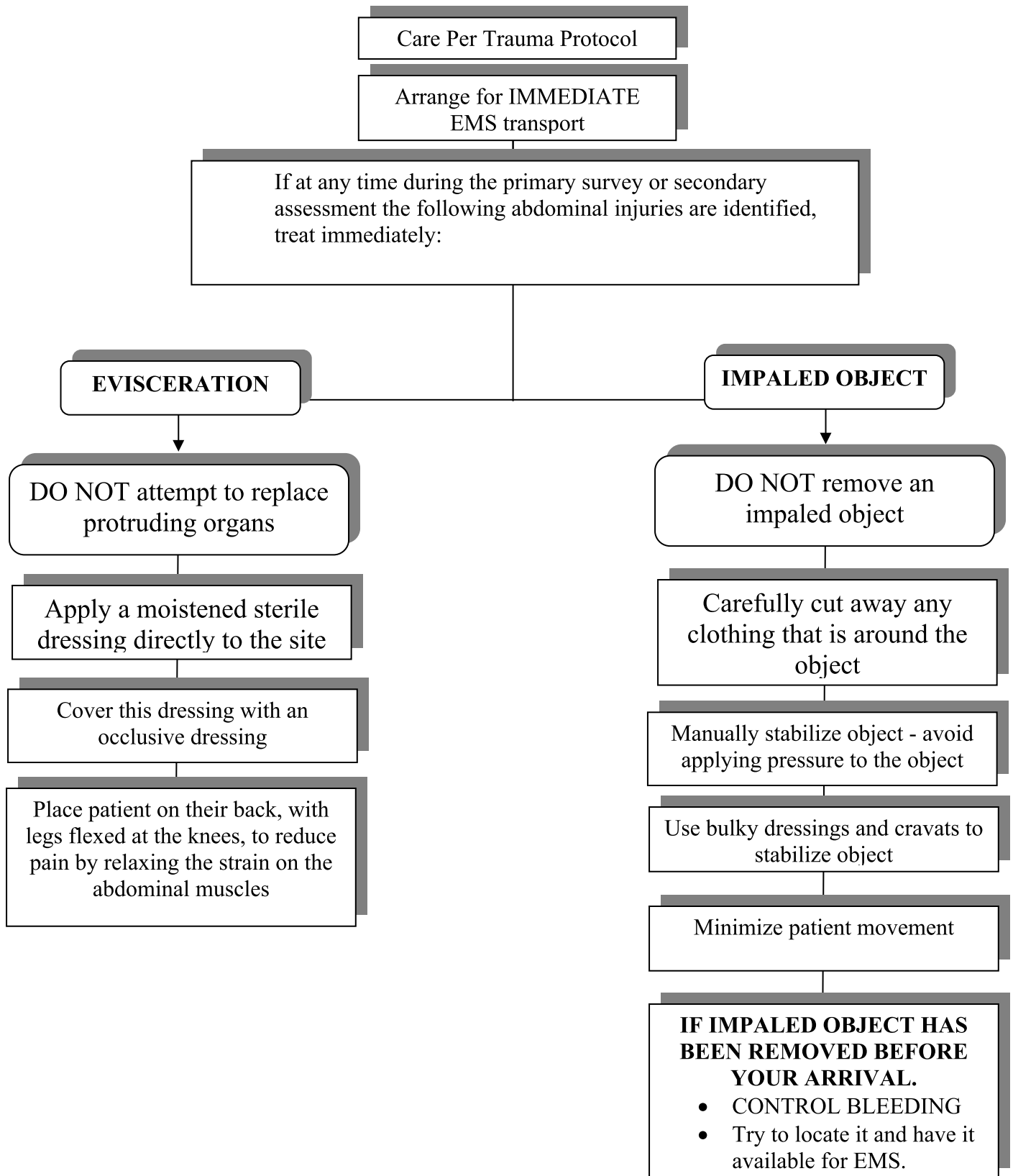
- Establish airway and maintain as indicated.
- Administer high concentration oxygen.
- DO NOT give the patient anything by mouth.
- Allow the patient to assume a position of comfort.

Perform a focused history

- Ask the patient to describe the pain:
 - What were they doing when the pain started?
 - What makes it better or worse?
 - What does it feel like?
 - Where is the pain? Does it move anywhere?
 - How bad is it? (refer to pain scale)
 - Is it constant or does it come and go?
- Has the patient ever had the pain before?
- When did the patient last eat? What was it?
- When was their last bowel movement? Was there blood or black material in it?
- Have they vomited? Was there any blood or coffee ground material present?
- What other symptoms are present? (fever, chest pain, nausea, trouble breathing)
- Is there any history of trauma?
- If the patient is female:
 - Determine when last menstrual period was.
 - Have menstrual periods been regular?
 - Has there been any vaginal bleeding or discharge?
 - Is there the possibility of pregnancy?
- Is there any other relevant past medical history?
- Has the patient had any abdominal surgeries?

Sharp or dull pain in stomach area
"popping" sensation in abdomen
cramping
nausea/vomiting
tenderness on palpation
bruising to abdominal area

ABDOMINAL TRAUMA



AIRWAY OBSTRUCTION

Follow accepted AHA BLS
Protocols for obstructed
airway

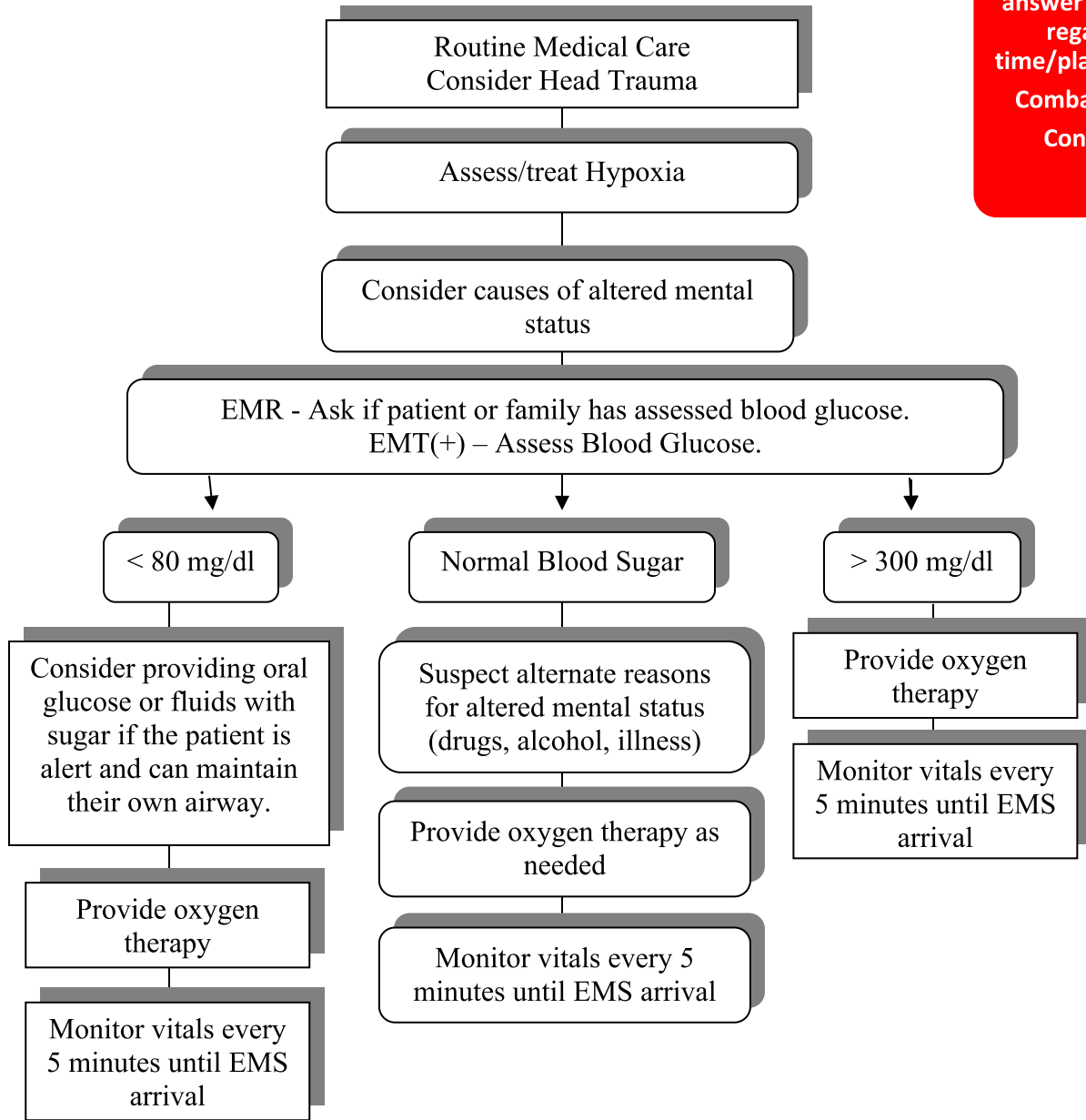


If unsuccessful, continue efforts to include
considerations for CPR and await transport

Inability to speak
Peripheral Cyanosis
Wheezing or
Stridorous
respirations
Anxiety
Confusion

ALTERED MENTAL STATUS

Inability to correctly answer questions regarding time/place/person
Combativeness
Confusion



ANAPHYLAXIS

Stable Hemodynamics (SBP > 100) with minor or moderate skin manifestations (itching, rash, blotches, hives, urticaria), and **no respiratory compromise**.

STABLE PATIENT

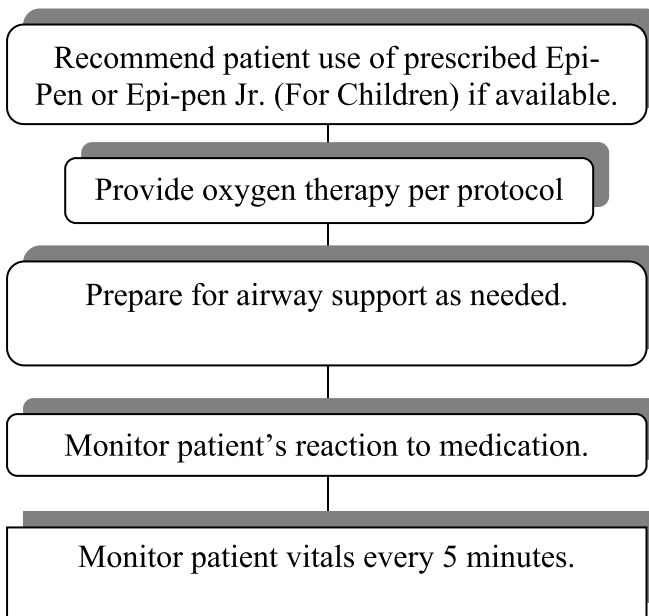
Routine Medical Care
Assess BP and respiratory status

Be alert for LOC changes and
ANY signs of respiratory
compromise.

Pronounced skin rash,
itching, blotches,
hives and/or urticaria
Peripheral Cyanosis
Wheezing or
Stridorous
respirations
Anxiety
Confusion

UNSTABLE PATIENT

SBP < 100 with significant skin manifestations itching, rash, blotches, hives, urticaria and **respiratory compromise**.



ANIMAL BITE

Routine Medical / Trauma Care

CONTROL ANY BLEEDING IMMEDIATELY.

Treat any open bites per
HEMMORHAGE and OPEN WOUND
protocol.

Treat any closed bites per SOFT
TISSUE INJURY protocol.

Puncture wounds
Bleeding at site
Swelling
Contusions

LATE SIGNS

Warmth / fever at site
Severe swelling
Continued pain
Purulent discharge

QUESTIONS TO ASK

1. When where and how was the patient bitten?
2. What type of animal was it?
3. Location of the animal at this time?
4. Vaccination status of the animal.

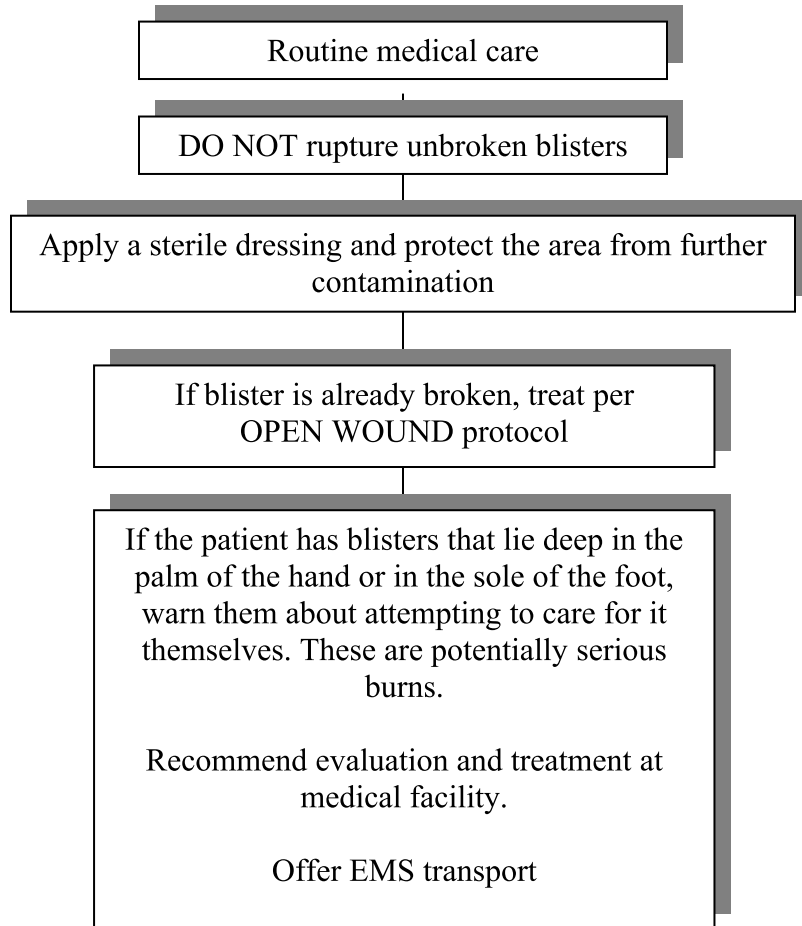
STEPS TO COMPLETE

1. Notify Dispatch as soon as possible.
2. Notify Battalion Chief as soon as possible.
3. Notify Animal Control as soon as possible

PATIENT INFORMATION

1. Inquire as to last Tetanus immunization or booster. Advise of need for Tetanus booster or immunization.

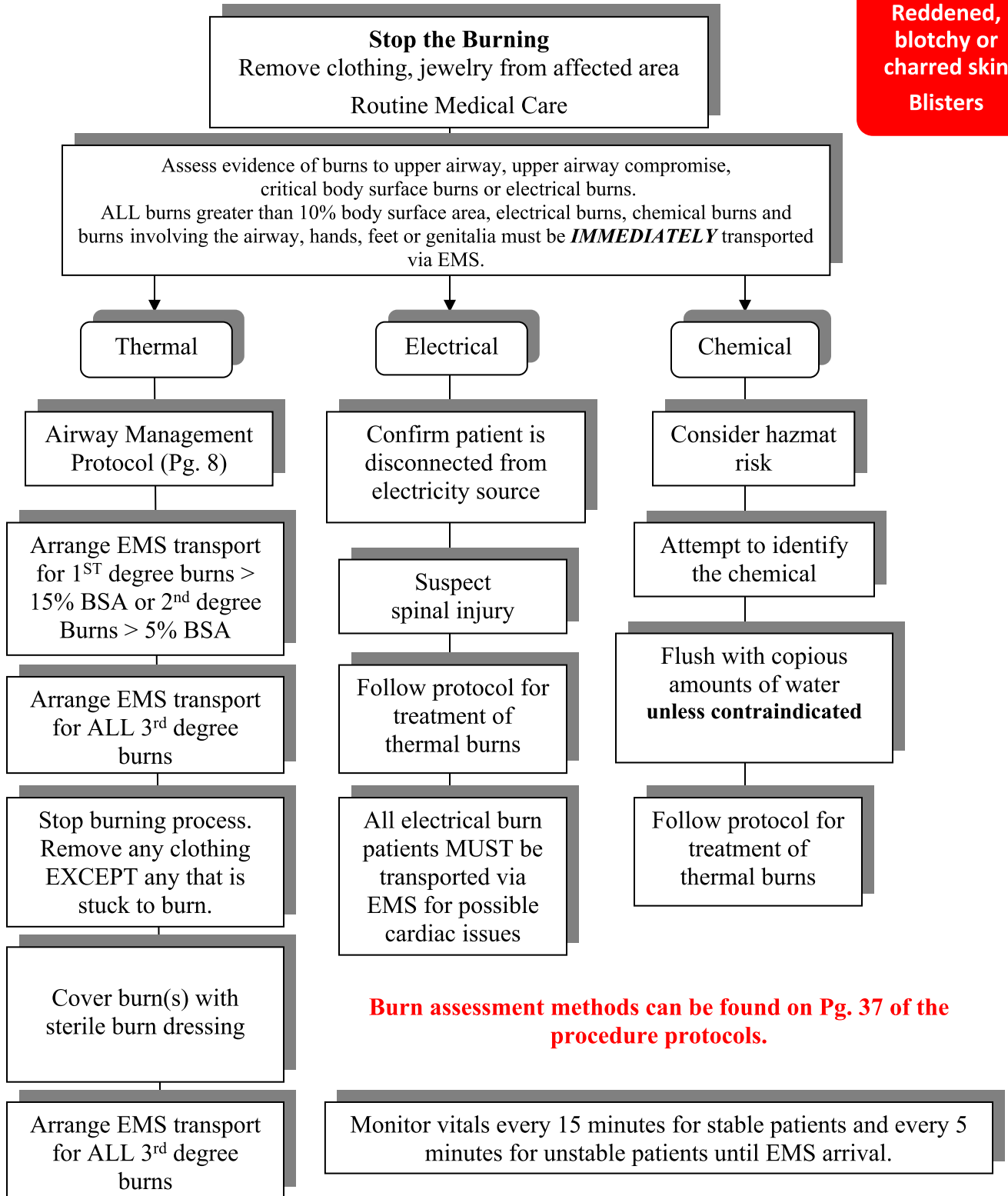
BLISTERS



Redness or discoloration
Pain at site
Moist and mottled skin
Visible pustule

BURNS

Exposure to heat, chemicals or electricity
 Reddened, blotchy or charred skin
 Blisters



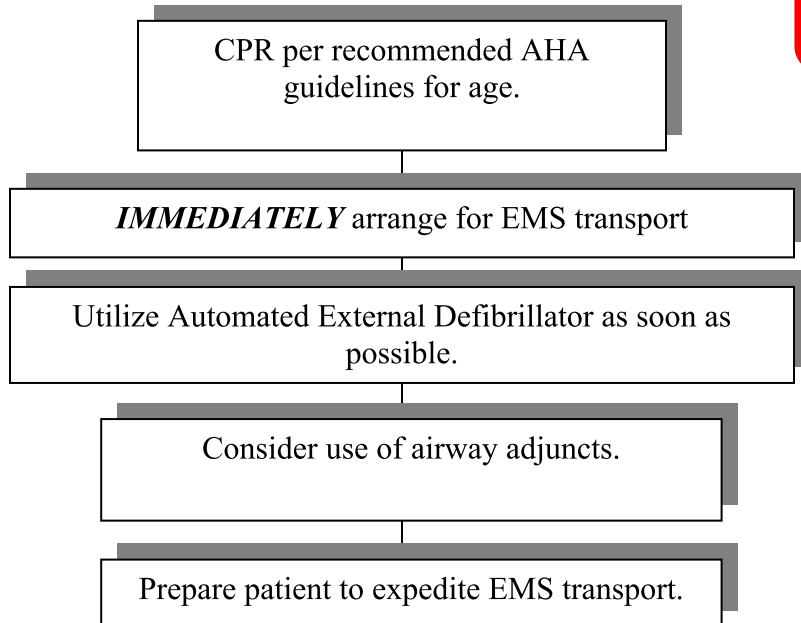
Burn assessment methods can be found on Pg. 37 of the procedure protocols.

