

# **REGION 7**

## **Emergency Medical Services Systems**

Advocate Christ Medical Center EMS System

Morris EMS System

Provena Saint Mary's EMS System

Riverside EMS System

Silver Cross EMS System

South Cook County EMS System

## **ADVANCED LIFE SUPPORT Standing Medical Orders**

**REVISED: OCTOBER 1<sup>st</sup>, 2011**

Effective: May 1<sup>st</sup>, 1998

# REGION 7 EMERGENCY MEDICAL SERVICES SYSTEMS ADVANCED LIFE SUPPORT STANDING MEDICAL ORDERS

## INTRODUCTION

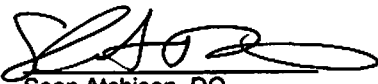
These orders are to be used as the pre-hospital treatment protocols. They are to be followed by all Advanced Life Support (ALS) members of the EMS System. Deviations from these orders can be made only by the Medical Director or designee.

These orders are to be used in the following situations:

1. When the initiation of care begins before hospital communication is established.
2. In the event that communications cannot be established or communication is disrupted or lost between the responding paramedics and their directing hospital. Every effort should be made to contact the hospital over the telemetry radio, MERCI radio, cellular phone or landline phone.
3. Until the patient arrives at the hospital and the patient's care has been transferred to the appropriate hospital personnel.
4. In disaster situations, when immediate action to preserve lives and limbs supersedes the need to communicate directly with the hospital.

All emergency patients must be transported to a hospital emergency department with inpatient facilities.

Due to geographic and regional considerations, some systems may include or exclude certain drugs as indicated.



Sean Atchison, DO  
Medical Director  
Morris EMS System  
Morris Hospital



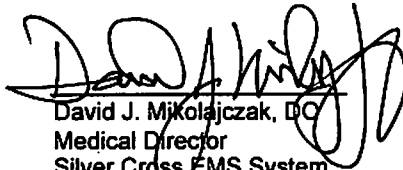
Joseph P. Danna, MD  
Medical Director  
St. Mary's-Kankakee EMS System  
Provena St. Mary's Hospital



Bernard Heilicser, DO  
Medical Director  
South Cook County EMS System  
Ingalls Memorial Hospital



David Teague, MD  
Medical Director  
Riverside EMS System  
Riverside Medical Center



David J. Mikolajczak, DO  
Medical Director  
Silver Cross EMS System  
Silver Cross Hospital



Sean E. Motzny, MD  
Medical Director  
Advocate Christ Medical Center EMS System  
Advocate Christ Medical Center

**REGION VII**  
**ALS STANDING MEDICAL ORDERS**  
**2011 REVISION SUMMARY**

Only changed SMOs are listed below. If an SMO is not listed below, it was not changed.

- Code 1            Added Zofran ODT for adults and pediatrics
- Code 3-           Deleted pediatrics (< 1 year) airway obstruction guidelines from the adult airway obstruction SMO
- Code 6-           In order to minimize interruptions in CPR during the acute resuscitation phase, consider placing a King airway. Clarified Epinephrine concentration; Deleted Lidocaine drip.
- Code 9-           In order to minimize interruptions in CPR during the acute resuscitation phase, consider placing a King airway. Clarified Epinephrine concentration; Deleted Atropine.
- Code 13-          Consider CPAP enroute, if available, for patient's with a BP > 90
- Code 14-          Reformatted for clarification
- Code 22-          Under chemical burn, perform routine burn wound care after irrigation or flushing
- Code 32-          Added Intranasal Glucagon
- Code 33-          Added Intranasal Narcan and Intranasal Glucagon
- Code 34-          Added Intranasal Narcan
- Code 38-          Perform 12 Lead EKG, added "if available"
- Code 65-          Deleted #3 bullet point #3: Statement about child under the age of 10 being left unattended.
- Code 75-          Deleted cricoid pressure (Sellick Maneuver) during the endotracheal intubation procedure for adult and pediatric patients
- Code 75a-         Deleted anesthetic spray
- Code 85-          Added procedure for Intranasal Administration

# REGION 7 STANDING MEDICAL ORDERS

## I N D E X

### CODE      CARDIAC PROTOCOLS

1. INITIAL CARDIAC CARE/INITIAL MEDICAL CARE/ROUTINE CARDIAC CARE GENERAL PATIENT ASSESSMENT
- 1a. INITIAL CARDIAC CARE/INITIAL MEDICAL CARE/ROUTINE CARDIAC CARE GENERAL PATIENT ASSESSMENT/ ABBREVIATED RADIO REPORT
2. RESPIRATORY DISTRESS
3. AIRWAY OBSTRUCTION
4. CARDIAC ARREST (SEE APPROPRIATE DYSRHYTHMIA)
5. CARDIOGENIC SHOCK
6. VENTRICULAR FIBRILLATION - PULSELESS VENTRICULAR TACHYCARDIA
7. TACHYCARDIAS (WITH PULSE)
8. VENTRICULAR ECTOPY
9. PULSELESS ELECTRICAL ACTIVITY
10. BRADYCARDIA (PULSE < 60)
11. INDUCED THERAPEUTIC HYPOTHERMIA
12. SUSPECTED CARDIAC PATIENT
13. PULMONARY EDEMA DUE TO HEART FAILURE

### CODE      TRAUMA PROTOCOLS

14. FIELD TRIAGE PROTOCOLS
15. REVISED TRAUMA SCORE/GLASGOW COMA SCALE
16. ROUTINE TRAUMA CARE: PRIMARY AND SECONDARY ASSESSMENT
17. HEMORRHAGIC SHOCK
18. SUSPECTED SPINAL CORD INJURY - SPINAL IMMOBILIZATION
19. HEAD TRAUMA/UNCONSCIOUS PATIENT
20. TRAUMATIC CARDIOPULMONARY ARREST
21. EXTREMITY INJURIES/AMPUTATED PARTS
- 21a. CRUSH INJURIES
22. BURNS

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**CODE      TRAUMA PROTOCOLS - CONTINUED**

