

Western Arizona Council of Emergency Medical Services

Pre-Hospital Protocols

Approved by Dr. Michael Ward, Medical Director

Date

ABUSE OR NEGLECT, SUSPICION OF**ADMINISTRATIVE 1.1****1. COMMUNICATION**

All EMS personnel shall patch to a base hospital for medical direction when a patient is suspected of having been, or being at risk for physical abuse, exploitation or neglect (A.R.S. 13-3602 (A & B)). Suspicion may be based on physical evidence, or based upon behaviors which provide reasonable belief that a patient may have been or may become a victim. If the patient or their caregiver is refusing treatment and transport, the EMS provider should contact their administrative base hospital.

II. PROCEDURE

All suspected cases of abuse, exploitation, or neglect are to be reported to law enforcement, Adult or Child Protective Services.

A. Medical direction/law enforcement will provide guidance to EMS personnel regarding the need for further hospital evaluation prior to termination of patient contact. This may include "hold" orders to protect the vulnerable adult or child in need of treatment and protection.

B. If the EMS provider suspects that the patient is a victim of abuse, neglect or exploitation:

1. The provider will contact medical direction as stated above
2. Make a report to local law enforcement providing all pertinent medical reports/information.
3. Make a report to local Adult or Child Protective Services
4. Document on the first care form all assessment findings, any orders received, case numbers (if available) from local law enforcement agencies and Adult or Child Protective Services
5. Complete the Suspicion of Abuse or Neglect Report

C. If patient or caregiver is refusing treatment and transport, the administrative base hospital shall be notified prior to clearing the scene.

III. DEFINITIONS

A. Abuse:

- a. Intentional infliction of physical harm
- b. Injury caused by criminally negligent acts or omissions
- c. Unreasonable imprisonment
- d. Sexual abuse or sexual assault

B. Neglect:

- a. A pattern of conduct without the person's informed consent resulting in deprivation of food, water, medication, medical services.

C. Exploitation: The illegal or improper use of an incapacitated or vulnerable adult of his resources for another's profit or advantage.

D. Incapacity: An impairment by reason of mental illness, mental deficiency, mental disorder, physical illness or disability, advanced age, chronic use of drugs, chronic intoxication or other cause to the extent that the person lacks sufficient understanding or capacity to make or communicate informed decisions concerning his person.

E. Physical Injury: The impairment of physical condition which includes but shall not be limited to any skin bruising, pressure sores, bleeding, failure to thrive, malnutrition, dehydration, burns, subdural hematoma, soft tissue swelling, injury to any internal organ, or any physical condition which imperils health or welfare

F. Serious Physical Injury: Physical injury which creates a reasonable risk of death, or which causes serious or permanent disfigurement, or serious impairment of health, or loss or protracted impairment of the function of any bodily organ or limb

G. Vulnerable Adult: Any individual who is eighteen years or older who is unable to protect himself from abuse, neglect, or exploitation because of mental or physical impairment.

H. Child, Youth or Juvenile: Any individual who is under the age of eighteen.

AIR MEDICAL SERVICES, INDICATIONS FOR EMERGENCY USE**ADMINISTRATIVE 1.2****I. AIR TRANSPORTATION TO BE CONSIDERED WHEN EVALUATION OF PATIENT(S) AND SCENE CIRCUMSTANCES FINDS:**

A. Weather, location, road or traffic conditions would prolong patient's ground transport time to the closest appropriate care facility and would pose a threat to the patient's survival and/or recovery.

B. Use of local ground transport team would leave the local area without adequate EMS coverage.

C. Mechanism of injury as per Trauma Triage Decision Scheme.

D. One or more indicator of severe physiologic or anatomic compromise:

1. Physiologic Considerations

- a. Glasgow Coma Scale <13
- b. Severe hypothermia or hyperthermia
- c. Premature labor (gestation <36 wks)
- d. Amputation or near amputation
- e. Unstable toxicologic syndrome

2. Anatomic Considerations

a. Head, Neck & Spine

- i. Penetrating injury of head or neck
- ii. Scalping or severe burn injury
- iii. Unconsciousness or decreasing mental status
- iv. Paralysis or spinal cord injury
- v. Probable intracranial hemorrhage
- vi. Altered mental status in near-drowning
- vii. Status epilepticus unresponsive to medication

b. Airway and Chest

- i. Compromised or unsecured patient airway
- ii. Penetrating injury to chest
- iii. Flail chest
- iv. Severe burns and/or inhalation injury
- v. Respiratory rate <10/min or >30/min
- vi. Acute respiratory failure
- vii. Hypoxia in near drowning
- viii. Cyanosis in pediatrics
- ix. Peds patient requires invasive airway procedure and assisted ventilation
- x. Pediatric unstable respiratory rate <10, >60
- xi. Peds patient experiencing/high risk of developing, acute respiratory failure or arrest

c. Cardiovascular

- i. Cardiac arrest when patient responds by return of spontaneous circulation with pulse
- ii. Cardiac arrest if no ACLS ground personnel are available
- iii. Shock and/or hypotension (BP <90) any cause
- iv. Symptomatic rhythm disturbance (<50 or >150)
- v. Symptomatic hypo/hypertension
- vi. Probable dissecting or leaking aneurysm
- vii. Severe bleeding/shock in pregnant patient
- viii. Pediatric unstable vital signs;
 - a. BP <60 (newborn)
 - b. BP <70 (age <6 yrs)

- c. BP <80 (6-12 yrs)
- d. BP <90 (13-18 yrs)

- d. Extremities
 - i. Two or more long bone fractures
 - ii. Degloving injury

- e. Other
 - i. Penetrating injury to abdomen, back or groin

ASSESSMENT**ADMINISTRATIVE 1.3****I. SCENE SIZE-UP/ASSESSMENT**

- A. Initiate body substance isolation
- B. Recognize hazards to EMS personnel or patient
- C. Recognize mechanism of injury or chief complaint
- D. Analyze position of patient
- E. Identify number of patients
- F. Activate additional resources and initiate a triage system, if appropriate
- G. Identify self to patient(s)

II. INITIAL ASSESSMENT

- A. Airway: open, check for adequacy, note potential problems. Consider neck injury with trauma and initiate manual stabilization
- B. Breathing: Is the patient breathing? Monitor: rate, rhythm, depth. Note: respiratory noises and effort. Note: skin color or abnormal behavior
- C. Circulation: stop exsanguinating hemorrhage. Evaluate: pulse presence, rate, rhythm, strength.
- D. Note level of consciousness (AVPU) in conjunction with airway, breathing, circulation
- E. Observe for signs of shock. Watch for cool, clammy, pale skin, thirst, agitation

III. FOCUSED HISTORY AND PHYSICAL EXAM

Emphasis is placed on the patient's complaint and history, allowing for rapid emergency medical care.

A. Medical

1. Assess complaints and signs or symptoms; OPQRST format:
 - a. Onset
 - b. Provocation
 - c. Quality
 - d. Radiation
 - e. Severity
 - f. Time
2. Assess history; "SAMPLE" format
 - a. Signs/symptoms
 - b. Allergies
 - c. Medications
 - d. Pertinent previous illness
 - e. Last oral intake
 - f. Events preceding this illness

B. Trauma

1. Assess mechanism of injury
 - a. Cause
 - b. Implements
 - c. Trajectory
 - d. Force
 - e. Speed, condition of windshield and steering wheel, restraints, condition of other passengers in vehicular accidents
2. Inspect and palpate each body region, look and feel for the following
 - a. Deformities
 - b. Contusions
 - c. Abrasions
 - d. Punctures/penetrations
 - e. Burns

- f. Tenderness
- g. Lacerations
- h. Swelling

IV. DETAILED PHYSICAL ASSESSMENT

A detailed physical assessment should be completed based on the patient's chief complaint.

- A. Vital Signs: pulse, blood pressure, respiratory rate and quality, skin condition.
 - 1. Repeat according to patient condition. Attempt at least one more set.
 - 2. Observe, record and report any changes in patient condition that deviate from the initial assessment.

B. Perform a detailed physical examination on the patient to gather additional information.

- 1. As you inspect and palpate each body region, look and feel for the following
 - a. Deformities
 - b. Contusions
 - c. Abrasions
 - d. Punctures/penetrations
 - e. Burns
 - f. Tenderness
 - g. Lacerations
 - h. Swelling
- 2. During assessment of the head also include
 - a. Drainage from the ears
 - b. Discoloration of eyes
 - c. Pupil reactivity
 - d. Presence of foreign bodies
 - e. Blood in anterior chamber of eyes
 - f. Drainage and bleeding from nose
- 3. During assessment of the neck also include
 - a. Jugular vein distention
 - b. Presence of crepitus
- 4. During assessment of the chest also include
 - a. Presence of crepitus
 - b. Paradoxical motion
 - c. Presence, absence, and equality of breath sounds
- 5. During assessment of abdomen also include
 - a. Firmness
 - b. Distention
- 6. During assessment of pelvis also include gentle flexion and compression of the pelvic ring to determine stability if patient does not complain of pain
- 7. During assessment of all four extremities also include
 - a. Distal pulses
 - b. Sensation
 - c. Motor function

C. Special notes

- 1. The detailed physical exam should be systematic, although the exact order may vary depending upon patient presentation.
- 2. When reporting findings from detailed physical exam, do not use poorly understood

terminology like: lethargic, semi-comatose, semi-conscious, stuporous. Record and report precise responses to specific stimuli.

BURN TRIAGE**ADMINISTRATIVE 1.4****I. Adult Burn Triage**

A. Patients with the following characteristics should have air transport to a trauma center if possible.

1. Partial thickness burns greater than 10% BSA
2. Burns that involve the face, hands, feet, genitalia, perineum, or major joints.
3. Third degree burns
4. Electrical burns, including lightening injury
5. Chemical burns
6. Inhalation injury
7. Burn injury in patients with preexisting medical disorders that could complicate management, prolong recovery, or affect mortality, such as: diabetes, cardiac disease, pulmonary disease, pregnancy, cirrhosis, morbid obesity, immunosuppression, bleeding disorders

II. PEDIATRIC BURN TRIAGE

A. Children (age 14 and under) who present with any of the above characteristics (1-7) should be transported to the nearest Trauma Center for evaluation by the trauma team and pediatric intensivist.

B. The Trauma Center will then coordinate care and, if necessary, subsequent transfer to a burn unit.

III. Patients with an unstable airway who require further urgent advanced airway interventions should proceed to the nearest facility that can provide airway assistance.

COMMUNICATION PROCEDURE**ADMINISTRATIVE 1.5****I. Medical Direction**

A. Direct on-line medical direction allows physician consultation for patient care management.

1. Patient care orders are provided by an approved medical direction authority (certified ALS base hospital, agency medical director, or centralized medical direction facility).

2. If the receiving facility is not a medical direction authority, a dual-patch with the approved medical direction authority (for orders) and the receiving facility is required with the exception of standing orders.

a) Communication should be brief and concise. At a minimum, the following information should be provided:

Unit designation and level of care

Patient age and sex

ETA

Requests for orders

Assessment findings/Vital signs

Chief complaint/Mechanism of injury

IF PERTINENT

History of present illness/Meds/Allergies/Past History

Interventions

3. Interfacility transfers require contact with the receiving facility.

4. Criteria for requesting BLS downgrade are per agency/medical direction authority

B. Indirect notification provides patient related information to the receiving facility.

1. Communication (EMSCOM, Dispatch, or Local Communications Procedures) relays pertinent information to the receiving facility for those calls involving a standing order patient.

a) Examples of indirect notification to the receiving facility may include air ambulance arrival, standing order or request for assistance upon arrival.

DISASTER TRIAGE**ADMINISTRATIVE 1.6****I. Specific Information (S.T.A.R.T.)**

A. Triage: Triage is the sorting of casualties and is, therefore, one of the most important functions to be performed at the scene of a disaster. Triage is a continuous process; it is necessary to re-evaluate all patient priorities, as resources become available. The most seriously injured persons can be quickly identified by:

1. Evaluating respiratory rate, less than or greater than 30.
2. Evaluating radial pulse
3. Evaluating mental status, able to follow simple commands

B. Establish Priorities: Casualties are sorted into four (4) categories:

1. Immediate (RED); Those who have serious injuries or medical problems (salvageable life threatening problems, taking into account the resources available);
 - a. Airway and breathing difficulties which can be readily alleviated with head tilt and OPA insertion
 - b. Gross bleeding controlled by direct pressure
2. Delayed (YELLOW): Those for whom treatment and transportation can be delayed while more seriously injured persons receive care.
3. Minor (GREEN): Those patients who can ambulate to an alternative location without assistance.
4. Dead/Dying (BLACK): Those patients who do not resume spontaneous breathing after positioning of the head and insertion of an OPA, and have no spontaneous pulse. These patients should be retriaged, as resources become available.

II. DISASTER SCENE OPERATIONS Follow approved area Incident Management System procedures.

A. When removing patients from a hazardous area:

1. Survey scene for potential hazards, number of patients, need for specialized help
2. Call for medical or technical backup as needed
3. Protect rescuers first; treat gas spills, remove power lines, etc.
4. Stabilize vehicle prior to entry
5. Perform primary survey and treat airway difficulties and severe bleeding first
6. If patient has no pulse or respirations and extrication is necessary before CPR can be provided, the patient should be considered dead
7. Triage patients and assign to available medical personnel
8. Apply cervical collar, immobilize spine prior to extrication

9. Perform quick secondary survey as possible; splint extremity fractures, if possible
10. Expedite safe extrication by specialists after management of life-threatening problems.
11. Perform or repeat complete secondary survey once patient is extricated.

B. Triage area: The triage area should be safely located away from the dangers of the hazard, generally uphill and upwind of the hazard.

C. Incoming ambulances: As incoming ambulances arrive, they should be directed to the staging officer at the staging area. They should not be driven to the triage area.

D. Ambulance Assignments: Ambulance crews should remain with their ambulances until given an assignment by the medical commander. Keys are to remain in the vehicles.

E. Ambulance Supplies: The ambulance supplies and equipment should be placed in a supply pool that is near the treatment area, and a responsible EMT provider placed in charge of the pool.

F. Volunteers: Volunteers can and should be used at a disaster scene to free firefighters, rescuers, and ALS personnel alike from activities that take them away from rescue and patient care activities. Volunteers may be used to:

- a. Block or control the flow of traffic if there are not enough police officers on the scene.
- b. Assist medical personnel in carrying patients from the wreckage to the triage and treatment point.
- c. Help to load the ambulances
- d. Assist the walking wounded.
- e. Comfort victims and care for children
- f. Carry items from the supply pool to the treatment area

G. Sorting for transportation: As soon as victims are treated, a second triage must begin the sorting for transportation.

H. Transporting: As soon as the victims are ready for transportation, ambulances should be called from the staging area. The command post, or designee, should determine prior to the departure of the ambulance the hospital to which the ambulance should go. RACES volunteers may provide additional support to the transport sector for communicating patient and resource information between the hospitals and the disaster scene.

I. Communication Network: The command post, or designee, should determine the channel for scene radio communications and designate the ambulance dispatch center(s) to announce when this channel is to be utilized by incoming units.

J. After Discharge of Patient: As ambulances discharge their patients and return to the scene, they should report directly to the staging officer.

K. Special Area for Relatives: A special area should be provided for relatives and friends away from the patient treatment area.

L. Temporary Morgue: Since bodies will not be removed from the scene until all the injured have been transported, a temporary morgue should be established

DOA AND PRE-HOSP. ADVANCE DIRECTIVE FOR WITHHOLDING CARE ADMINISTRATIVE 1.7**I. General**

A. The American Heart Association Standards for CPR and Emergency Cardiac Care state that "Individuals should receive the appropriate care and arbitrary basis for decisions to withhold care should be avoided."

B. Pre-Hospital Advance Directive for Withholding Care allows Pre-Hospital care providers to withhold care on patients who wish not to be resuscitated.

1. When a document is produced by the patient, patient's guardian, or agent designated to act on the patient's behalf, it should conform to the current Arizona Pre-Hospital Advance Directive Form (Orange Form).

2. If at any time the patient, or patient's surrogate, wishes to reverse the DNR order, they may do so by verbally telling the emergency provider.

C. Proper police agencies should be notified when:

1. resuscitative efforts are cancelled by a medical direction authority
2. the patient presents with a valid Prehospital Advance Directive Form
3. the exceptions noted in II. A. are present

II. BASIC LIFE SUPPORT PERSONNEL

A. Attach AED if available, initiate CPR and call for ALS support unless the patient:

1. Is decapitated
2. Is burned so severely as to be unrecognizable
3. Is in an obvious state of decomposition
4. shows signs of fixed lividity and rigor mortis (unless medical situations such as sedative hypnotic overdose or hypothermia might be present)
5. presents with a valid Prehospital Advance Directive

B. Document the presence of the Pre-Hospital Advance Directive Form on the First Care Form.

III. ADVANCED CARDIAC LIFE SUPPORT PERSONNEL

A. Initiate CPR and ACLS procedures if the above exceptions do not apply

B. Document presence of the Pre-Hospital Advanced Directive on the First Care Form.

C. Assessment

1. History
2. Carotid pulses
3. Skin temperature and color
4. Pupillary reaction

5. Auscultate chest - breath and lung sounds

6. ECG

a) Hard copy attached to the First Care Form

b) More than one lead

IV. SPECIAL CONSIDERATIONS

A. Prehospital Advance Directive for Withholding Care does not apply to Mass Casualty Incidents.

B. In multiple patient situations, there may be inadequate resources to devote care to the resuscitation of pulseless patients. In such cases, the highest qualified provider on the scene should establish pulselessness and direct care when appropriate. Medical Direction should be established as soon as possible.

C. The presence of a "Living Will" does not justify withholding care without immediate on-line medical direction since the authority and accuracy of such documents cannot be readily verified by pre-hospital personnel.

D. Surrogate list - This list identifies people who can make health care decisions if:

The patient is incapacitated

The patient does not have a health care power of attorney

The court has not appointed a health care agent

1. Spouse (unless legally separated)
2. Adult child (if more than one, a majority will make decisions)
3. Parent
4. Domestic partner
5. Sibling
6. Attending physician

DOCUMENTATION CRITERIA**ADMINISTRATIVE 1.8**

The pre-hospital encounter form, or first care form, provided by pre-hospital personnel establishes the documentation that forms a cornerstone of patient care. Documentation should accurately and precisely reflect observations, orders, treatments, and outcomes arising from the patient encounter. Proper documentation will reflect adherence to the standards of care established by the EMS community.

I. CRITERIA FOR DOCUMENTATION**A. Chief complaint should include**

1. Patient description of problem
2. Mechanism of injury if trauma related

B. History should include

1. Onset - when did symptoms begin
2. Provocation - what makes it worse
3. Quality - what does the pain feel like
4. Radiation - can it be felt in any other body location
5. Severity - rating the pain
6. Time - constant or intermittent, is there a history
7. Pertinent past medical history, related to complaint

C. Patient assessment should include

1. Scene survey and mechanism of injury if trauma related
2. Initial survey, to include signs, symptoms and immediate interventions related to the following
 - a) Airway
 - b) Breathing
 - c) Circulation
 - d) Level of Responsiveness
 - e) C-Spine precautions, if appropriate

D. Focused history and physical should include signs and symptoms of presenting problem and review of body systems as needed

1. Vital signs, including postural vital signs if indicated
2. Color, temperature, appearance of skin
3. Blood pressure, both arms if indicated
4. Capillary refill, if appropriate
5. Pupillary response, if appropriate
6. Motor, sensory, circulatory status of extremities, if appropriate

E. Orders received, treatment initiated and patient response to treatment

F. Drug therapy given and patient response to treatment

G. On-going assessment of patient

H. Transfer summary should include

1. Condition of patient on transfer
2. Name of receiving agency/person, including signature
3. Outcome of patient, if known

HAZARDOUS MATERIAL INCIDENT, GENERAL MANAGEMENT

ADMINISTRATIVE 1.9

Immediately upon the responder's arrival at an identified hazardous materials incident, an approved Incident Command System will be utilized for the command and incident management structure.

I. RECOGNITION OF POTENTIAL HAZARDOUS MATERIALS INCIDENTS**A. Maintain a high index of suspicion to recognize environmental hazards, i.e.**

1. Incidents with more than one ill patient/animal/livestock
2. Incidents at industrial sites for ill or contaminated workers
3. Fires, explosions
4. Incidents involving commercial transport vehicles (semi-tractor/trailers, trains, etc.)
5. Identify placarding, labels, reports from shipper, carrier, or workers on site
NOTE: Patient care may be secondary concern to containment/control of a highly toxic site. EMS personnel should avoid becoming a part of the problem, and should not enter the "hot zone".

B. Evaluate the site for a safe zone and communicate needs for appropriate back-up resources to control/contain the hazard

1. Personnel needs/equipment needs
2. Time concerns
3. Safety perimeter - EMS personnel, Public Safety Officers, civilians
4. Evacuation needs
5. Consider need for on-scene physician assistance

II. RESOURCE AND INITIAL SITE MANAGEMENT BY EMS RESPONDERS TO A POTENTIAL HAZARDOUS MATERIALS INCIDENT**A. EMS personnel who are first responders to incident and identify a potential Haz Mat site**

1. Consider the need to approach a suspicious scene with caution, uphill and upwind
2. Request assistance
 - a. Pre-identify available Haz Mat site control resources and request their assistance through dispatch
3. Avoid entering the "hot" areas unprotected
4. It is best to remain out in the safety perimeter until properly protected Haz Mat incident responders arrive, decontaminate and deliver the patients to the responding EMS personnel at the safety perimeter for further triage and care.

B. EMS personnel responding to an identified Haz Mat site

1. EMS personnel dispatched to an identified Haz Mat site shall report to the incident staging area and await direction from the scene commander.
2. Haz Mat responders should identify ingress and egress areas/control points from the hot zone to the decontamination area to the safety perimeter.

3. Haz Mat responders should decontaminate and deliver patients in need of EMS care to the safety perimeter.

C. Communications and Medical Direction:

1. Medical control will be through a Base Hospital physician.
2. "Medical Command" shall request a patch with a Base Hospital.
 - a. Patient orders should be provided through a base hospital physician.
 - b. The Base Hospital physician will then make contact with the Poison Control Center for toxicologic information as necessary.
3. EMS personnel shall communicate toxicologic history information as soon as possible to Medical Direction and the Poison Center.
4. EMS personnel should be properly positioned and attired. Risk assessment should be made in conjunction with Medical Control, Poison Center and/or Haz Mat response team.
5. Transport of patients away from contaminated sites shall be under the control of the Incident Commander in consultation with the Base Hospital physician and, when appropriate, the Poison Control Center.

III. PATIENT HISTORY AND ASSESSMENT SPECIFIC TO HAZ MAT SUBSTANCES.

A. In addition to standard patient history and assessment information

1. Assess for specific concerns in consultation with Medical/Poison Control as indicated by known substance exposure
2. Assess for specific indicators of toxicity when substances are mixed or unknown

B. Toxicologic history

1. What substances were potentially involved? Obtain spelling of substance involved
2. How contaminated and for how long before decontamination?
3. How much substance, via what routes of exposure?
4. How many patients are involved?
5. What symptoms have occurred?
6. How long ago was the exposure?

C. Toxicologic physical assessment

1. Consider primary and secondary target sites on body systems. (Airway, Breathing, Circulation, Disability, Exposure)
2. Secondary survey
 - a. Vital signs
 - b. Toxic syndromes, i.e., Narcotic, cholinergic, anticholinergic, generalized CNS depression, etc.
 - c. Complications of poisoning
 - d. Underlying disease states, associated trauma

D. Associated Medical Problems:

1. Injury
2. Past medical history
3. Current pregnancy
4. Current medications
5. Allergies

IV. GENERAL PATIENT MANAGEMENT FOR HAZARDOUS MATERIALS INCIDENTS

- A. Recognize environmental hazards and ensure rescuer is fully protected.
- B. Haz Mat technician shall remove patient(s) from the contaminated area and begin decontamination. EMS responders shall receive the patients on the cold zone of the decontamination station.
- C. Complete patient assessment and report information to Medical Control for further direction of medical treatment.
- D. Treatment considerations
 1. Antidote/Alter Absorption
 - a. Antidotes: existence, availability, timeliness
 - i. Oxygen
 - ii. Naloxone
 - iii. Antidotes available through Haz Mat paramedic or industrial sites. (See "Hazardous Material Incident, Drug and Antidote Therapy" protocol.)
 - iv. Antidotes available in emergency departments (chelating compounds, etc.)
 2. Basic Life Support and Advanced Life Support
 - a. Respiratory considerations
 - b. Cardiovascular considerations
 - c. Neurologic considerations
 3. Change Catabolism
 4. Distribute Differently
 5. Enhance Elimination

V. SPECIAL NOTES

Containment of the materials, evacuation and decontamination will generally take priority at the hazardous materials incident. Haz Mat responders should usually contain the area, decontaminate and deliver patients in need of EMS care to the safety perimeter, where EMS responders can safely render care and prepare to package and transport ill/injured patients.

INFECTION CONTROL FOR EMS PERSONNEL**ADMINISTRATIVE 1.10**

In accordance with the Arizona Hospital Association, these guidelines have been developed to standardize EMS infection control prevention and education.

- I. The standard of practice for patient contact should emphasize body substance isolation and, as appropriate, respiratory isolation procedures.
- II. Each agency shall be responsible for their personnel meeting OSHA standards in infection control screening, tracking, training, and equipment procedures to prevent cross contamination of infection during treatment, transport, or transfer of patient care.
- III. Each provider's field procedures shall account for

A. Those activities where risk of exposure should be considered, including:

1. Respiratory diagnosis - intubation/suctioning/mouth to mouth, bacterial meningitis, communicable diseases
2. Blood and body fluid contamination. Identify what an exposure will be: blood on broken skin, bloody/body fluids, CSF splash onto mucous membrane of mouth, eyes.
3. Closed environment for extended time frame Exposure: productive coughing
4. Disaster situations: i.e., flood interrupting sewer lines, environmental exposures
5. Awareness of "what's going around" in the community

B. Equipment and Training Considerations consistent with national standards

IV. Reporting of concern for exposure/contamination shall include the use of the infection control practitioners (ICP) in each health care institution & infection control officers, as identified, in each agency.

V. DISPOSAL OF USED/CONTAMINATED EQUIPMENT/SUPPLIES

- A. All prehospital personnel shall observe disposal guidelines at all times without exception.
- B. All used disposable equipment and supplies which have come into direct or indirect contact with a patient shall be placed in properly designated contaminated waste receptacles at the receiving facility, or at the provider's base of operations.
- C. All used or exposed needles shall be placed in specially designed and accepted sharps containers immediately after treatment. Containers shall be located both in transport vehicles and at receiving facilities. Disposal of sharps containers by EMS personnel shall be determined by base hospital contract provisions.
- D. Failure to utilize proper disposal methods or containers by prehospital personnel shall result in a recommendation of remedial action to the employing agency.

PATIENT ASSISTED MEDICATION ADMINISTRATION

ADMINISTRATIVE 1.11

EMTs may assist with the administration of approved medications when those medications are indicated for the presenting complaint, and are prescribed for, and in the possession of that particular patient. The EMT must be familiar with the dosage, route of administration, actions and side effects of the medication before assisting in its delivery. Patients must be reassessed following medication administration. Response to interventions must be documented.

I. The following medications are carried on the emergency response vehicle which the EMT may administer to a patient prior to base hospital contact

- A. Oxygen
- B. Oral Glucose Gel
- C. ASA per Chest Pain Standing Order

II. The following medication is also carried on the emergency response vehicle but requires base hospital contact prior to administration

- A. Activated Charcoal

III. The following are medications that may be prescribed for a patient. The EMT may assist with administration

A. Medications

- 1. Nitroglycerin Tablets or Spray
- 2. Liquid/vaporized Fixed Dose Nebulizers

B. Administration: These medications may be taken by the patient for whom they were prescribed prior to base hospital contact if the following conditions are met:

- 1. The patient would normally take the medication regardless of the presence of the EMT
- 2. The symptoms of the patient's condition are familiar to them
- 3. They have not already exceeded the prescribed dose for that medication
- 4. They are alert enough (not hypoxic, hypotensive) to self-administer the medication. (Systolic BP must be > 100 prior to administering Nitroglycerin)
- 5. They have the physical strength to self-administer the medication

By allowing the patient to take the medications prescribed for them under the above circumstances, potential for complications from withholding these medications until base hospital contact is made is reduced. The EMT should not interfere with what the patient's physician has already told them to do. In this case, the order for the medication has already been given by that patient's physician. The EMT presence is only a secondary issue.

C. Base hospital contact is required prior to assisting with the administration of Nitroglycerin or Nebulizers in the following situations:

- 1. The patient is unsure whether to take the medication because
 - a. The symptoms or severity of the patient's condition are not typical
 - b. They have already exceeded the prescribed dose for that medication

IV. The following patient prescribed medication may be administered by the EMT *prior to base hospital contact* for a patient experiencing a severe anaphylactic reaction (wheezing, respiratory compromise, hypotension)

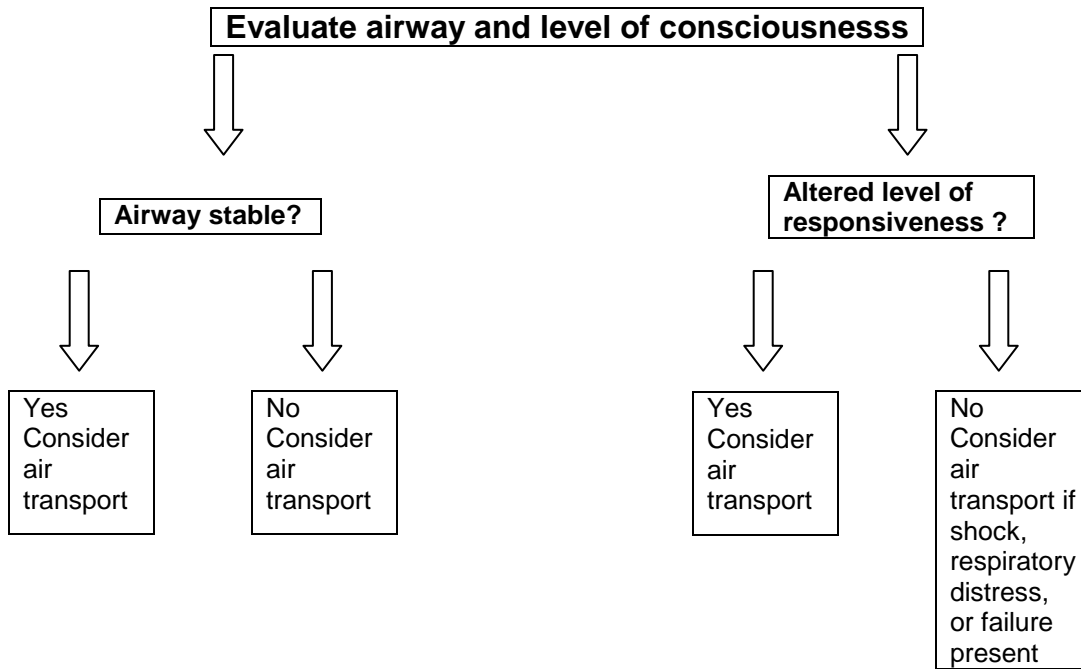
- A. Epinephrine Auto-Injector

V. SPECIAL CONSIDERATIONS

- A. When in doubt, consult the base hospital
- B. The base hospital must ultimately be contacted for each patient assisted medication call
- C. Assure right medication, right patient, right dose, right route

CRITICAL PEDIATRIC DECISION SCHEME (Age 14 and Under)

ADMINISTRATIVE 1.12



PHYSICIAN ON SCENE

ADMINISTRATIVE 1.13

I. GENERAL

A. EMS procedures are, by statute, to be performed by EMS personnel only under the direction of a designated Arizona Licensed physician. EMS personnel, then, operate as extensions of their supervising responsible physician. Ordinarily, this is the emergency physician on call at the base hospital.