Advise ALL patients of need for Tetanus booster or immunization.

CARDIAC ARREST

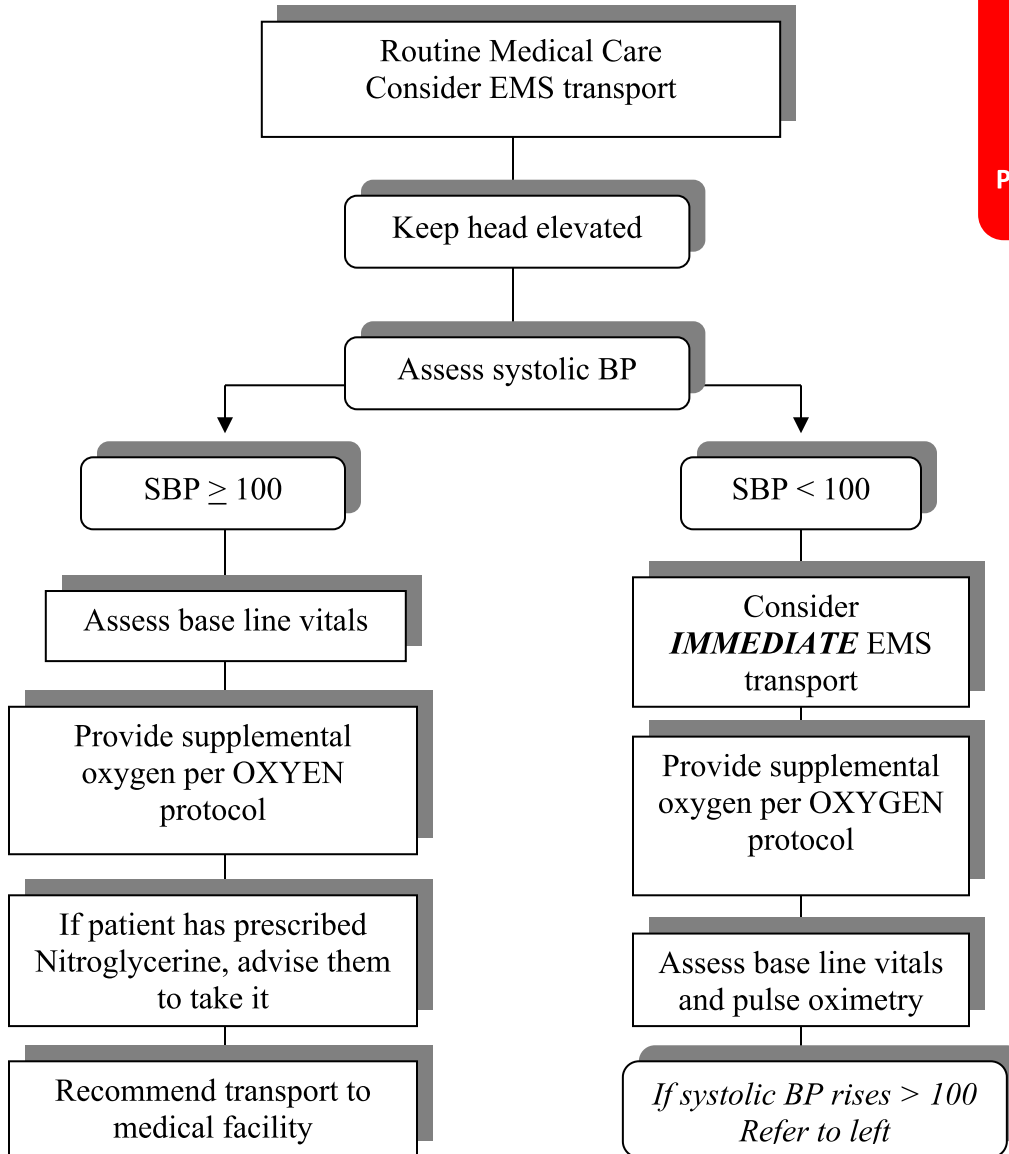
ALL PATIENTS

No pulses
Apnea
No signs
of life



CARDIAC - PULMONARY EDEMA

Peripheral Cyanosis
Wheezing or
Stridorous
respirations
Anxiety
Confusion
Pink Frothy Sputum

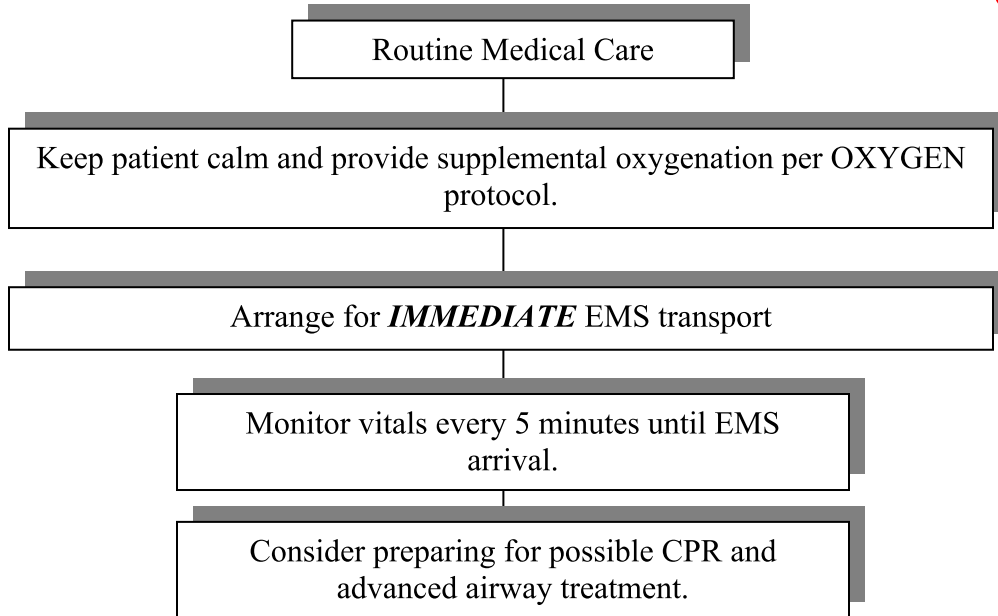


Nitroglycerine is contraindicated in patients who have taken Erectile Dysfunction medication within 24 hours.

CARDIAC – SYMPTOMATIC BRADYCARDIA

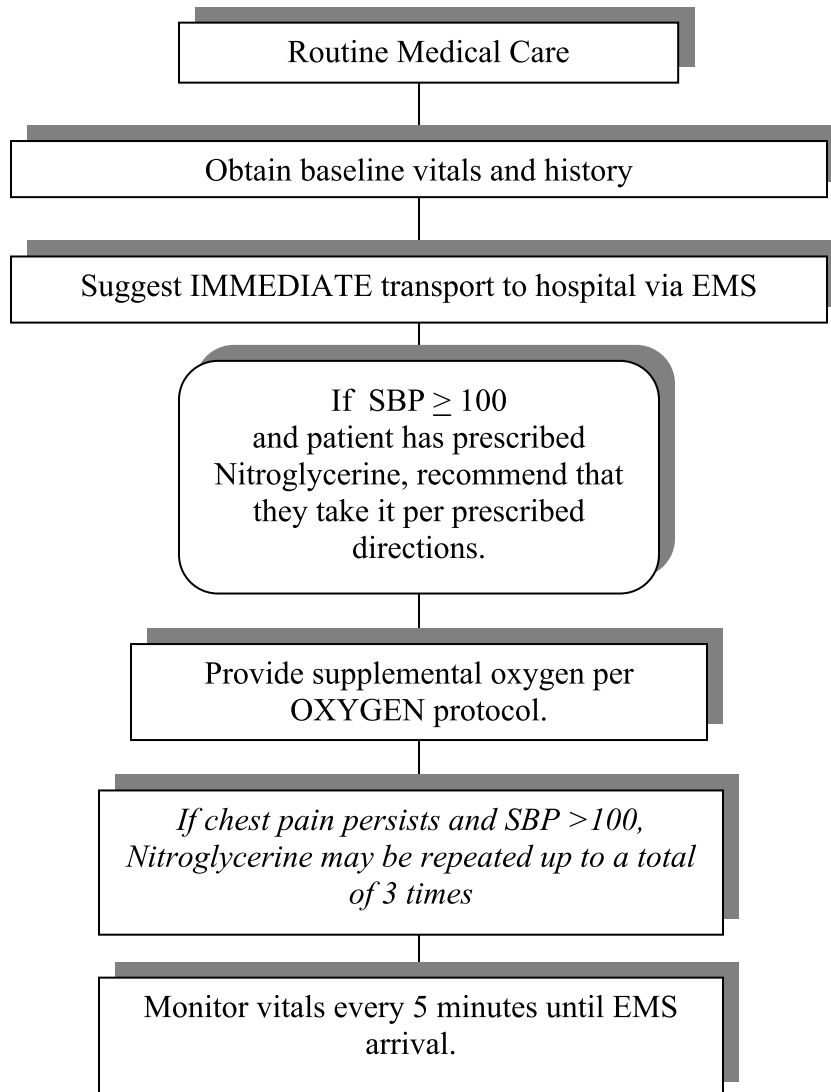
Symptomatic bradycardia is defined as a pulse rate < 60 with a systolic BP < 100, with serious signs and symptoms including chest pain, SOB, altered mental status, signs of CHF or hypoperfusion.

Pulse rate < 60 with
a systolic BP < 100
Chest pain
Shortness of breath
Altered mental
status
Signs of CHF or
hypoperfusion



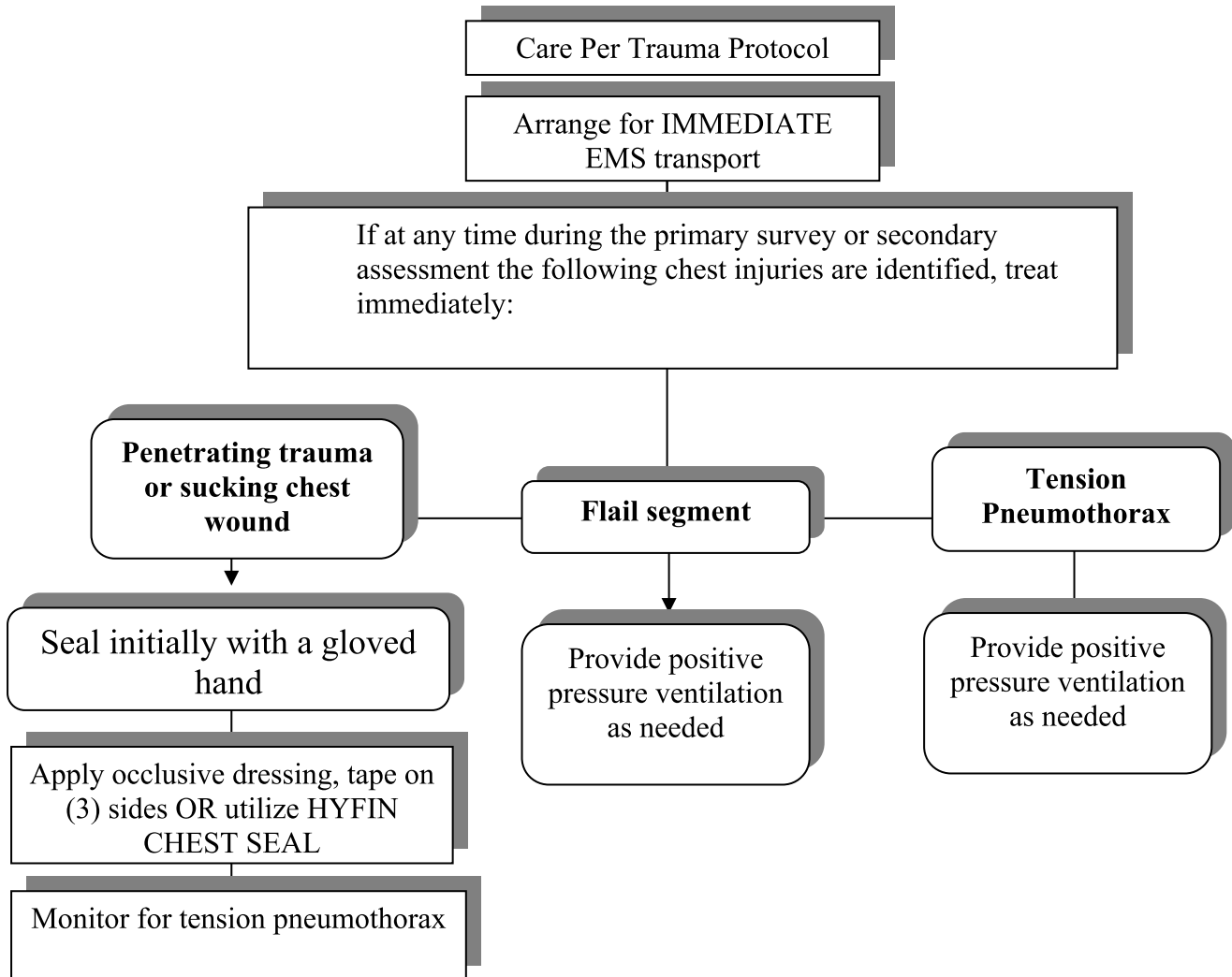
CARDIAC – ACUTE CORONARY SYNDROME (ACS) (Suspected Cardiac Chest Pain)

Crushing or dull Chest pain or numbness that may or may not radiate down left arm or into mid-clavicular area
Shortness of breath
Altered mental status

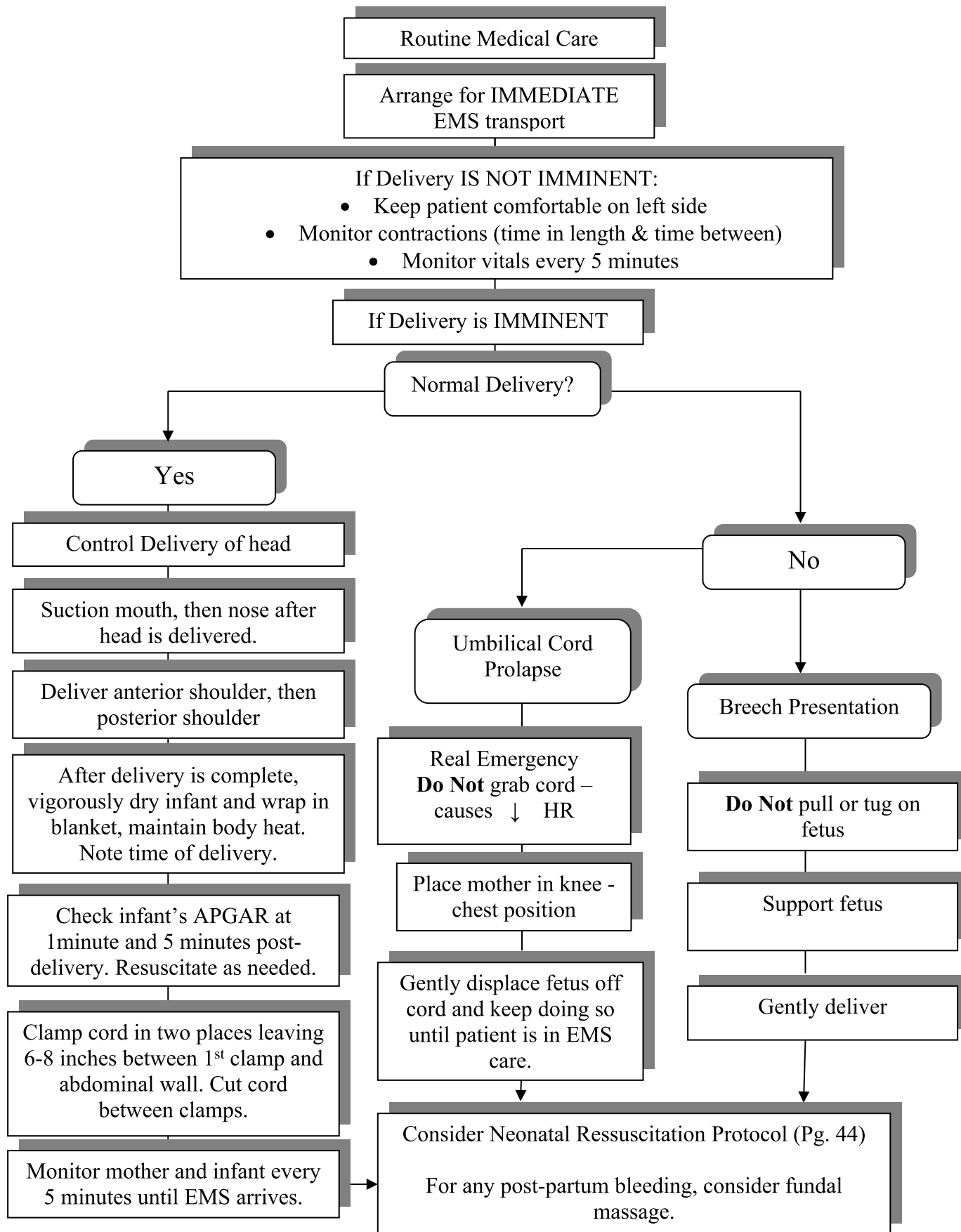


Nitroglycerine is contraindicated in patients who have taken Erectile Dysfunction medication within 24 hours.