- 23. CHEST TRAUMA
- 24. TRAUMA IN PREGNANCY
- 25. INITIAL MANAGEMENT OF THE PEDIATRIC TRAUMA PATIENT
- 26. ACCELERATED TRANSPORT
- 27. PEDIATRIC TRAUMA
- 28. PEDIATRIC ASSESSMENT & TRAUMA SCORE
- 29. PEDIATRIC BURNS (Thermal, Electrical, Chemical)

**CODE      PROTOCOLS FOR MEDICAL EMERGENCIES**

- 30. ACUTE ASTHMA/COPD WITH WHEEZING
- 31. ALLERGIC REACTION/ANAPHYLACTIC SHOCK
- 32. DIABETIC GLUCOSE EMERGENCIES
- 33. DRUG OVERDOSE/ALCOHOL RELATED EMERGENCIES/POISONING
- 34. COMA OF UNKNOWN ORIGIN (NO HISTORY OF TRAUMA)
- 35. SEIZURES/STATUS EPILEPTICUS
- 36. HEAT EMERGENCIES
- 37. COLD EMERGENCIES
- 38. SUSPECTED STROKE
- 39. HAZARDOUS MATERIALS - GENERAL
- 40. HAZARDOUS MATERIALS - EYE
- 41. HAZARDOUS MATERIALS - PESTICIDE/NERVE AGENT
- 42. HAZARDOUS MATERIALS - RADIATION
- 43. RENAL PROTOCOLS
- 44. DROWNING

**CODE      OBSTETRICAL/GYNECOLOGICAL PROTOCOLS**

- 45.            EMERGENCY CHILDBIRTH - LABOR & DELIVERY
- 46.            OBSTETRICAL COMPLICATIONS
- 47.            ABNORMAL DELIVERIES
- 48.            RESUSCITATION AND CARE OF THE NEWBORN
- 49.            MATERNAL CARE

**CODE      PEDIATRIC PROTOCOLS**

- 50.            PEDIATRIC INITIAL ASSESSMENT
- 51.            PEDIATRIC CARDIAC ARREST
- 52.            PEDIATRIC BRADYCARDIA
- 53.            PEDIATRIC TACHYCARDIA WITH POOR PERFUSION
- 54.            PEDIATRIC TACHYCARDIA WITH ADEQUATE PERFUSION
- 55.            PEDIATRIC RESPIRATORY DISTRESS
- 56.            PEDIATRIC RESPIRATORY ARREST
- 57.            PEDIATRIC SHOCK
- 58.            PEDIATRIC ALLERGIC REACTION/ANAPHYLAXIS
- 59.            PEDIATRIC SEIZURES
- 60.            PEDIATRIC ALTERED LEVEL OF CONSCIOUSNESS
- 61.            PEDIATRIC TOXIC EXPOSURES/INGESTIONS
- 62.            PEDIATRIC HEAT EMERGENCIES
- 63.            PEDIATRIC COLD EMERGENCIES
- 64.            PEDIATRIC DROWNING

**CODE      PROTOCOLS FOR SPECIAL SITUATIONS**

- 65.      SUSPECTED CHILD ABUSE AND NEGLECT
- 66.      PSYCHOLOGICAL EMERGENCIES/DOMESTIC VIOLENCE/SPOUSAL ABUSE/  
GERIATRIC ABUSE/SEXUAL ASSAULT
- 67.      TRIPLE 000/DNR/CRITERIA FOR INITIATION OF CPR
- 68.      RESTRAINTS AND BEHAVIORIAL EMERGENCIES
- 69.      REFUSALS OF CARE

**CODE      PROCEDURAL PROTOCOLS**

- 70.      NITROUS OXIDE ADMINISTRATION
- 71.      EXTERNAL JUGULAR VEIN CANNULATION
- 72.      DECOMPRESSION OF TENSION PNEUMOTHORAX
- 73.      INTRAOSSEOUS NEEDLE INSERTION
- 74.      PERCUTANEOUS TRANSTRACHEAL VENTILATION  
(NEEDLE CRICOTHYROTOMY)
- 75.      ENDOTRACHEAL INTUBATION - ADULT AND PEDIATRIC
- 75a      MEDICATION ASSISTED INTUBATION-ADULT AND PEDIATRIC
- 76.      CONTINUOUS POSITIVE AIRWAY PRESSURE ADMINISTRATION
- 77.      MEDICATION ADMINISTRATION - IV PUSH
- 78.      MEDICATION ADMINISTRATION - IV DRIP
- 79.      MEDICATION ADMINISTRATION - INTRAMUSCULAR
- 80.      MEDICATION ADMINISTRATION - NEBULIZED INHALATION
- 81.      TRANSCUTANEOUS CARDIAC PACING
- 82.      DEFIBRILLATION
- 83.      SYNCHRONIZED CARDIOVERSION
- 84.      MECONIUM ASPIRATOR
- 85.      INTRANASAL ADMINISTRATION

**REGION 7**

**STANDING MEDICAL ORDERS**

**CARDIAC PROTOCOLS**

# Code 1

## INITIAL MEDICAL CARE ROUTINE CARDIAC CARE GENERAL PATIENT ASSESSMENT

1. Prehospital providers shall always assess the scene to assure the safety of all personnel.
2. Patient care and treatment begins at the "bedside."
3. Prehospital personnel shall take all reasonable precautions to prevent exposure to blood and/or body fluids of any patient. Use fluid repellent gowns, masks and goggles as situation dictates.
4. For Pediatric Dosing, utilize a length based Pediatric Tape or Chart.