II. PHYSICIAN RESPONSIBILITY

A. If a physician is on the scene first, and assumes the care of a patient, then this physician is responsible for the care of the patient until another physician has accepted the patient in transfer. This transfer of patient responsibility occurs after the physician accepts transfer of the patient over the radio. Pre-hospital personnel who arrive on the scene subsequently should assist the physician, but if given orders inconsistent with their training, should ask the physician to perform the procedure. If EMS personnel are on the scene first, then the Base Hospital Physician has assumed responsibility for the care of the patient. This responsibility can be transferred to another physician only on order of the Base Hospital Physician.

B. If a personal physician of the patient arrives on the scene after EMS personnel and the base hospital physician have accepted responsibility for patient care, the personal physician may wish to take charge of patient care. The medical direction physician may transfer care to the personal physician.

III. FIELD PROCEDURE**A. EMS personnel on the scene first**

1. Establish radio contact with base hospital as quickly as possible.
2. If a physician wishes to assume medical direction
 - a. Give this information to your base hospital physician and then put scene physician on the radio.
 - b. Subsequently talk again with your base hospital physician to learn if he/she requests transfer of the patient care to the scene physician.

B. Physician on the scene first

1. When EMS personnel arrive, they should act promptly to perform immediate needed life saving procedures, remembering that the physician on the scene is in charge and responsible.
2. Ascertain the identity and specialty of the physician on the scene as promptly as possible and also whether or not this physician desires to retain control. Give this information to the base hospital physician.
 - a. If the physician on the scene wishes to retain medical direction, provide assistance to him/her to the extent consistent with the EMS personnel's training and protocols.
 - b. If the doctor on the scene wishes to relinquish medical direction, then arrange transfer of care to base hospital physician.

REFUSAL PROTOCOL**ADMINISTRATIVE 1.14****I. COMMUNICATIONS GUIDELINES**

A. EMS personnel will patch to their administrative base hospital for medical direction when a patient is refusing EMS intervention. Such refusals may include, but are not limited to

1. Refusal

I. COMMUNICATIONS GUIDELINES

A. EMS personnel will patch to their own administrative base hospital for medical direction when a patient is refusing EMS intervention. Such refusals may include, but are not limited to

1. Refusal of treatment or assessment
2. Refusal of procedures
3. Refusal of appropriate destination for or mode for transport
4. Refusal of transport

II. PROCEDURE:

A. The EMS personnel shall attempt to assess the patient's condition to the degree that the patient will allow. Explain findings, including mechanism of injury to patient.

B. Explain the risks of not accepting medical intervention to the patient.

C. EMS personnel will contact their base hospital for assistance in determining patient competency and with explaining reasonable and prudent care to the patient.

D. The on-line physician may ask to speak directly to the patient and explain the risks of refusing care. Transporting a patient against their will is a physician decision according to ARS § 35-524 (Management of Mentally or Emotionally Ill) and ARS § 13-403 (Justification: use of physical force).

1. Factors that may impact determination of competency
 - a. Is patient reasonable and prudent?
 - b. Is patient 18 years of age or determined to be an emancipated minor? If not
 - i. Refusal of care from an informed legal guardian or the parent is needed
 - ii. Caretakers/school officials are not considered guardians for refusal of care
 - c. Is patient judgment compromised by
 - i. ETOH or Drug use
 - ii. Neurologic Insult/Injury

III. TELEPHONIC APPLICATION

A. ARS 35-524 allows for the emergency evaluation of a person that, as the result of a mental disorder, is a danger to self or others (with or without their consent). The law holds that a peace officer (county sheriff, constables, marshals, and policemen of cities and towns) at the scene be present during telephonic contact with a psychiatrist, who has, in writing, been designated as the medical director of an approved mental health treatment agency. Following the application process, the medical director may advise the peace officer that sufficient grounds exist to take the person into custody and to transport the person to the evaluation agency.

IV. EMS personnel will document all steps taken on a patient encounter form. Documentation should include

A. Mental status assessment

- B. Potential harm to self or others
- C. Results of physical or visual assessment
- D. Risks as outlined to patient
- E. Discussions with base hospital
- F. Patient's continued refusal of transport/treatment modality
- G. Released in care of party

Whenever possible it is preferred that the patient write the risks they are assuming and sign on the first care and/or refusal form.

V. SPECIAL NOTE

Law Enforcement personnel who insist on asserting medical authority over a patient should be placed in radio communication with the base hospital physician and asked to sign the patient's first care form. EMS personnel should document the peace officer's name and badge number on the first care form.

SCENE TRANSFER OF PATIENT CARE

ADMINISTRATIVE 1.15

I. When care has been given, a provider of appropriate skill level to that care rendered will accompany the patient in transport. If there has been tiered care, all records to show the continuity of care will accompany the patient.

II. Upon transfer of patient care, the receiving provider should make an independent assessment of the patient without unnecessarily delaying transport.

STANDING ORDERS**ADMINISTRATIVE 1.16**

I. The purpose of standing orders is to provide ALS providers the opportunity to implement patient care without establishing radio contact with a base hospital.

II. Standing orders are an algorithmic approach to patient problem identification and treatment. Providers utilizing standing orders must thoroughly document evaluation of inclusion and exclusion criteria on prehospital report forms.

III. When a patient meets inclusion criteria and a standing order has been initiated, the EMS provider must provide the following information to the receiving hospital via radio or through dispatch:

- A. Patient age
- B. Patient gender
- C. Type of standing order initiated
- D. ETA

TRAUMA TRIAGE DECISION SCHEME

ADMINISTRATIVE 1.17

Measure vital signs and level of consciousness



- **Initiate immediate supportive care**
- **Establish airway**
- **Immobilize spine**
- **High flow oxygen (keep sats above 90%)**
- **Control hemorrhage**
- **Determine level of injury**



Consider air transport



Assess anatomy of injury – Evaluate for mechanism of injury and high impact

ANATOMIC CRITERIA	PHYSIOLOGIC CRITERIA	MECHANISM CRITERIA
<ul style="list-style-type: none"> ➤ Penetrating injuries to head, neck, torso, or extremities proximal to elbow or knee ➤ Flail chest ➤ Combination trauma with burns ➤ 2 or more proximal long bone fractures ➤ Pelvic fractures ➤ Open or depressed skull fractures ➤ Paralysis ➤ Amputation proximal to wrist or ankle 	<ul style="list-style-type: none"> ➤ GCS <14 or ➤ Systolic BP < 90 or ➤ Respiratory rate <10 or > 30 	<ul style="list-style-type: none"> ➤ Ejection ➤ Death of another person in same passenger compart. ➤ Extrication time > 20 min. ➤ Rollover ➤ Initial speed > 40 ➤ Major auto deformity > 20 in. ➤ Intrusion into passenger comp > 12" ➤ Auto > 5 mph vs. ped ➤ Auto > 5 mph vs. Bicyclist ➤ Ped thrown or run over ➤ M/C crash > 20 mph ➤ Falls > 20 feet
<p>PRE-EXISTING CONDITIONS Age <5 or >55, cardiac or respiratory disease, insulin dependent diabetes, cirrhosis, morbid obesity, pregnancy, immunosuppressed patient, bleeding disorder or on anticoagulants</p>		

RECEIVING FACILITY PROTOCOL

ADMINISTRATIVE 1.18

I. Definition- As defined under 36-2201-17- .Emergency receiving facility. means a licensed general hospital or rural general hospital that offers emergency medical services, is staffed twenty-four hours a day and has a physician on call.

II. All licensed general hospitals or rural general hospitals shall in accordance with any other state statutes and /or regulations receive any and all patient types when presented by an ambulance, as defined by regional protocols.

III. An .Emergency receiving facility. as defined by law shall not set predetermined parameters for patient acceptance, unless a regionally approved divert protocol is in effect, or regional field triage protocols prevail.

IV. All patients received by such facilities shall receive initial management specific to the patient needs, and if necessary, arrangements must be made for transferring/transporting the patient to another facility for continuing care.

V. Emergency receiving facilities may be:

1. A licensed general hospital or rural general hospital that is designated as a Base Hospital by Department of Health Services . Bureau of Emergency Medical Services guidelines, that provides on-line medical control, or

2. A licensed general hospital or rural general hospital that is designated as a Centralized Medical Direction Communication Center by Department of Health Services- Bureau of Emergency Medical Services guidelines that provides on-line medical control, but does not meet the definition of a Base Hospital, or

3. A licensed general hospital or rural general hospital that can receive patient medical information via radio or telephone patch through either a Base Hospital or Centralized Medical Direction Communication Center, but cannot provide on-line medical control. .

RESTRAINT PROTOCOL

ADMINISTRATIVE 1.19

I. GENERAL

The decision to transport a patient against their will rests with medical direction. Refer to WACEMS Administrative Protocol for Refusal. EMS personnel are never required to enter into situations posing a threat of physical harm to themselves. Scenes must be safe and secure prior to EMS involvement. Early contact with medical direction and law enforcement is en-route.

II. PURPOSE OF PATIENT RESTRAINTS

The purpose of restraining patients is to prevent them from harming themselves or others when violent behavior is the result of a medical condition or in cases where a determination of the cause of violent behavior is not possible in the prehospital setting.

III. INDICATIONS FOR USE

A. It is appropriate to use restraints when a patient is a danger to themselves or others as a result of a medical or psychiatric condition. Restraints are also appropriate when the cause of violent or unsafe behavior cannot be determined in the prehospital setting. These conditions include, but are not limited to: substance abuse, psychiatric disorder, trauma, and seizure disorder.

B. Physical restraints should be considered only after attempts at verbal control of the patient have failed. However, there will be some situations in which EMS may elect to use a higher level of restraint first due to patient condition or scene situation.

IV. MANNER OF USE

A. Contact law enforcement and medical direction at the earliest available opportunity. In some situations, an order for restraint will be received and aid from law enforcement will be needed to safely accomplish restraint. In these situations, if law enforcement is not available or willing, EMS is not compelled to restrain the patient

B. Determine the presence of sufficient personnel to accomplish patient restraint in a given situation.

C. Use the least restrictive or invasive method of restraint which will protect the patient and others. *However, consider provider safety, and in many instances full restraints will be appropriate to insure patient and provider safety during transport.*

D. Use restraints in a humane manner, affording the patient as much dignity as possible. Explain to the patient and family that you are restraining them so that they do not hurt themselves or someone else.

E. Never place a restrained patient in a prone position due to the potential for airway problems, cardiac arrest, and aspiration

V. ASSESSMENT

Monitor the restrained patient's airway, circulatory, respiratory, and mental status frequently. Also monitor extremity circulation, motion and sensation distal to the restraints.

VI. DOCUMENT

Document the patient's mental status, lack of response to verbal control, the need for restraint, the method of restraint used, the type of restraint used, the results, any injuries to patient or EMS personnel resulting from the restraint efforts, and methods of monitoring the restrained patient during transport. Also document patient position during treatment and transportation, vital signs, distal neurovascular checks, and patient status at time of transfer of

care. Continue restraints until patient reaches the emergency department. It is generally not appropriate to remove restraints that have been applied in the prehospital setting.

VII. RESTRAINT METHODS

PRONE OR "HOBBLE" RESTRAINTS ARE NOT APPROPRIATE FOR EMS due to the concerns about the lack of proper access for medical assessment and procedures. If a patient is found in prone or hobble law enforcement restraint, immediately roll the patient to their side and accomplish agency appropriate EMS restraint. ALWAYS consider risk in patients with predisposition to arrhythmias and seizures, particularly those who present as toxic delirium. Individual service protocol will determine the type of restraint devices, training, and tactics which are appropriate for EMS use. Consider: spine board, KED, vacuum splint, soft gauze 4 point restraints, leather restraints, rolled sheets, commercially prepared strapping or torso vest restraints. If patients are handcuffed, the key must be readily available during transport and transfer of care.

SPECIAL PROCEDURES**ADMINISTRATIVE 2.0**

I. Special procedures (permissive skills) require documentation of the individual's completion of the approved training program and the approval of the base hospital(s) medical director prior to utilizing the procedure in their EMS area.

II. Treatment guidelines are algorithmic step by step treatment procedures to be considered by each level of certified emergency medical technicians in a given circumstance of medical or trauma emergency. These are presented as minimum guidelines for prehospital care personnel. Individual situations may require flexibility and variance from these guidelines. The final authority is the independent medical judgment of the physician rendering medical control while cognizant of authorized emergency medical treatment parameters. (See State minimum standard guidelines.)

AUTOMATIC TRANSPORT VENTILATOR

ADMINISTRATIVE 2.1

I. INTRODUCTION

Use of an Automatic Transport Ventilator requires Medical Control, is at the sole discretion of the base hospital medical director, and must be appropriately documented when used. The medic must be trained in use of specific provider ventilator to be used for transport.

II. INDICATIONS

- A. Any patient requiring ventilatory assistance in conjunction with advanced airway adjuncts.
- B. Any patient requiring ventilatory assistance in conjunction with basic airway adjuncts.
- C. Any patient requiring ventilatory assistance in conjunction with manual airway maintenance.

III. CONTRAINDICATIONS

- A. Patients weighing less than 16 Kg. (35 lbs.)
- B. Pneumothorax - tension pneumothorax
- C. Pulmonary over pressurization syndrome (blast injury, water ascent injury, etc.)

IV. PROCEDURE

- A. Determine that a need for the use of the ATV exists.
- B. Assure that all tubing is free from kinks.
- C. Determine the proper tidal volume setting. This is done by determining the patient ideal weight (approx. weight for any physically fit patient having the same sex, height, frame) and multiplying it by 8-10 ml./kg. Begin with the lowest tidal volume limit.
- D. Set Breaths per Minute (bpm) control to rate of 8-15 per minute.
- E. Check alarm by occluding the patient valve assembly outlet. The audible pressure limit alarm should sound as the ventilator cycles through the delivery phase.
- F. Assess lung compliance and chest rise with a bag valve device. Tidal volume may be adjusted lower if poor lung compliance is found.
- G. Attach the patient valve assembly to the airway device or mask used on the patient.
- H. Assess the ventilation. Listen for bilateral lung sounds. Observe for proper chest rise . . . this should look normal and be symmetrical.
- I. Count the number of complete ventilator cycles for a full minute. The number should be the same as the setting (+/-1).
- J. Assess and manage the airway as you normally would for any patient with controlled ventilation.
- K. If spontaneous breathing begins, it may be desirable to turn the BPM down as long as patient's spontaneous rate is 10-12 per minute.
- L. Check oxygen cylinder pressure level frequently. This device will deplete a "D" cylinder rapidly.

V. SPECIAL CONSIDERATIONS

- A. Due to COPD, chest rise may not appear full . . . do not increase tidal volume (TV) past upper TV limit.
- B. If lung sounds are absent or on one side only: rule out airway obstruction, improper tube placement, or pneumothorax, and check tidal volume ml/bpm settings.
- C. If chest expansion is not adequate, the rescuer should slowly increase tidal volume until chest expansion is adequate, or the uppermost limit (for the patient's ideal weight) is reached.
- D. If chest appears to over expand, decrease tidal volume.

CRICOTHYROTOMY

ADMINISTRATIVE 2.2

I. INTRODUCTION

A cricothyrotomy is an invasive surgical procedure aimed at obtaining a patent airway in a specific patient population. It should only be performed in the situations outlined below. In these situations, speed is of the essence. However, do not allow the urgency of the situation to take precedence over reasonable judgment or action. The indications and technique must be clearly documented whenever it is utilized.

II. INDICATIONS

- A. Acute upper airway obstruction which cannot be relieved by other BLS and ALS maneuvers
- B. Patient in respiratory arrest with neck injury or head injury who cannot be ventilated adequately with bag/valve/mask and in whom orotracheal and nasotracheal intubation cannot be accomplished. After intubation attempts have failed, or is clearly not possible, attempt to ventilate the patient with bag/valve/mask technique. If this also fails to result in adequate ventilation, then proceed with surgical cricothyrotomy.
- C. Patient who is in respiratory arrest with facial injuries which preclude endotracheal and nasotracheal intubation
- D. Patient with neck injury in which tracheal intubation either cannot be accomplished or has failed to ventilate the patient due to damage to the airway
- E. Other patients who are apneic and in whom all other BLS and ALS airway techniques have failed and when the time to the closest receiving hospital is prolonged

III. PRECAUTIONS

- A. If bleeding occurs, use suction and proceed. Insertion and inflation of endotracheal tube through cricothyrotomy will protect patient from the hazard of blood in the airway. Direct pressure can then be used on the area.
- B. Advance an endotracheal tube only 1 to 1.5 inches to avoid a right main stem intubation

IV. SPECIAL CONSIDERATIONS AND COMPLICATIONS

Surgical cricothyrotomy is not recommended for infants or small children (age < 10) due to anatomical differences.

EXTERNAL PACING (Transcutaneous)**ADMINISTRATIVE 2.3****I. INTRODUCTION**

Use of a Transcutaneous External Pacing device requires Medical Direction. It is at the sole discretion of the base hospital medical director, and must be appropriately documented when used.

II. INDICATIONS

- A. Hemodynamically significant brady dysrhythmias and heart blocks unresponsive to Atropine
- B. Asystole . . . Early asystolic arrest (<10 mins.) and witnessed asystolic arrest
- C. Pulseless Electrical Activity (PEA)

III. CONTRAINDICATIONS

- A. Traumatic asystole and brady arrhythmias
- B. Non-viable patients per DOA protocol
- C. Children weighing less than 15Kg. (33 lbs.)

IV. SPECIAL CONSIDERATIONS

- A. Pain Control: This procedure is exceedingly uncomfortable. Consider:
 - 1. Analgesia - morphine sulfate
 - 2. Sedation - diazepam
- B. Defibrillation
 - 1. Place defibrillation pads 2 - 3 cms. from pacer electrodes to prevent arching.
 - 2. Put separate pacer units on standby when defibrillating.
- C. CPR
 - 1. May perform CPR with pacer electrodes in place without risk.
 - 2. May get muscle stimulation which might make it difficult to palpate pulses.
- D. ACLS advanced cardiac care protocols should be followed
- E. Failure to capture pacing
 - 1. Extremely large individuals
 - 2. Inappropriate electrode placement
 - 3. Barrel chested individuals
 - 4. Pericardial effusions and tamponade

VII. COMPLICATIONS

- A. Failure to recognize the presence of underlying, treatable ventricular fibrillation (large pacer artifact on scene)

B. Induction of dysrhythmia (theoretical)

C. Pain

D. Burns

E. Cardiac damage

INTRAOSSIOUS INFUSION**ADMINISTRATIVE 2.4****I. INTRODUCTION**

Use of Intraosseous Infusion requires Medical Control. It is at the sole discretion of the Base Hospital Medical Director, and must be appropriately documented when used.

II. INDICATIONS

- A. When peripheral IV access has been unsuccessfully attempted, and a route for fluids and medications is critical
- B. Cardiac arrest, uncompensated shock, major traumatic injuries, major burns
- C. Pediatric patient 6 years or less

III. CONTRAINDICATIONS

- A. Fractures in the extremity to be used
- B. Infection or burns at the site to be used. (Must be weighed against the benefits.)

IV. SPECIAL CONSIDERATIONS

- A. In shock situations, only one intraosseous infusion is necessary
- B. If additional site(s) attempted, inform the physician on arrival at the hospital
- C. Be aware of complications which may occur
 - 1. Puncture through posterior cortex
 - 2. Incomplete penetration of the cortex
 - 3. Long bone fracture near or at puncture site
 - 4. Fluid leaking from puncture site

HAZARDOUS MATERIAL INCIDENT DRUG AND ANTIDOTE THERAPY ADMINISTRATIVE 2.5**I. GENERAL**

Paramedics trained in HazMat care and drug/antidote therapy are established in order to provide rapid on scene ALS assessment and medical care to decontaminated patient(s). It should remain the primary responsibility of the HazMat responders to evacuate from a hot zone, decontaminate and deliver patients to the medical station. HazMat Paramedics shall respond in conjunction with a HazMat technician team which has decontamination and protective capability. It shall include a HazMat paramedic with support of a state certified paramedic unit, with drug box/antidotes supplied to the scene.

II. TRAINING, CONTINUING EDUCATION AND ALS PARAMEDIC HAZMAT RESPONSE

- A. Training and continuing education in hazardous materials incidents must be consistent with the objectives and requirements set forth in ADHS R9 25-807, and approved by the administrative medical director.
- B. Paramedics will participate as HazMat responders in regular drills with system Hazmat responders.

III. HAZMAT ALS: DRUG AND ANTIDOTE THERAPY

- A. Paramedics trained in the adjunctive HazMat skills will demonstrate competency in use of selected antidote therapy as approved by the medical director.
- B. Each Paramedic's knowledge of antidote indications, clinical pharmacology, dosage, route, contraindications, side effects, drug interactions, etc. will be updated annually by continuing education and/or retesting at the discretion of the medical director.

IV. CONTROL AND ACCESS OF DRUGS/ANTIDOTE THERAPY

- A. HazMat ALS drug box will be a distinctively marked box. Each box will contain drugs approved by the medical director.
- B. Control and access of box:
 - 1. Only a state certified paramedic who has completed an approved HazMat program shall provide antidote therapy with the adjunctive drugs from the HazMat drug box.
 - 2. Antidote therapy shall be under direct communications with a base hospital physician in consultation with the Poison Control Center Medical Toxicologist as necessary.
 - 3. Documentation, exchange, and accountability for the drug box and its contents will be consistent with existing regulations for paramedic drug boxes in the state.

NEEDLE THORACOSTOMY

ADMINISTRATIVE 2.6

I. INTRODUCTION

Needle decompression is necessary when a patient exhibits signs and symptoms of a tension pneumothorax and extreme respiratory distress. It is a rare procedure but when used it may restore ventilation. A tension pneumothorax must be recognized and treated promptly. The indications and technique must be clearly documented whenever it is used.

II. SIGNS AND SYMPTOMS

(Typical - often not straight-forward and all signs & symptoms may not be present)

A. Tension Pneumothorax

1. Progressive respiratory distress, tachypnea
2. Hypotension
3. Tachycardia
4. JVD - jugular venous distention
5. Absent breath sounds on affected side
6. Tracheal shift away from affected side
7. "Drum-like" percussion noted on affected side
8. Hyperexpanded chest on affected side

9. Signs and symptoms of shock
10. If patient intubated - increasing difficulty with ventilation
11. Cyanosis
12. Narrowing pulse pressure

IV. Recent trauma cardiac arrest, or imminent arrest:

A. Cardiac arrest in a blunt trauma patient, with possible chest injuries. The onset of the arrest should be known or reasonably suspected to have occurred within 10 minutes.

B. Cardiac arrest in a trauma patient from gunshot or stab wounds to the chest, neck, or abdomen. The onset of the arrest should be known or reasonably suspected to have occurred within 10 minutes.

III. PRECAUTIONS

A. Tension pneumothorax may occur as a complication of CPR

B. Misplacement of an endotracheal tube, i.e. right mainstem placement may lead to asymmetry or absent breath sounds and can be mistaken for a left pneumothorax.

IV. INDICATIONS

A. The prehospital diagnosis of tension pneumothorax should not be made unless the patient exhibits severe respiratory distress.

V. SPECIAL CONSIDERATIONS AND COMPLICATIONS

A. Creation of pneumothorax if none already existed.

B. Laceration of lung

C. Laceration of blood vessels. Blood vessels run in a groove under each rib.

D. Infection. Clean site rapidly but vigorously. Use sterile gloves if possible.

E. Be prepared to intubate, if patient condition deteriorates

PREHOSPITAL TRANSPORT PROVIDER SKILLS

ADMINISTRATIVE 2.7

GENERAL SKILLS	EMT-B	EMT-I	Q-EMT-I	EMT-P
Perform CPR	X	X	X	X
Control Hemorrhage	X	X	X	X
Splint Fractures	X	X	X	X
Administer Oxygen	X	X	X	X
Assist in Childbirth	X	X	X	X
Apply MAST Trousers	X	X	X	X
Cardiac Monitoring			X	X
Semiautomatic Defibrillation	X	X	X	X
Defibrillation			X	X
Synchronized Cardioversion			X	X
Endotracheal Intubation		X	X	X
Gastric Suction		X	X	X
Gastrostomy Tube Monitoring	X	X	X	X
Foley Monitoring	X	X	X	X
Initiate Peripheral IV Therapy		X	X	X
Monitor Peripheral IV Infusions of NS, D5W, LR, or any combination of the above (interfacility only)	X	X	X	X
Blood Administration			X	X
Phlebotomy		X	X	X
Initiate Central IV Therapy (IJ, Subclavian)				X
Monitor any Capped IV- Includes Central, Peripheral and indwelling IV.s		X	X	X
Monitor Central IV Infusions of NS or LR (Femoral, PICC, Indwelling Portacaths, Long-term Catheters)				X
INTERFACILITY IV INFUSIONS- refer to current DHS Interfacility Medication list and pump requirements				
PERMANENT INDWELLING INFUSION PUMPS(MSO₄, INSULIN) Can be monitored by all Provider levels in the <i>stable</i> patient, as long as the patient or caregiver is in charge of the pump				
ELECTROLYTE ADDITIVES AND CRYSTALLOID . Transferring facility should evaluate the ordered solutions and additives prior to turning a patient over to the care of appropriate certified EMT personnel for transfer.				
POTASSIUM- added to IV Solution- more than 10 meq/L requires a pump. Greater than 40 meq/L requires RN transport				
INTRAOSSUEOUS - Initiate I/O infusion		X	X	X
Assist Patients with Administration of NTG, SVN.s, Epi-pen, Charcoal, & Glucose	X	X	X	X
* Rectal Valium Administration		X	X	X
*Automatic Transport Ventilators		X	X	X
*Cricothyrotomy		X	X	X
*Needle Thorocostomy		X	X	X
*Transcutaneous External Pacer			X	X
*Toxic Materials Antidotes				X
*Immunization Administration			X	X

* Not all providers may use these permissive skills

HOSPITAL STAFF ONLY- Questions regarding level of care should be directed to your facility's Prehospital Manager

WACEMS Adaptation of:

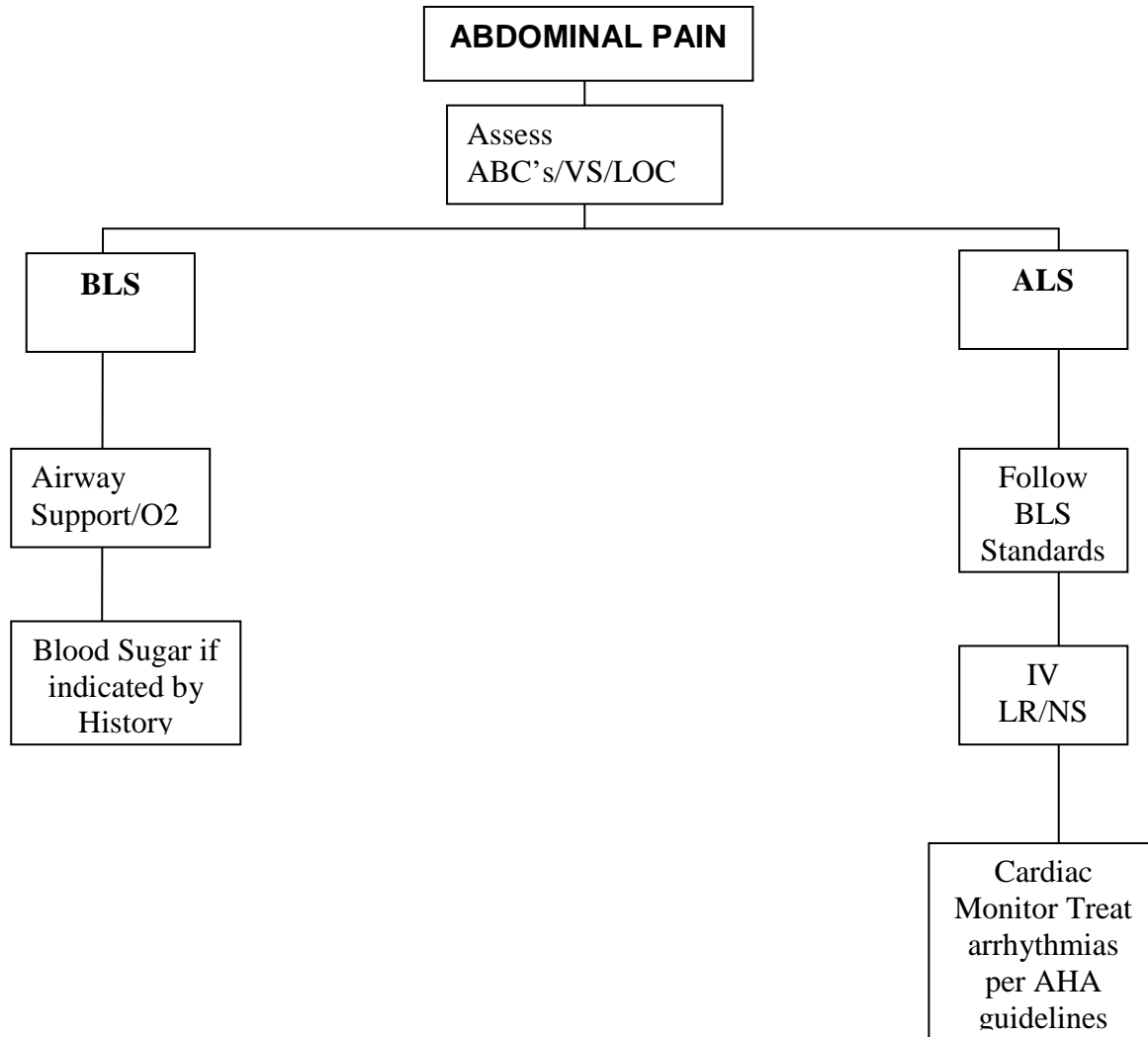
**STATEWIDE MEDICAL
STANDARDS FOR NON-
PHYSICIAN PREHOSPITAL
TREATMENT AND TRIAGE
OF PATIENTS REQUIRING
EMERGENCY MEDICAL
SERVICES**