CHEST TRAUMA



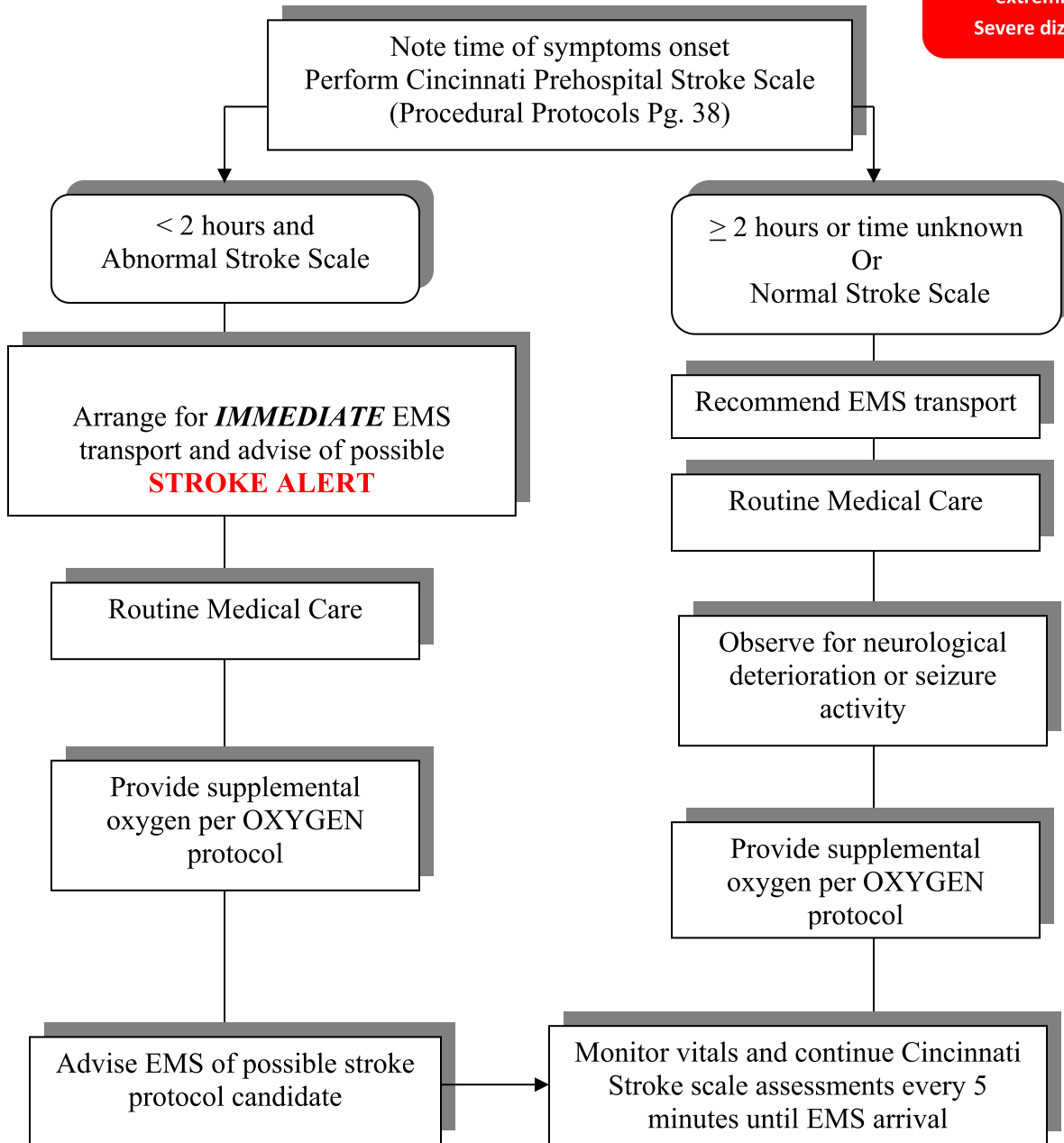
CHILDBIRTH



CVA (STROKE)

All patients with stroke symptoms in which onset can be confirmed < 2 hours should be given high priority and quick transport.

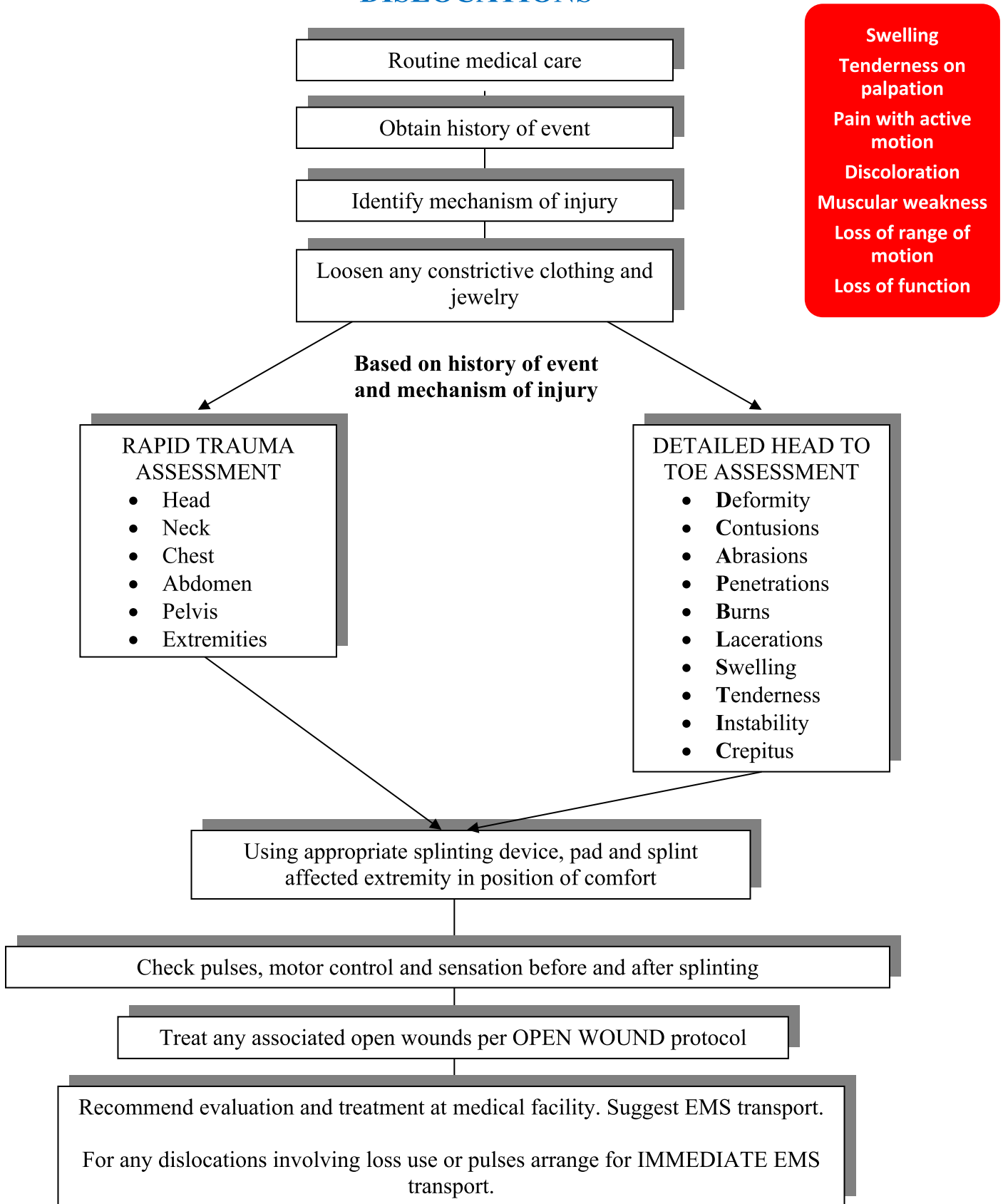
- Abnormal inability to move extremities
- Loss of motor function or strength
- Blurred vision
- Slurred Speech
- Aphagia
- Numbness affecting extremities
- Severe dizziness



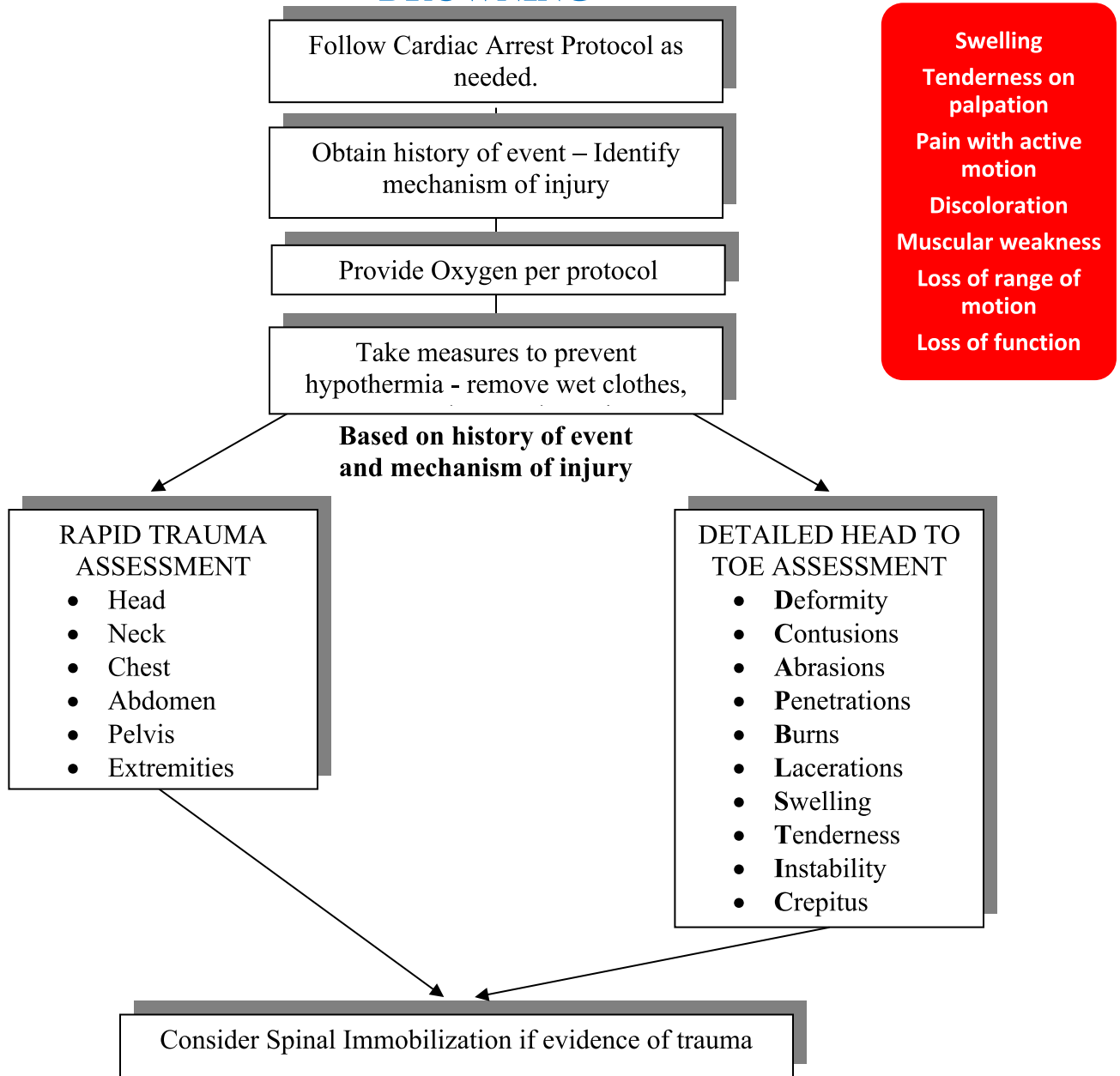
Bring witness or family member to answer questions relating to the patients past medical history.

Transport with head elevated at 45° when patient condition will tolerate.