### GENERAL PATIENT ASSESSMENT

1. Initial Assessment
  - A. Airway - Establish and/or maintain an airway (cervical spine control, if indicated)
  - B. Breathing - Assist ventilation as required
  - C. Circulation (pulse) and hemorrhage control (if indicated)
  - D. Disability (Level of Consciousness)
    1. "Alert"
    2. "Verbal" - (responds to verbal stimuli)
    3. "Pain" - (responds to painful stimuli)
    4. "Unresponsive"
  - E. Exposure and examine (if indicated)
2. Focused Assessment
  - A. Vital signs, and where applicable, Glasgow Coma Scoring parameters
  - B. Systematic head - to - toe detailed assessment
  - C. History of present illness/injury

### INITIAL MEDICAL CARE/ROUTINE CARDIAC CARE

1. Reassure patient, provide comfort and loosen tight clothing.
2. Sit patient in semi-Fowler's or position of comfort (if applicable)
3. Obtain Pulse Oximeter value prior to oxygen delivery  
Deliver OXYGEN 2-6 L by nasal cannula or 12-15L by mask, unless otherwise specified.
4. Evaluate cardiac rhythm, if indicated. Consider use of 12-lead, if available. (All ALS patients do not necessarily require continuous ECG monitoring or transmission of a strip to the hospital.)
5. If patient's condition warrants, obtain IV access (Saline lock or NS). Attempt x2 unless requested to continue.
6. For adult and pediatrics  $\geq 1$  year old experiencing nausea, consider Zofran ODT 4mg tab x 1 dose only.
7. Contact hospital as soon as patient's condition permits. Transmit assessment information and await orders. If no radio contact can be established or patient's condition requires immediate treatment, refer to appropriate SMO and begin intervention immediately.
8. Recheck vitals and other pertinent signs at least every 15 minutes and record, noting times.
9. Transport to closest hospital. NOTE: By law, a physician must certify that the benefits outweigh the risk of transport to a facility other than the nearest hospital. If the patient refuses care or transport to the closest hospital, refer to policy and document signatures and situation.

NOTE: In a combative or uncooperative patient, the requirement to initiate initial routine medical care, as written, may be altered or waived in favor of rapidly transporting the patient for definitive care. Document the patient's actions or behaviors which interfered with the performance of any assessments and/or interventions.

### OUTLINE FOR RADIO REPORT (Transmit using as few words as possible)

1. Name and vehicle number of provider
2. Requested destination, closest hospital, and estimated time of arrival
3. Age, sex, and approximate weight of patient
4. Chief Complaint, to include symptoms and degree of distress
5. History of present illness/injury
6. Pertinent Medical History:
  - Allergies
  - Medications
  - Past History of Current Illness
  - Last Meal
  - Events surrounding incident
7. Clinical condition:
  - Focused and detailed patient assessment findings
8. Treatment initiated and Response

# Code 1a

**INITIAL MEDICAL CARE  
ROUTINE CARDIAC CARE  
GENERAL PATIENT ASSESSMENT  
ABBREVIATED RADIO REPORT**

The use of an abbreviated report is optional. A full report may always be given at the discretion of the prehospital provider. A full report must always be given when vital signs are unstable, when any treatment has been initiated other than **OXYGEN** AND/OR establishment of an IV, OR when requesting transport to other than the closest hospital (by time).

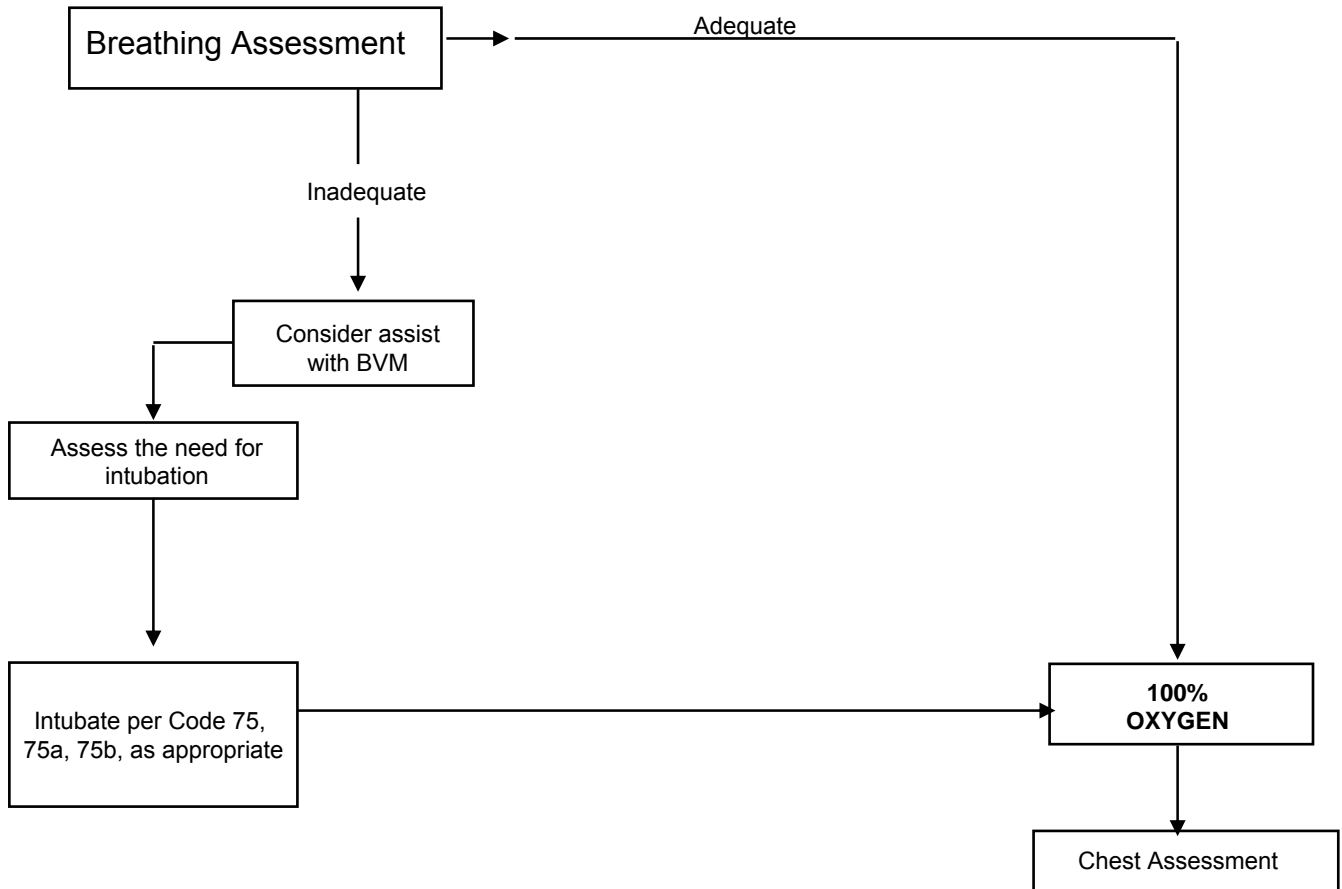
Refer to **CODE 1** and follow the steps under **GENERAL PATIENT ASSESSMENT** and **INITIAL MEDICAL CARE/ROUTINE CARDIAC CARE**.