**ARIZONA DEPARTMENT OF HEALTH SERVICES
DIVISION OF EMERGENCY MEDICAL SERVICES
2nd Edition, January 1994**

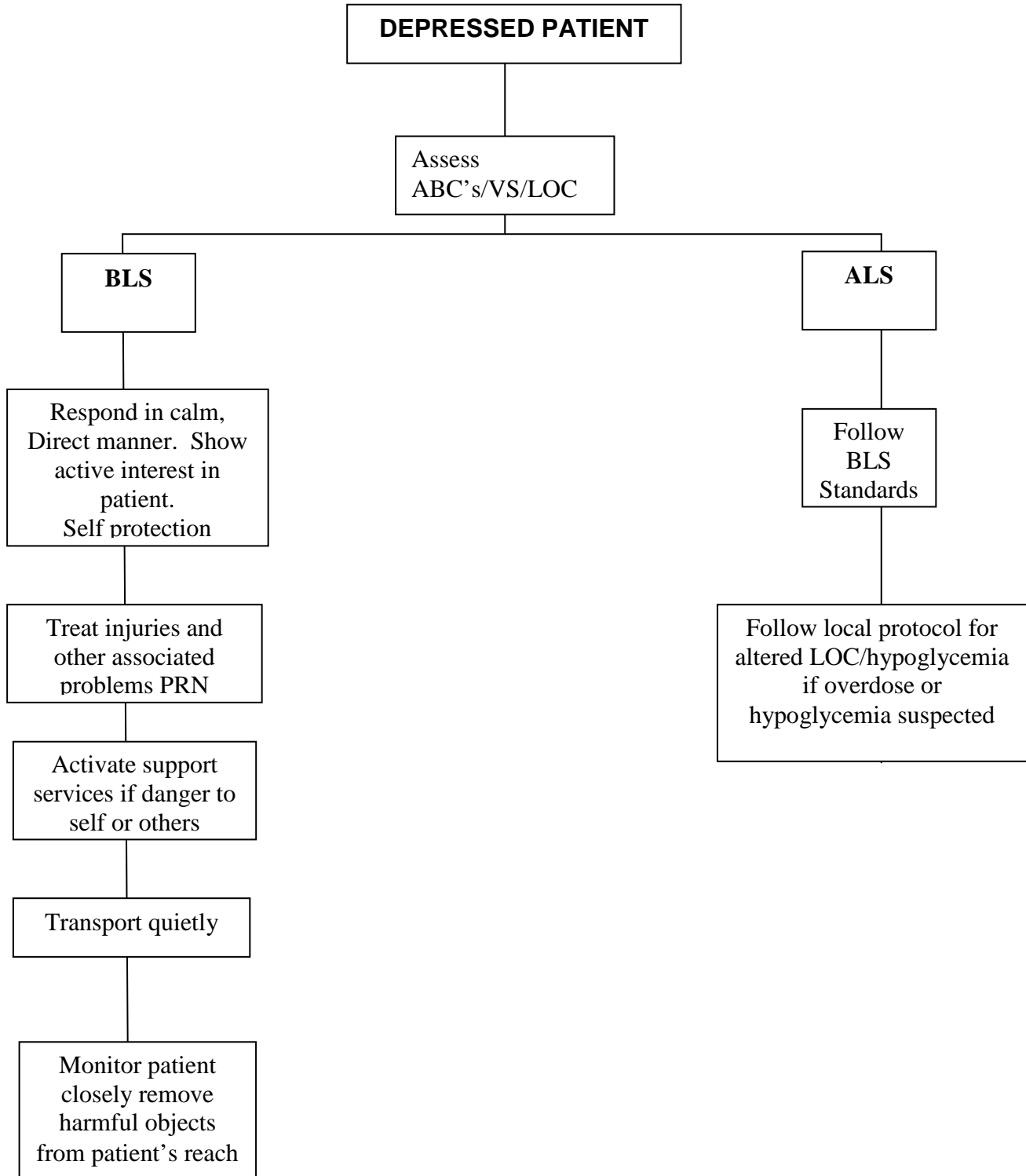
See DHS/BEMS web site for state protocols- www.hs.state.az.us/bems

ABDOMINAL PAIN

ABDOMINAL PAIN 100.01
SEE: OB/GYN 106.04
OB/GYN 106.07
Revised PC/TEMSC 3/96

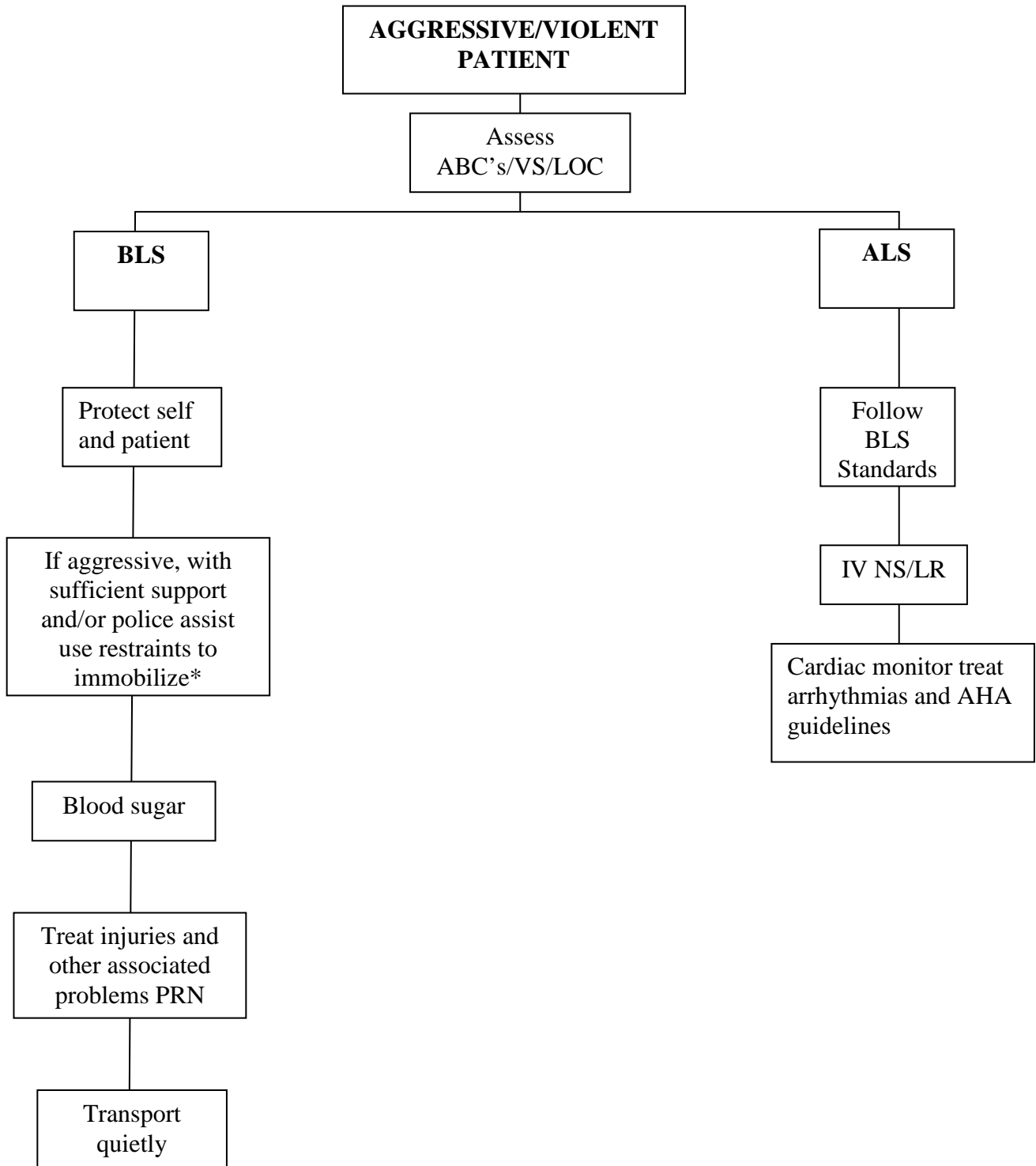


BEHAVIORAL
DEPRESSED PATIENT 101.01



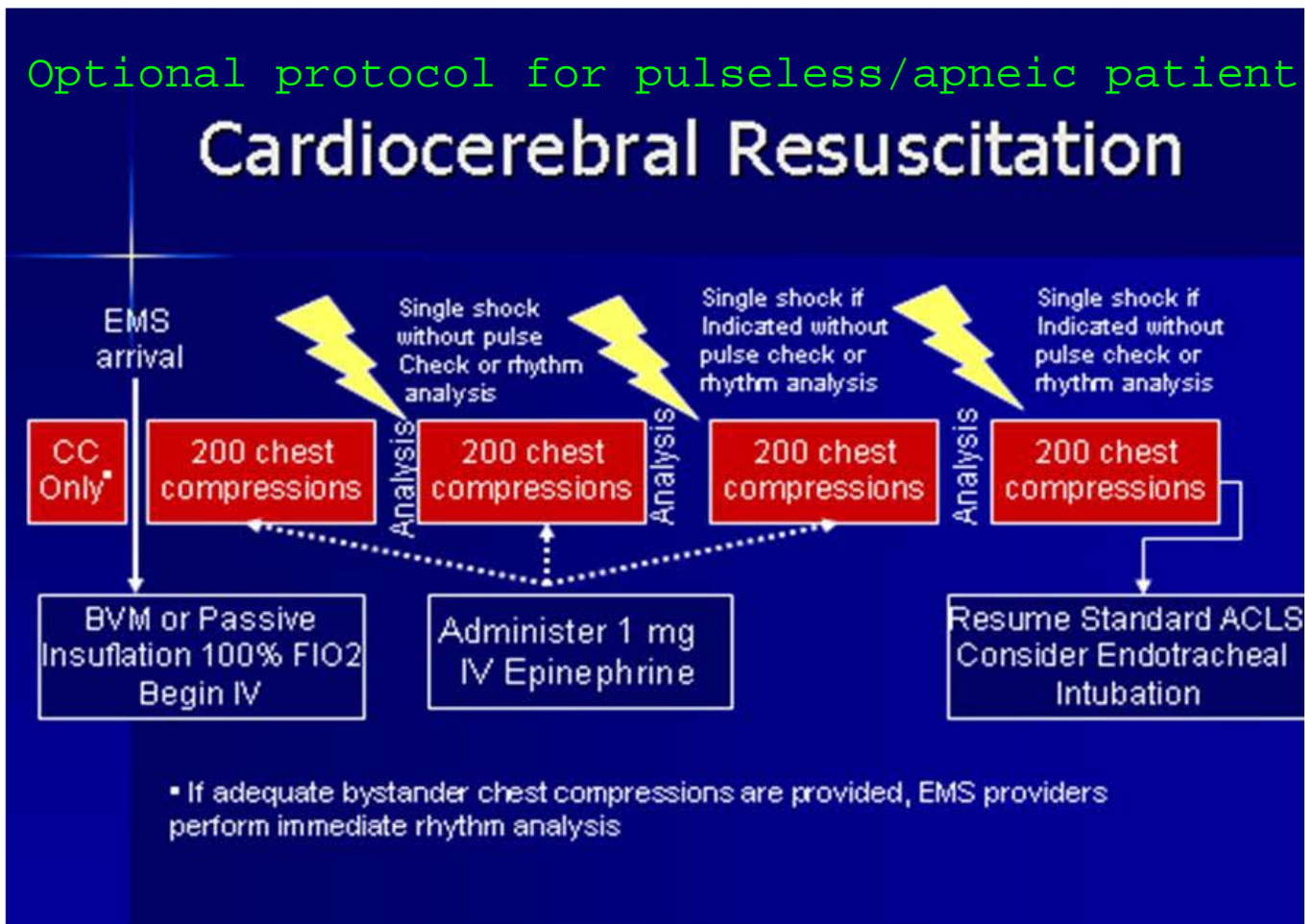
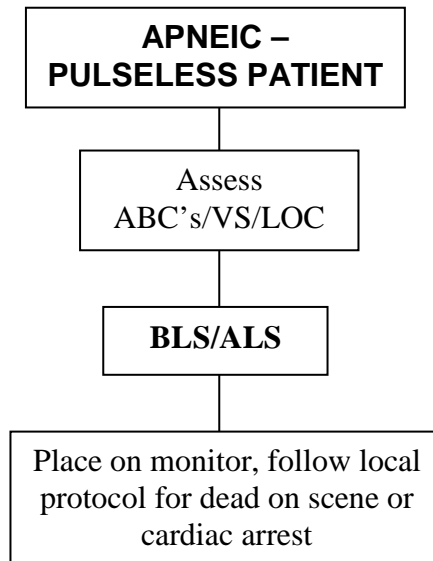
BEHAVIORAL