DISLOCATIONS

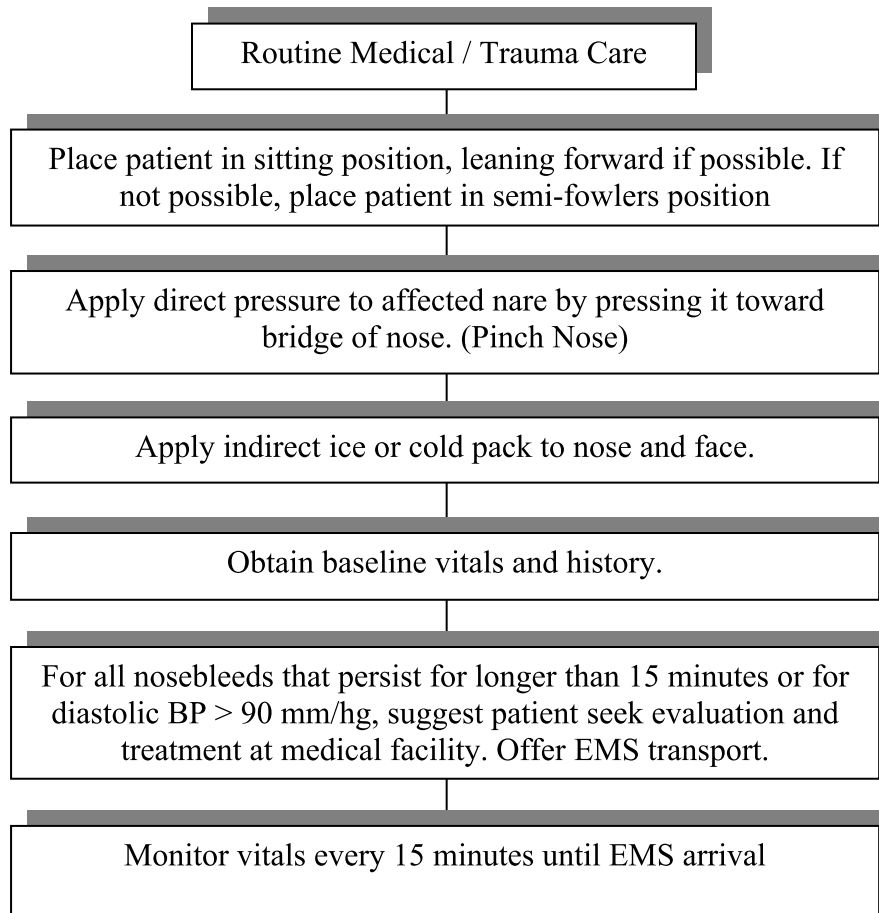


DROWNING



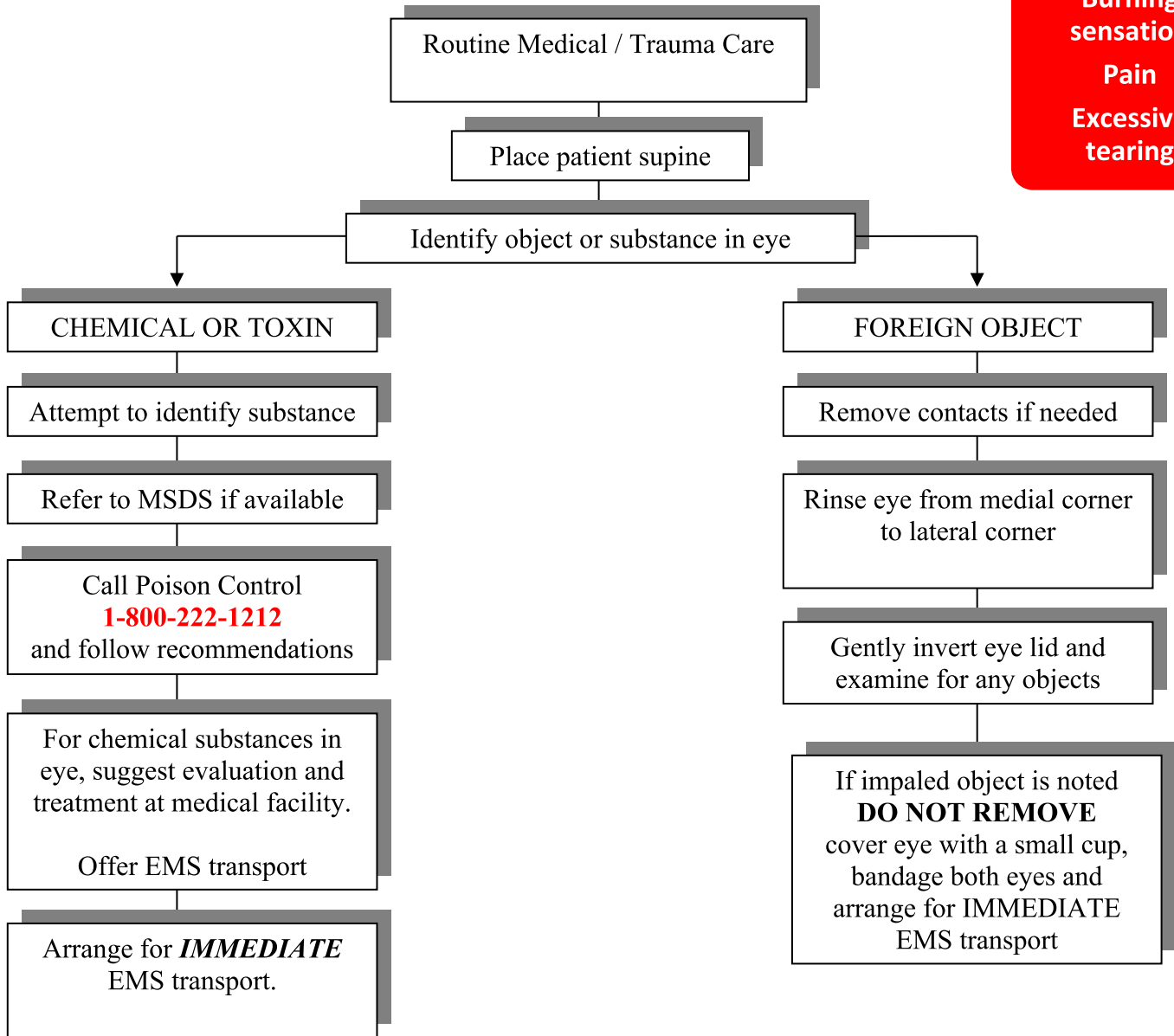
EPISTAXIS (NOSE BLEED)

Hypertension
Direct trauma
Past History



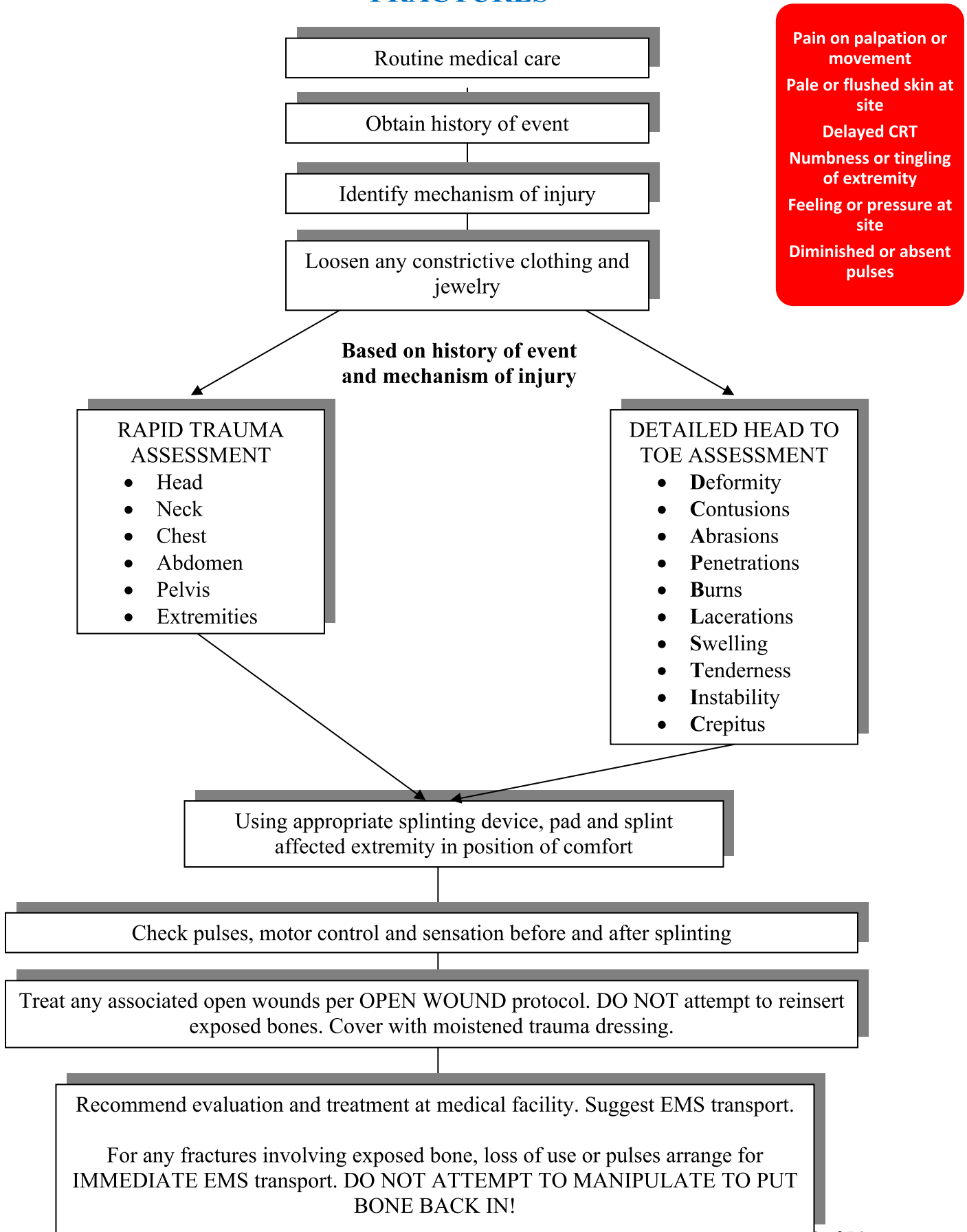
FOREIGN OBJECT / SUBSTANCE IN EYE

Redness of the eye
Burning sensation
Pain
Excessive tearing



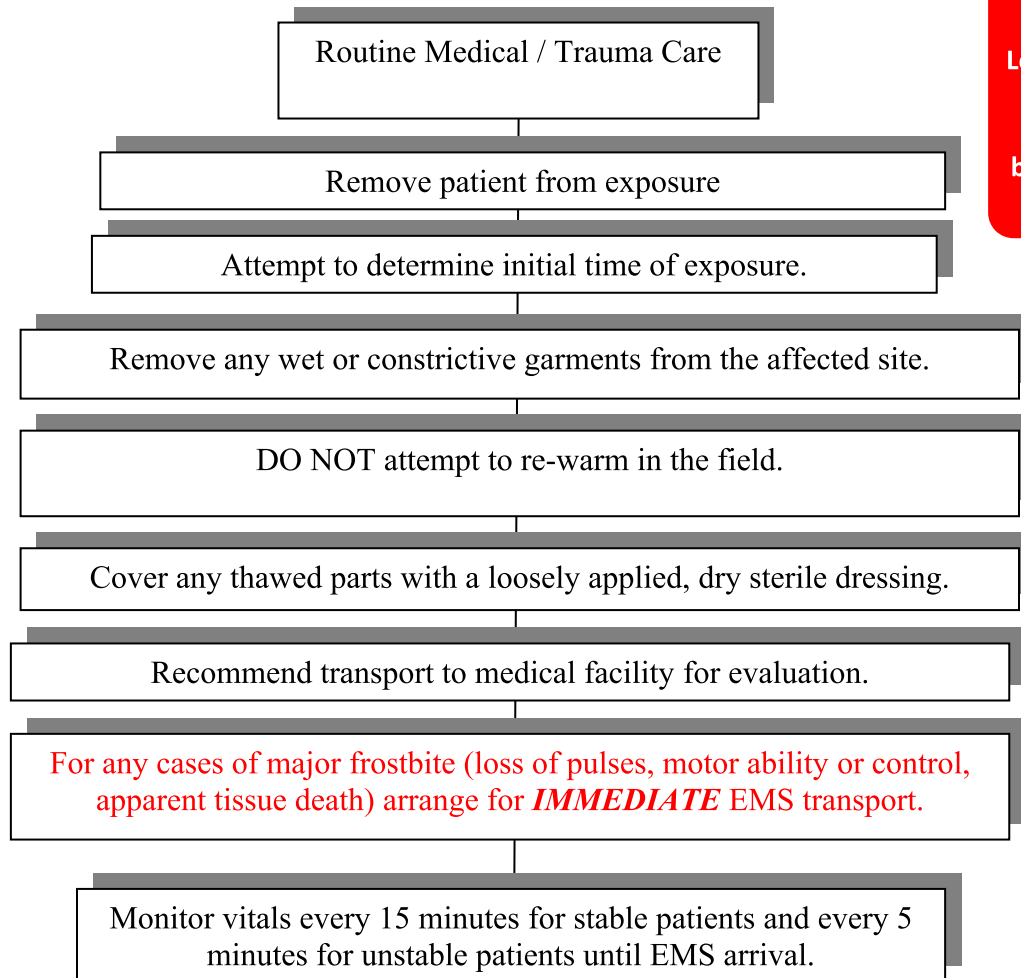
- If efforts are not successful, suspect corneal abrasion or laceration.

FRACTURES



Pain on palpation or movement
Pale or flushed skin at site
Delayed CRT
Numbness or tingling of extremity
Feeling or pressure at site
Diminished or absent pulses

FROSTBITE

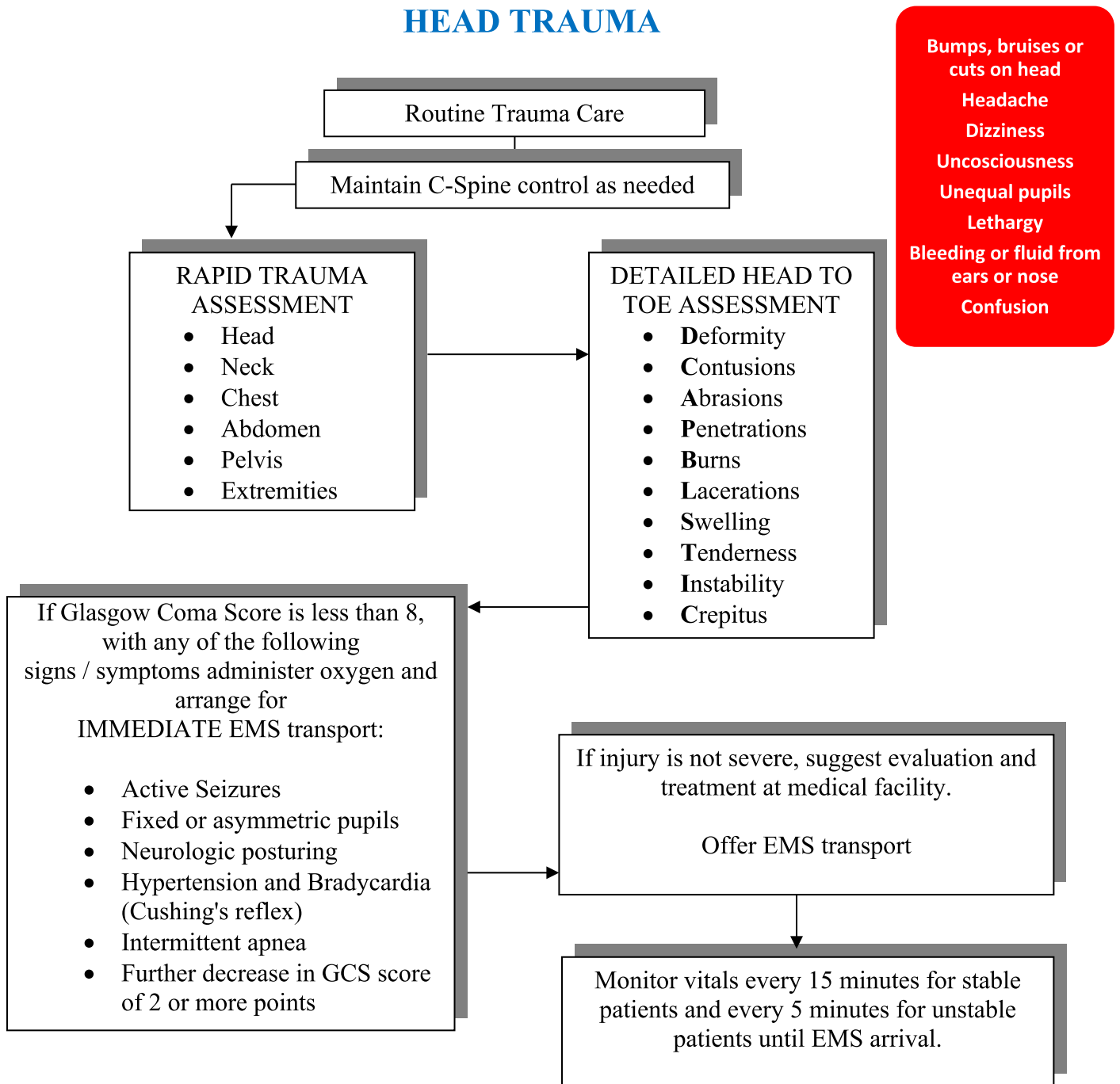


Reddened, blotchy or blackened appearance to affected area.

Loss of sensation to affected area.

Sloughing or blistering of skin in affected area.

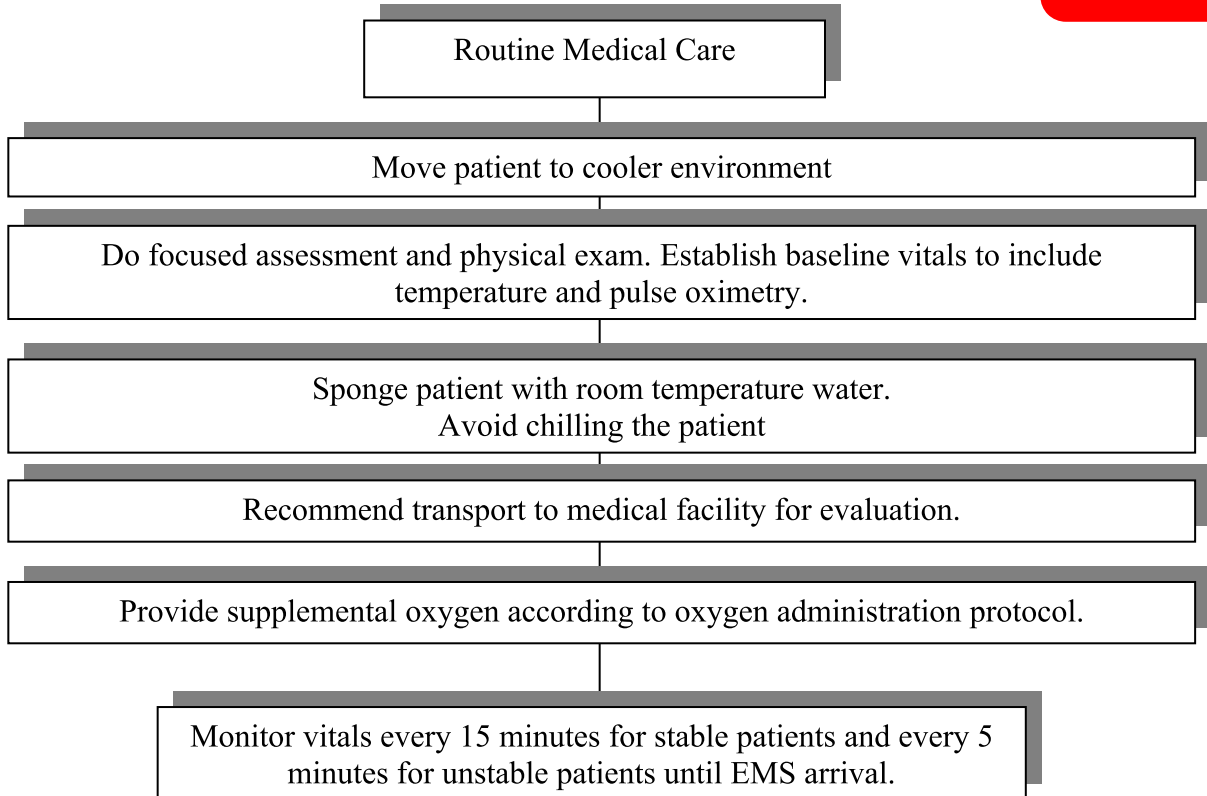
HEAD TRAUMA



HEAT EXHAUSTION

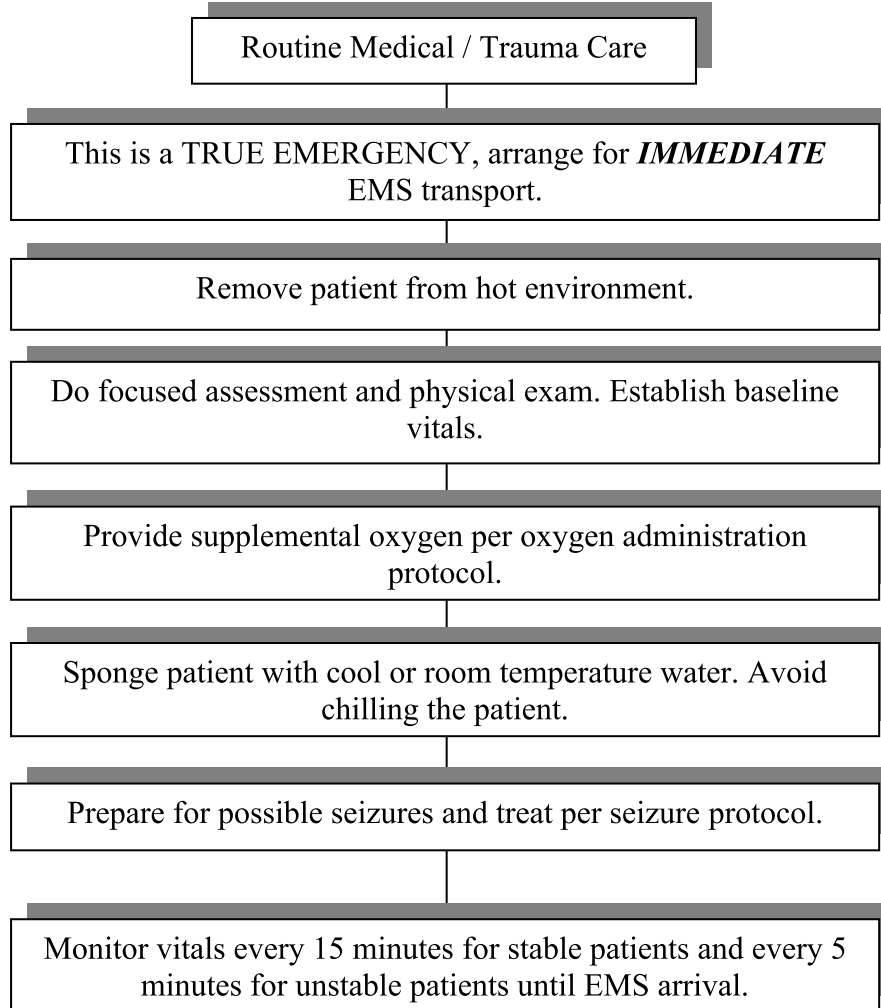
An abnormal condition characterized by weakness, vertigo, nausea, muscle cramps and possible syncope caused by depletion of body fluids and electrolytes resulting from prolonged exposure to elevated temperatures.