## **OUTLINE FOR ABBREVIATED RADIO REPORT (Transmit using as few words as possible)**

1. Name and vehicle number of provider
2. Requested destination, closest hospital, and estimated time of arrival
3. Age and sex
4. Chief Complaint, to include symptoms and degree of distress
5. Clinical condition:
  - Vital signs stable

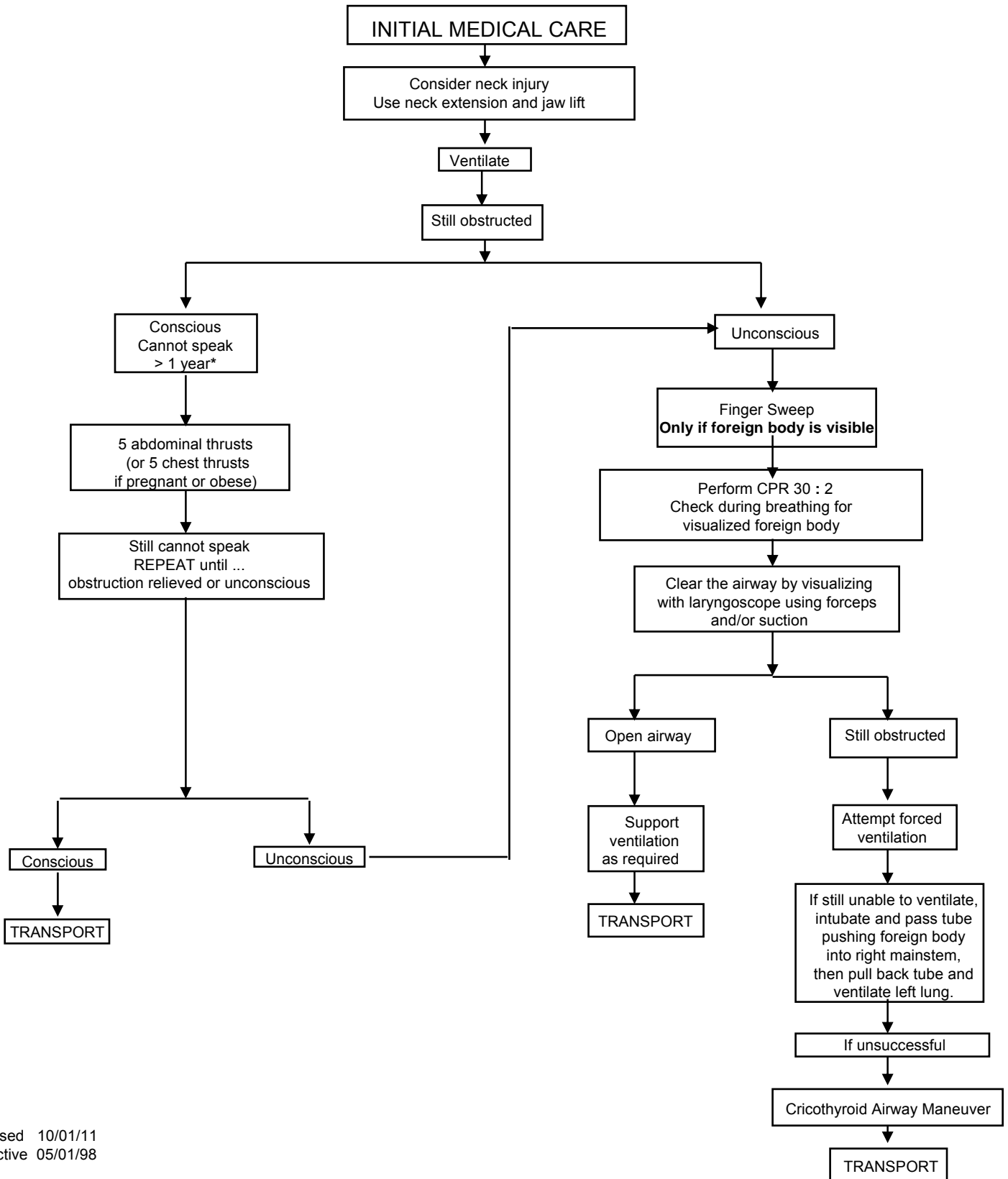
# Code 2

## RESPIRATORY DISTRESS



# Code 3

## AIRWAY OBSTRUCTION



**Code 4**

**CARDIAC ARREST**

(SEE APPROPRIATE  
DYSRHYTHMIA)

# Code 5

## CARDIOGENIC SHOCK

INITIAL MEDICAL CARE

SBP <90  
WITHOUT  
DYSRHYTHMIA

TRANSPORT ASAP

IV NS fluid challenge in  
200ml increments up to 1000ml  
(if lungs remain clear)  
OR  
until SBP >90

SBP >90

YES

NO

Continue IMC  
and Rapid  
TRANSPORT

Initiate **DOPAMINE** Drip  
@ 5mcg/kg/min.  
Titrate to maintain  
SBP >90

Continue IMC and  
Rapid TRANSPORT

SBP <90  
WITH  
DYSRHYTHMIA

TREAT UNDERLYING  
DYSRHYTHMIA  
AND TRANSPORT ASAP

### Dopamine Drip:

400mg in 250ml D5W = 1.6mg/ml=1600mcg/ml

Dose = 5mcg/kg/min. to start

220 lbs. = 100kg x 5mcg/kg/min. = 500mcg/min. = 20microdrops/min. = 20ml/hr

132 lbs. = 60kg x 5mcg/kg/min. = 300mcg/min. = 12microdrops/min. = 12ml/hr

### NOTE TO PREHOSPITAL PROVIDERS:

If patient is in (or develops respiratory distress) despite treatment, maintain airway and prepare to intubate.