AGGRESSIVE/VIOLENT PATIENT 101.02



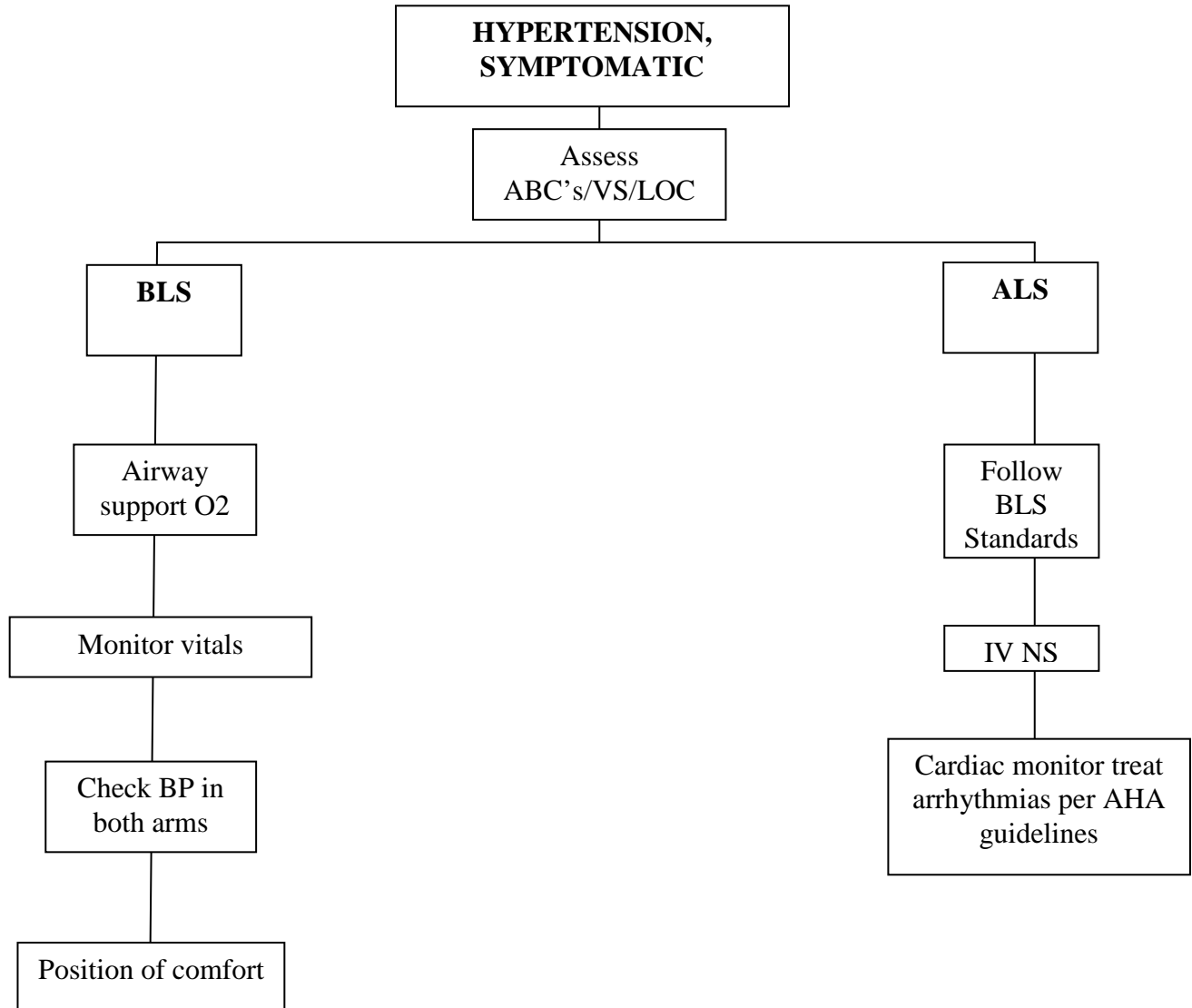
*Avoid immobilization in prone position

CARDIOVASCULAR
APNEIC/PULSELESS 102.01

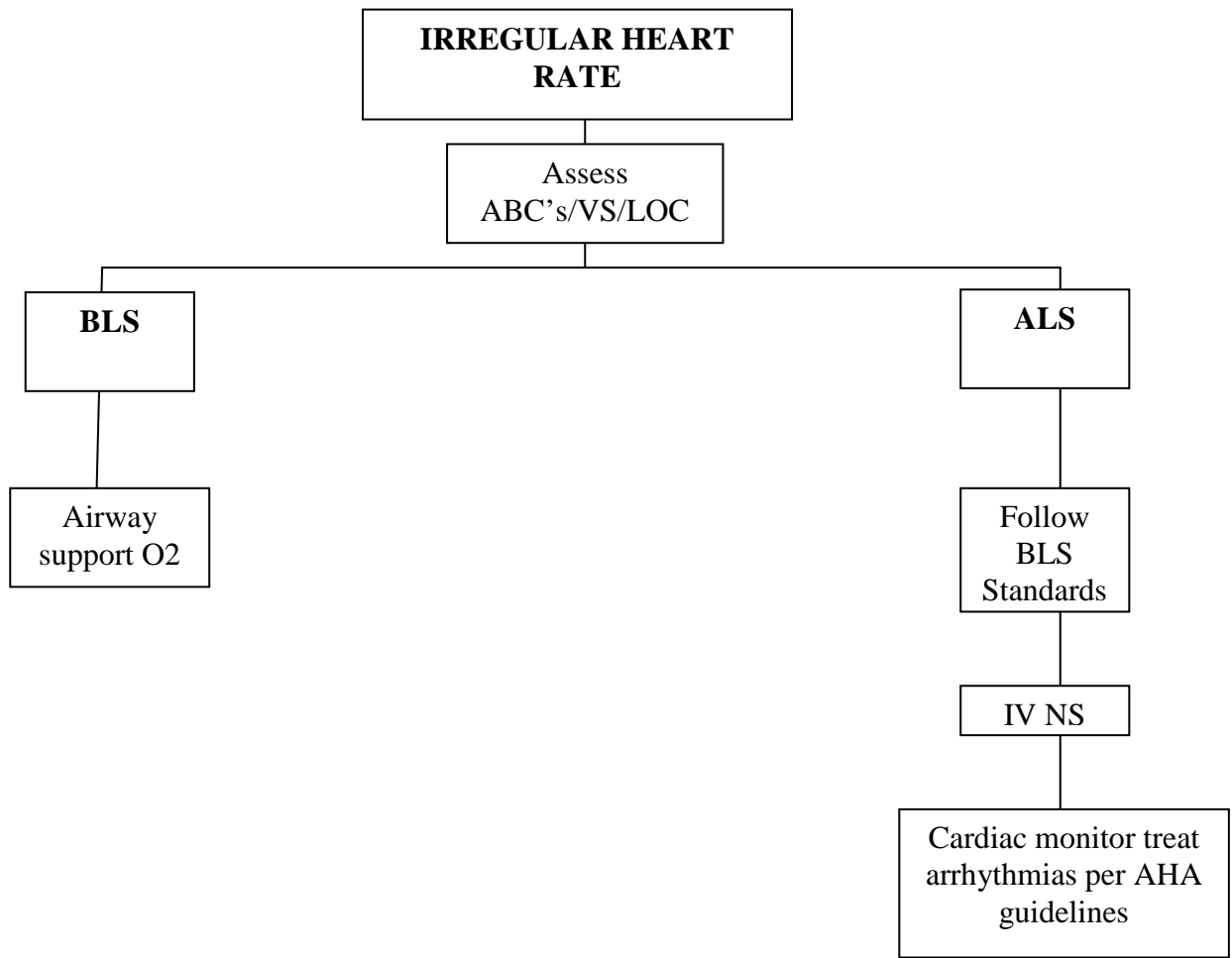


CARDIOVASCULAR

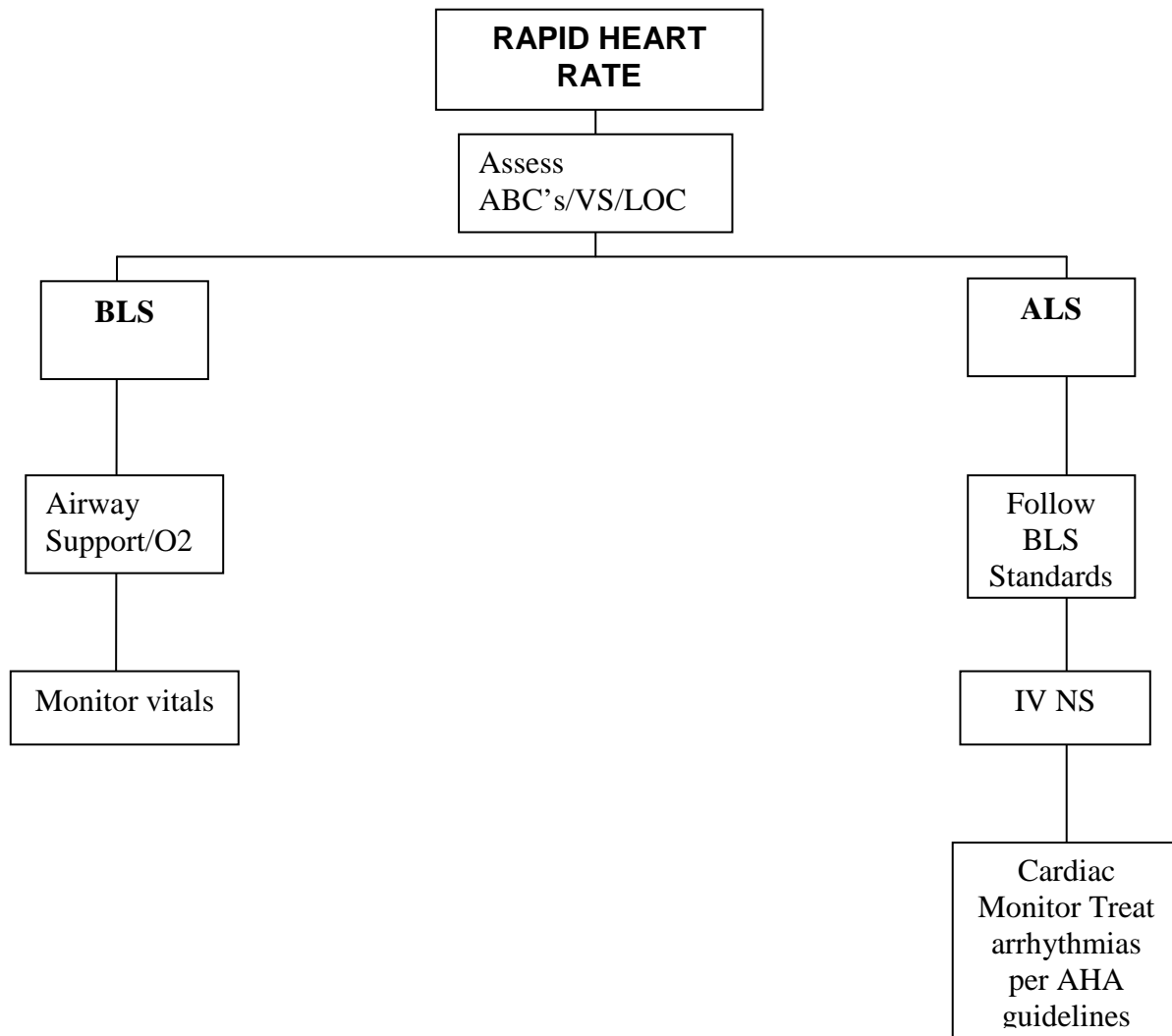
HYPERTENSION, SYMPTOMATIC 102.02



CARDIOVASCULAR
IRREGULAR HEART RATE 102.03

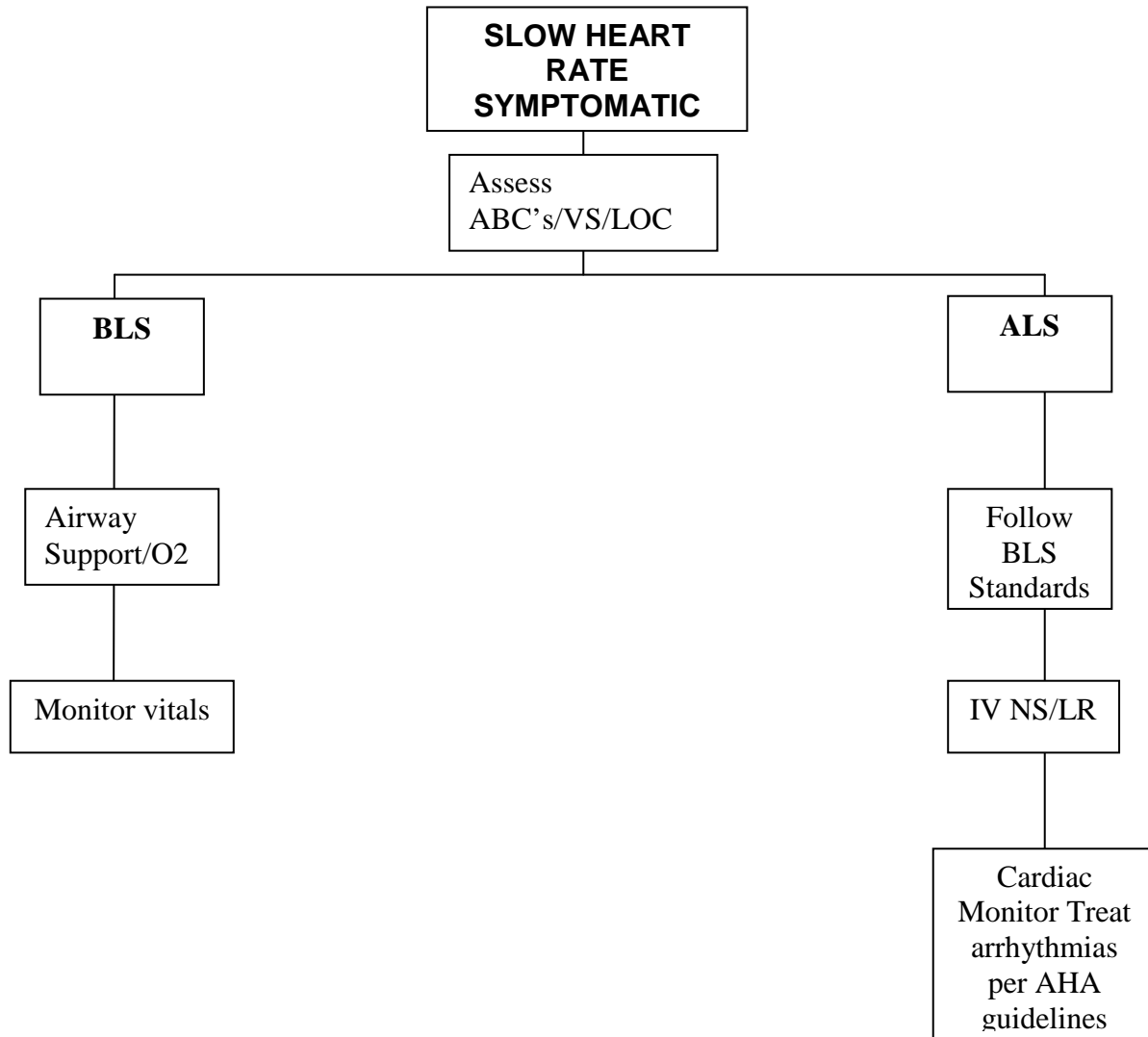


CARDIOVASCULAR
RAPID HEART RATE 102.04

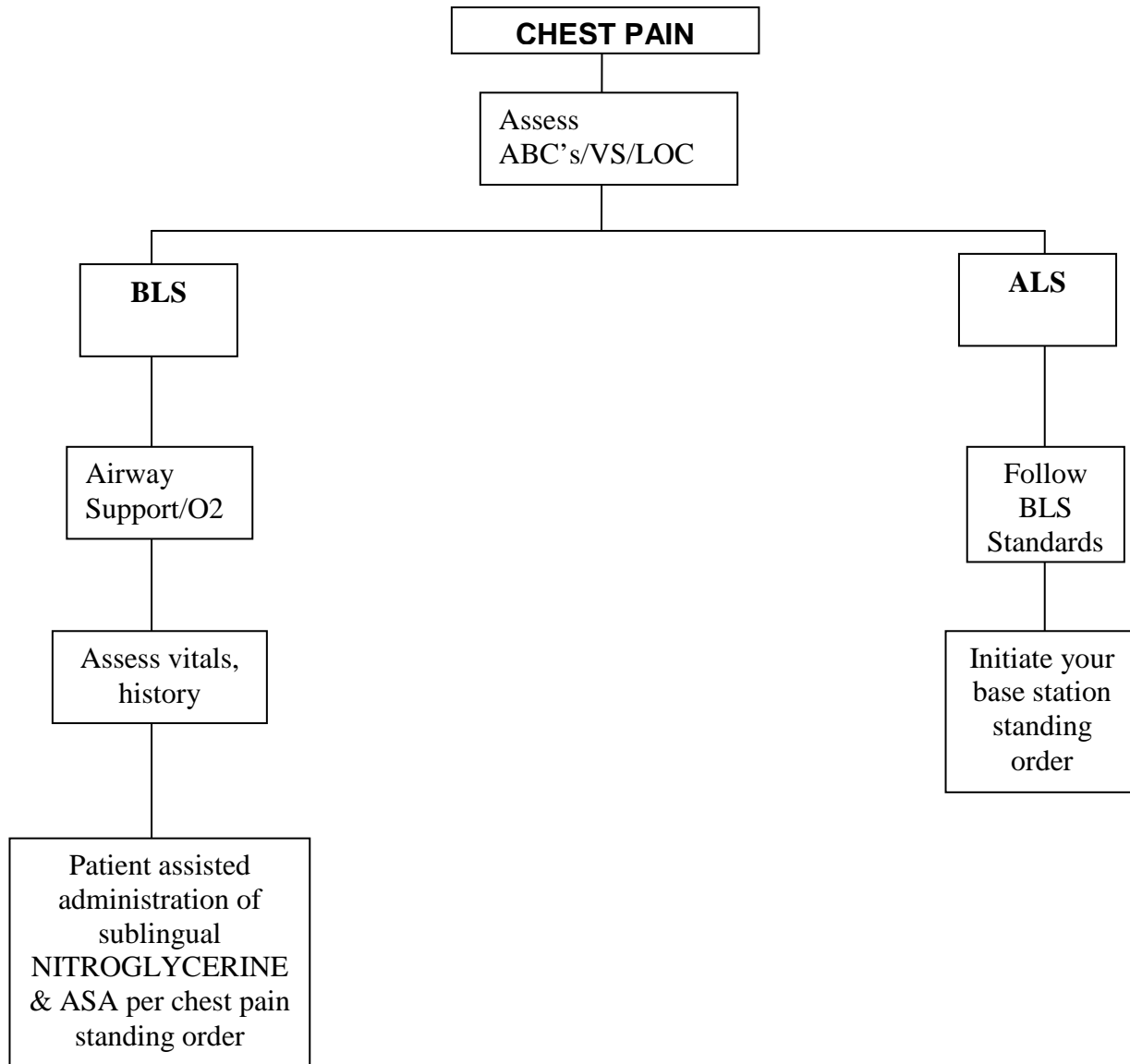


CARDIOVASCULAR

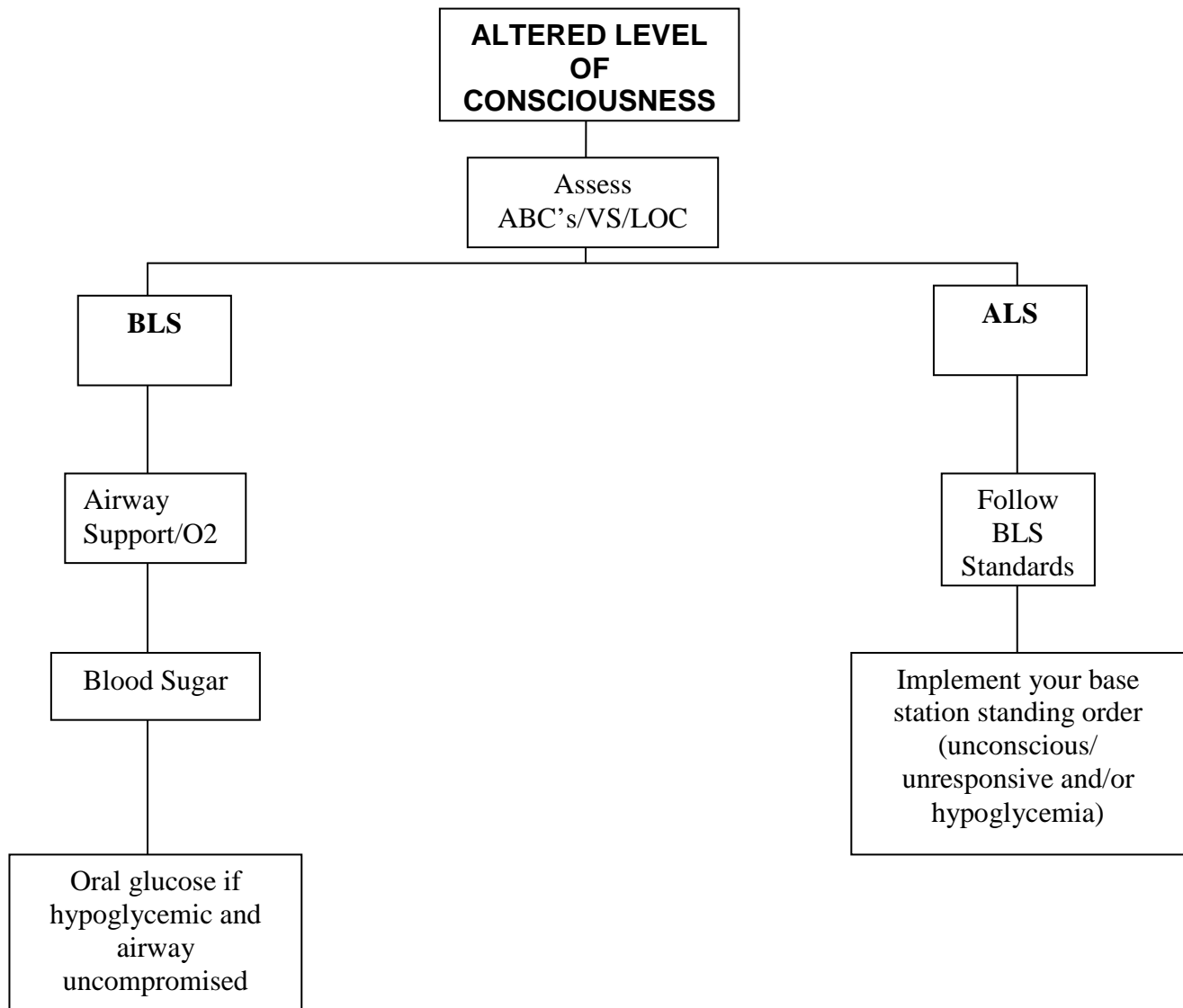
SLOW HEART RATE, SYMPTOMATIC 102.05



CHEST PAIN
CHEST PAIN 103.01

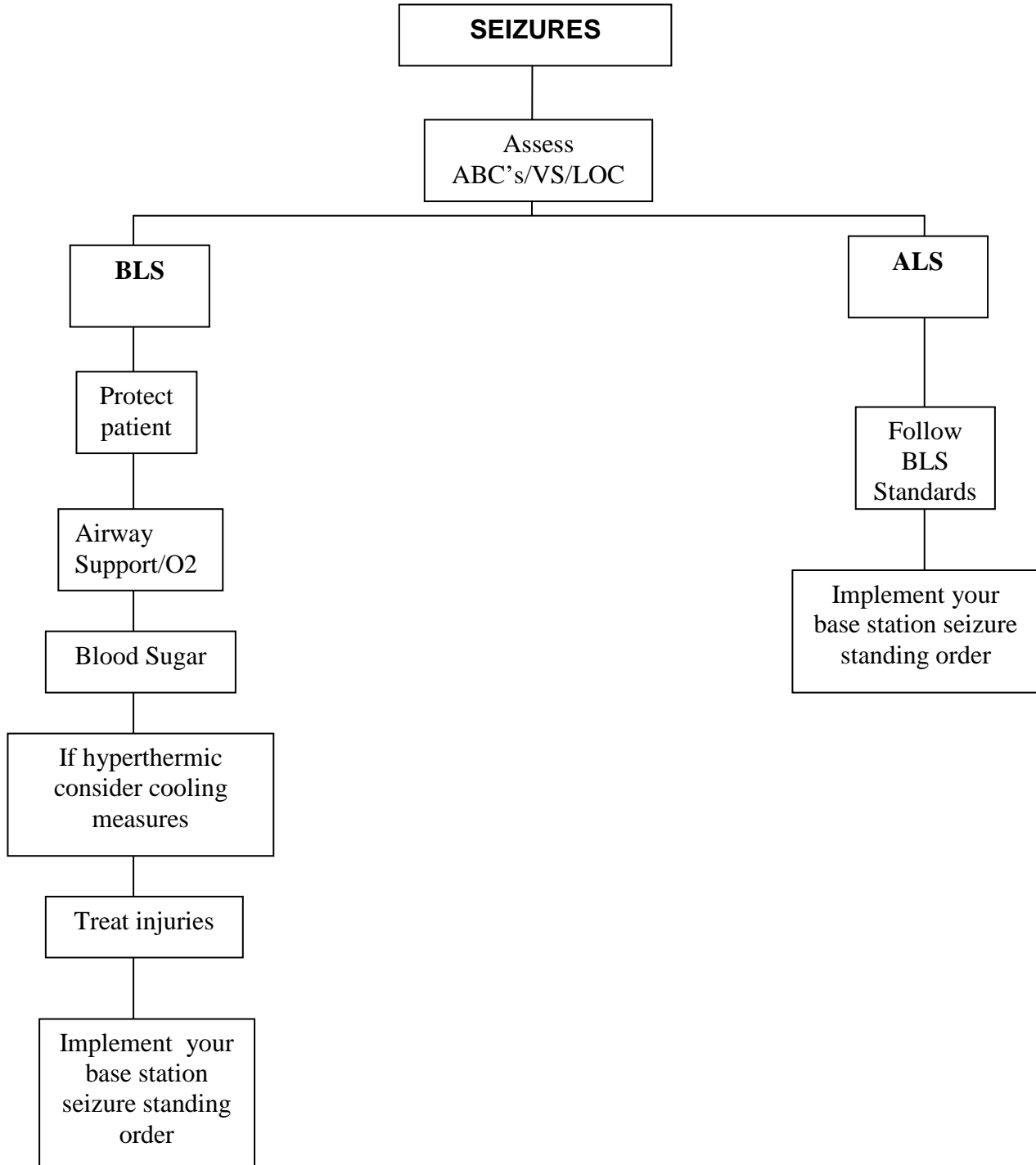


CONSCIOUSNESS, ALTERED STATE (LOC)
ALTERED LEVED 104.01



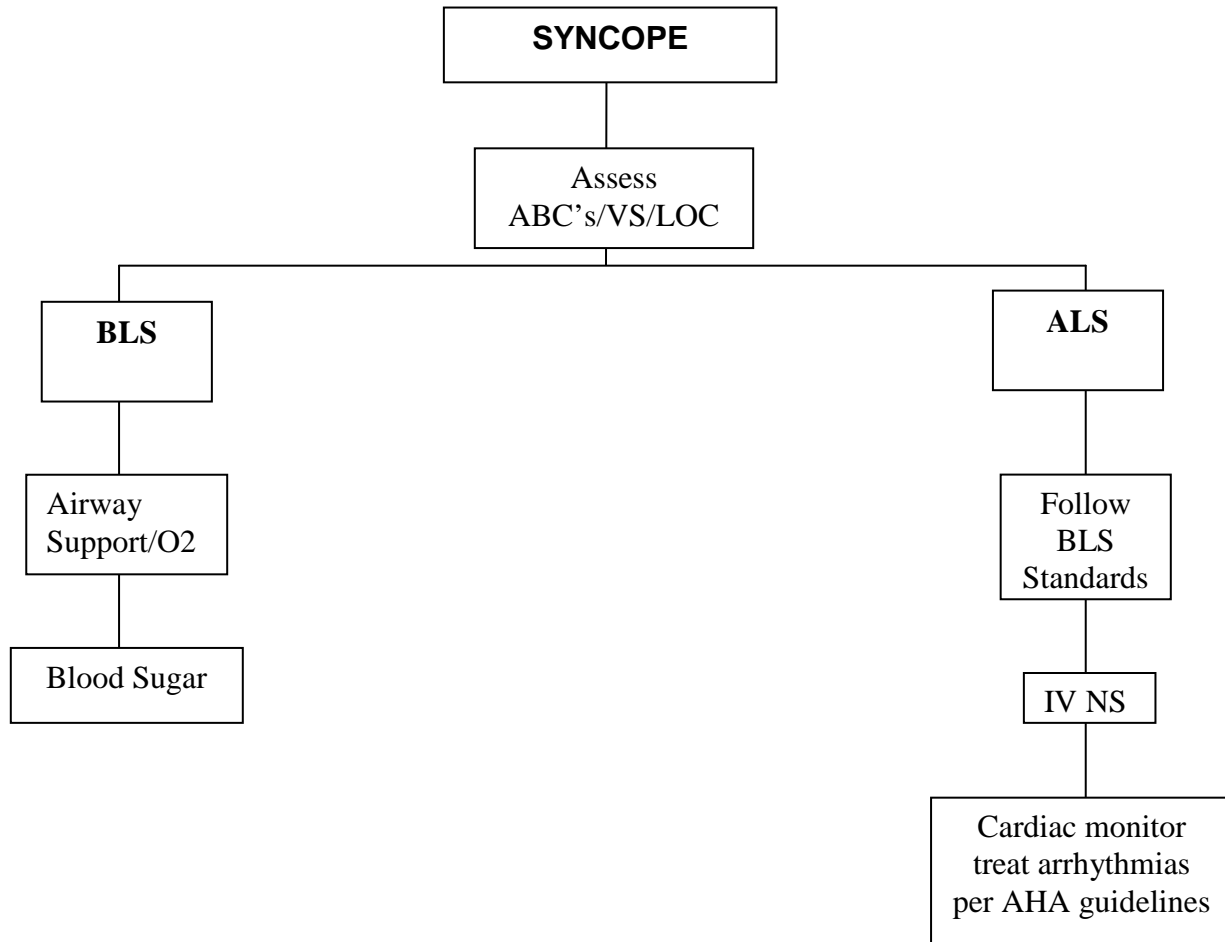
CONSCIOUSNESS, ALTERED STATE (LOC)

SEIZURES 104.02



CONSCIOUSNESS, ALTERED STATE (LOC)

SYNCOPE 104.03



**SUSPECTED STROKE
STROKE 104.04**

<p>History:</p> <ul style="list-style-type: none"> ➤ Previous CVA, TIA's ➤ Previous cardiac/vascular surgery ➤ Associated diseases: diabetes, hypertension, CAD ➤ Atrial fibrillation ➤ History of trauma 	<p>Signs and Symptoms:</p> <ul style="list-style-type: none"> ➤ Altered mental status ➤ Weakness/paralysis ➤ Blindness or other sensory loss ➤ Aphasia ➤ Syncope ➤ Vertigo/dizziness ➤ Vomiting ➤ Headache ➤ Seizures ➤ Respiratory pattern change ➤ Hypertension/hypotension 	<p>Differential:</p> <ul style="list-style-type: none"> ➤ See Altered Mental Status ➤ TIA ➤ Seizure ➤ Hypoglycemia ➤ Stroke <ul style="list-style-type: none"> ➤ Thrombotic ➤ Embolic ➤ Hemorrhagic ➤ Tumor ➤ Trauma
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Assess
ABC's/VS/LOC

Altered Level of
Consciousness
Protocol 104.01

IV NS

Hypertensive? Systolic BP >140 Consider Hypertension Protocol

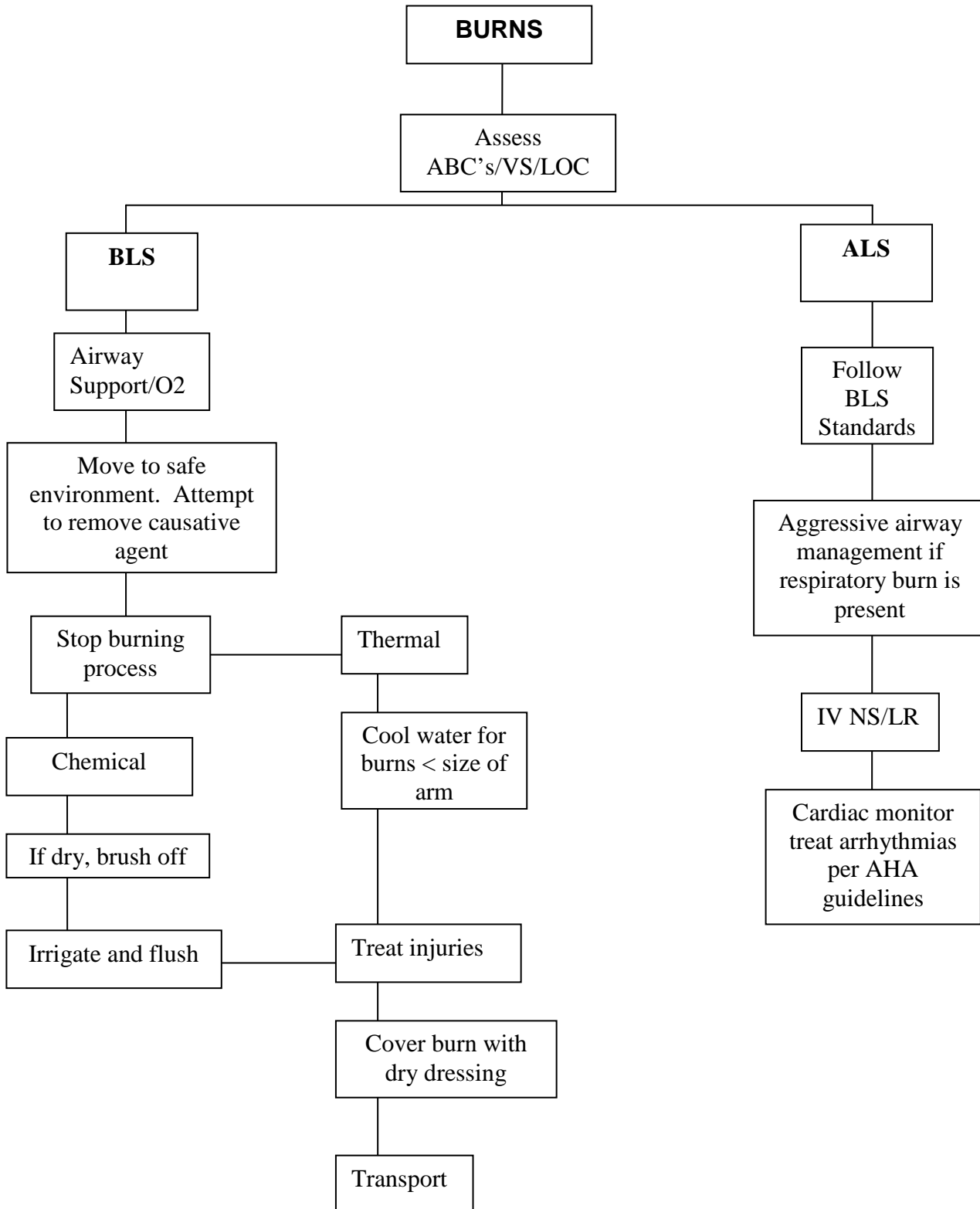
Cincinnati Prehospital Stroke Scale
Complete Thrombolytic Checklist

Contact Medical Control

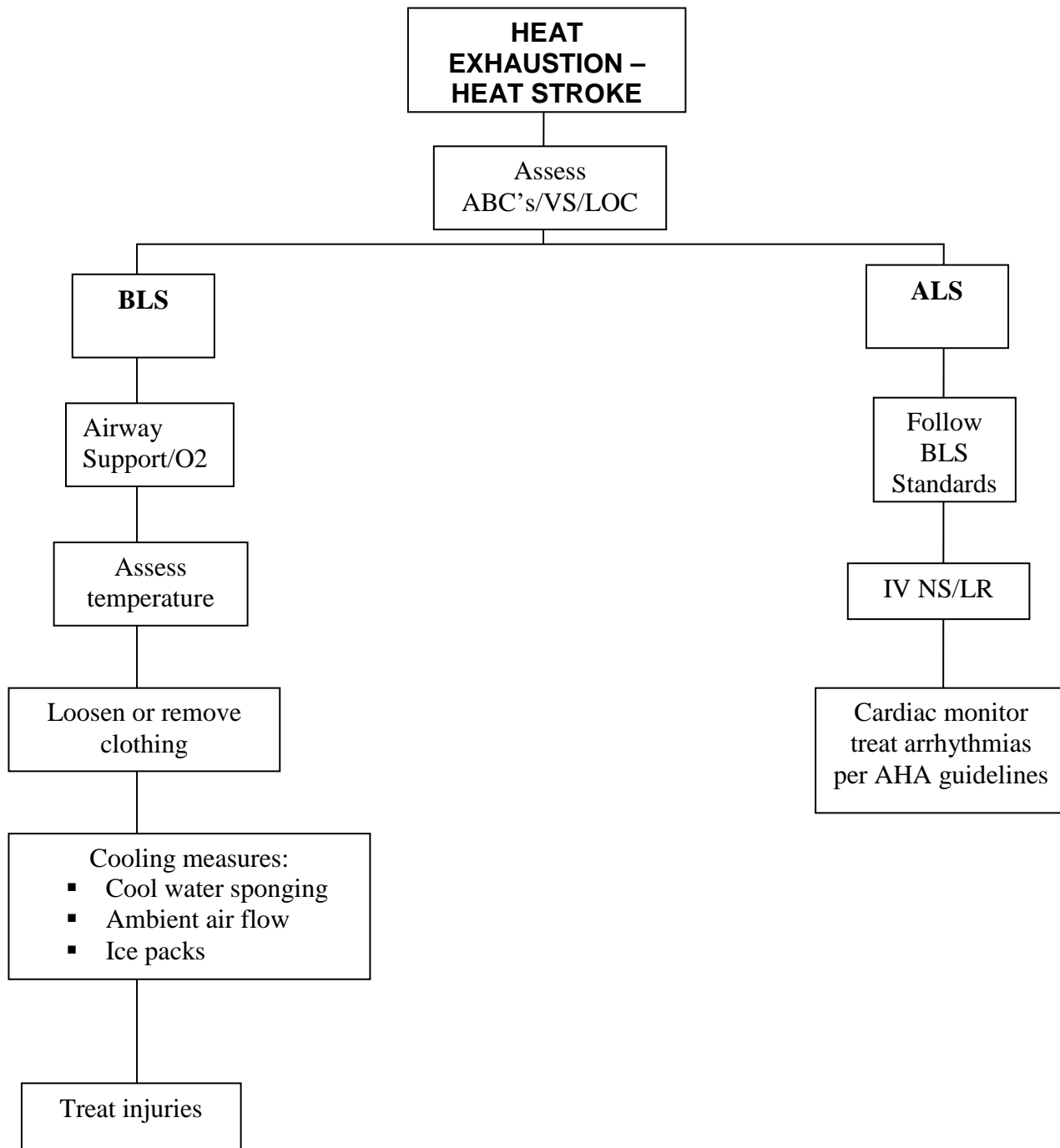
Appropriate protocol

<p>Critical Criteria:</p> <ul style="list-style-type: none"> ➤ Exam: Mental status, HEENT, heart, lungs, abdomen, extremities, neuro ➤ Thrombolytic screening checklist should be completed for any suspected stroke patient. With a duration of symptoms less than 3 hours, scene time and transport times should be minimized. ➤ Onset of symptoms is defined as the last witness time the patient was symptom free (i.e. awakening with stroke symptoms would be defined as onset time of the previous night when patient was symptom free). ➤ The differential listed on the Altered Mental Status Protocol should also be considered ➤ Elevated blood pressure is commonly present with stroke. Consider treatment is diastolic is > 120 mmHg. ➤ Be alert for airway problems (swallowing difficulty, vomiting) ➤ Hypoglycemia can present as a localized neurologic deficit, especially in the elderly