Weakness
Vertigo
Nausea
Muscle cramps
Possible syncope
Profuse sweating
Reddened skin
Rapid respirations
Rapid heart rate



HEAT STROKE

A severe and sometimes fatal condition resulting from the failure of the temperature regulating capacity of the body caused by prolonged exposure to high temperatures.



- Weakness
- Vertigo
- Nausea
- Muscle cramps
- Possible syncope
- No sweating
- Reddened skin
- Rapid respirations
- Rapid heart rate
- Weak pulses

HEMORRHAGE

**External
bleeding**
**Oozing,
flowing or
spurting
blood from
wound**

Routine Medical / Trauma Care

Control any bleeding by applying direct pressure. (If Nosebleed, refer to *Nosebleed* protocol)

If direct pressure is not successful in controlling bleeding, apply tourniquet.

MINOR WOUND

- Clean area with soap & water
- Dress wound as appropriate
- Notify patient to check if their tetanus shot is current
- Apply additional dressings as needed.

SEVERE WOUND

- Administer supplemental oxygen per protocol
- Expose the wound and place direct pressure to the site
- Apply additional dressings as needed while continuing pressure. **DO NOT** remove saturated dressings
- If direct pressure is not successful in controlling bleeding, apply tourniquet.
- Immobilize site as needed with appropriate device

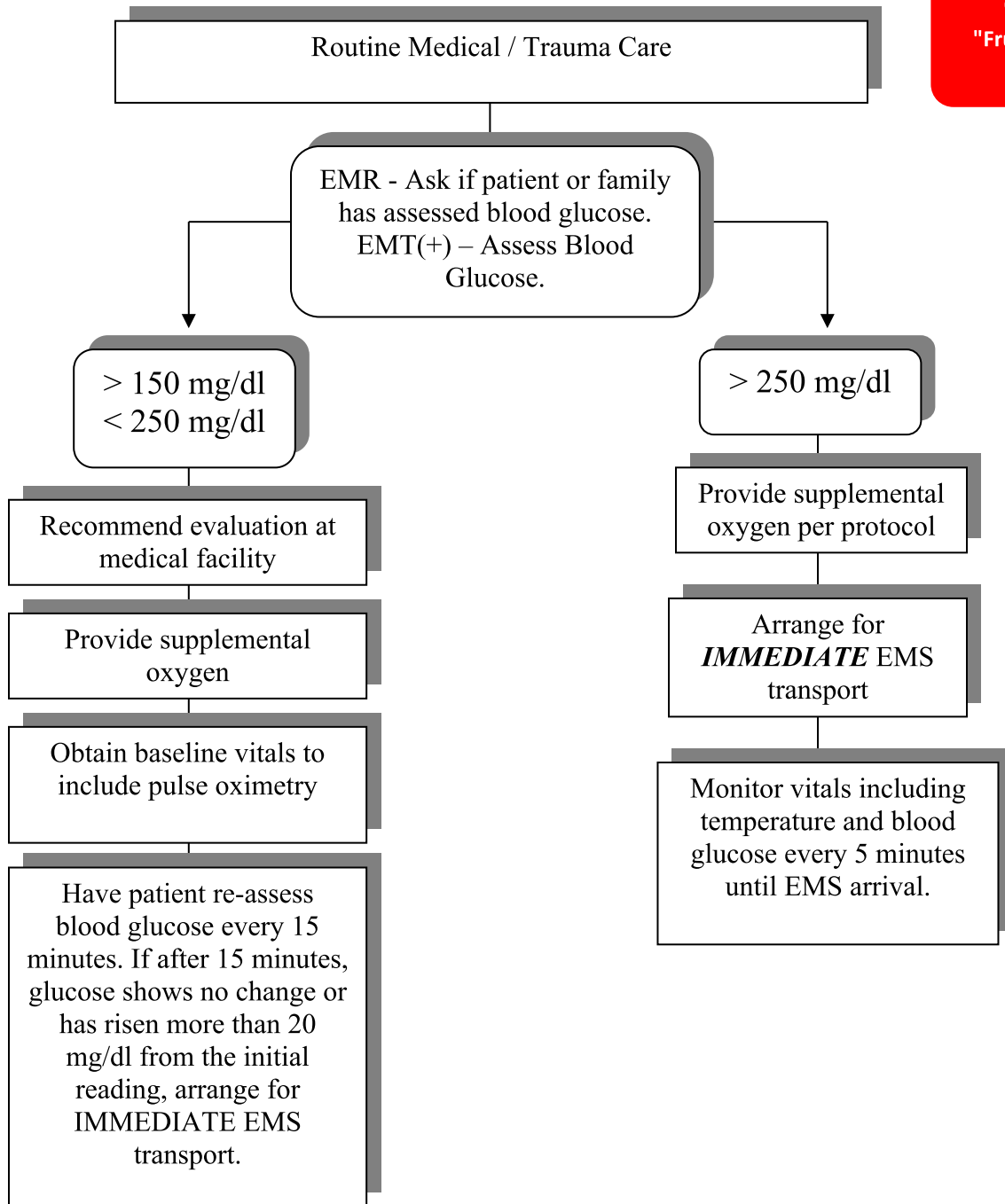
Obtain baseline vitals and history.

Monitor vitals every 15 minutes for stable patients and every 5 minutes for unstable patients until EMS arrival.

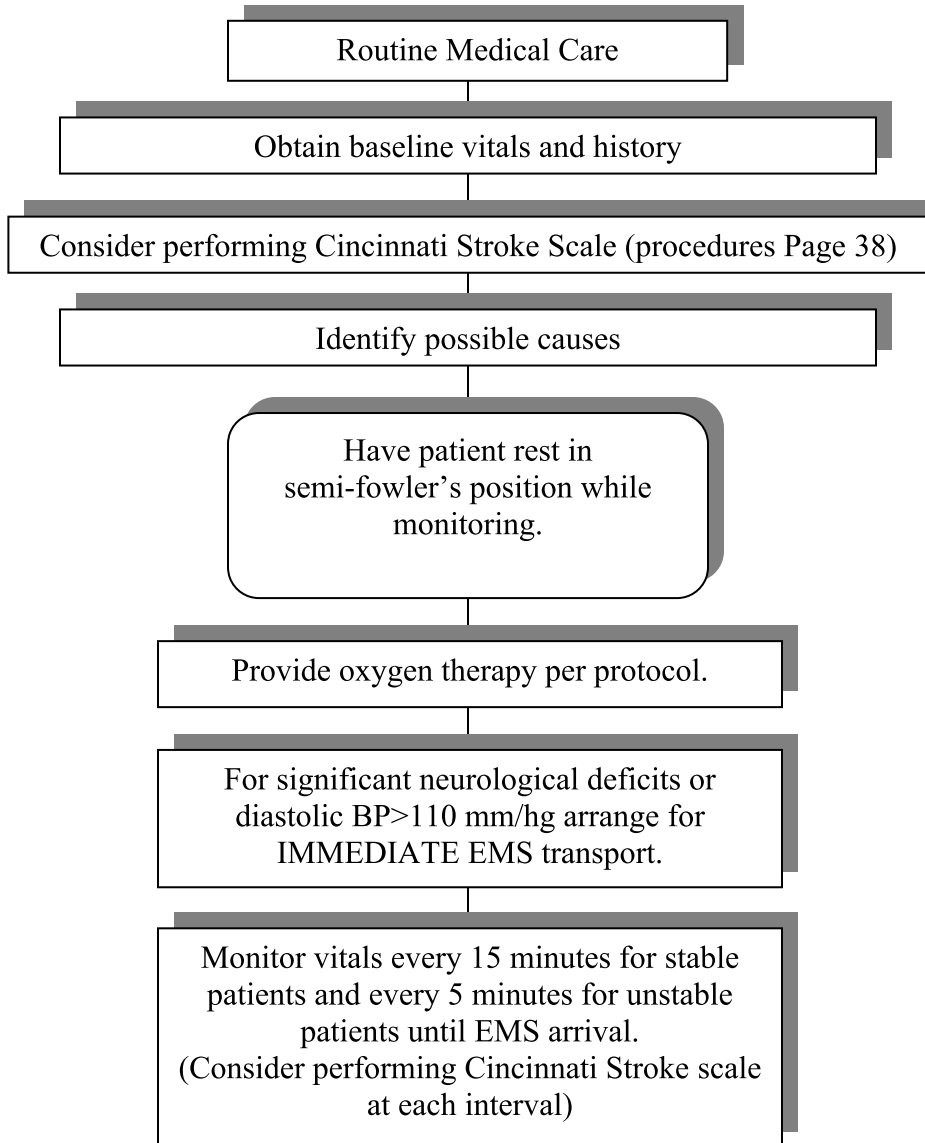
Advise patient of need for Tetanus booster or immunization

HYPERGLYCEMIA

Weakness
Vertigo
Nausea
Possible syncope
Profuse sweating
Confusion
"Fruity" odor on breath



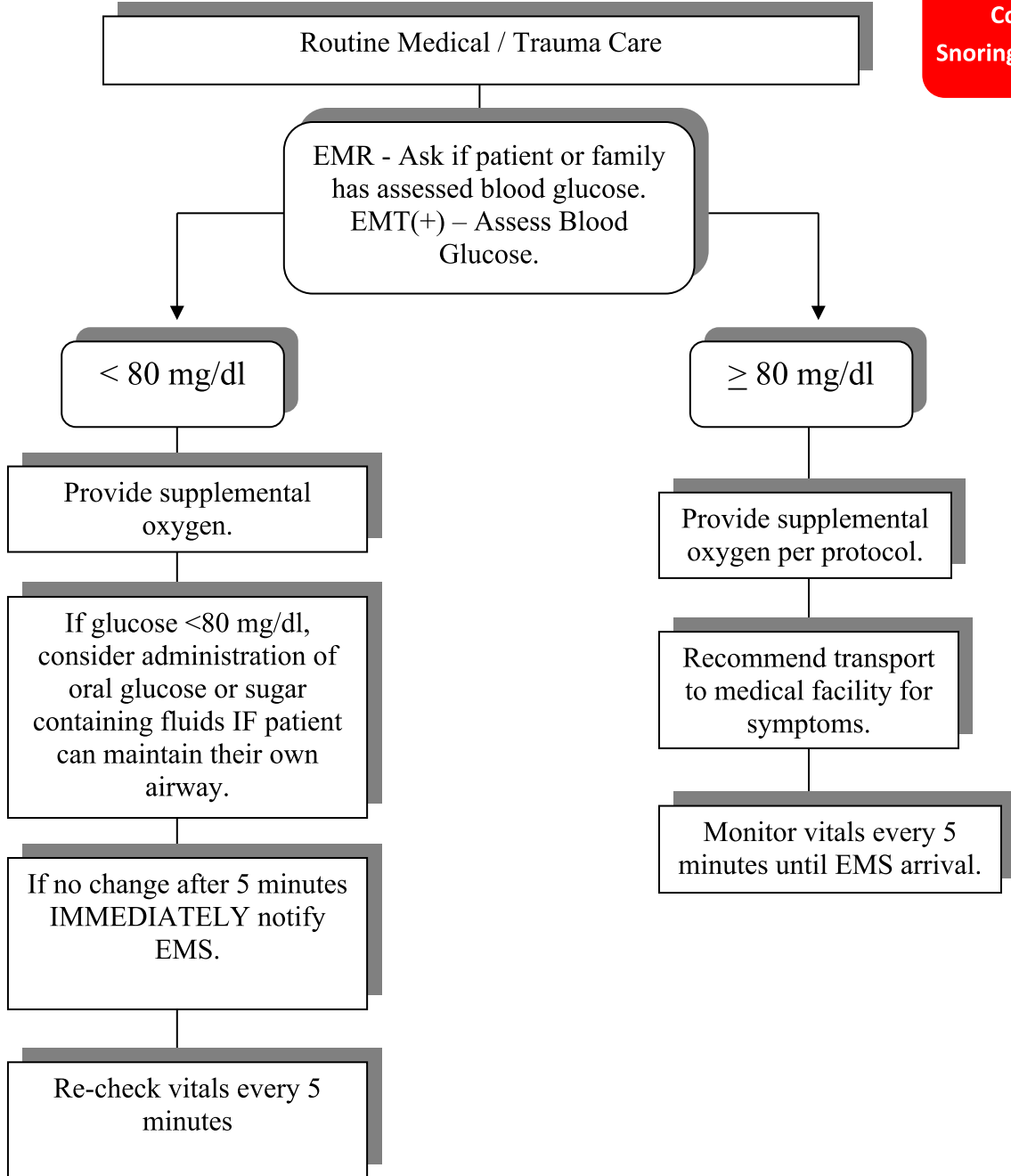
HYPERTENSION



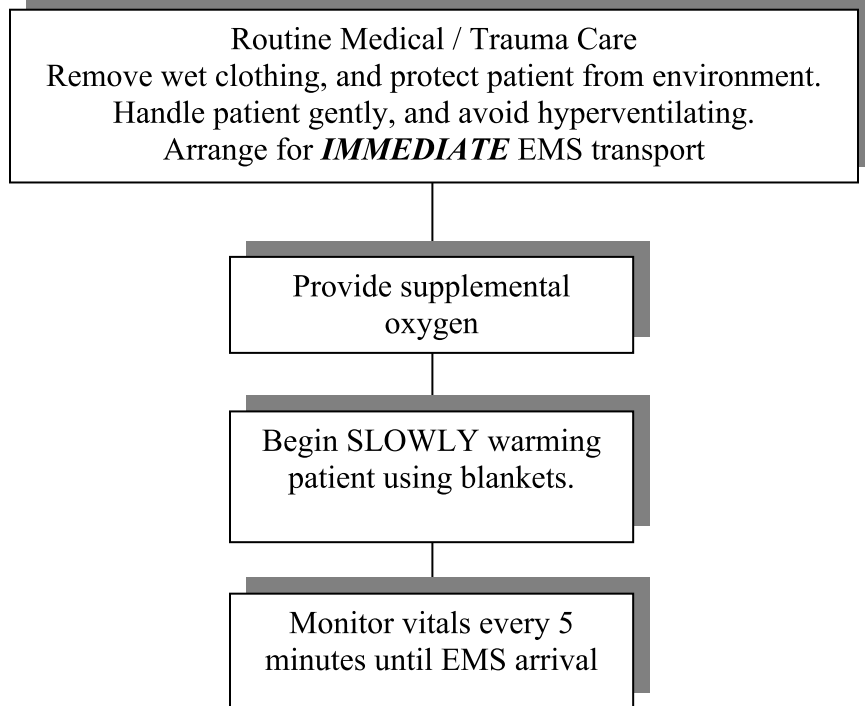
Diastolic pressure over 90mm/hg
Nausea/Vomiting
Confusion
Blurred Vision
Headache

HYPOGLYCEMIA

- Weakness
- Vertigo
- Nausea
- Possible syncope
- Profuse sweating
- Confusion
- Snoring respirations