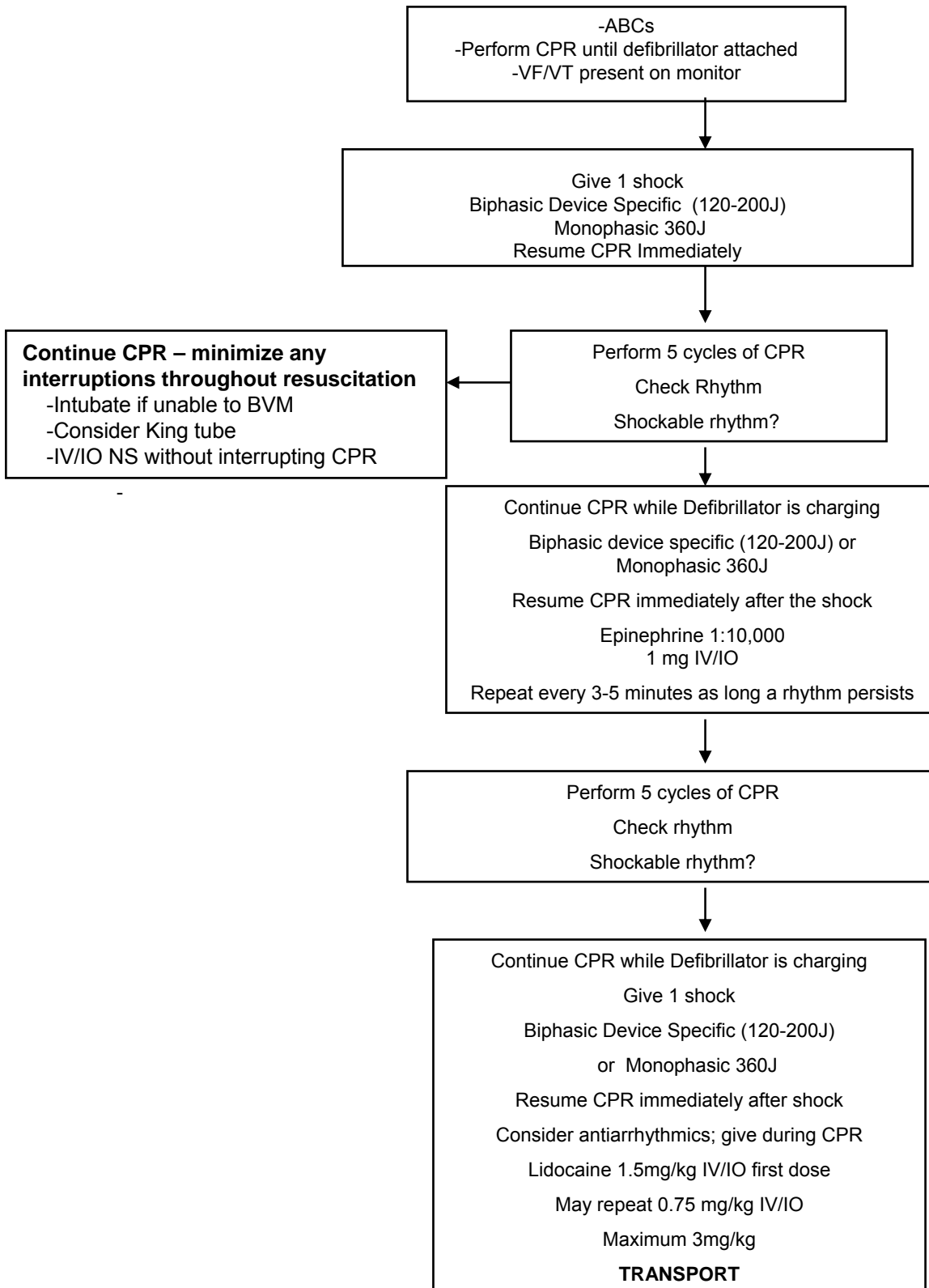
Reviewed 10/01/11

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# Code 6

## VENTRICULAR FIBRILLATION/ PULSELESS VENTRICULAR TACHYCARDIA



# Code 7

## TACHYCARDIAS (WITH PULSE)

### INITIAL MEDICAL CARE

#### STABLE

Rate >150  
Patient is alert, without  
any signs of hypoperfusion\*

Narrow  
Complex

Wide  
Complex

Valsalva  
Maneuvers

Continue IMC  
and TRANSPORT

**ADENOSINE** (Adenocard)  
6mg IVP

**ADENOSINE** (Adenocard)  
12mg IVP

Continue IMC  
and TRANSPORT

#### UNSTABLE

Rate >150 and signs  
of hypoperfusion\*

If conscious,  
consider sedation with  
**MIDAZOLAM HYDROCHLORIDE** (Versed)  
2.5mg slow IV

Synchronous  
Cardioversion\*\*  
Biphasic device specific (100-120J)  
or Monophasic 100-200J

If no response:  
2<sup>nd</sup> dose  
Biphasic escalate to maximum  
Monophasic 360J

Contact Medical Control  
for further orders

**ACCELERATED  
TRANSPORT**

#### NOTE TO PREHOSPITAL PROVIDERS:

- \*Signs of hypoperfusion: severe CP, severe SOB, SBP < 90, diaphoresis, altered mental status.
- ADENOSINE** (Adenocard) should always be administered RAPIDLY IVP and immediately followed with a 10ml NS bolus. Antecubital vein is preferred site to administer **ADENOSINE** (Adenocard).
- Always record rhythm strip and deliver to physician caring for patient.
- Wide Complex = QRS > 0.12 sec. (3 small boxes)  
Narrow Complex = QRS < 0.12 sec.
- Sinus Tachycardia should be treated appropriately.
- If **MIDAZOLAM HYDROCHLORIDE** (Versed) is administered for sedation, the patient's oxygen saturation must be monitored via pulse oximetry.
- \*\*Do not delay synchronous cardioversion while awaiting IV access.