ENVIRONMENTAL
BURNS 105.01



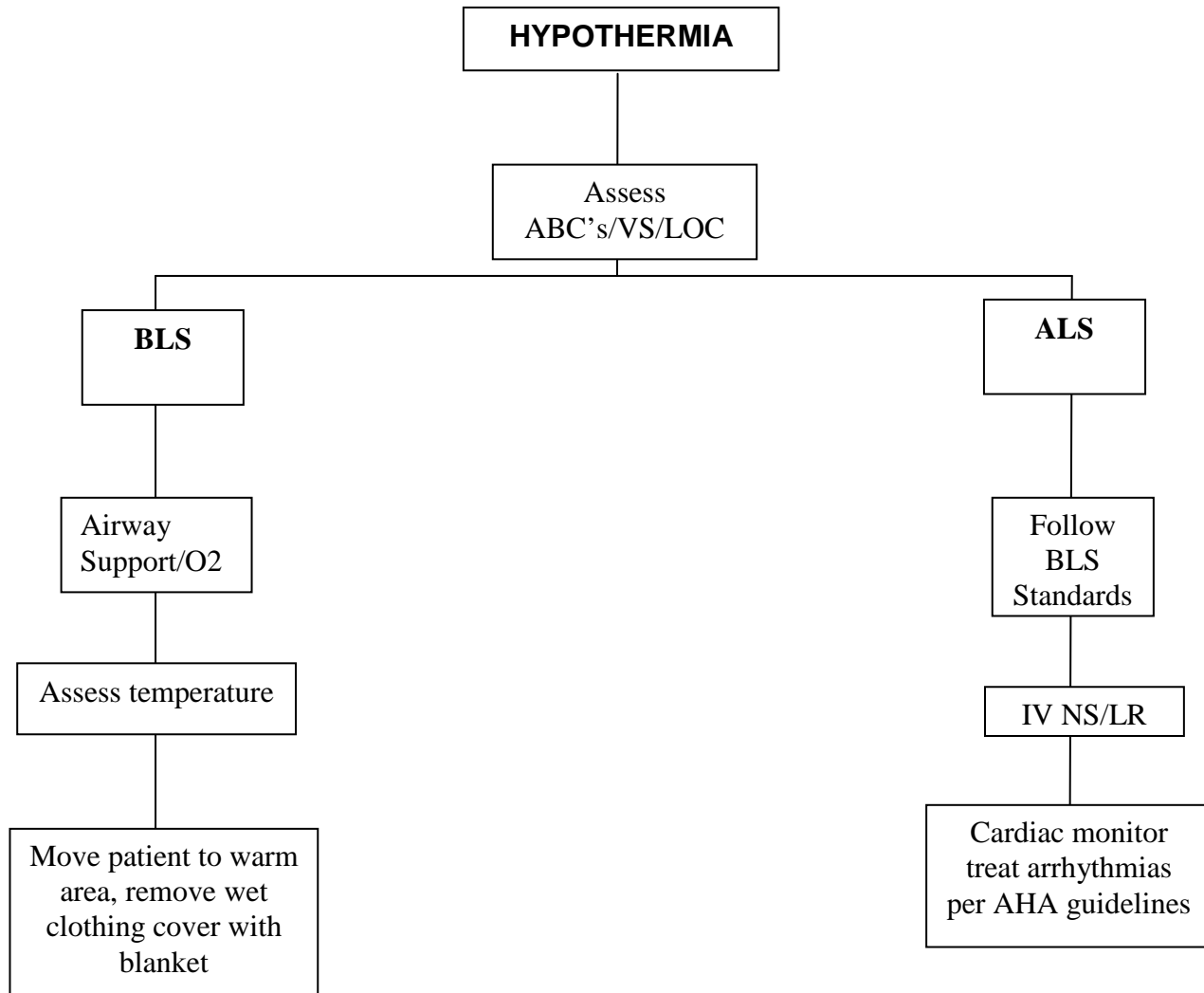
ENVIRONMENTAL
HYPERTHERMIA 105.02



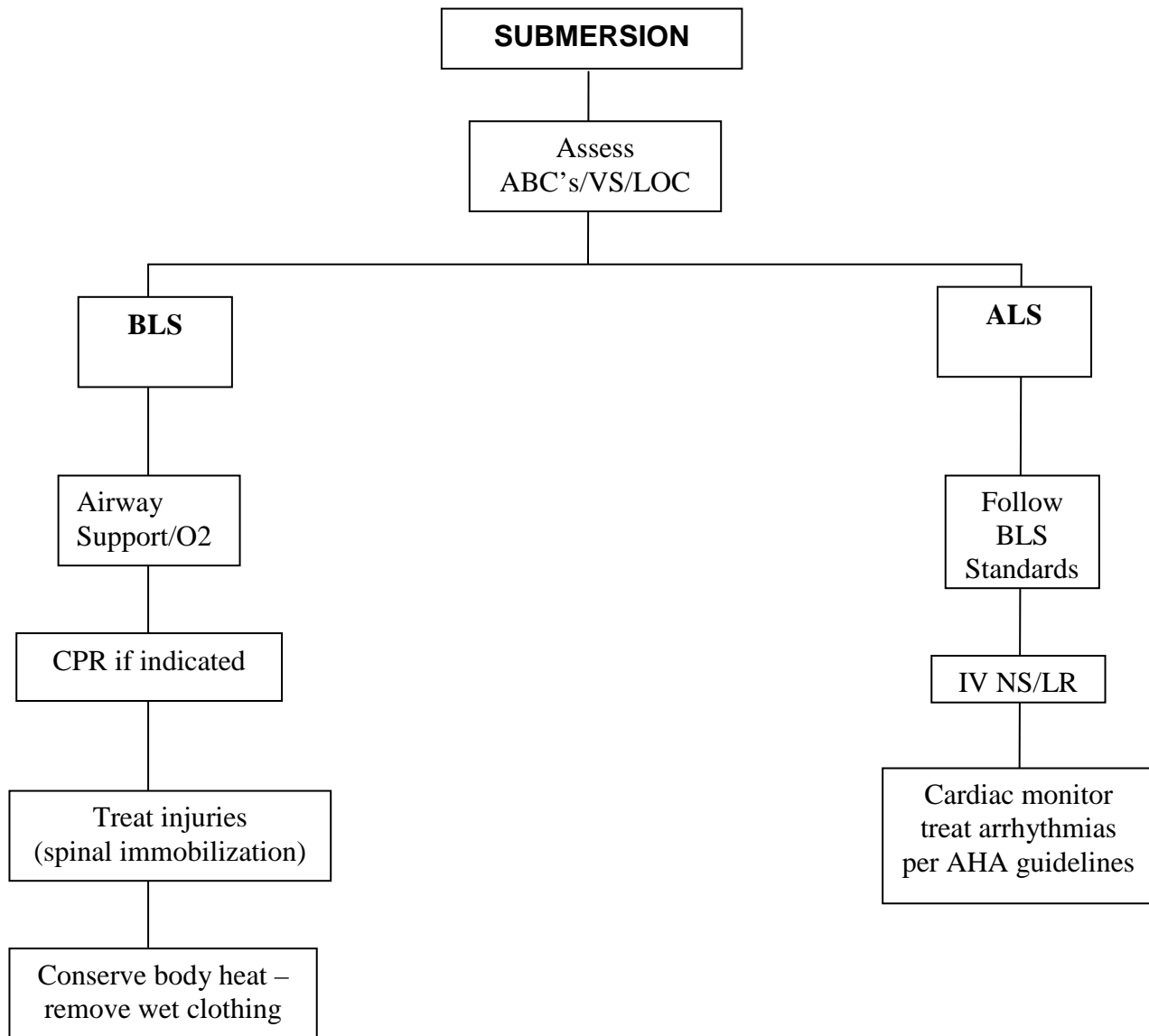
ENVIRONMENTAL

HYPOTHERMIA 105.03

SEE APNEIC PULSELESS PATIENT 105.03

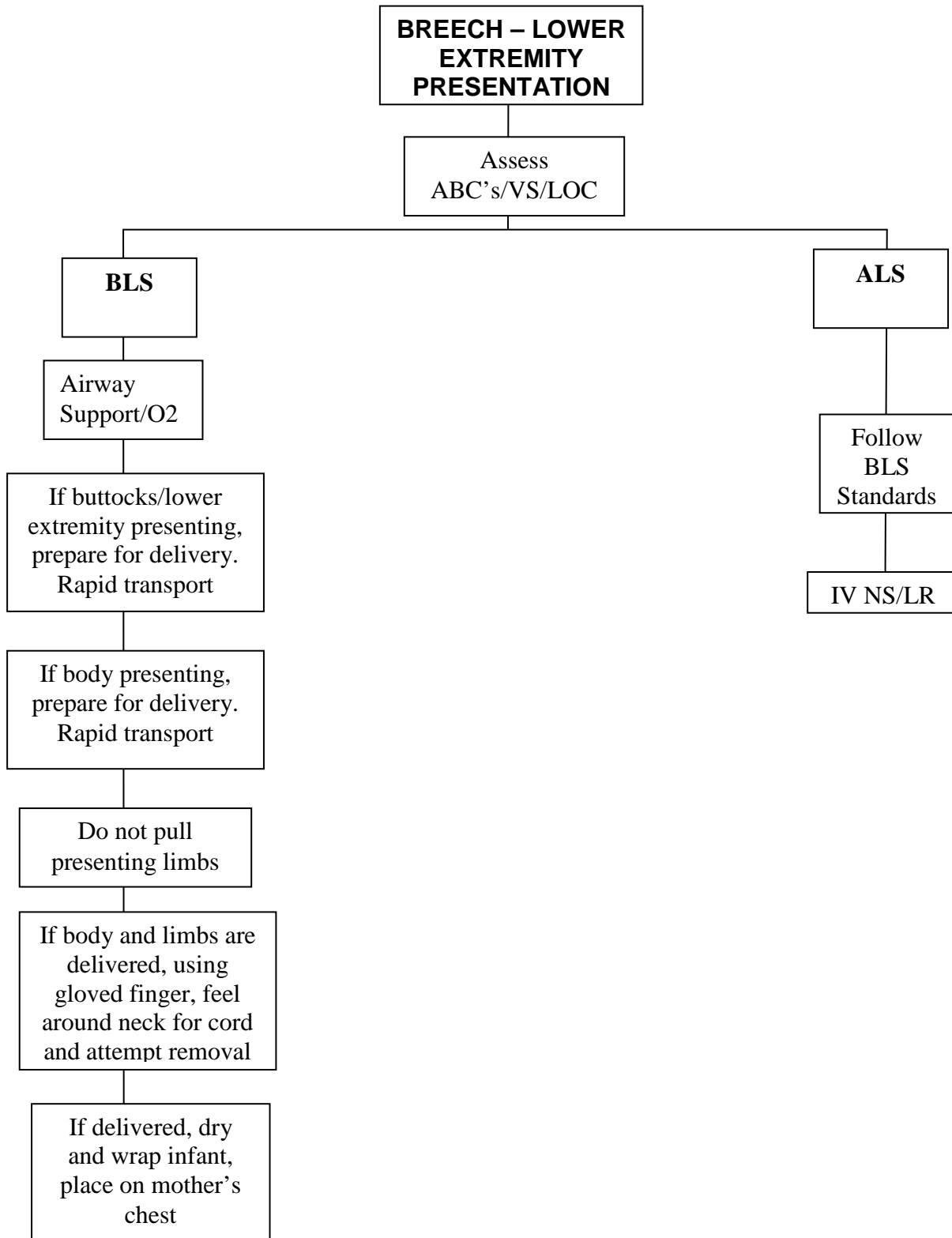


ENVIRONMENTAL
SUBMERSION 105.04



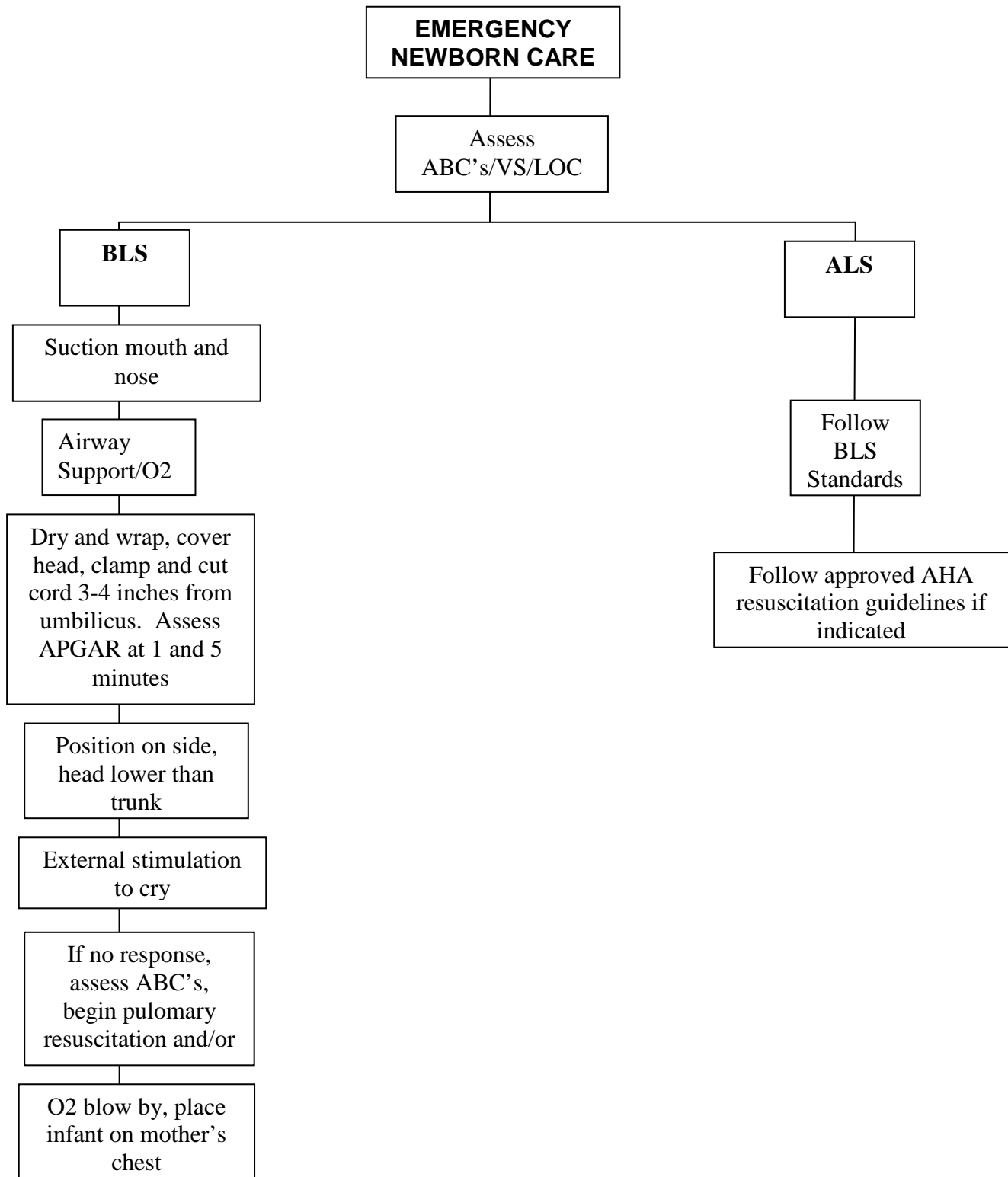
OB/GYN

BREECH. LIMB PRESENTATION 106.01



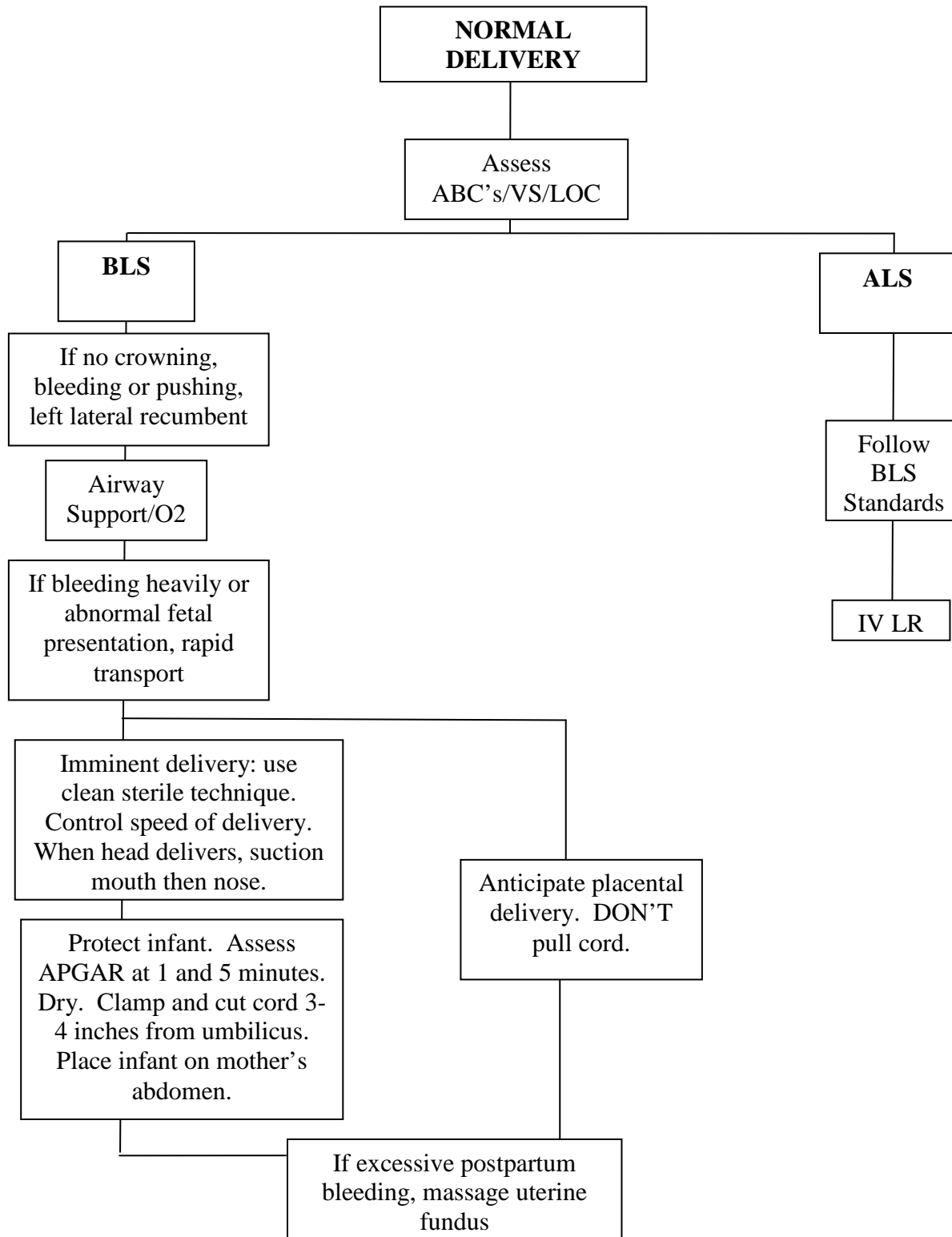
OB/GYN

EMERGENCY NEWBORN CARE 106.02



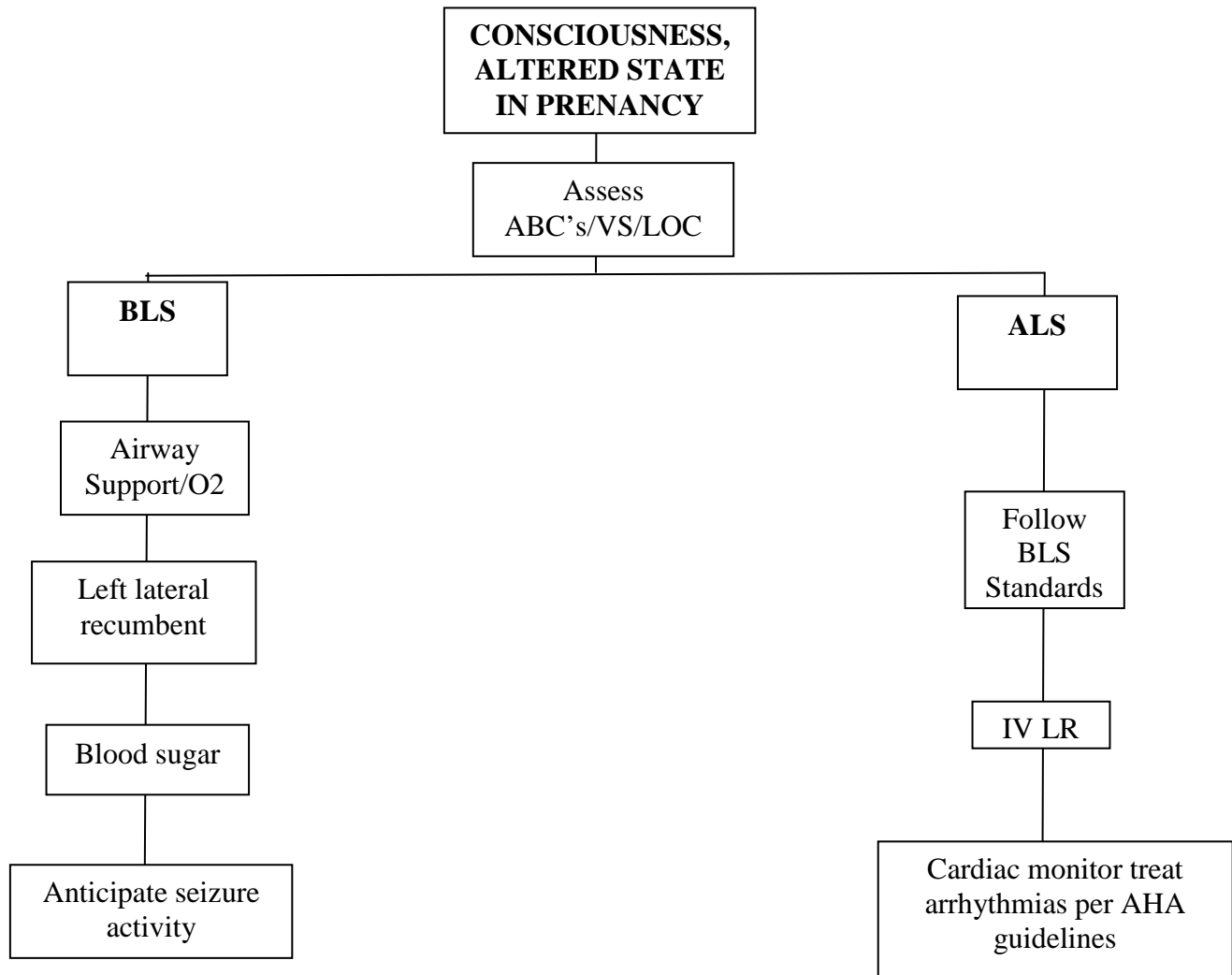
OB/GYN

NORMAL DELIVERY 106.03



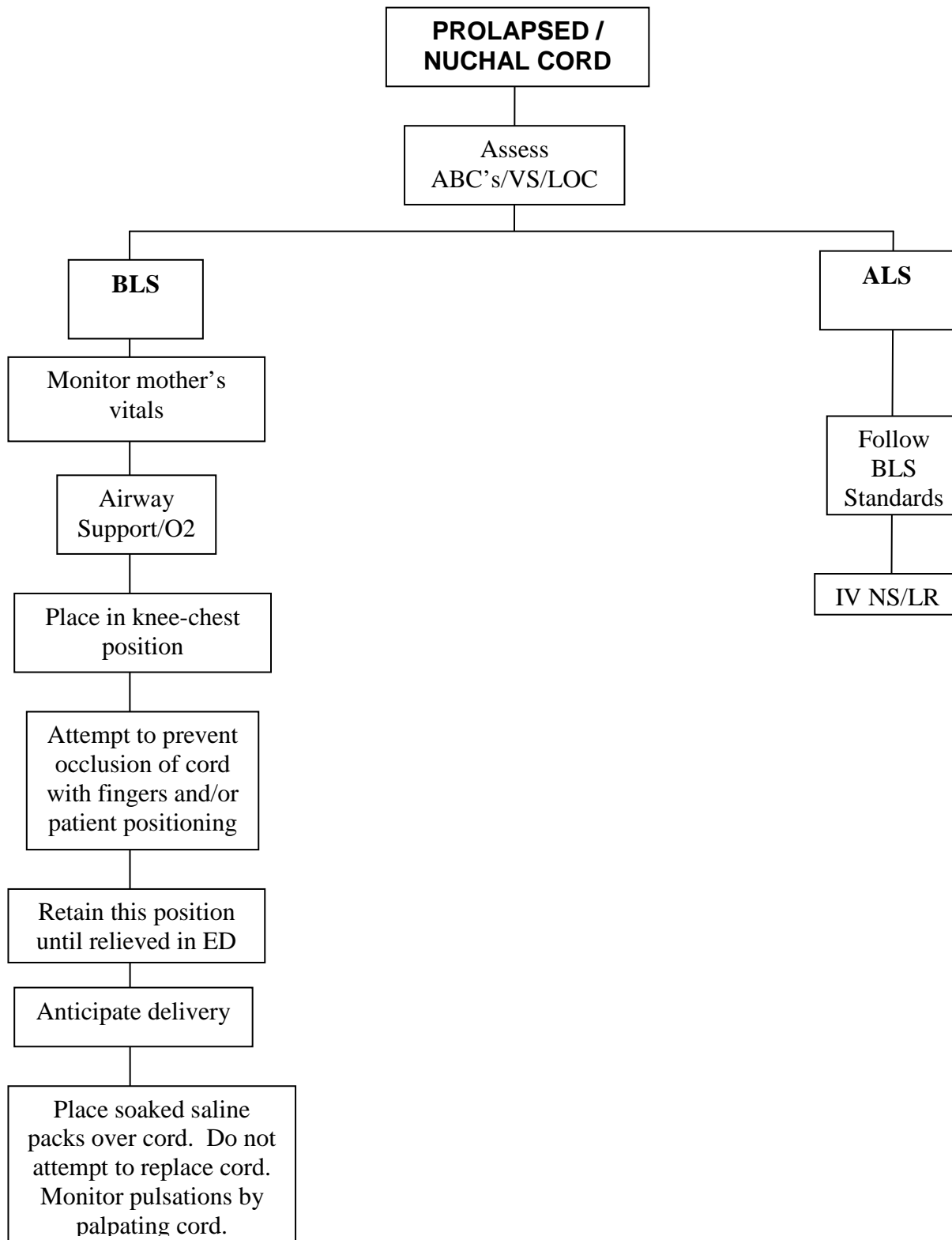
OB/GYN

CONSCIOUSNESS, ALTERED STATE IN PREGNANCY 106.04
SEE: LOSS OF CONSCIOUSNESS 104.01



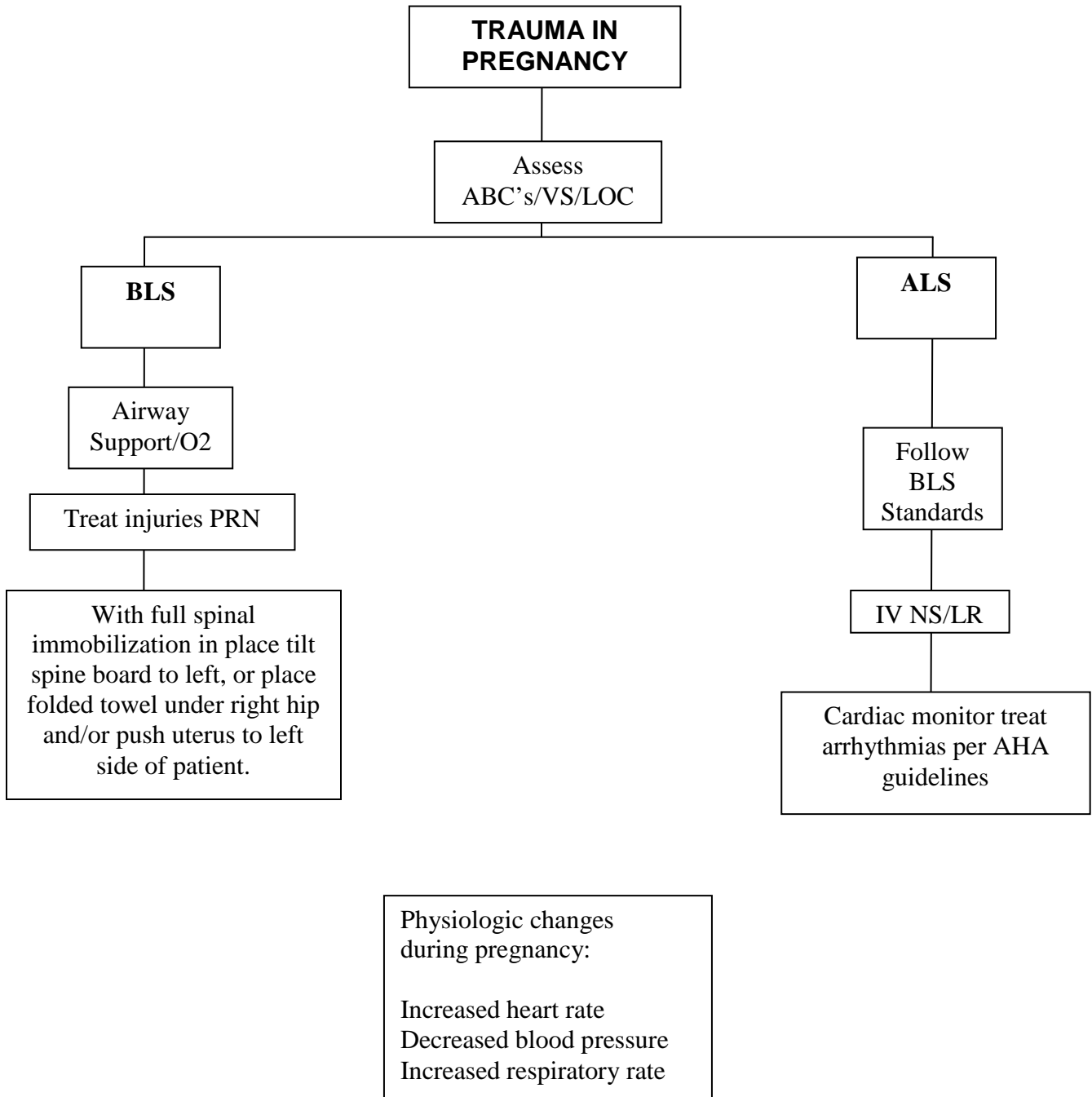
OB/GYN

PROLAPSED / NUCHAL CORD 106.05



OB/GYN

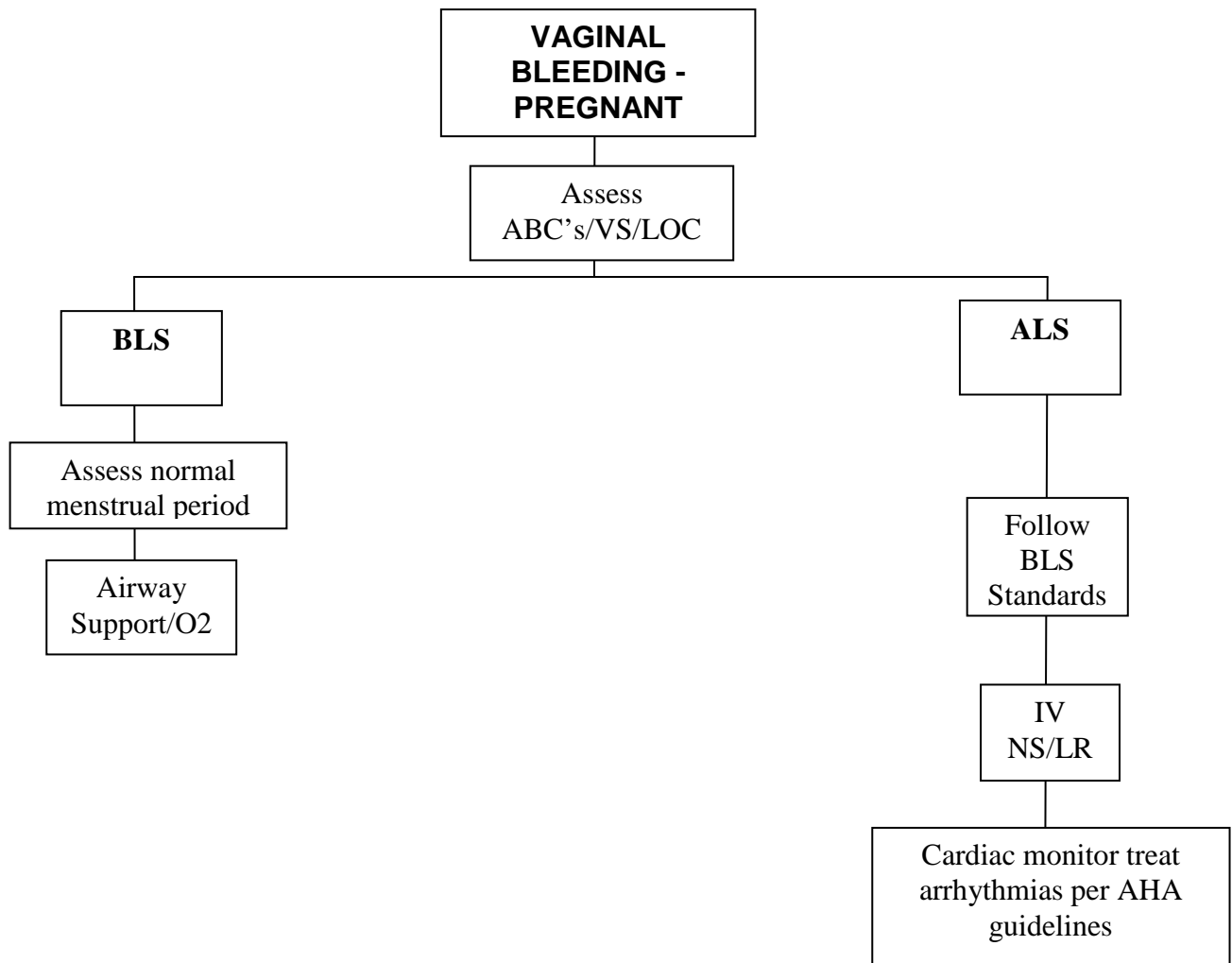
TRAUMA IN PREGNANCY 106.06



OB/GYN

VAGINAL BLEEDING 106.07

Effective 04/2003



POISON

GENERAL 107.00

POISON

Information to Obtain:

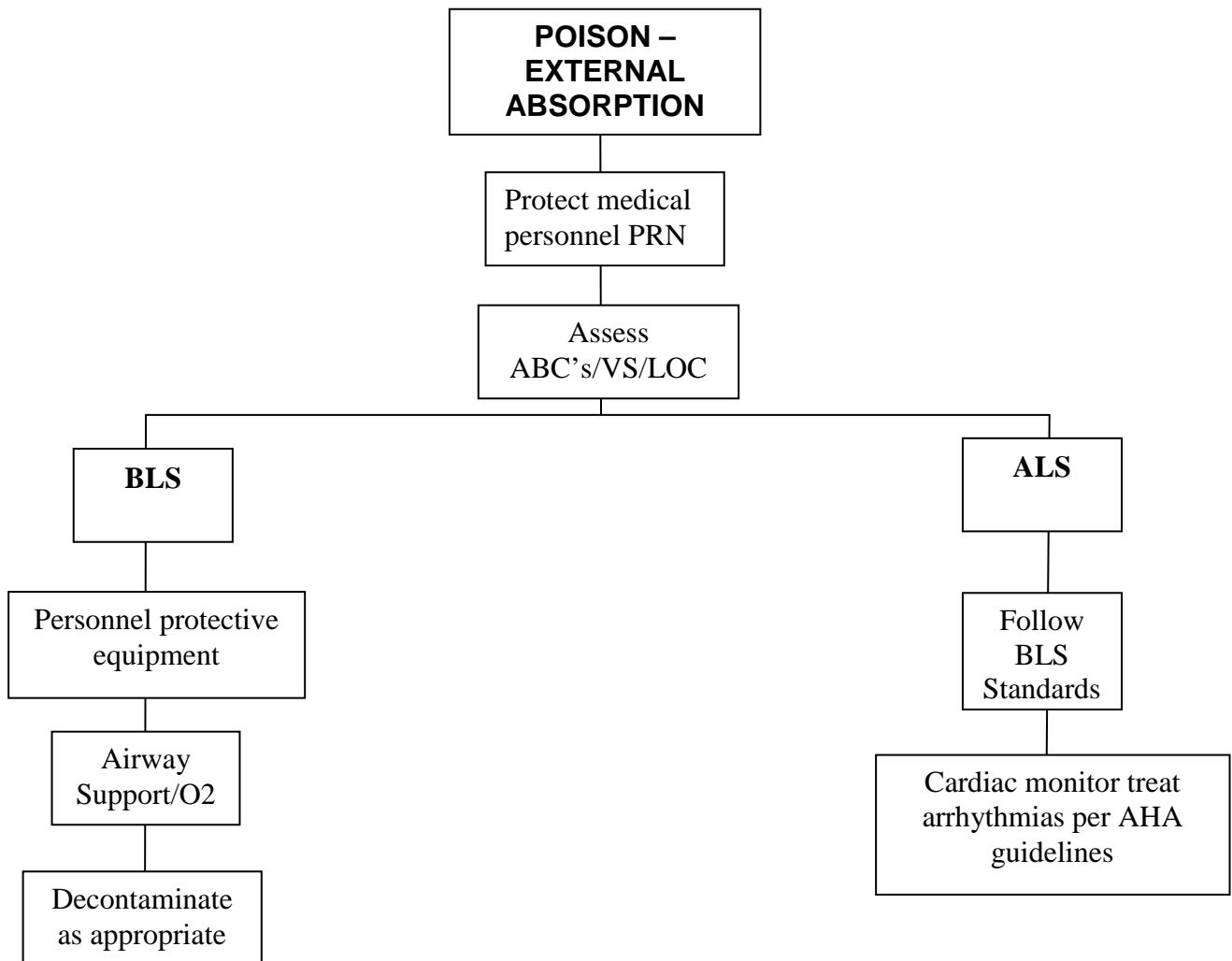
1. Route of Poisoning; Ingestion, Injection, Inhalation, Absorption
2. Identity of Specific Poison(s). If possible, bring protected sample(s) or container(s).
3. Time/Duration/Circumstances of contact.
4. Estimate Amount/Concentration of agent.
5. Incident History; Accident, Intentional, Neglect, Suspicious.
6. Past History: Medications, Diseases, Injuries, Medical allergies
7. Action taken by bystanders.