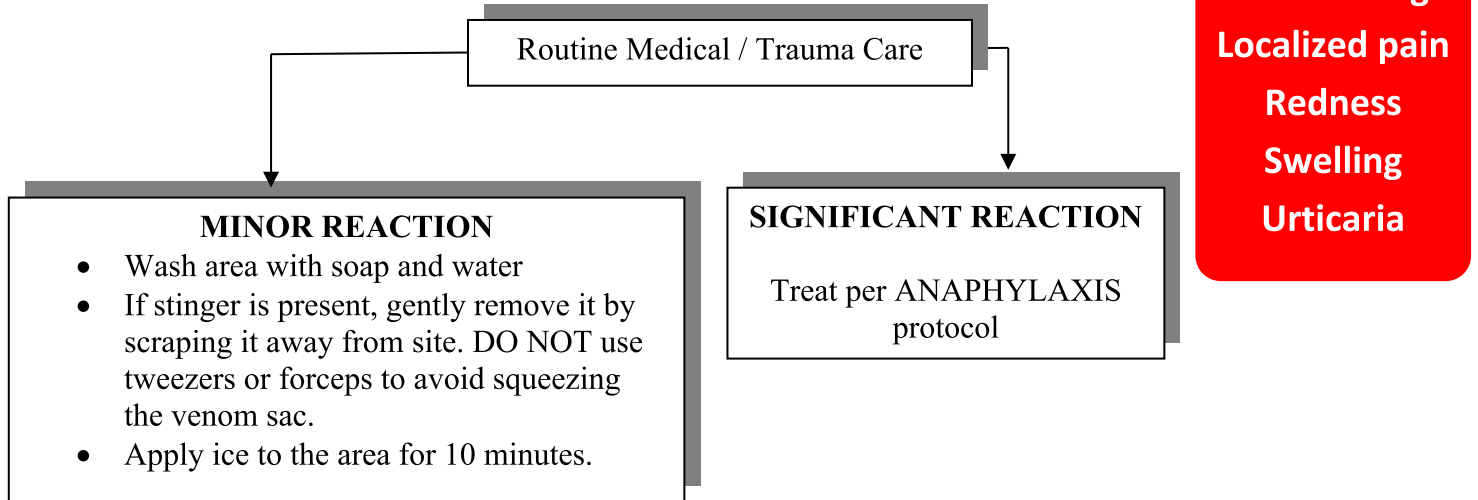
HYPOTHERMIA



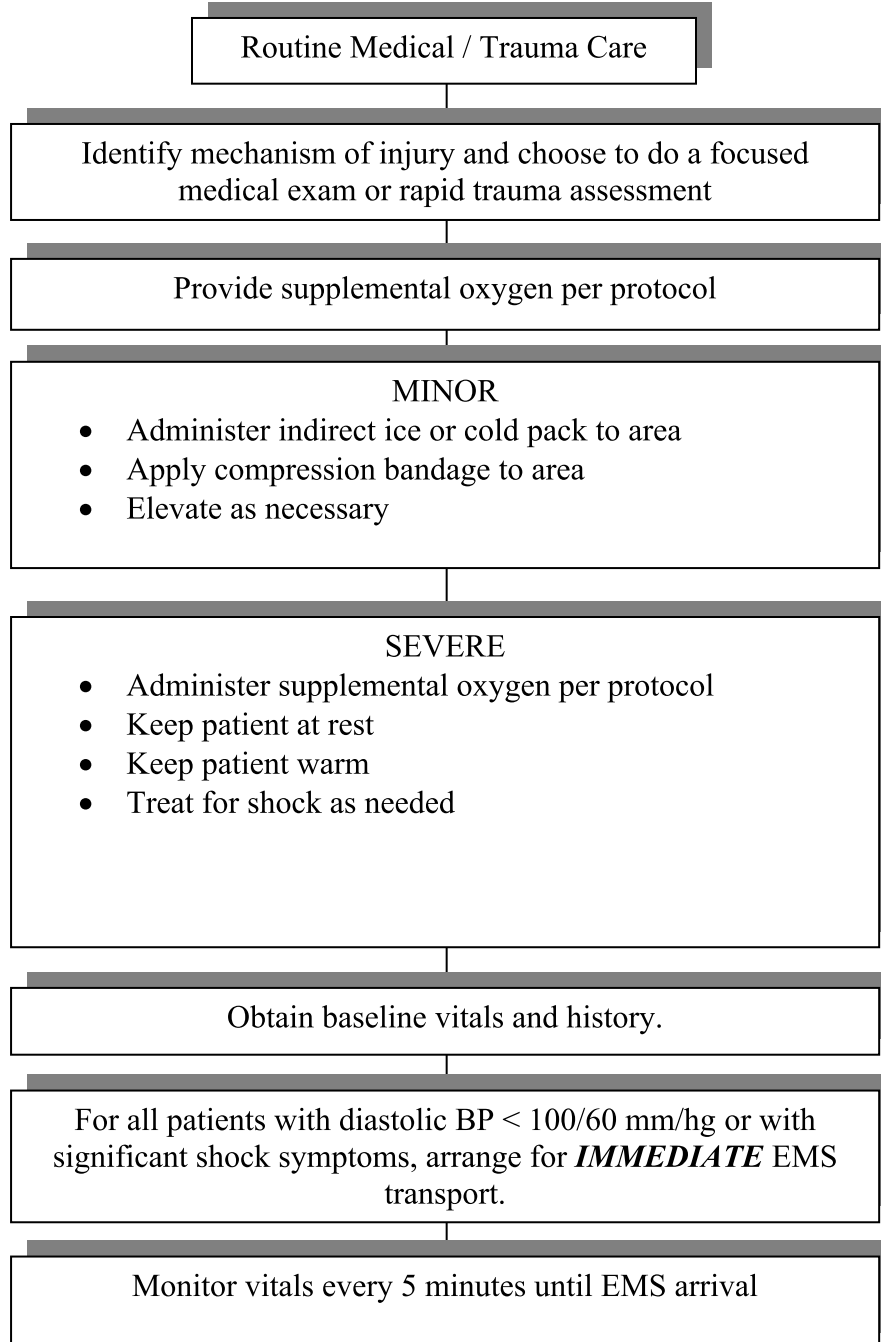
- Weakness
- Vertigo
- Nausea
- Loss of coordination
- Possible syncope
- Profuse shivering
- Cyanosis
- Confusion

★ In cases of hypothermic cardiac arrest, continue CPR and airway treatments as normal with consideration for gentle handling and patient warming.

INSECT / BEE / WASP STINGS

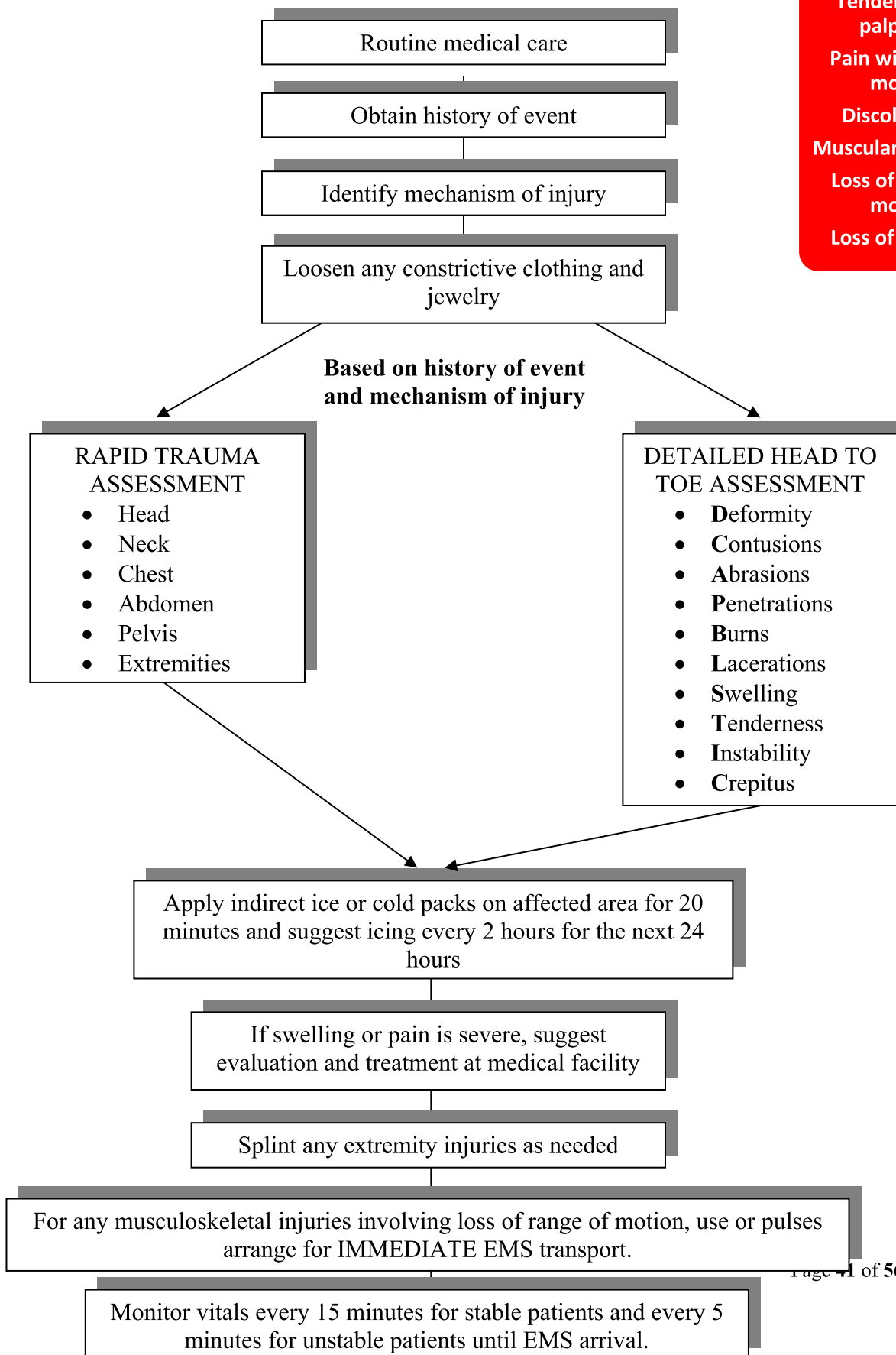


INTERNAL HEMORRHAGE



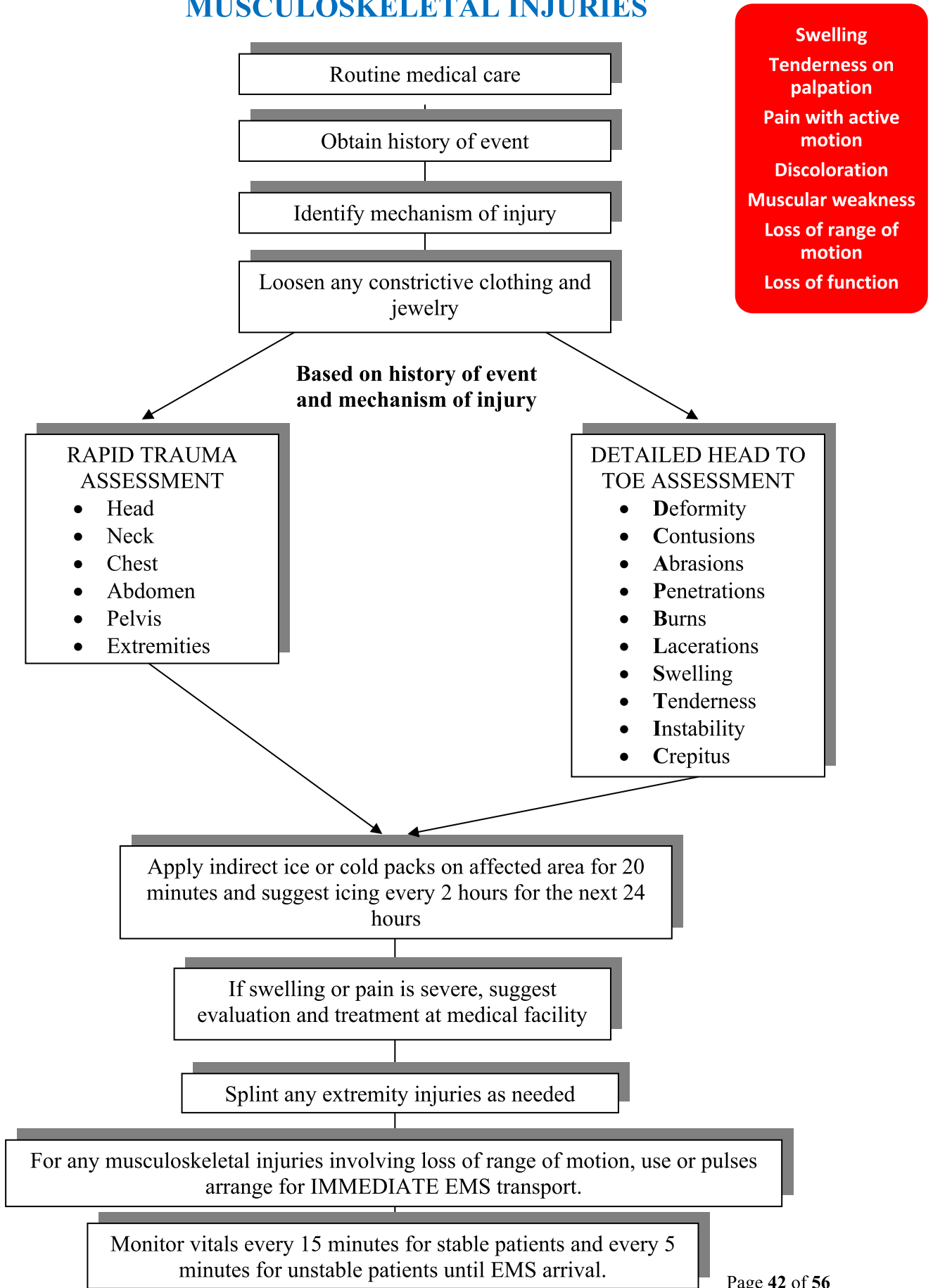
- Vomiting or coughing up blood
- Bruises on chest
- Bruised or swollen abdomen
- Abdominal tenderness, rigidity or spasms
- Rectal or vaginal bleeding
- Fractures
- Signs of shock

JOINT INJURIES



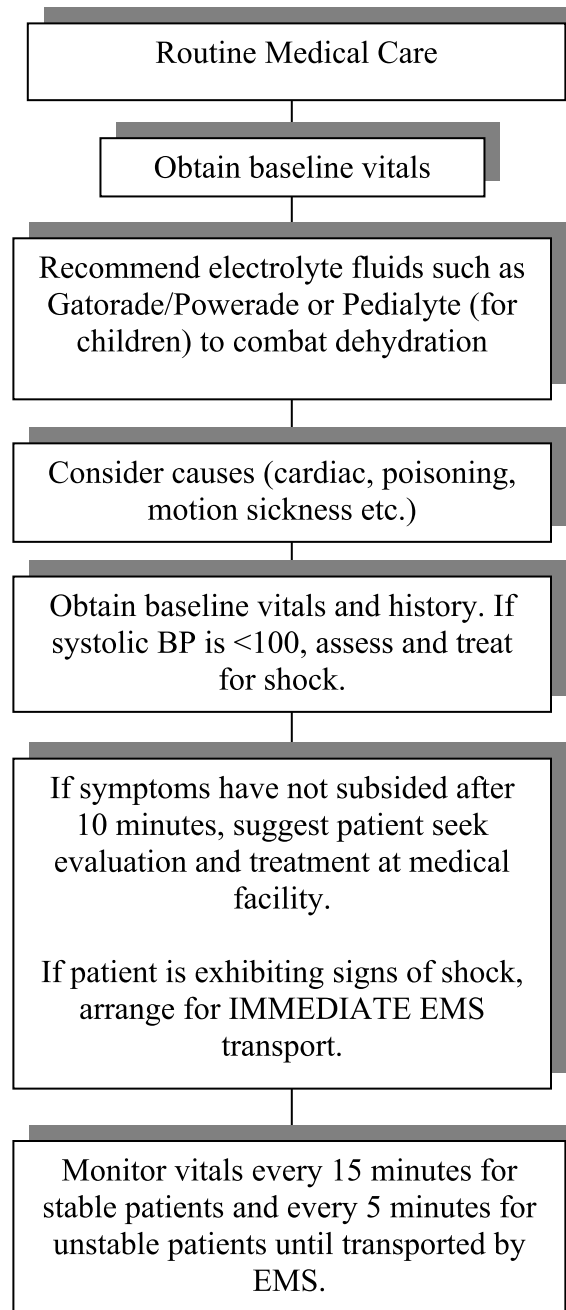
Swelling
Tenderness on palpation
Pain with active motion
Discoloration
Muscular weakness
Loss of range of motion
Loss of function