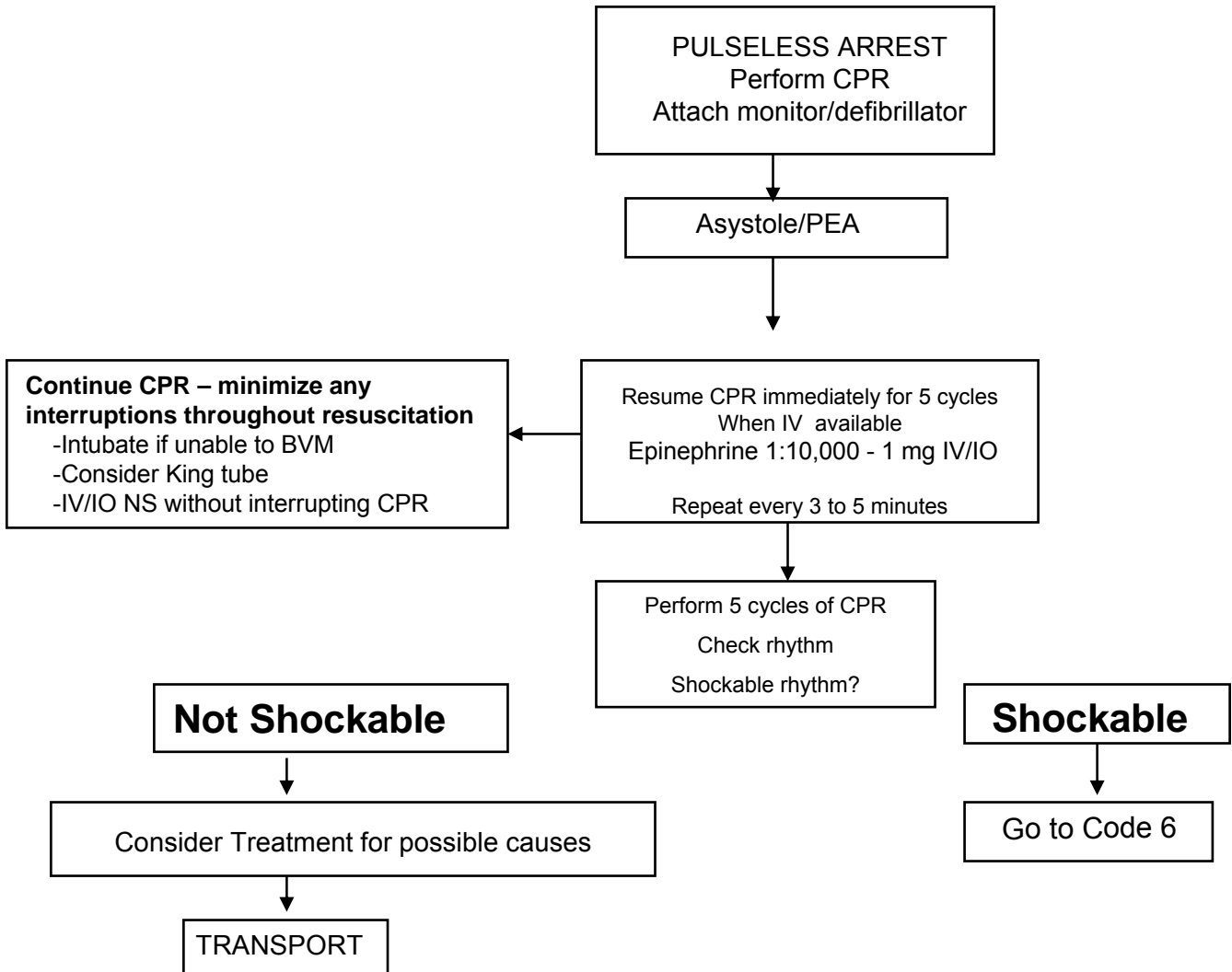
# Code 8

**VENTRICULAR ECTOPY**

**DO NOT TREAT ASYMPTOMATIC  
VENTRICULAR ECTOPY WITHOUT  
BASE STATION CONTACT**

# Code 9

## PULSELESS ELECTRICAL ACTIVITY/ASYSTOLE



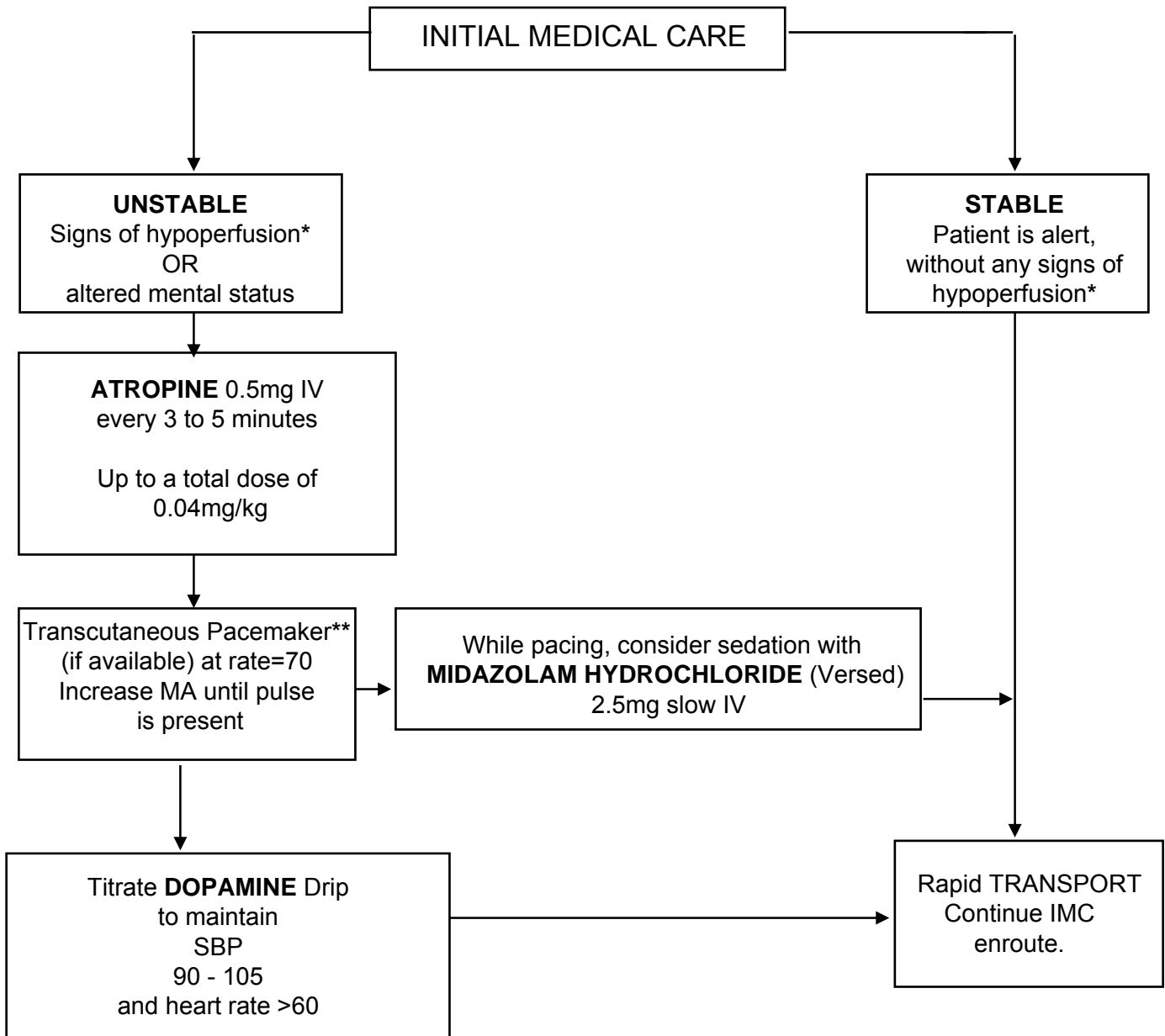
- Hypothermia -----> Follow appropriate SMO
- Hypovolemia -----> Fluid challenge (200ml of current IV)
- Tension Pneumothorax -----> Pleural Decompression
- Acidosis/Hypoxemia -----> Ventilate with 100% **OXYGEN** (Check tube placement)
- Pulmonary Embolism -----> Rapid TRANSPORT with 100% **OXYGEN**

**AT DISCRETION OF A PHYSICIAN/ECRN:**  
**SODIUM BICARBONATE** 1meq/kg IV/IO

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# Code 10

## BRADYCARDIA (Pulse < 60)



### NOTE TO PREHOSPITAL PROVIDERS:

1. \*Signs of hypoperfusion include: severe chest pain, severe SOB, SBP <90, diaphoresis
2. If Transcutaneous Pacer not available, start **DOPAMINE** Drip. Begin @ 5mcg/kg/minute and titrate to patient response. Refer to **CARDIOGENIC SHOCK CODE 5** for **DOPAMINE** dosing chart.
3. \*\*Do not delay Transcutaneous Pacer while awaiting IV access or for **ATROPINE** to take effect if patient is symptomatic.
4. If **MIDAZOLAM HYDROCHLORIDE (Versed)** is administered for sedation, the patient's oxygen saturation must be monitored via pulse oximetry.