Physical Findings:

1. Vital Signs
2. Level of Consciousness
3. Breath Odor
4. Neurologic Status
5. Emesis
6. Airway Soot, Burns
7. Increased Salivation, Weakness, Fasciculations

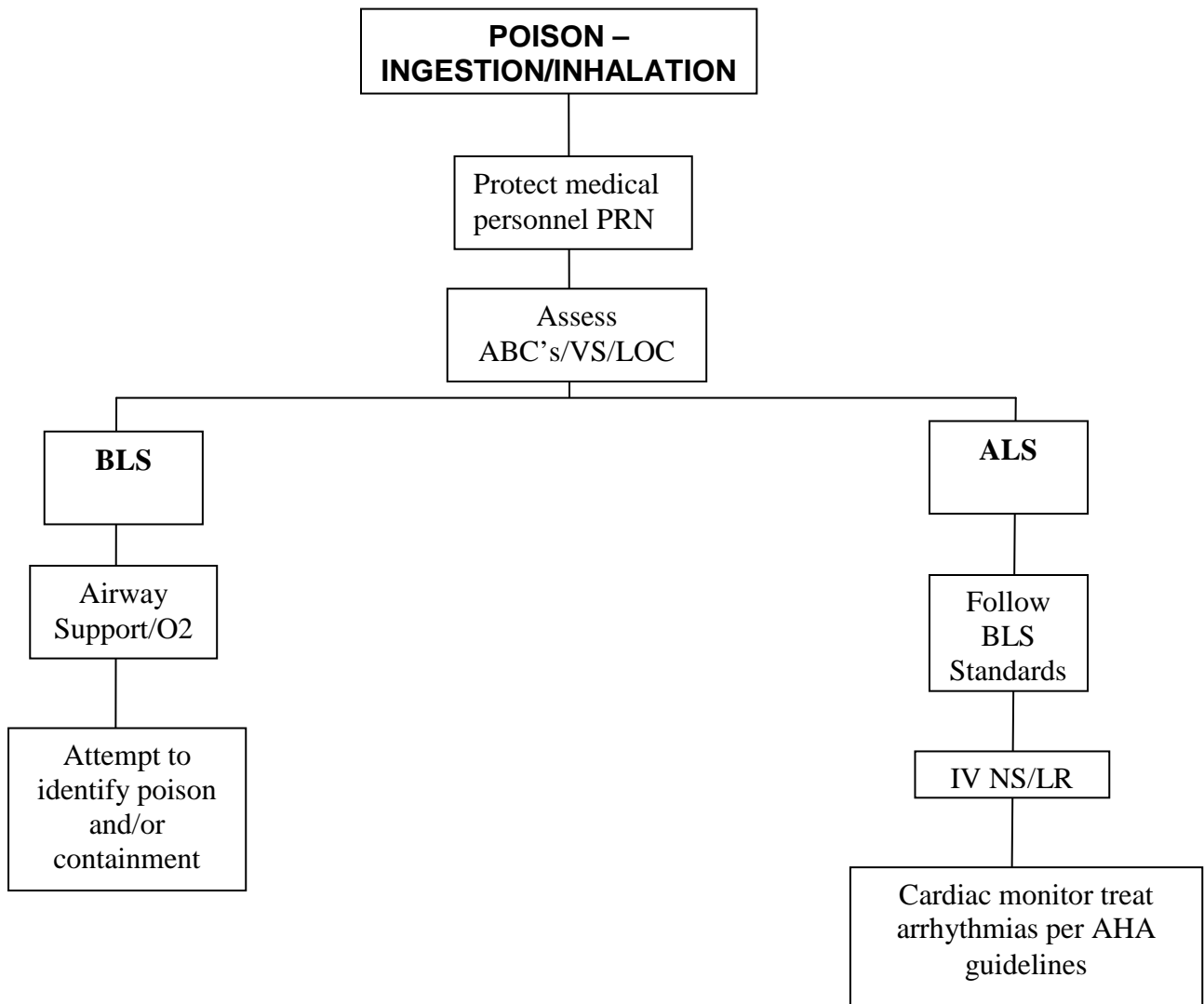
POISON

EXTERNAL ABSORPTION 107.01



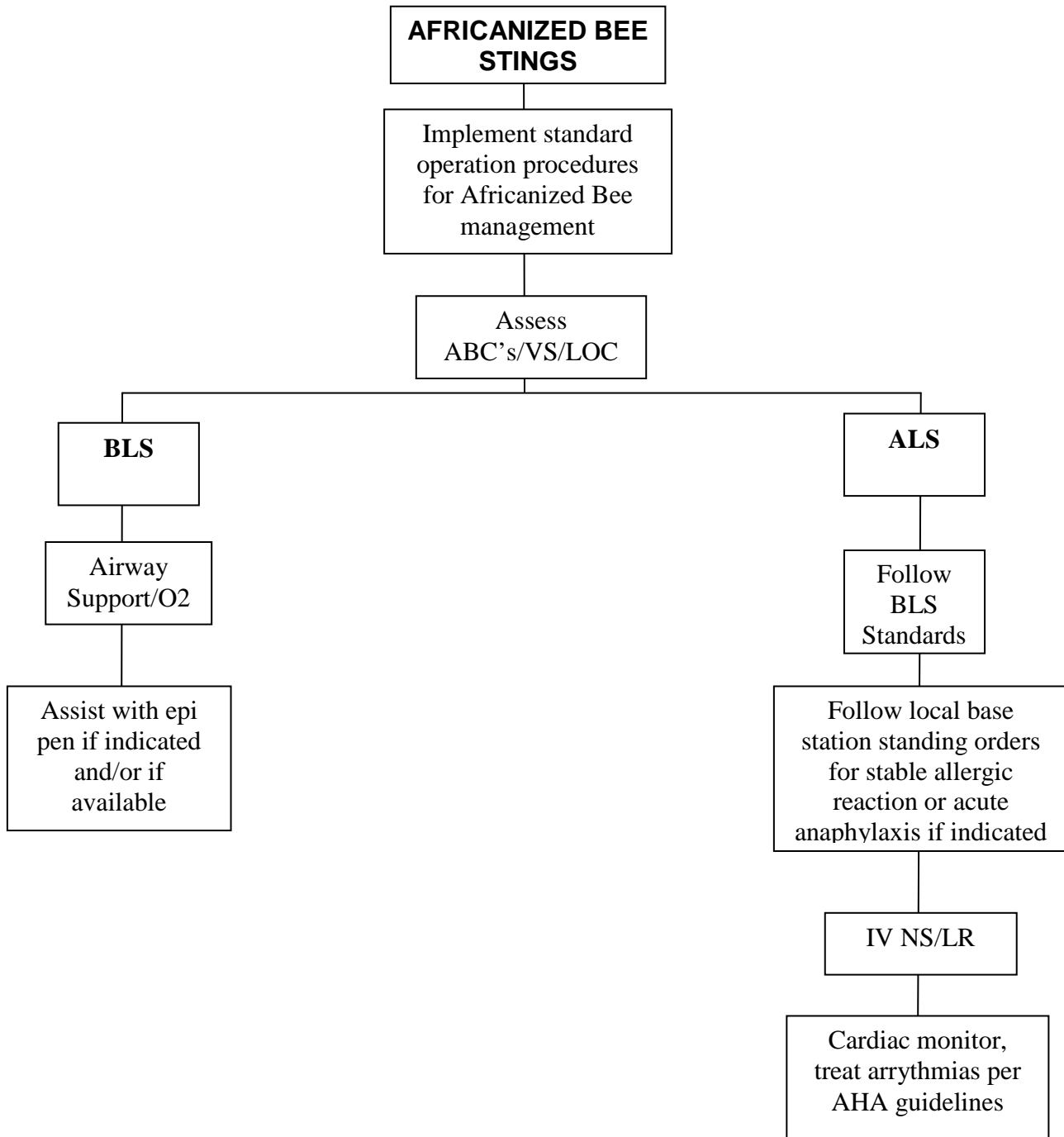
POISON

INGESTION/INHALATION 107.02



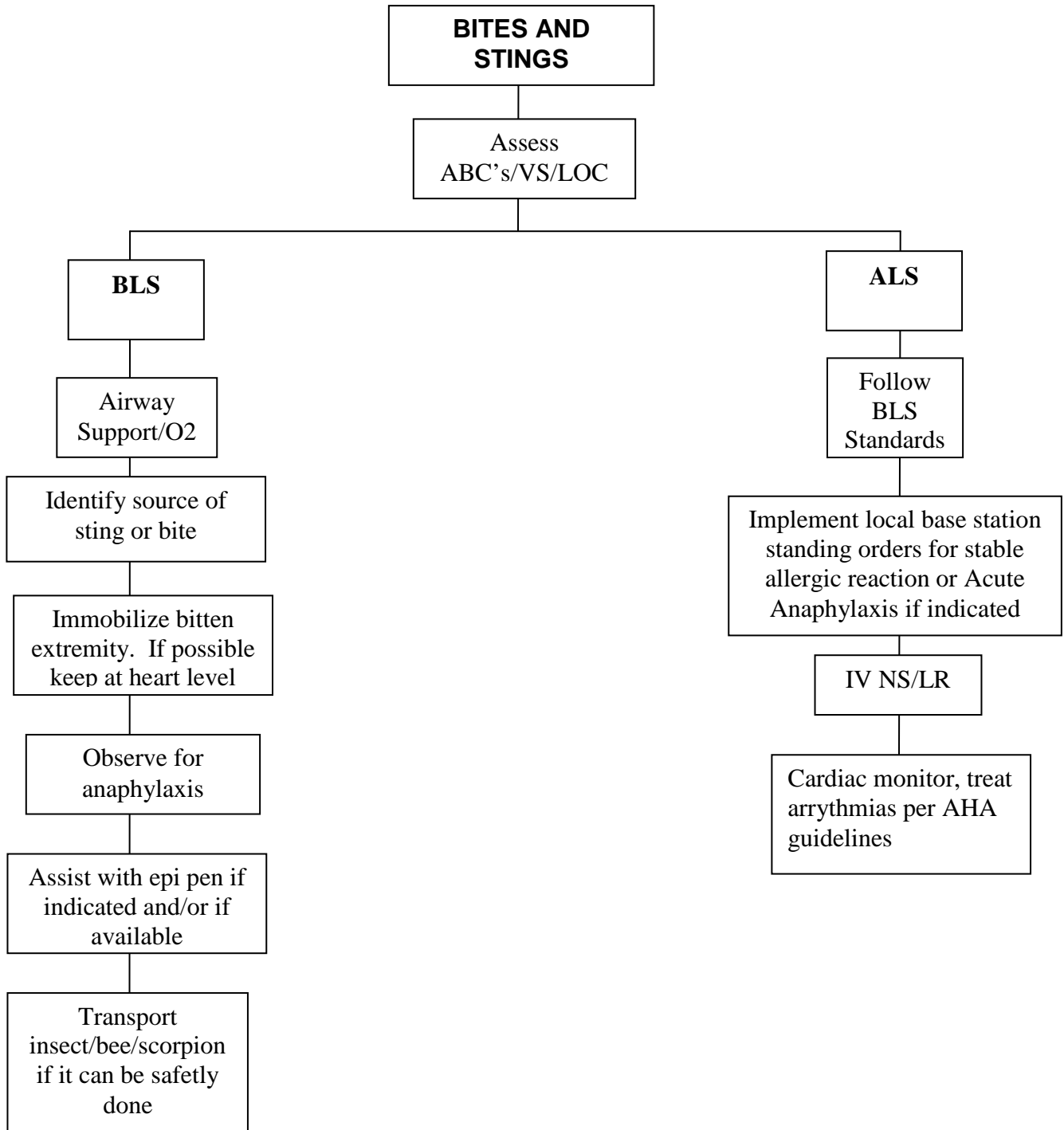
POISON

*AFRICANIZED BEE STINGS 107.03

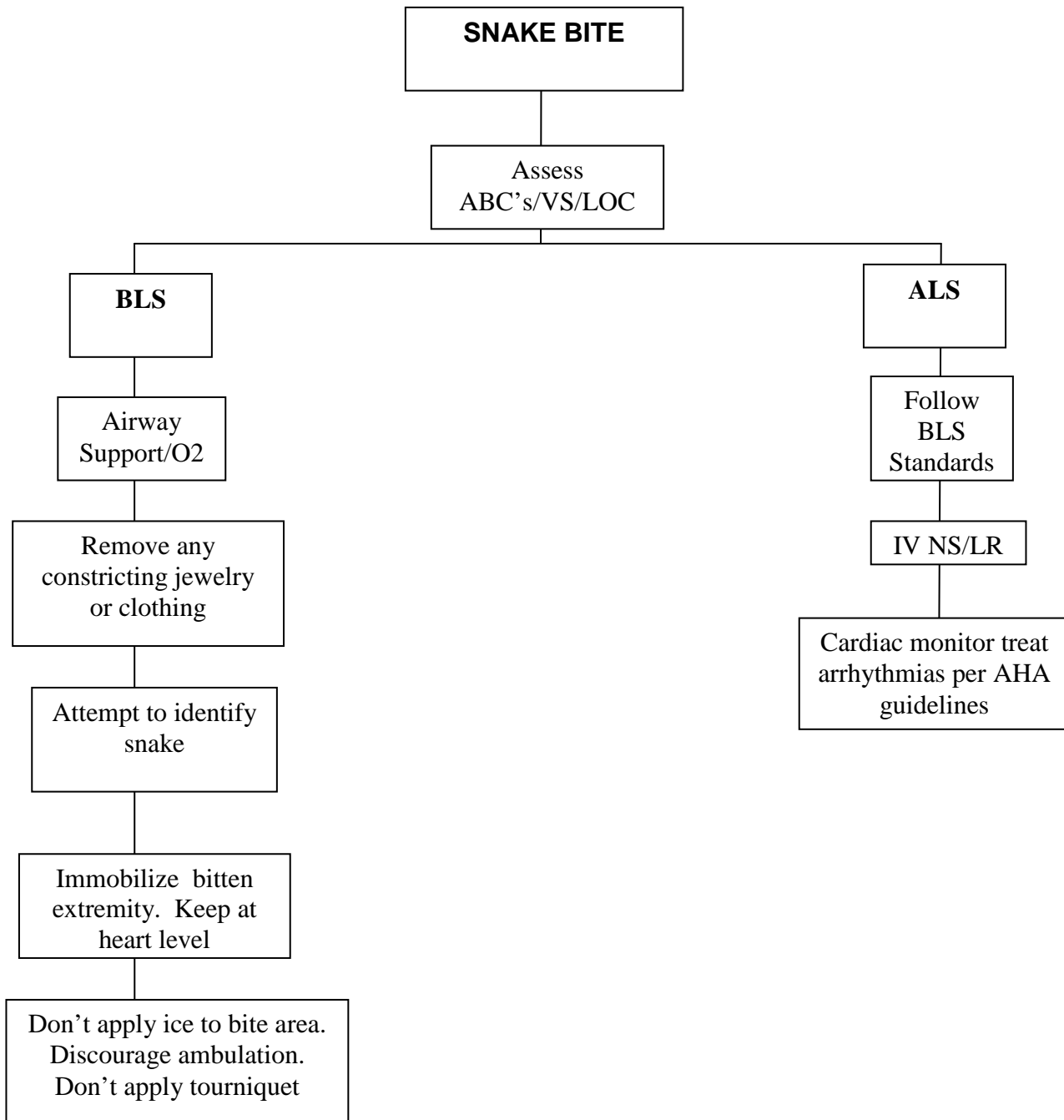


POISON

*BITES AND STINGS 107.04



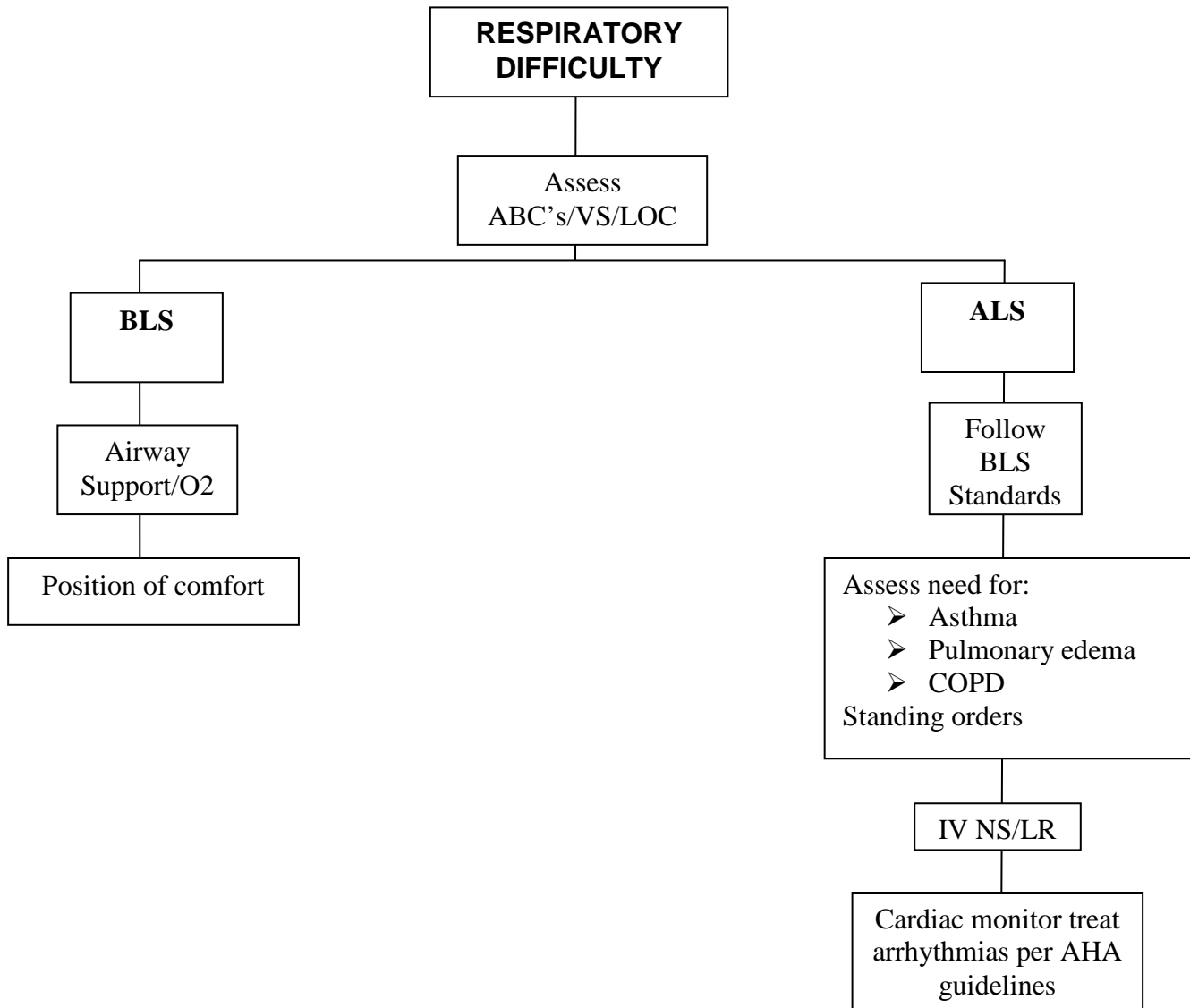
POISON
SNAKEBITE 107.05



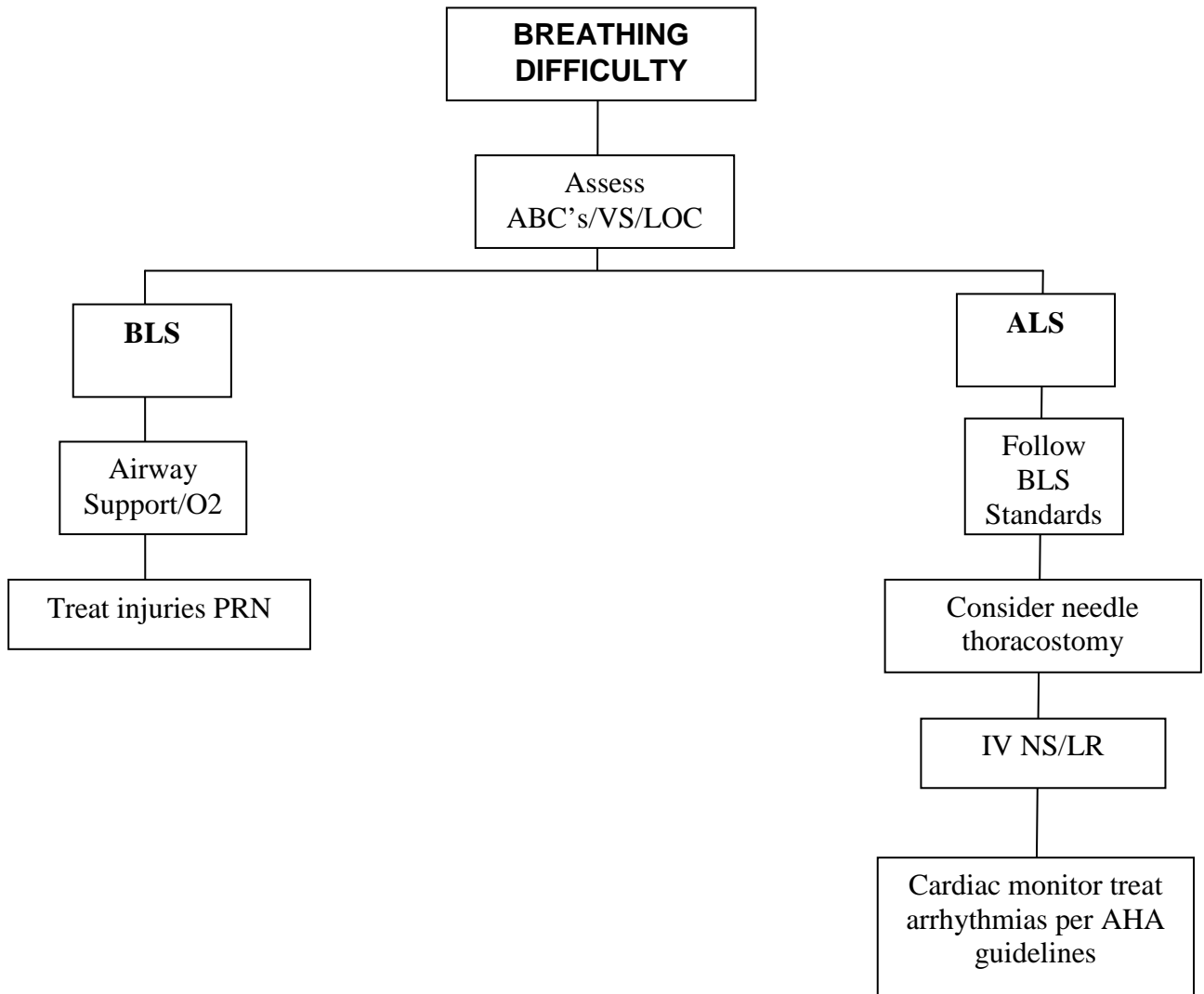
RESPIRATORY DIFFICULTY

GENERAL 108.01

SEE SHORTNESS OF BREATH 108.06



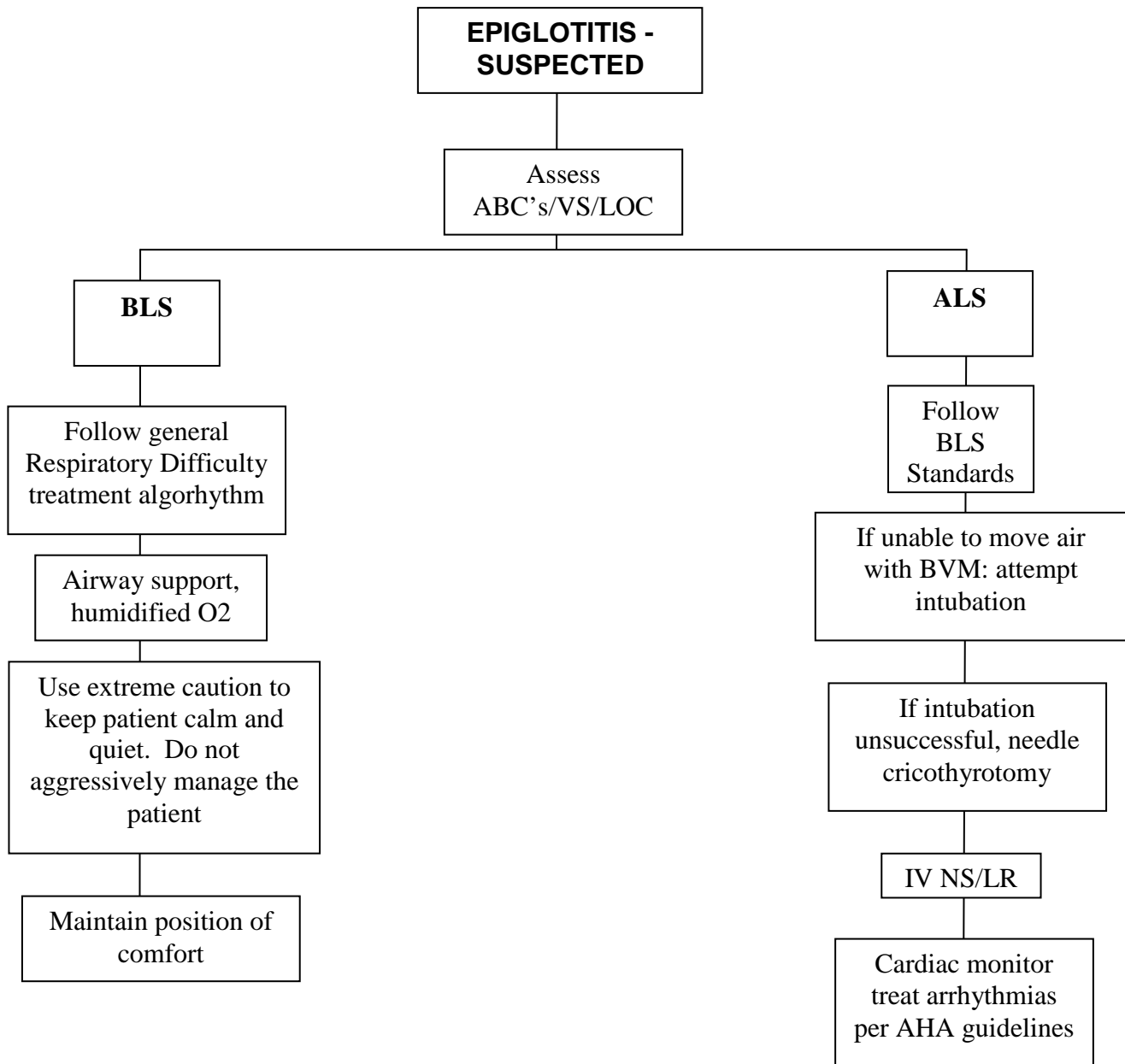
RESPIRATORY DIFFICULTY
CLOSED CHEST WOUND 108.02
SEE TRAUMA 110.01



Complications:
Hemothorax, hemopneumothorax,
cardiac tamponade, traumatic asphyxia,
tension pneumothorax