MUSCULOSKELETAL INJURIES



NAUSEA / VOMITING

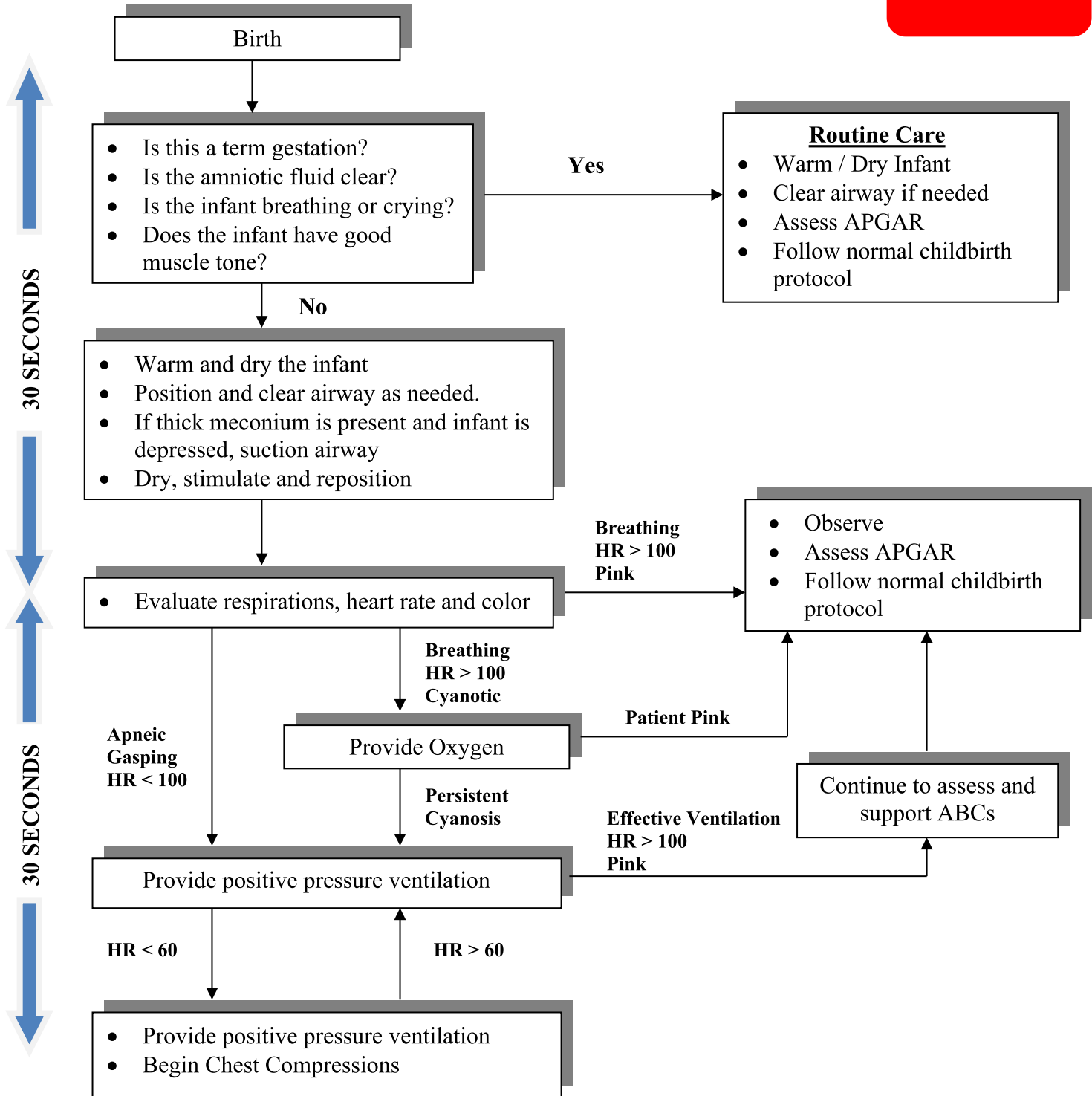
Gastric upset
Emesis



NEONATAL RESUSCITATION

Newly delivered infant

IMMEDIATELY ARRANGE FOR EMS TRANSPORT



OPEN WOUNDS

Abrasions
Lacerations
Incisions
Punctures
Avulsions
Amputations
Evisceration

Routine Medical / Trauma Care

MINOR OPEN WOUNDS

- Do focused physical exam
- Identify Mechanism of injury
- Obtain Baseline vital signs
- Assess bleeding and treat per HEMMORHAGE protocol

SEVERE OPEN WOUNDS

- Refer to HEMMORHAGE protocol for bleeding control.

**LACERATIONS
INCISIONS
PUNCTURES**

Apply bandage or dressing per HEMMORHAGE protocol

For gaping lacerations or lacerations > ¼ inch deep, stitches are indicated

If adjacent to any tendon or ligament, suggest evaluation & treatment at medical facility.

DO NOT remove impaled objects. Stabilize in place and arrange for immediate transport

ABRASIONS

Refer to HEMMORHAGE protocol

**AVULSIONS
AMPUTATIONS**

Treat bleeding per HEMMORHAGE protocol

DO NOT attempt to roll back avulsed skin

DO NOT remove any hanging or still attached items. Splint as well as possible.

Place any amputated items in sterile 4x4's then into a plastic bag then in a second bag with ice and water to be transported with patient.

Arrange for **IMMEDIATE** EMS transport

EVISCKERATION

DO NOT attempt to replace eviscerated intestines or organs

Contain eviscerated entrails as best as possible and cover with trauma pad moistened with sterile water or saline.

Cover eviscerated items with emergency blanket or plastic sheet and blanket to conserve body heat

Continue to keep dressings moist

Arrange for **IMMEDIATE** EMS

Monitor vitals every 15 minutes for stable patients and every 5 minutes for unstable patients until EMS arrival.

Advise patient of need for Tetanus booster or immunization

POISONING / TOXINS / OVERDOSE

History is important. Whenever possible, determine the substance(s) involved and the quantity, time and route they were taken.

Indications:

- Poisoning by mouth
- Poisoning by injection
- Poisoning by absorption

Contraindications:

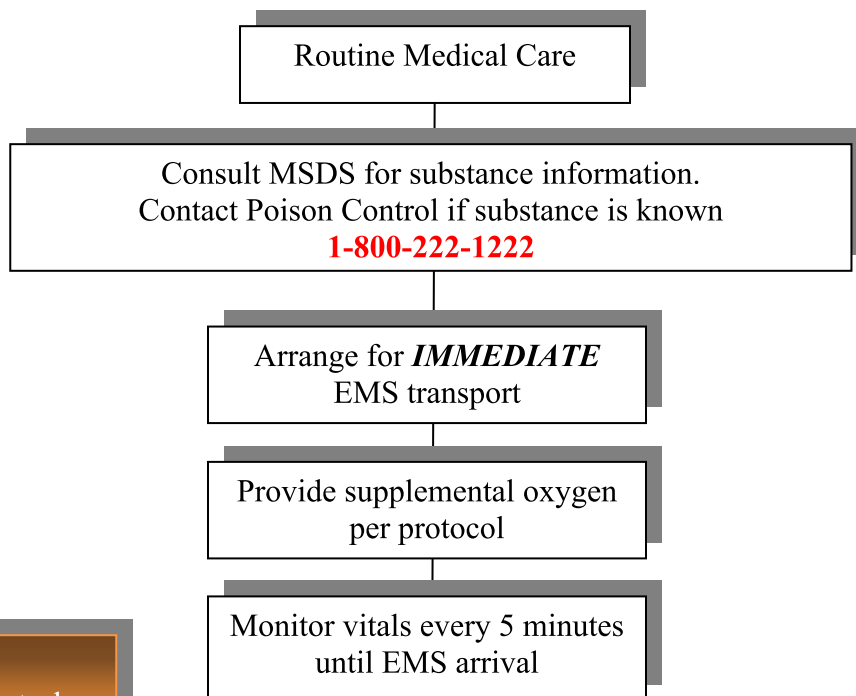
- Altered mental status
- Ingestion of acid or alkali substances
- Ingestion of hydrocarbons (petroleum)

Weakness
Vertigo
Nausea
Loss of coordination

Possible syncope
Profuse shivering
Cyanosis
Confusion

S.L.U.D.G.E.

Salivation
Lacrimation
Urination
Defecation
Gastric Upset
Emesis



DOCUMENT

- Time Poison Control was called
- Person you spoke to
- Recommendations given

OVERDOSE CONSIDERAIONS

Consider specific antidote. If possible, see container label and contact Poison Control.

Rule Out Narcotic OD. Be aware of increasing use of home dermal pain control patches.

Suspected Narcotic OD – Refer to Altered Mental Status

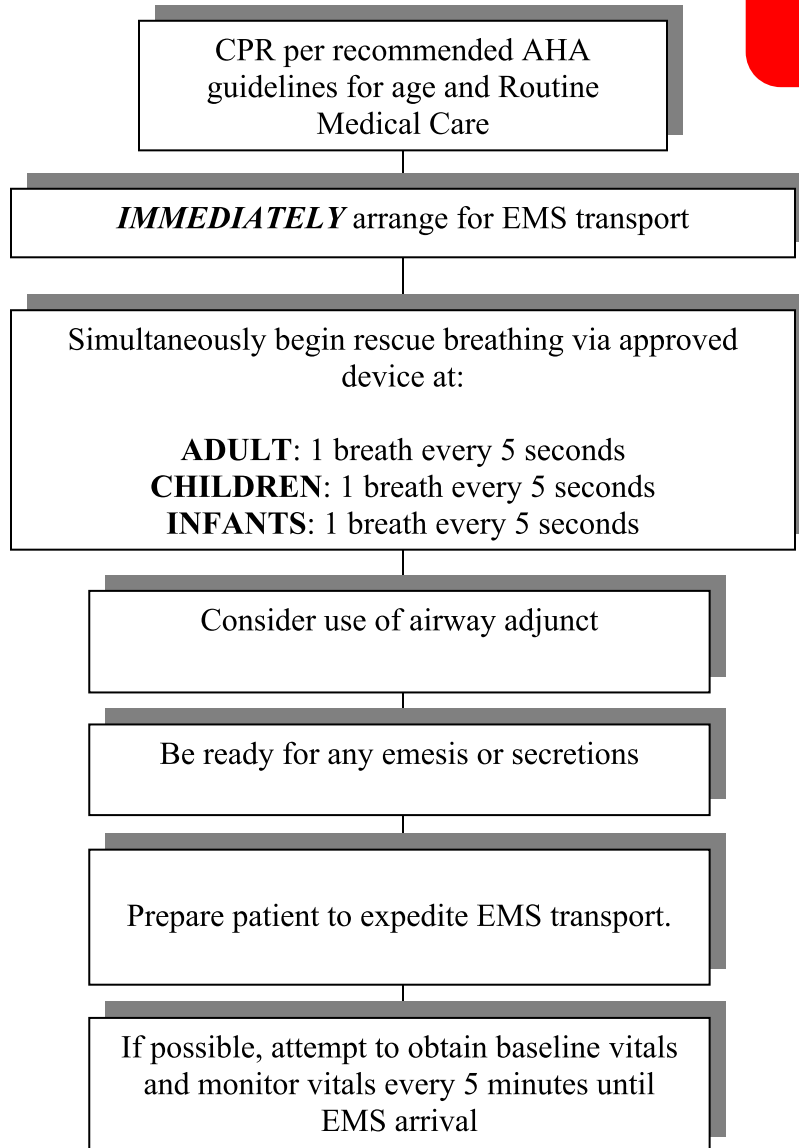
Topical poisons - Brush away particulate matter before flushing with water.

Carbon Monoxide poisoning - Pulse Oximetry is unreliable.

Multiple victims in enclosure - consider environment and hazmat team.

RESPIRATORY ARREST

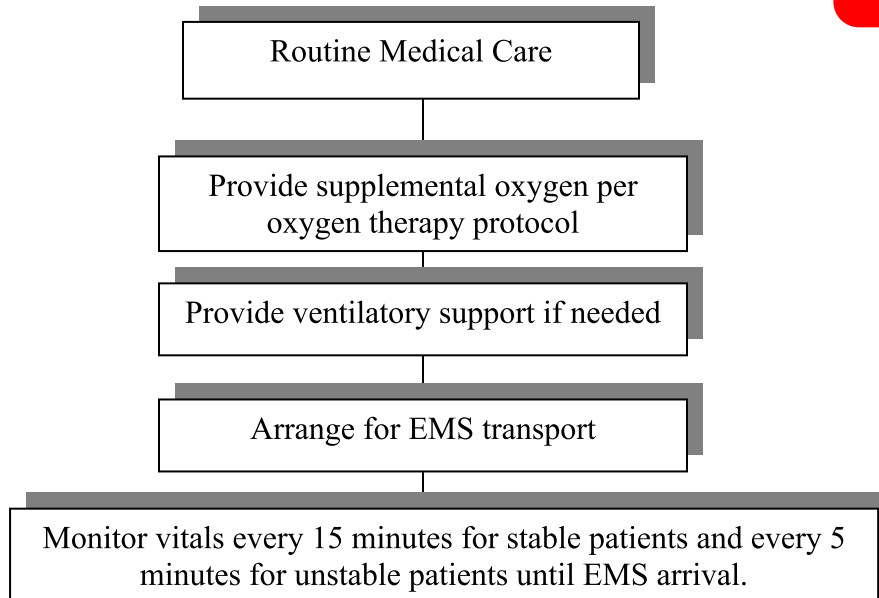
Apnea
Unresponsiveness



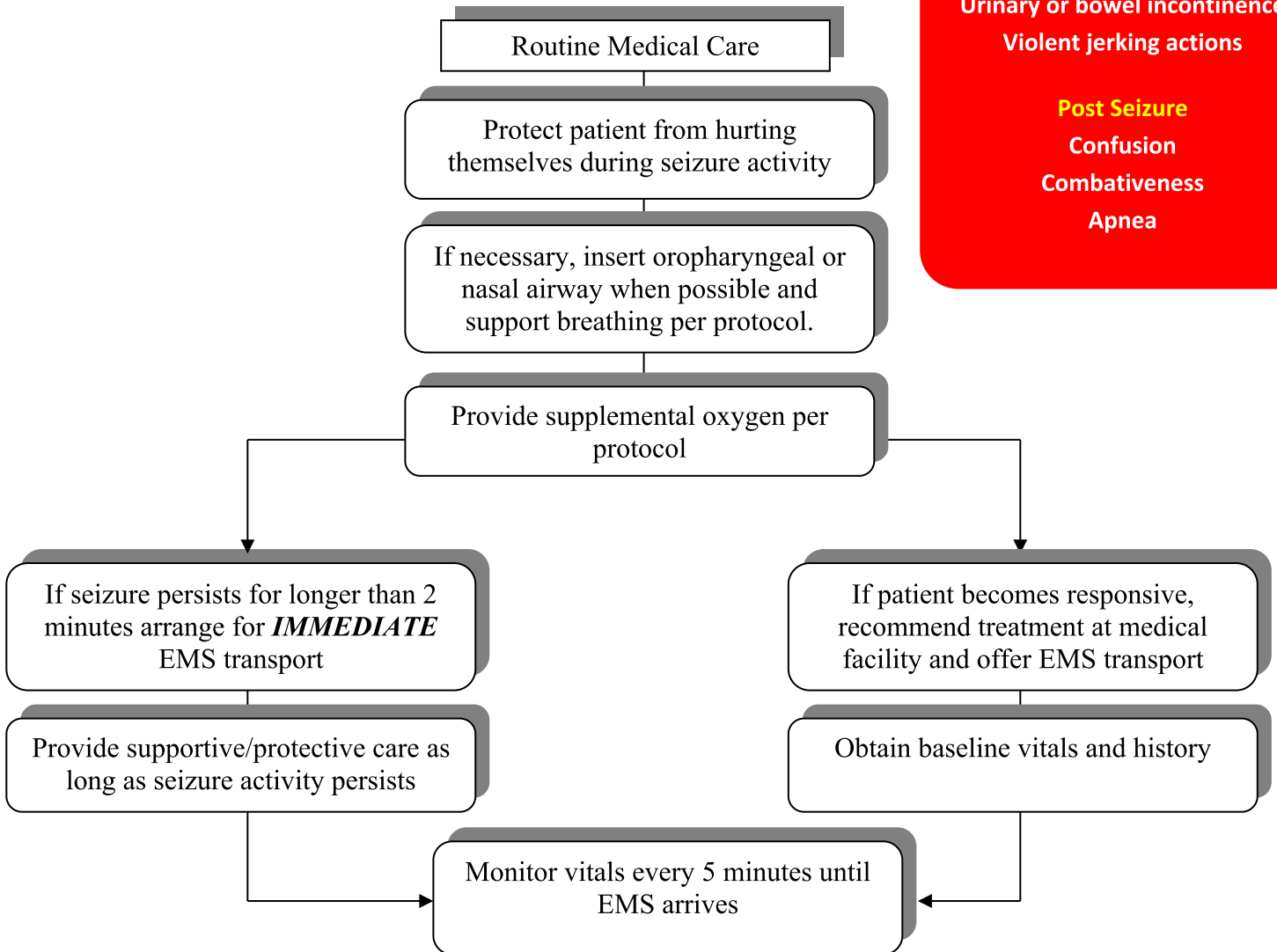
RESPIRATORY DISTRESS

Intervention for patients experiencing moderate to severe respiratory distress with wheezing presumed to be secondary to a reactive airway

Inability to speak
Peripheral Cyanosis
Wheezing or
Stridorous
respirations
Anxiety
Confusion