# Code 11

## INDUCED THERAPEUTIC HYPOTHERMIA (If available)

### INDICATION

- EMS resuscitated cardiac arrest or post-AED defibrillation
- Return of Spontaneous Circulation after cardiac arrest not related to trauma, hemorrhage, or infection
- Any presenting rhythm is acceptable
- Age > 16
- Not obviously pregnant/no history of current pregnancy
- Initial Temp >34° C (93.2° F)
- Patient is intubated and remains comatose (no response to verbal stimuli)

RETURN OF SPONTANEOUS CIRCULATION



INITIAL PATIENT TEMP > 34°C (93.2° F)



Endotracheal Intubation (if not already performed)



Quick Neuro Exam: NO response to verbal stimuli?



Expose Patient. 12 Lead EKG



Apply ICE packs to AXILLA and GROIN



COLD SALINE BOLUS: 30 ml/kg to max of 2L



VERSED 0.15 mg/kg slow IV push up to 10 mg  
(for sedation and to prevent shivering) with repeat blood pressure monitoring

### NOTE TO PREHOSPITAL PROVIDERS:

- If unable to intubate, DO NOT induce hypothermia.
- Do not delay transport for purpose of cooling.
- If at any time the patient loses a pulse, stop cooling and proceed to appropriate protocol.
- When exposing patient for purpose of cooling, undergarments may remain in place.  
Be mindful of bystanders, patient safety, and patient modesty.