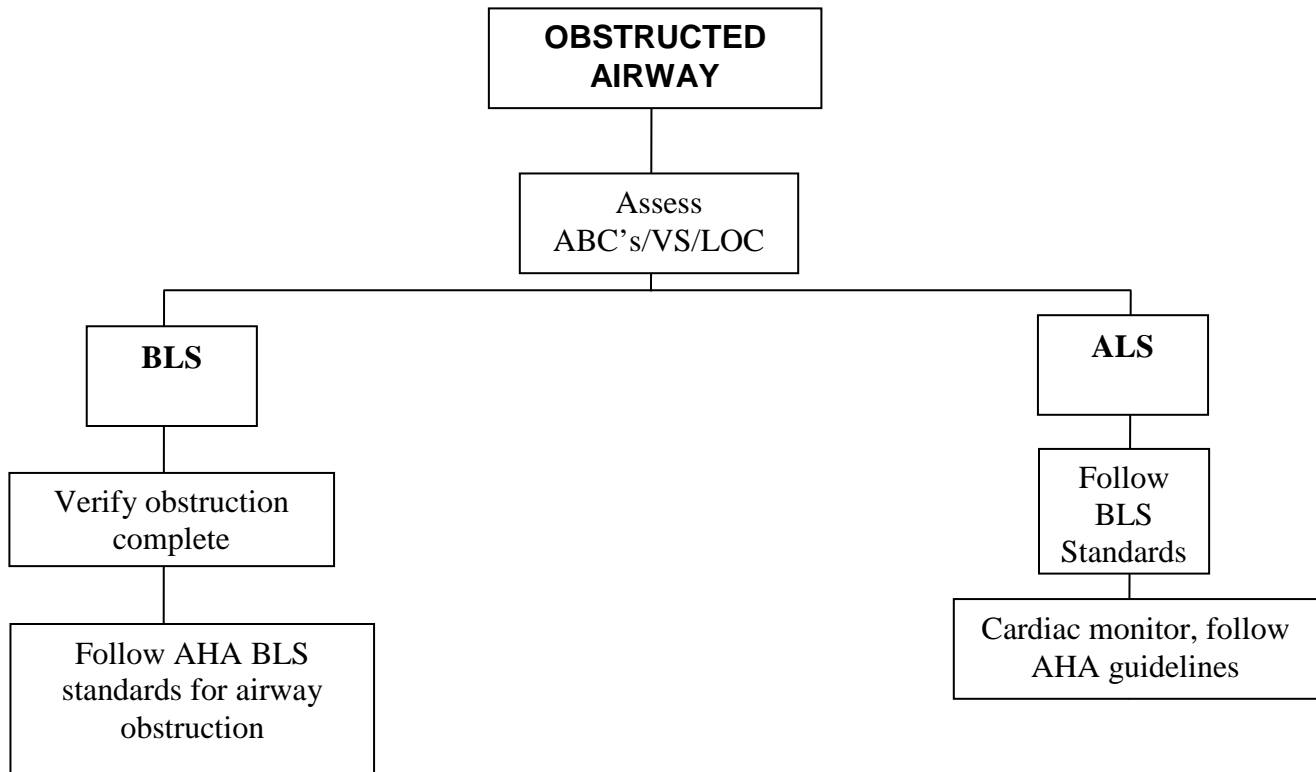
RESPIRATORY DIFFICULTY

EPIGLOTTITIS 108.03

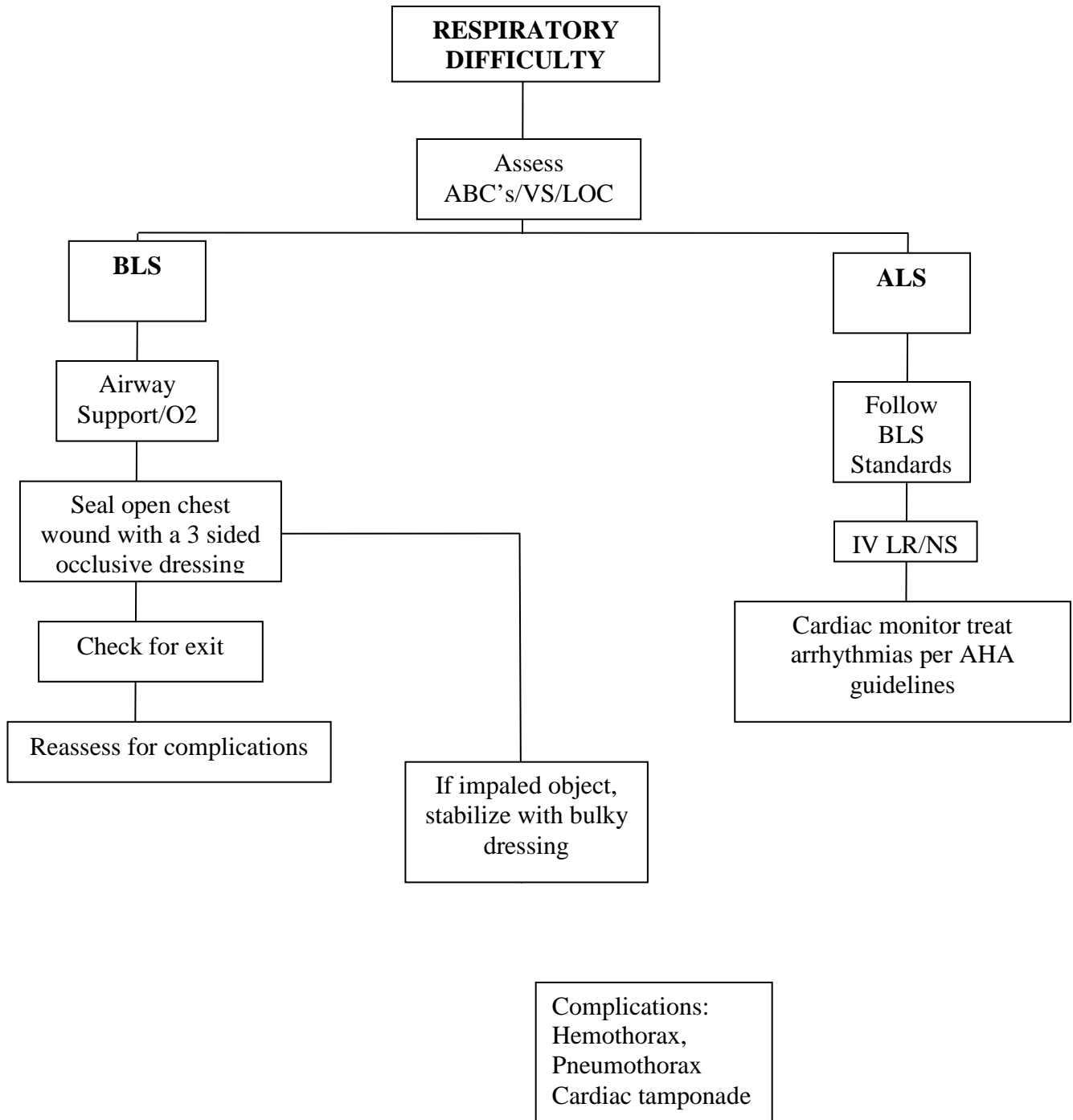


RESPIRATORY DIFFICULTY

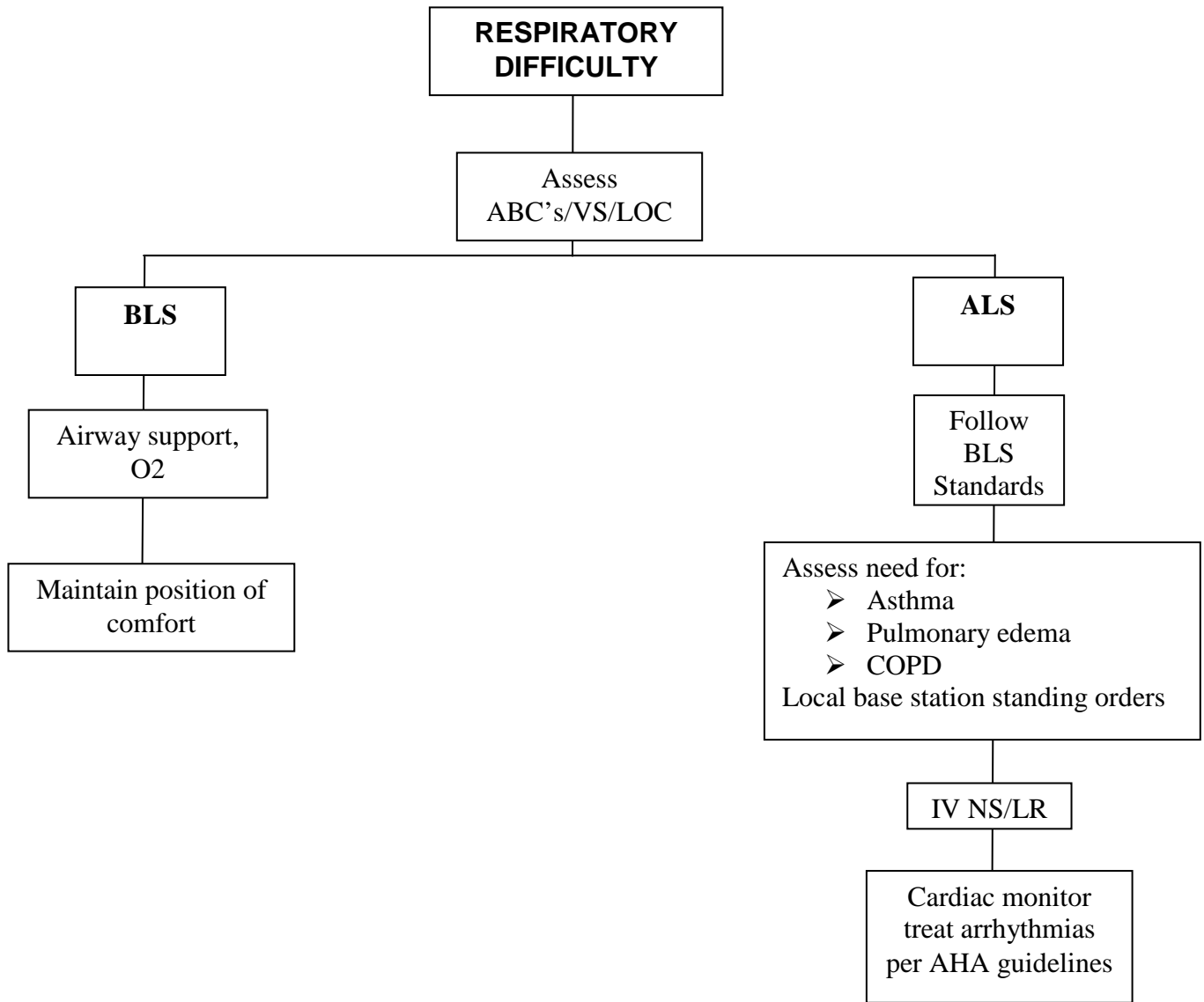
OBSTRUCTED AIRWAY 108.04
SEE TRAUMA 110.01



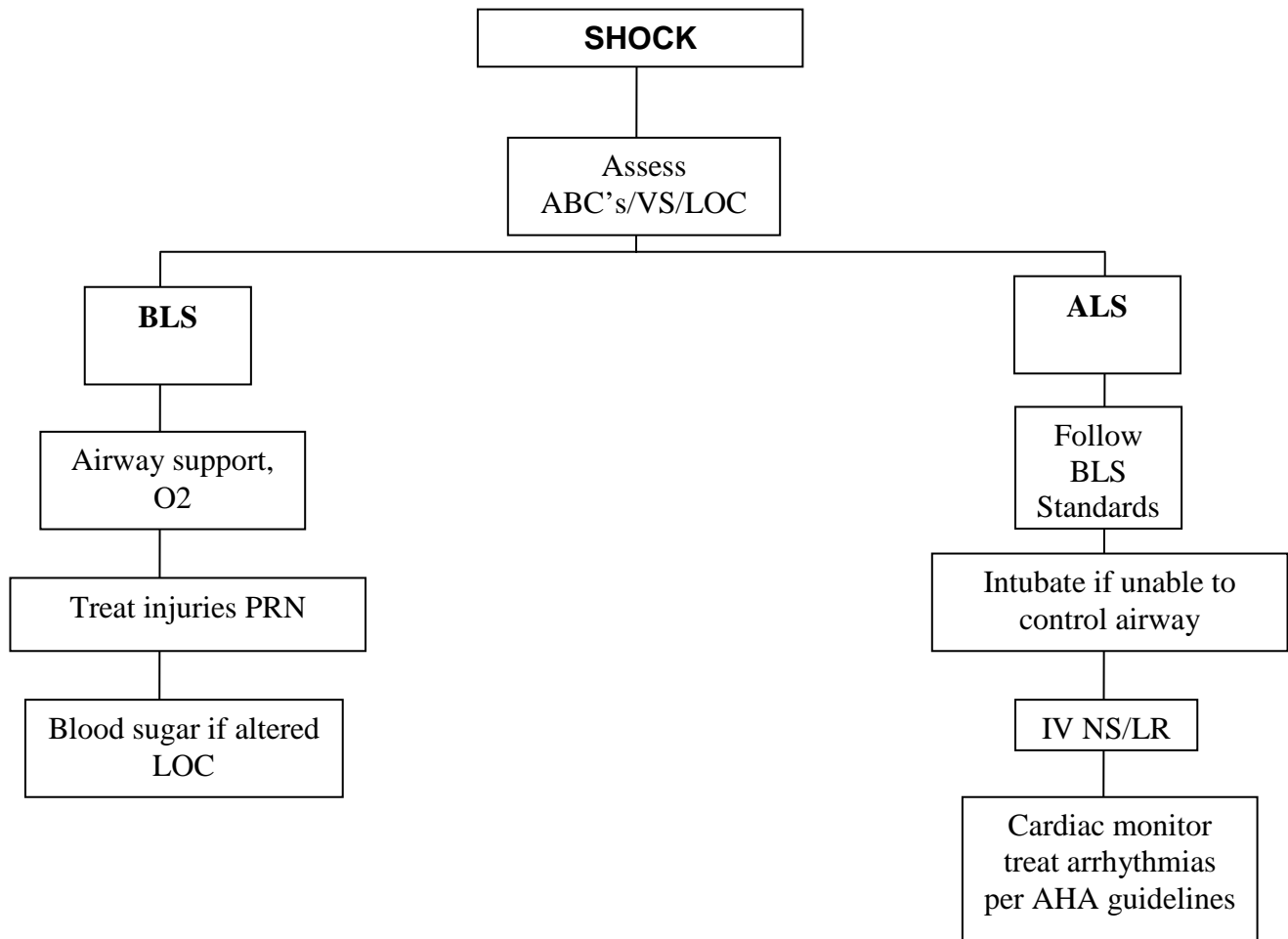
RESPIRATORY DIFFICULTY
OPEN CHEST WOUND 108.05
SEE TRAUMA 110.01



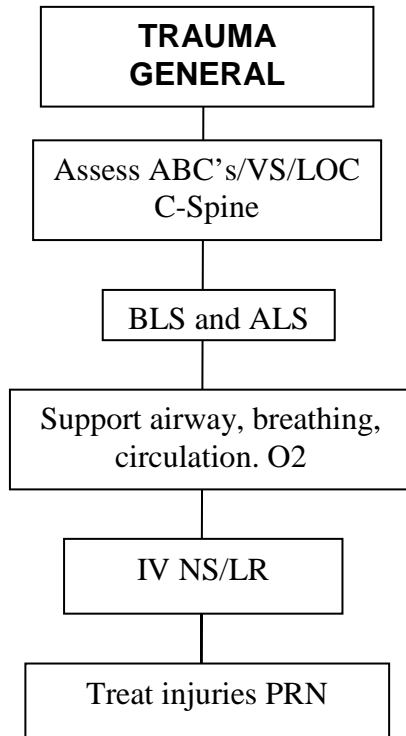
RESPIRATORY DIFFICULTY
SHORTNESS OF BREATH 108.06
SEE: GENERAL 108.01



SHOCK
SHOCK 109.01

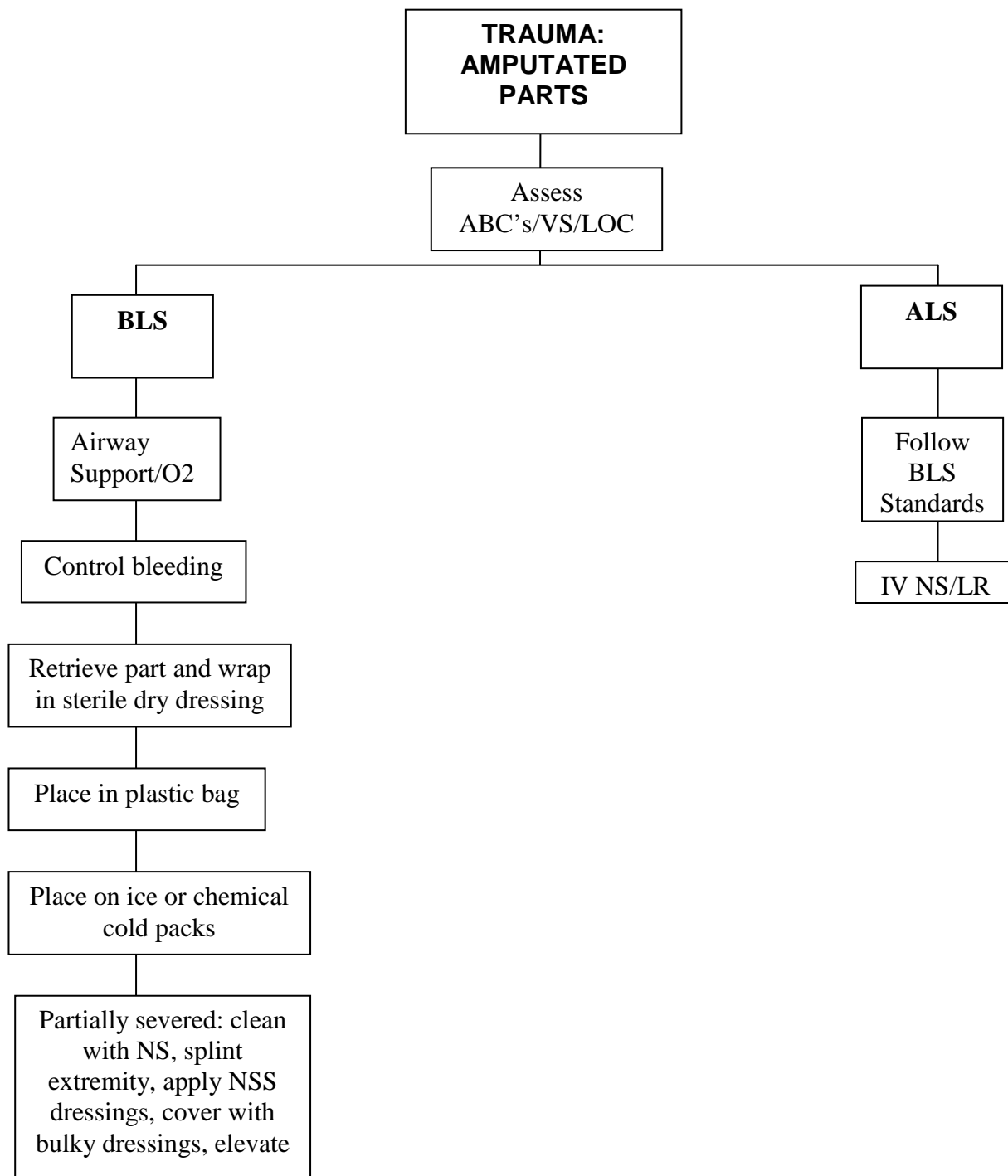


TRAUMA
GENERAL 110.01

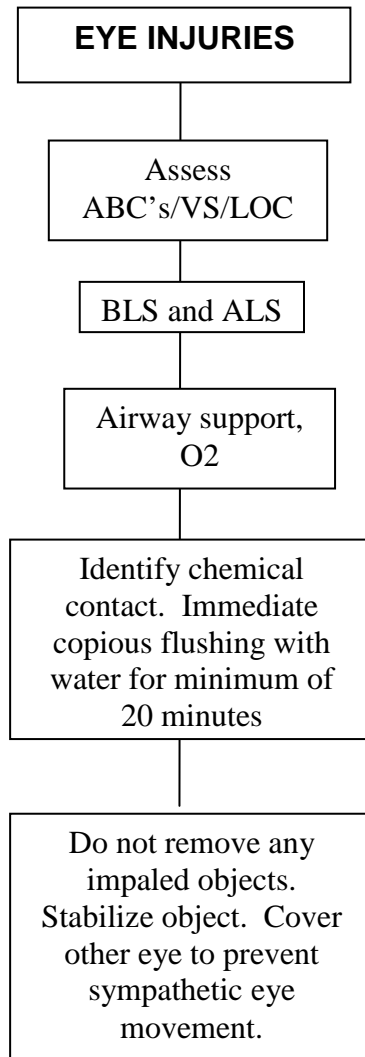


TRAUMA

AMPUTATED PARTS 110.02

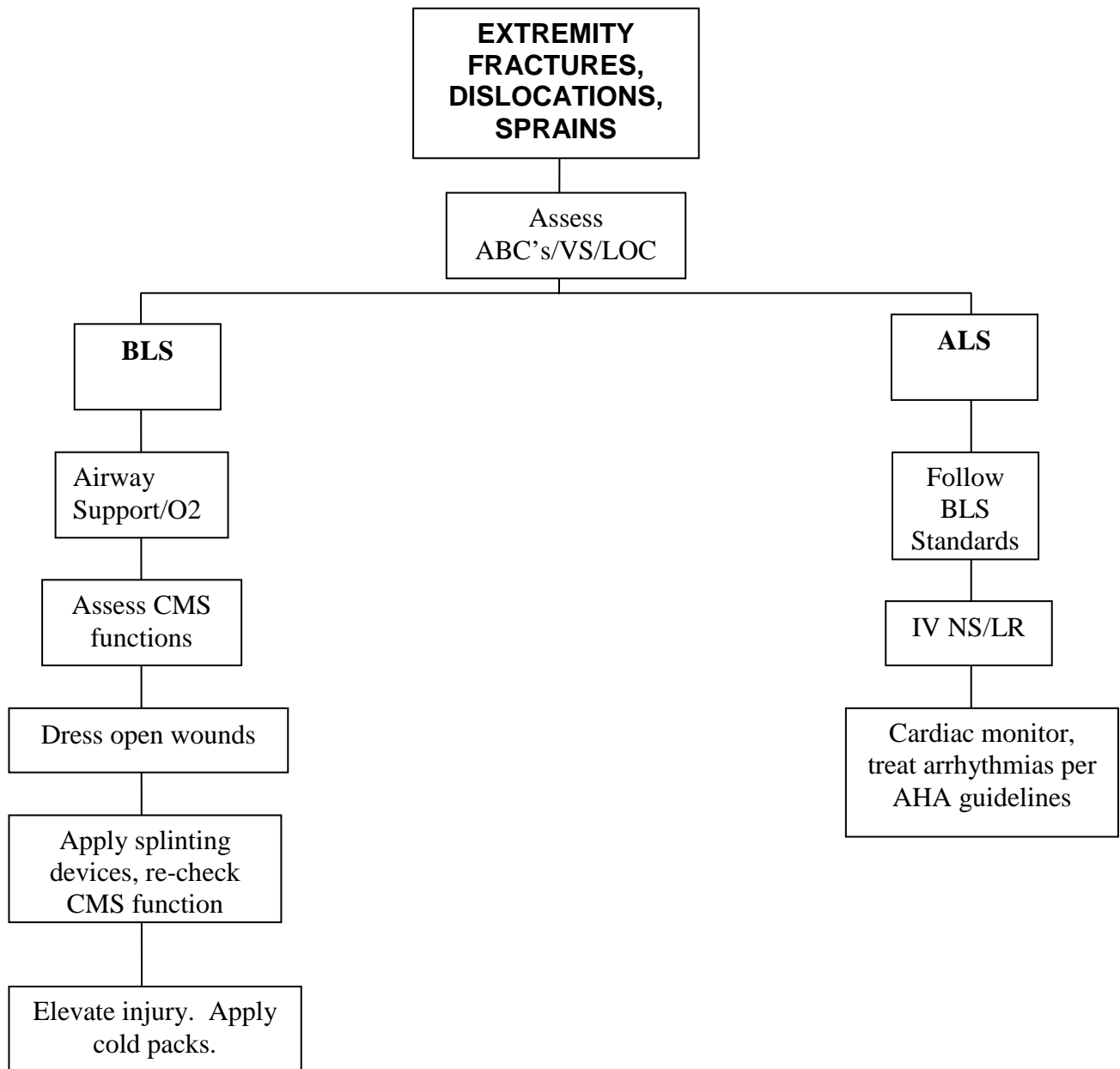


TRAUMA
EYE INJURIES 110.03



TRAUMA

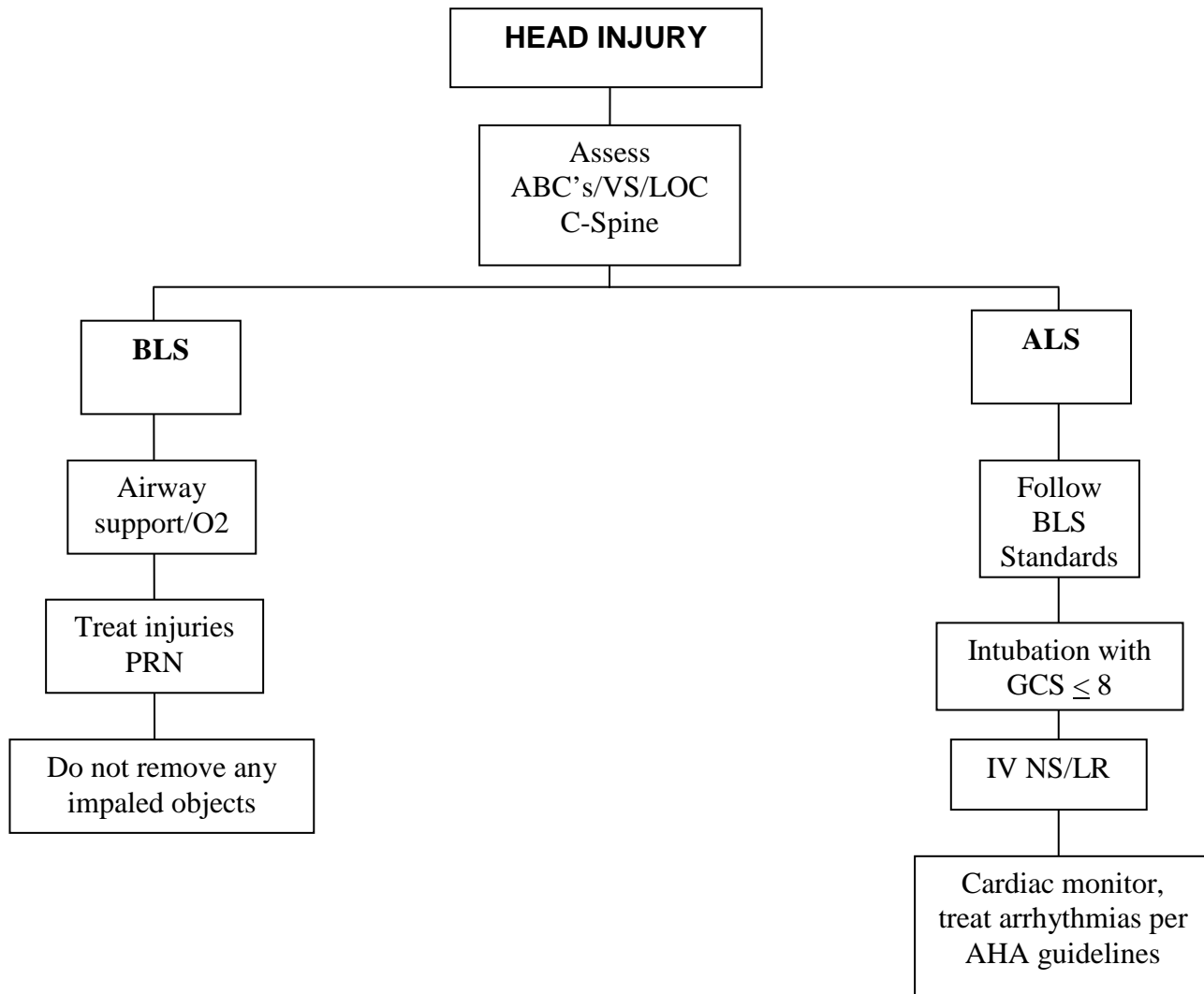
EXTREMITY FRACTURES, DISLOCATIONS, SPRAINS 110.04



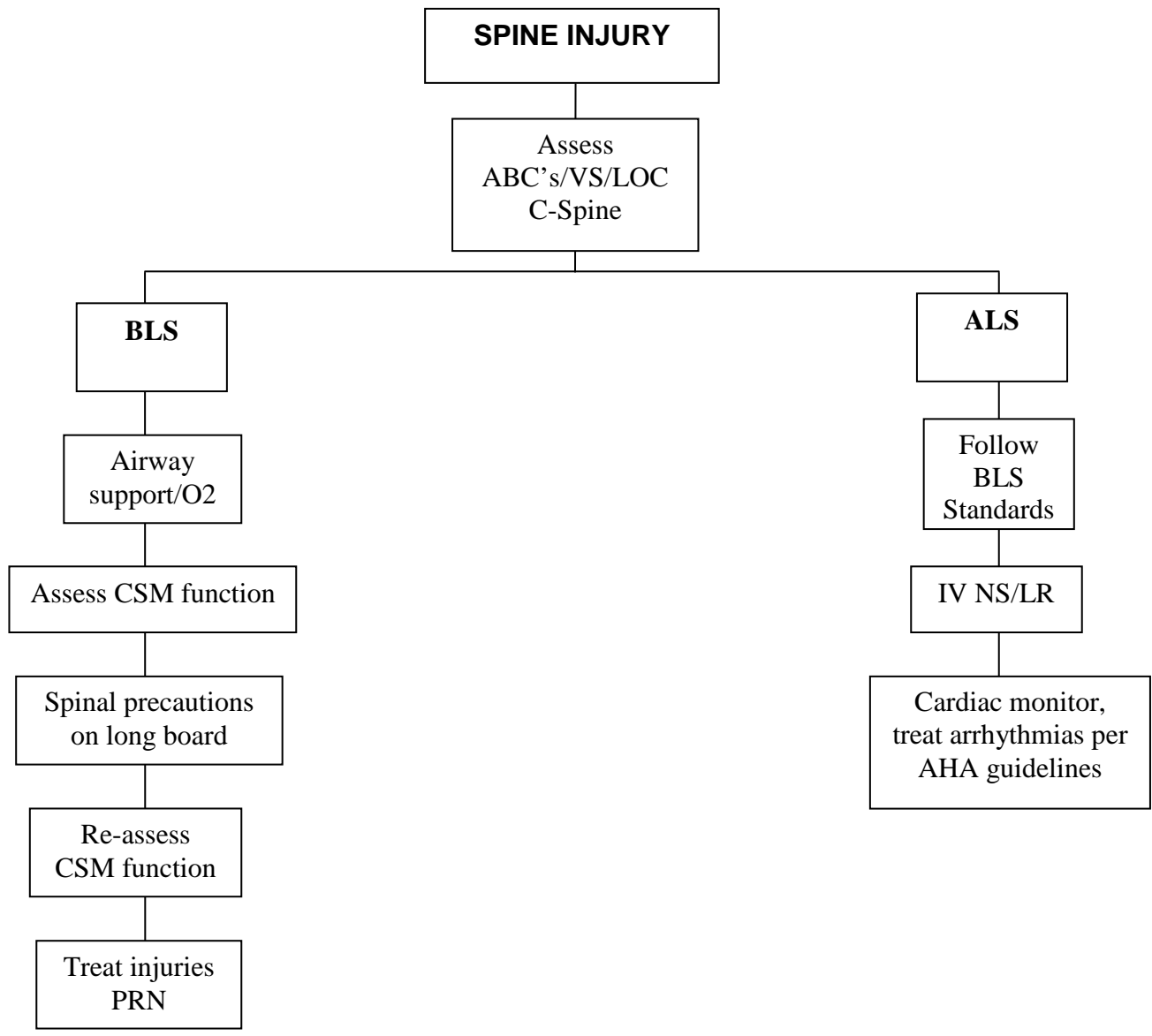
TRAUMA

HEAD INJURY 110.05

SEE: ALTERED STATE CONSCIOUSNESS 104.01



TRAUMA
SPINE INJURY 110.06



PEDIATRIC GUIDELINES

111.00

PEDIATRIC GUIDELINES

1. WEIGHT FORMULA

AGE < than 1yr old
Birth Weight = 3 KG
6 MO = 6 KG
9 MO = 9 KG

AGE > than 1yr old
 $(2 \times \text{AGE}) + 8 = \text{-KG}$

2. Pediatric FLUID EXCHANGE = 20cc/kg NS or LR. Repeat PRN

3. Use of INTRAOSSEOUS INFUSION should be considered in situations which meet the criteria established by the Department of Health Services and curriculum of PALS or PEPP or other state approved guidelines.

a. Peripheral IV access has not been readily established.

b. The Patient is critical (e.g., uncompensated shock, cardiac arrest, major traumatic injuries with shock, or major burns).

c. The patient is 6 years old or under.

4. IV fluids for resuscitation . Normal Saline or Lactated Ringers. The preferred IV fluid is NS or LR.

5. Where DEXTROSE is considered in the Guidelines, use should be made of D25 or lesser concentration dextrose in the pediatric patient. FSBS - < 40, 2-4cc IV/Kg.

6. When the pediatric patient.s ventilation has been assisted by mouth-to-mask, bag-valve-mask, or Intubation NASOGASTRIC (ng) or OROGASTRIC (og) INTUBATION for gastric decompression should be initiated by the ALS level provider.

7. SEPARATION of the parent and child depends on the severity and the critical nature of the individual situation.

Pediatric
SVT - 111.01

Pediatric – Supraventricular Tachycardia

ABCDE Assessment

BLS

Establish Airway
High Flow Oxygen
Assisted Ventilation as needed
Check glucose - oral glucose if no airway compromise and glucose < 40 mg/dl

Transport

ALS

Follow BLS Standards

Is there Abnormal Skin Color, Decreased Level of Consciousness, Cap Refill >2 sec., or Hypotension after airway interventions?