SEIZURES

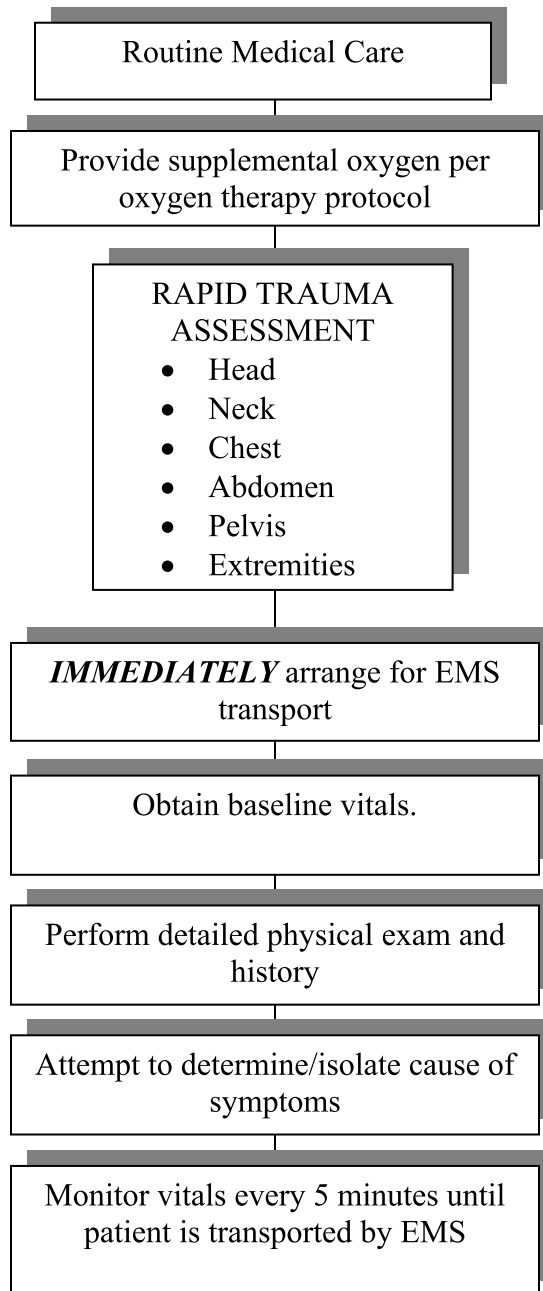


Rigid Body or stiffness
Possible Respiratory Arrest
Urinary or bowel incontinence
Violent jerking actions

Post Seizure
Confusion
Combativeness
Apnea

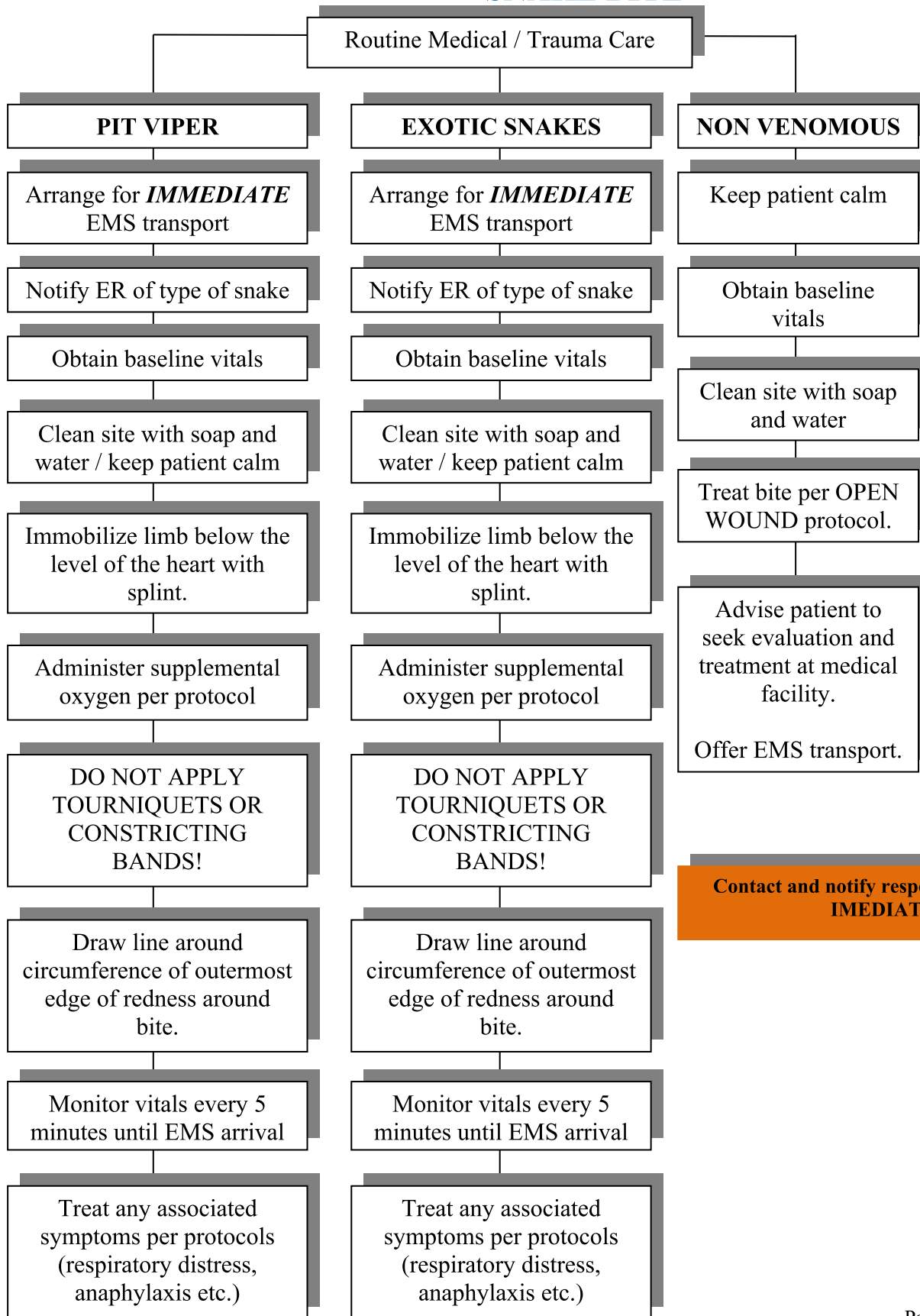
SHOCK

A state of inadequate tissue perfusion.



Restlessness
Anxiety
Progressive lethargy
Cool, clammy and pale skin
Peripheral cyanosis
Excessive thirst
Nausea / Vomiting
Rapid shallow respirations
Rapid, weak and/or absent peripheral pulses
Dilated pupils
Decreased LOC
Low B/P

SNAKE BITE



- Fang marks
- Swelling at site
- Localized pain
- Oozing wound
- Weakness / dizziness
- Sweating / chills
- Thirst
- Nausea / vomiting
- Diarrhea
- Tachycardia
- Hypotension
- Hematuria
- Hematemesis
- Ecchymosis
- Necrosis
- Respiratory distress / failure
- Numbness & tingling about face & head

Contact and notify responding EMS Squad IMMEDIATELY!

SOFT-TISSUE INJURIES

Routine Medical / Trauma Care

MINOR CLOSED WOUNDS

- Do focused physical exam
- Identify Mechanism of injury
- Obtain Baseline vital signs
- Apply indirect ice or cold pack on affected area for 10 to 20 minutes.
- Suggest cold compress to area every 2 hours for the next 24 hours.

SEVERE CLOSED WOUNDS

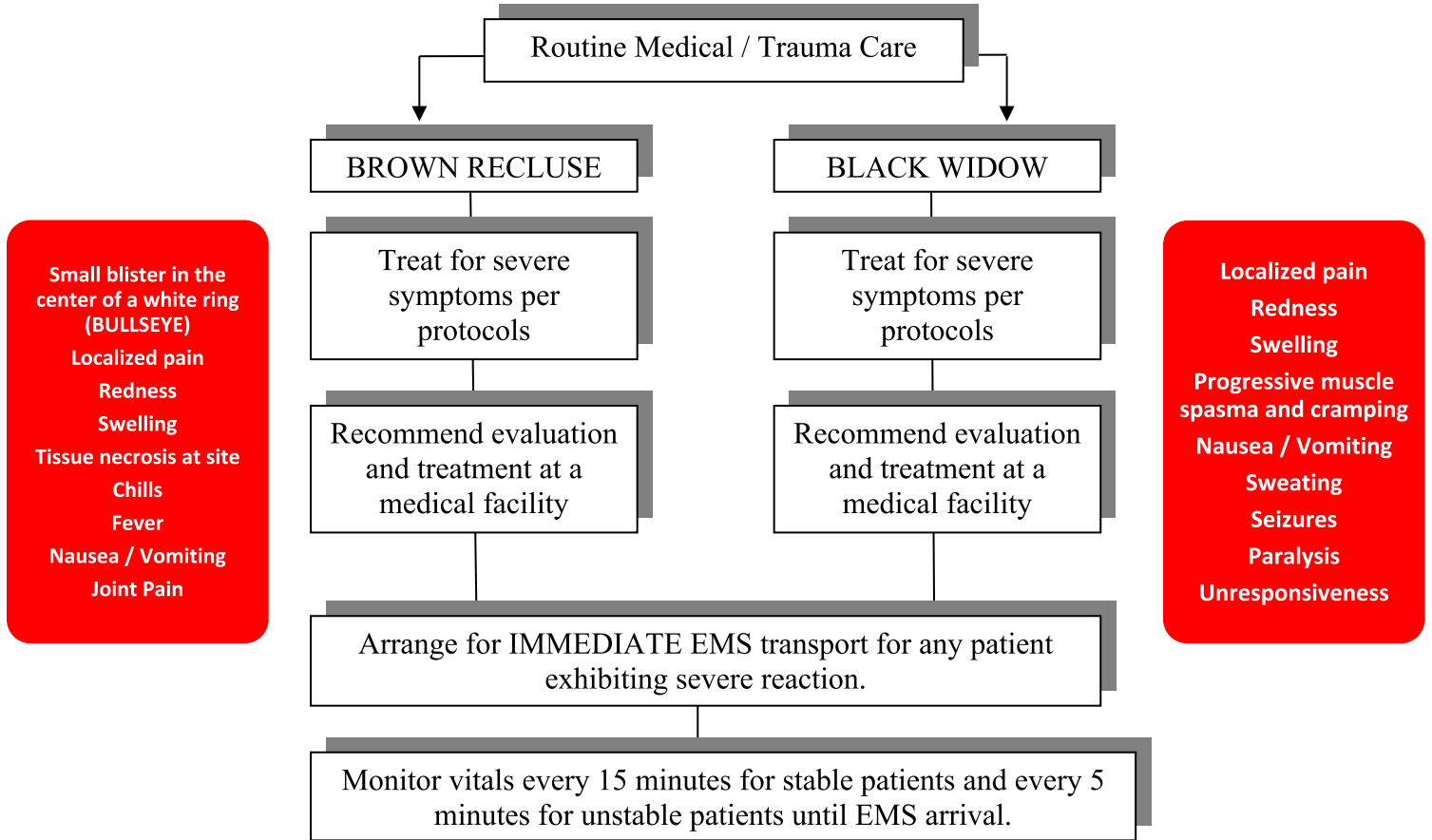
- Refer to INTERNAL HEMMORHAGE protocol

For all severe closed injuries or injuries with significant mechanism of injury arrange IMMEDIATE EMS transport.

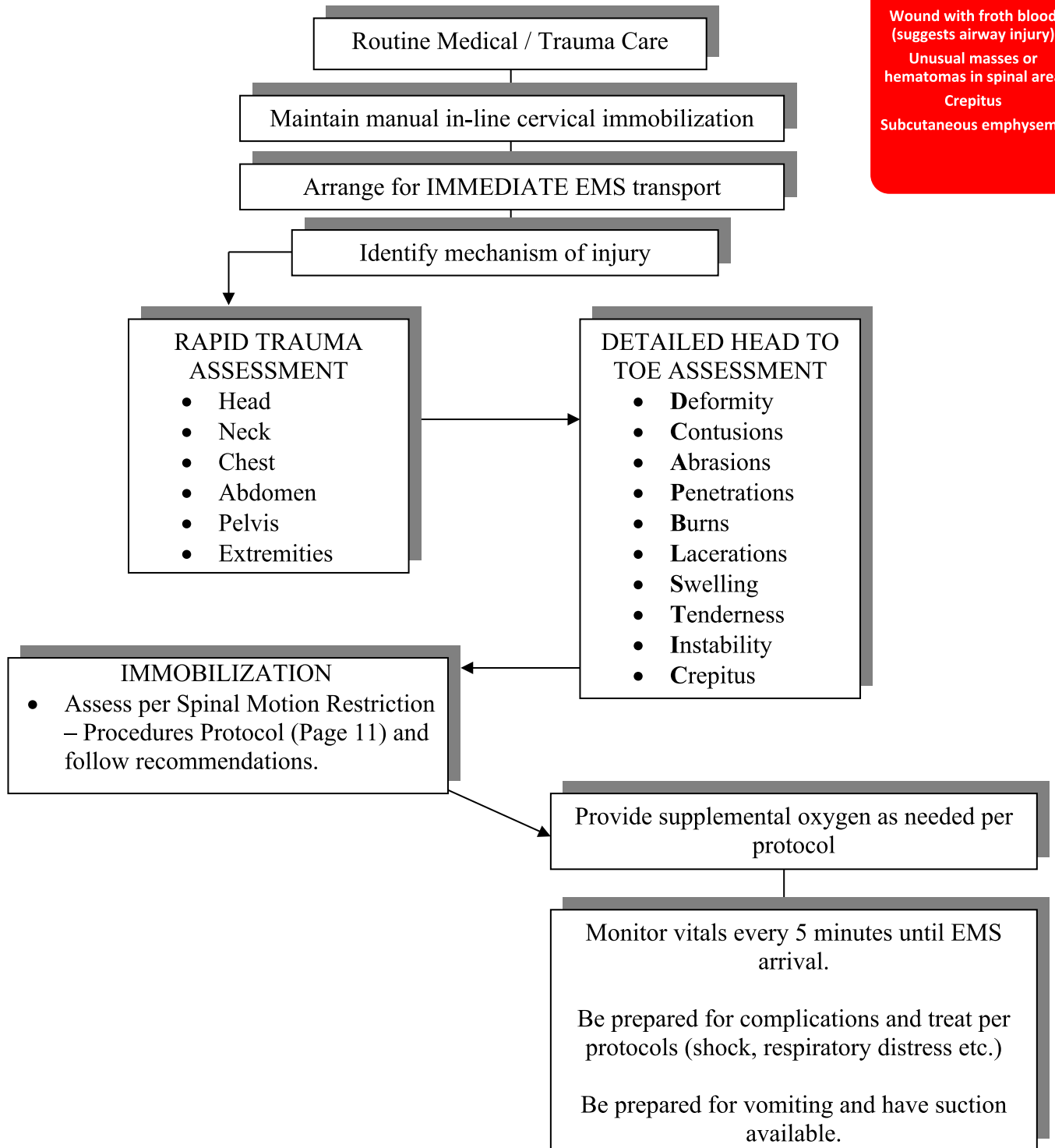
Monitor vitals every 15 minutes for stable patients and every 5 minutes for unstable patients until EMS arrival.

Contusions
Hematomas
Crush
Injuries

SPIDER BITES



SPINAL TRAUMA



Neck Swelling
Discoloration
Deformity
Wound with froth blood (suggests airway injury)
Unusual masses or hematomas in spinal area
Crepitus
Subcutaneous emphysema

SPLINTING PROCEDURES

**Obvious
fractures
Dislocations**

Splinting SHOULD NOT take priority over life threatening conditions.

Stabilize the injured limb manually.

Assess distal pulses, motor function and sensation. If pulses are absent, apply gentle in-line traction to the extremity to return the pulse.

Re-assess pulse, motor function and sensation after applying traction and every 5 minutes thereafter.

In some fractures, it may be necessary to splint them in the position they are found. In general, if pulses, motor function and sensation are intact, splint the extremity as it is found.

Splinting Recommendations

The following splints are recommended for the following situations. As every situation is different, splints may have to be improvised or adapted to achieve good immobilization.

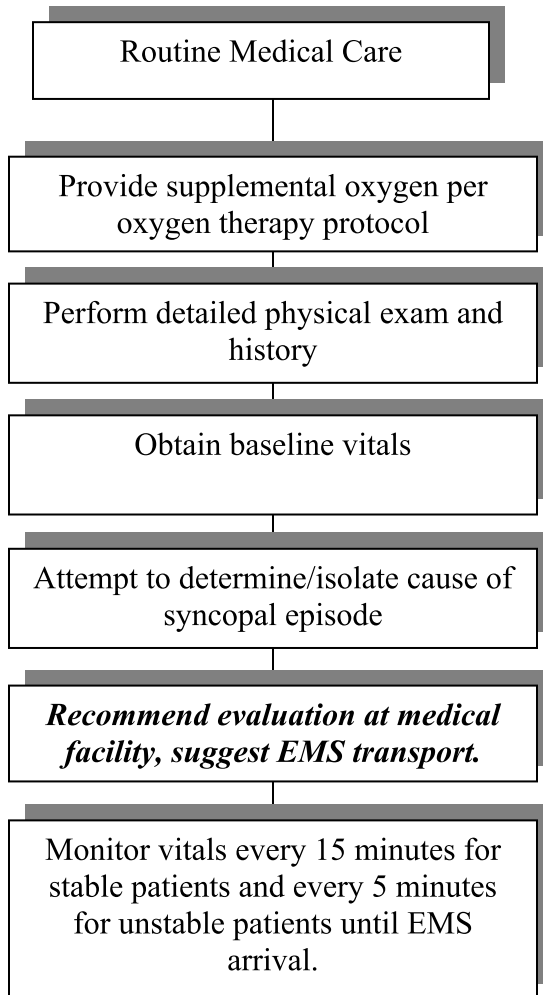
- Clavicle – Sling and Swathe
- Radius / Ulna – Arm board or SAM splint
- Tibia / Fibula – Board splint or SAM splint
- Ankle – Pillow wrap or SAM splint
- Any Joints – Splint in position found with pillow wrap or SAM splints
- Hand – In position of function, kling roll in palm with ACE wrap or SAM splint
- Hip – Pillow wrap, inverted KED technique, LSB to facilitate movement
- Fingers – Tong splint with tongue depressors or buddy taping

ALWAYS assess and document distal pulse, motor function and sensation before and after splinting.

SYNCOPE

A brief lapse in consciousness caused by transient cerebral hypoxia.

Palor
Dizziness
Numbness/tingling
in extremities
Nausea
Diaphoresis



If patient refuses EMS transport, advise them not to drive until evaluated by a physician and document recommendation.