Unstable

Stable

Synchronized Cardioversion:
0.5 J/kg
1 J/kg
2 J/kg
Consider Sedation with:
Diazepam (0.1mg/kg) - max 2 mg/dose

Stable

Attempt IV Access
Consider IO
10cc/kg Normal Saline Bolus

Administer Adenosine via rapid infusion:
IV/IO: 0.1 mg/kg
Max. 1st dose: 6 mg
Repeat doses: 0.2 mg/kg

Unstable

Monitor

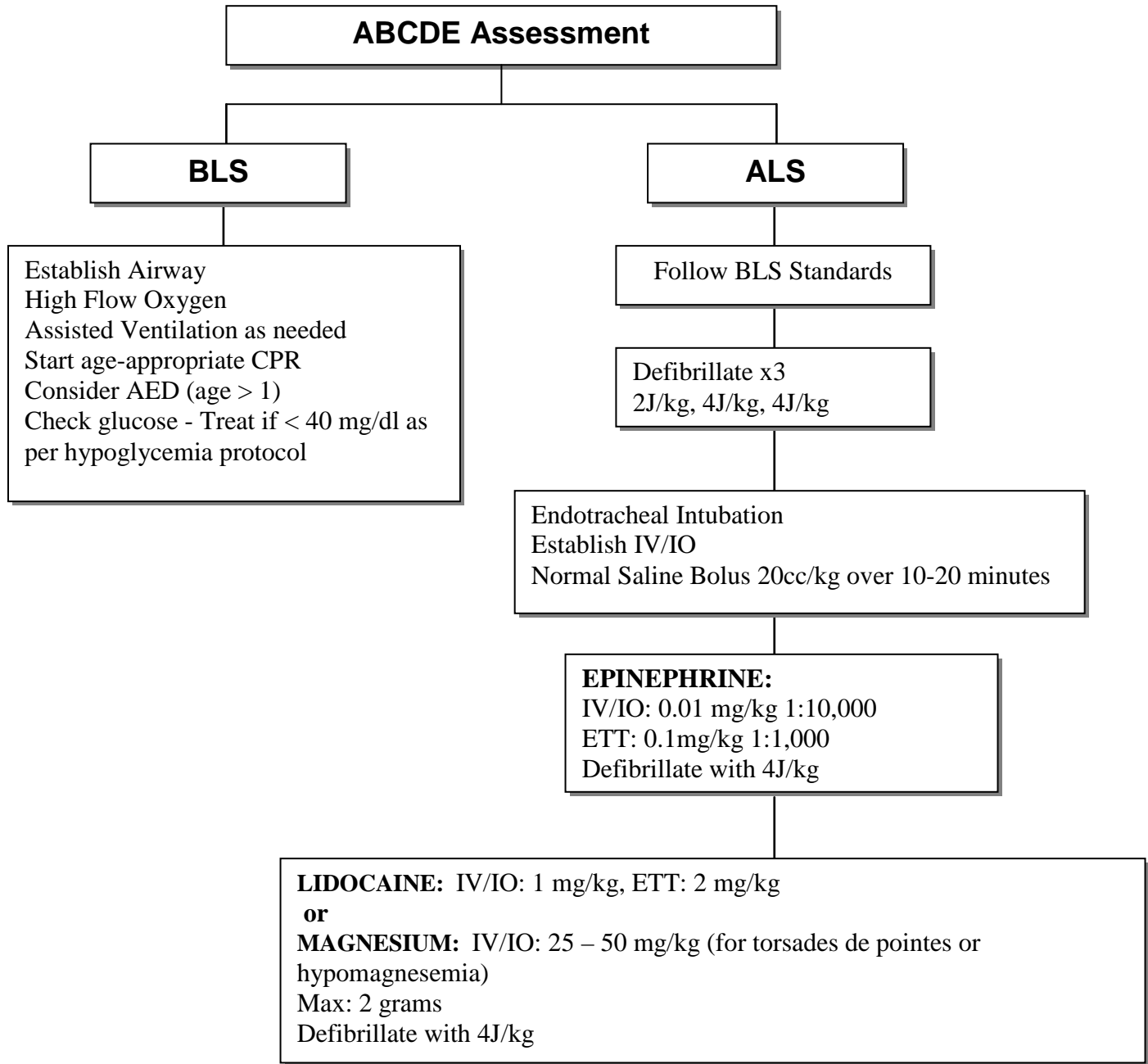
Transport

Monitor rate in children <2 years is >220 bpm
Biphasic energy settings may be different

Pediatric

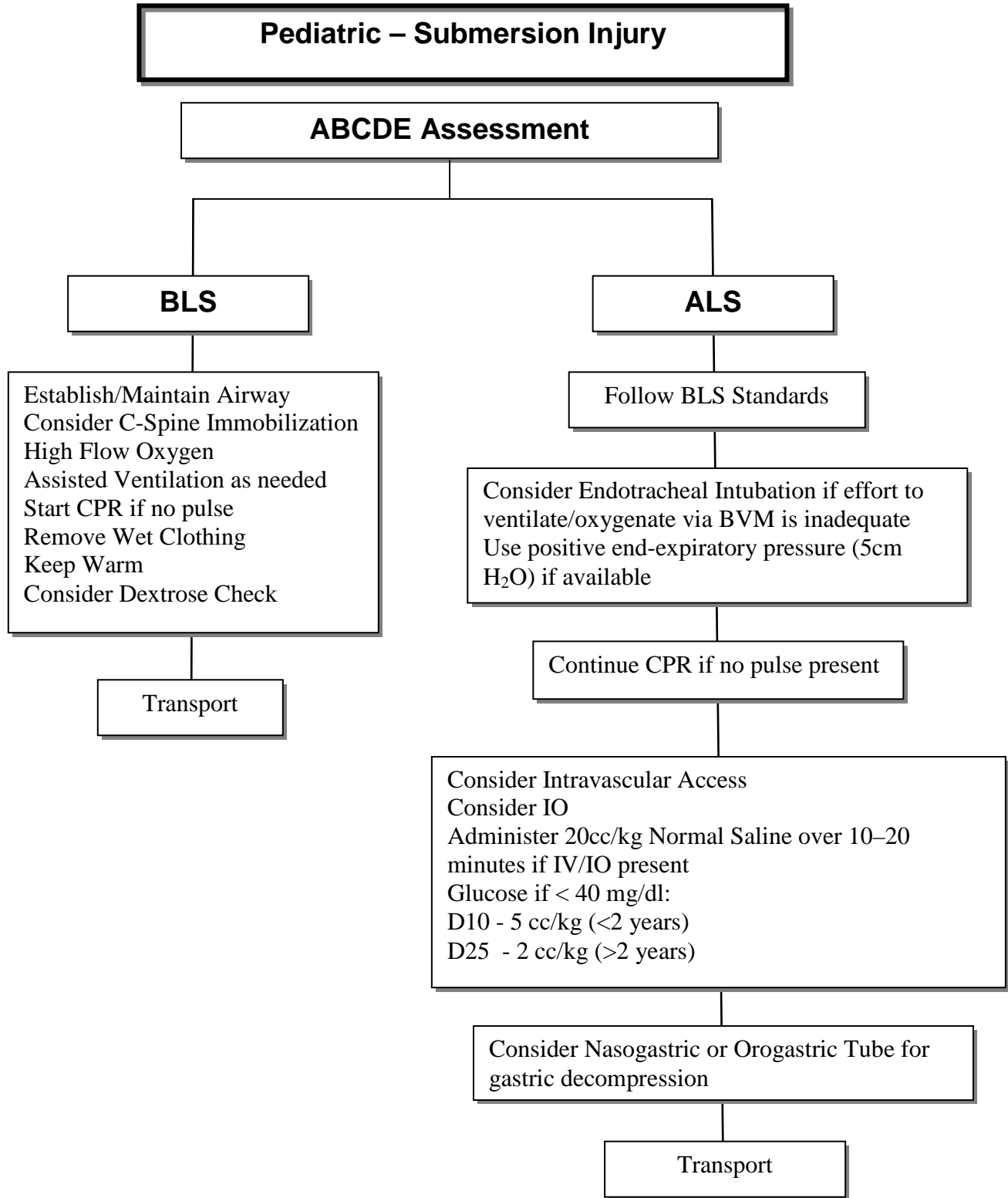
Apnic/Pulseless – 111.02

Pediatric - Ventricular Fibrillation/Pulseless Ventricular Tachycardia



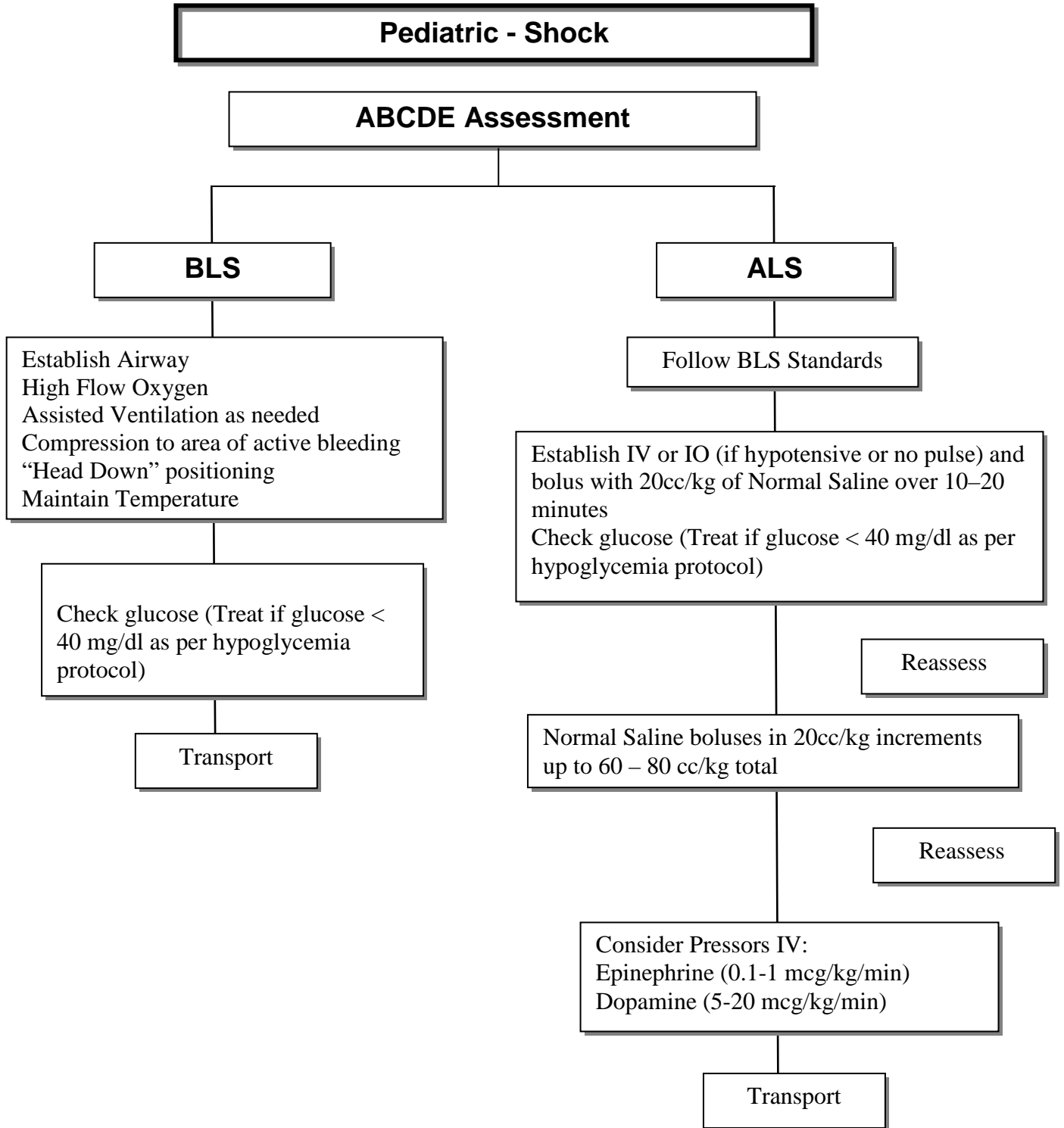
Pediatric

Submersion - 111.03



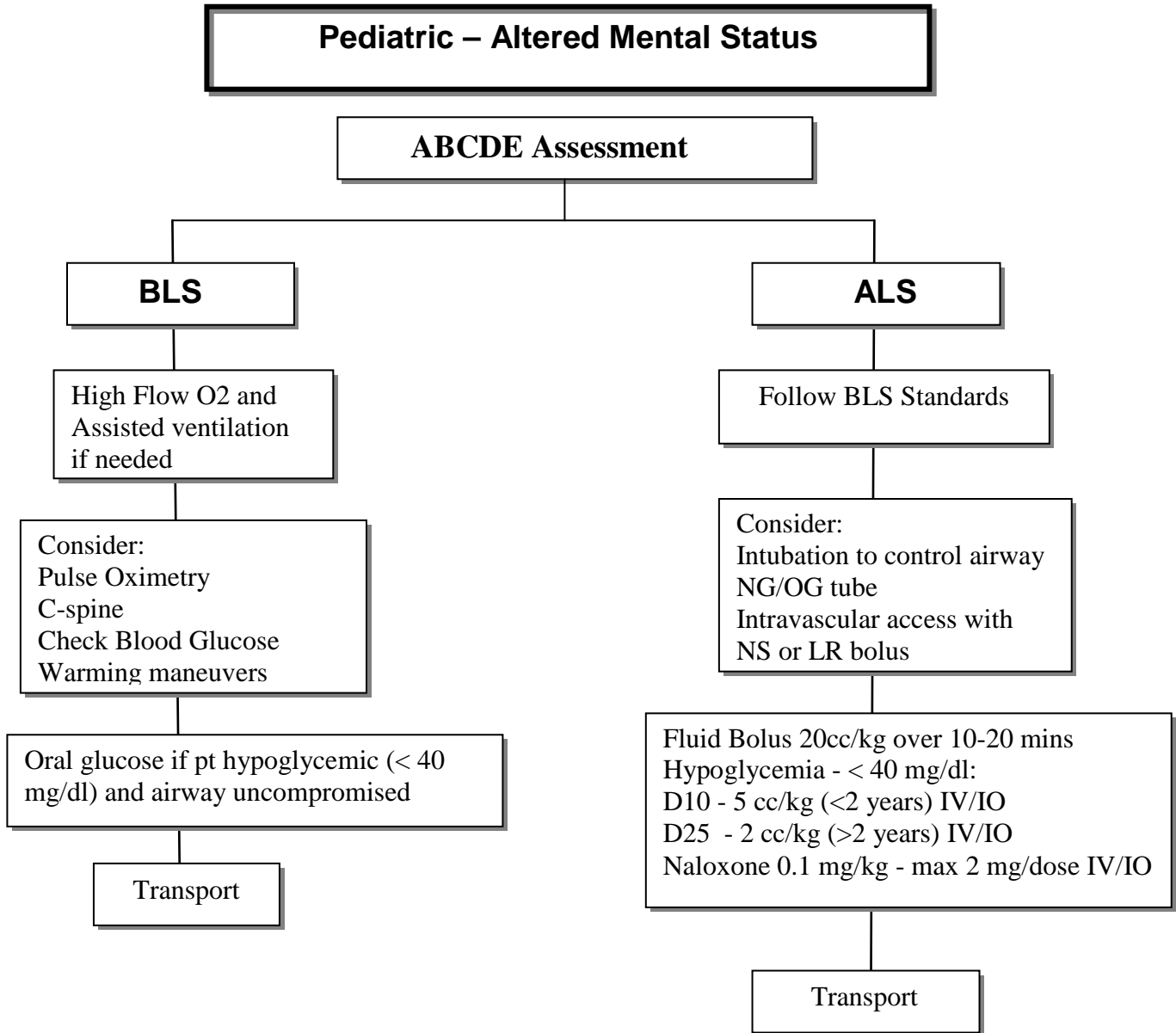
Pediatric

Shock - 111.04



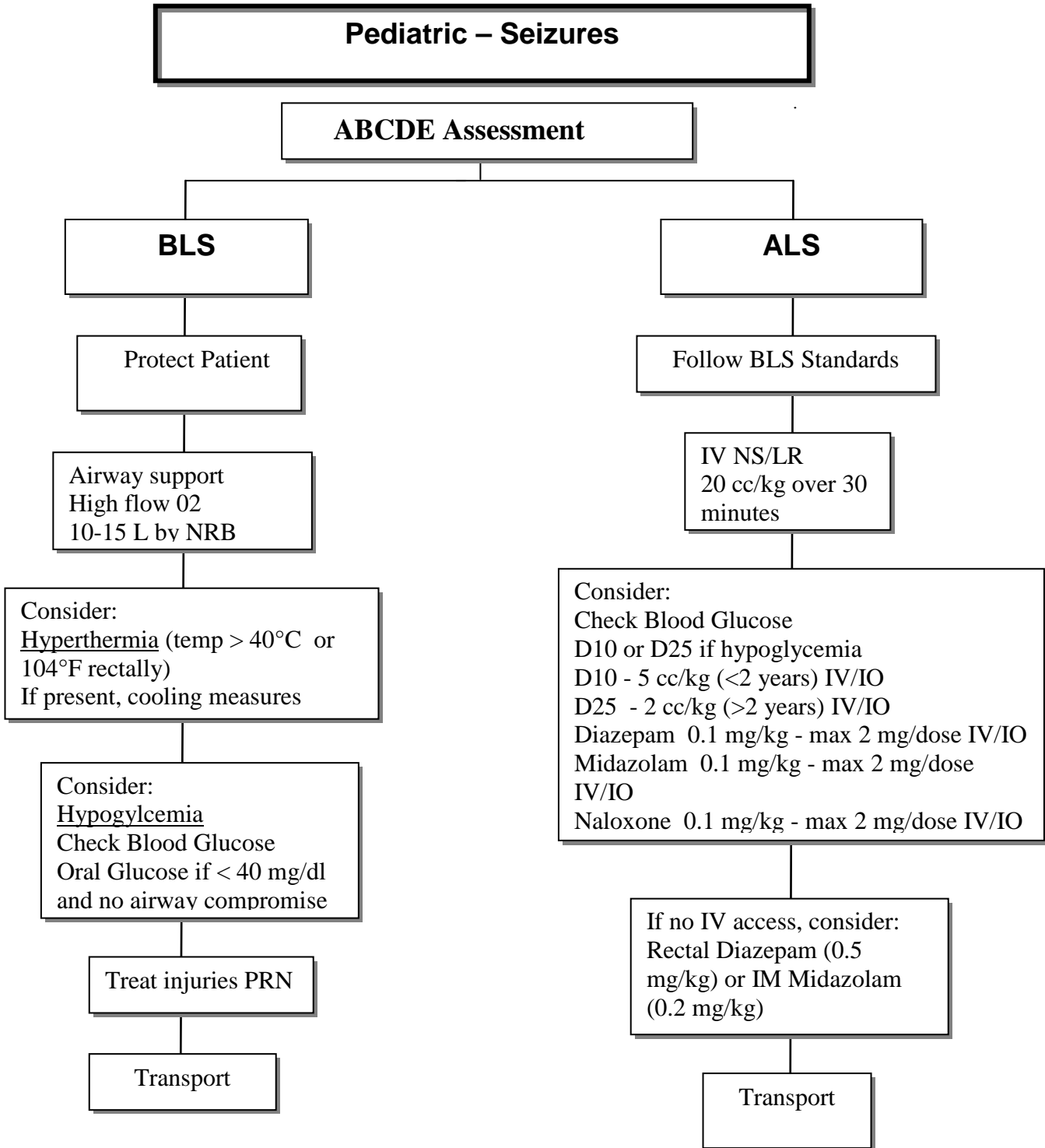
Pediatric

Altered Mental Status - 111.05



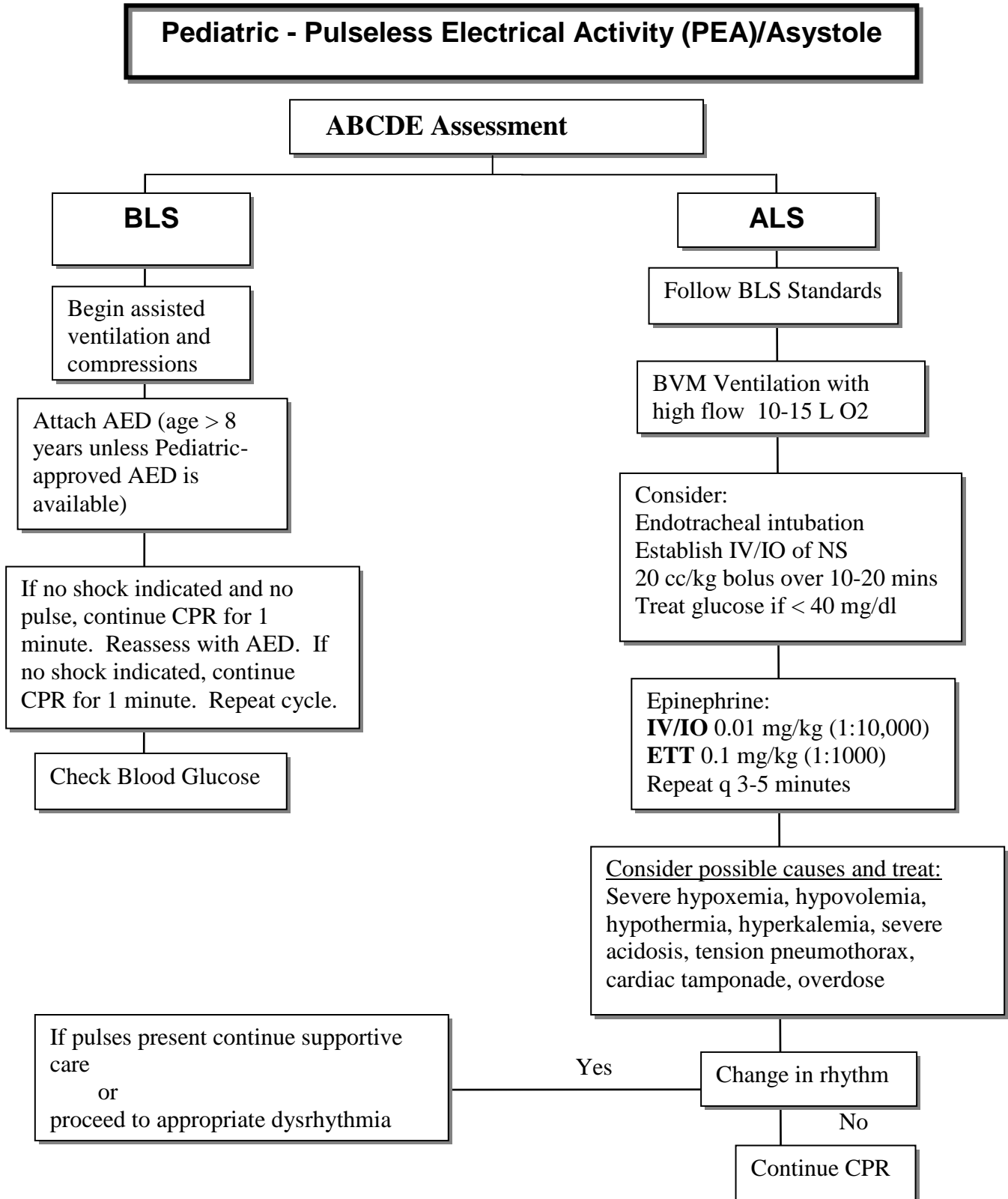
Pediatric

Seizures - 111.06



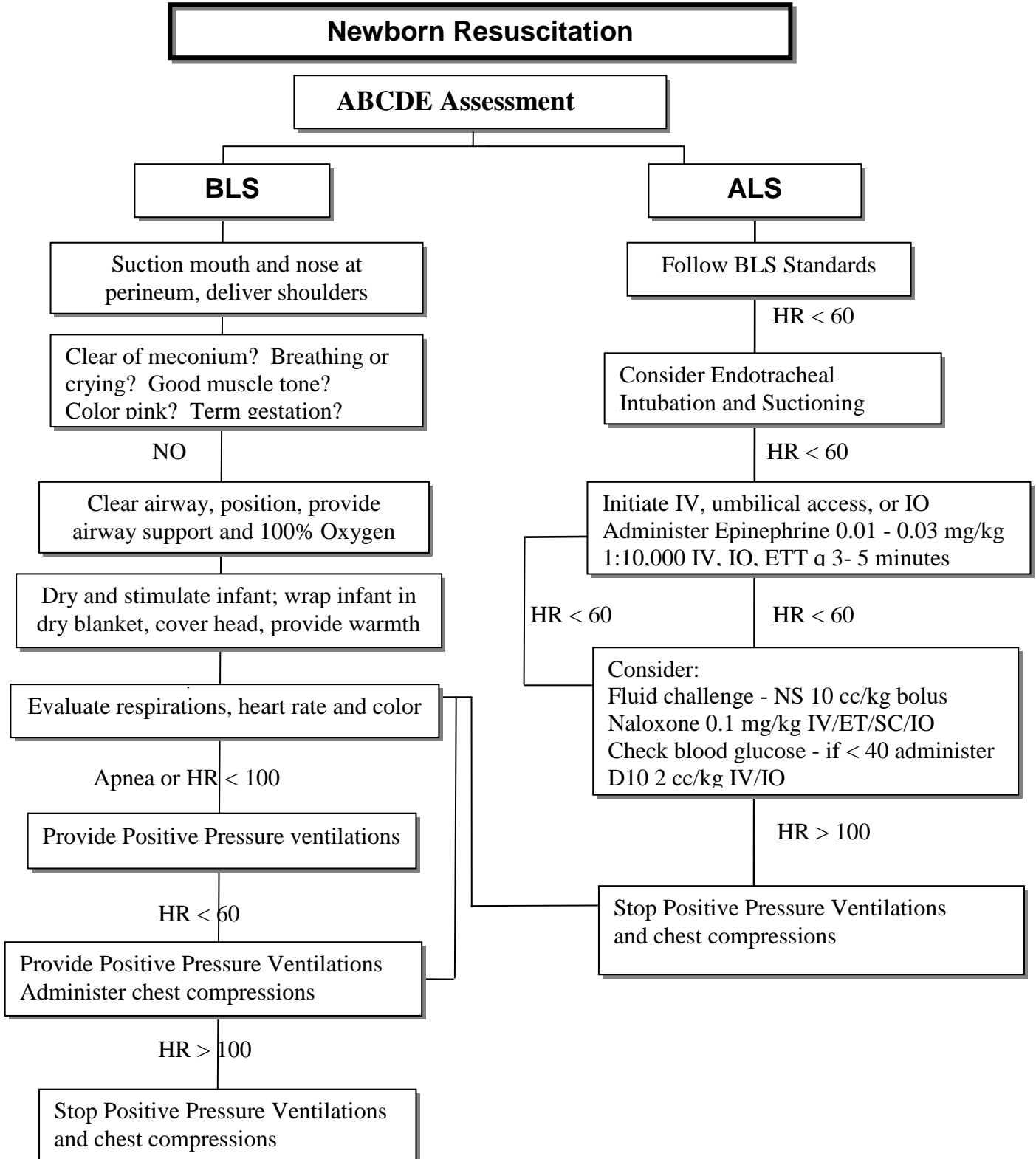
Pediatric

PEA/Asystole - 111.07



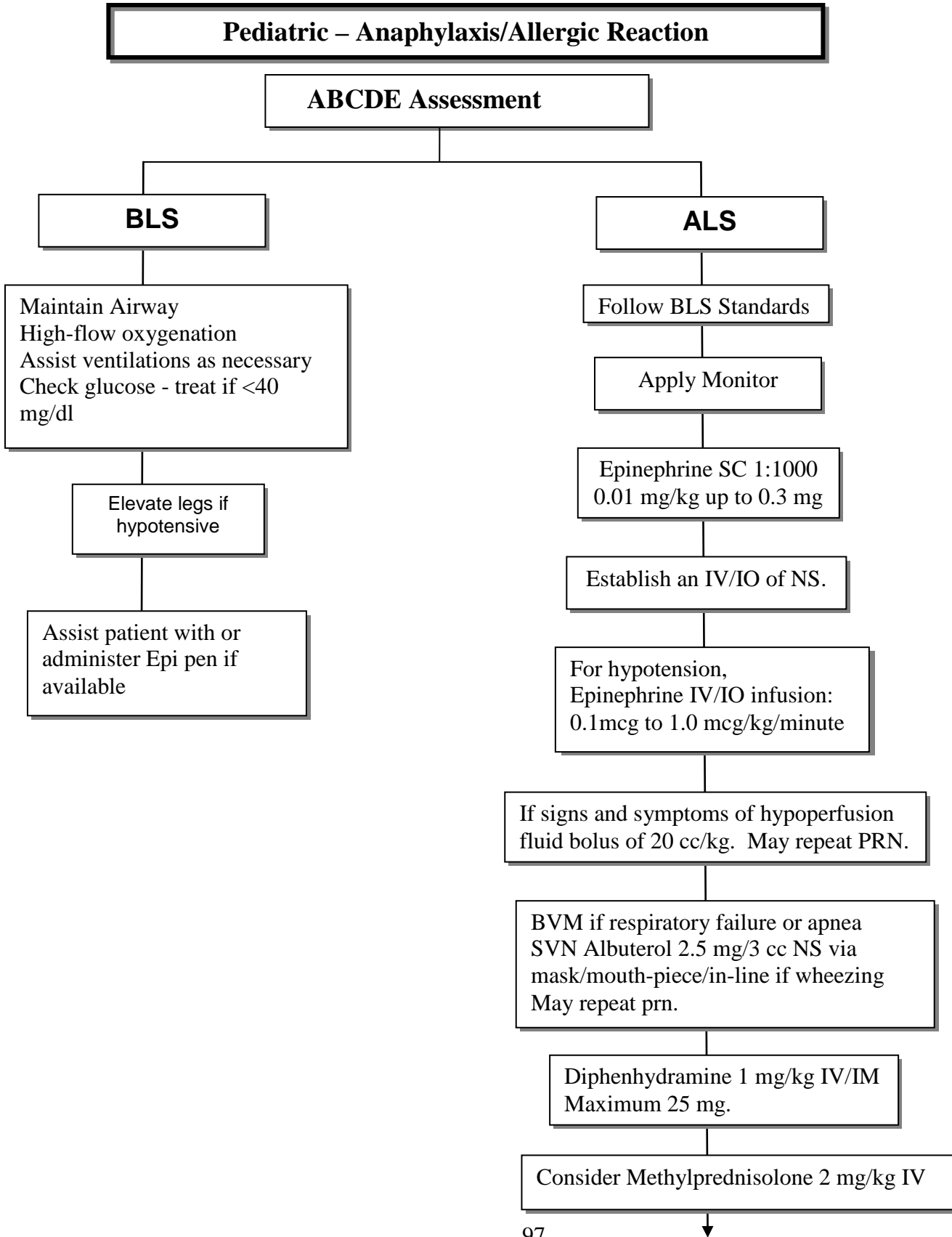
Pediatric

Newborn Resuscitation - 111.08



Pediatric

Anaphylaxis/Allergic Reaction - 111.09



Pediatric

Unstable bradycardia - 111.10