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# Code 12

## SUSPECTED CARDIAC PATIENT

INITIAL MEDICAL CARE  
Perform 12-Lead ECG and Transmit, if available

SBP <90mmHg

4 tabs \***BABY ASPIRIN** PO  
unless  
contraindicated\*

Refer to  
appropriate  
SMO

SBP 90-110mmHg

4 tabs \***BABY ASPIRIN** PO  
unless  
contraindicated\*

TRANSPORT

SBP >110mmHg

4 tabs \***BABY ASPIRIN** PO  
unless  
contraindicated\*

**NITROGLYCERIN\*\***  
gr 1/150 tab **OR** spray SL  
May repeat X 2 in 5 minutes  
(If no IV, consider hospital  
contact prior to administration)

Repeat vital signs

**MORPHINE SULFATE**  
2-10mg IV in 1-2mg  
increments every 5 minutes  
as necessary for severe chest pain.

Repeat vital signs

TRANSPORT

### Consider 12-Lead EKG for complaints of:

(may be deferred if patient unstable)

- Chest pain/Discomfort/Pressure
- Arm Pain (non-traumatic)
- Jaw Pain (non-traumatic)
- Upper back pain (non-traumatic)
- Unexplained diaphoresis
- Vomiting without fever or diarrhea
- Shortness of breath
- Dizziness/syncope
- Epigastric pain
- Fall in the elderly (unexplained)
- Weakness/Fatigue
- Bradycardia or Tachycardia

### NOTE TO PREHOSPITAL PROVIDERS:

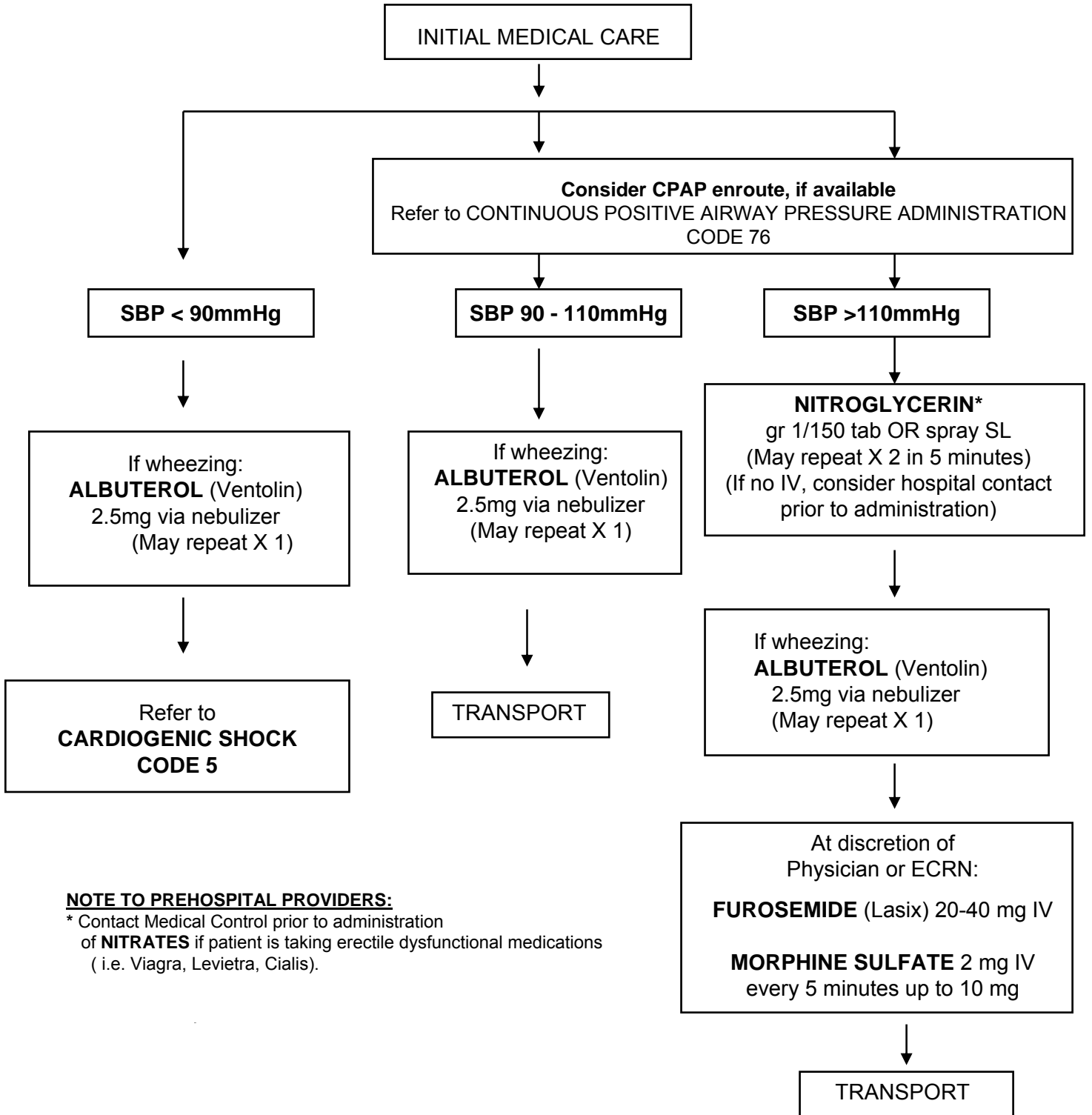
If adverse response to **MORPHINE SULFATE** consider **NALOXONE** (Narcan).

\*Contraindications to **ASPIRIN** would include **ASPIRIN** allergy & history of gastrointestinal bleeding.

\*\* Contact Medical Control prior to administration of **NITRATES** if patient is taking erectile dysfunctional medications ( i.e. Viagra, Levitra, Cialis).

# Code 13

## PULMONARY EDEMA DUE TO HEART FAILURE



### NOTE TO PREHOSPITAL PROVIDERS:

\* Contact Medical Control prior to administration of **NITRATES** if patient is taking erectile dysfunctional medications ( i.e. Viagra, Levitra, Cialis).

**REGION 7**

**STANDING MEDICAL ORDERS**

**TRAUMA PROTOCOLS**

# Code 14

## FIELD TRIAGE PROTOCOLS

- Transport directly to the nearest Level I Trauma Center if transport time is less than 25 minutes.
- Transport to the nearest Level II Trauma Center if transport time is less than 30 minutes.
- Transport to the nearest Emergency Department if transport time is greater than 30 minutes

### FIELD TRIAGE CATEGORY I

Sustained hypotension - B/P  $\leq$  90 systolic (Peds  $\leq$  80 systolic) on two consecutive measurements five minutes apart.

■ Cavity penetration of the torso or neck

→ MANDATORY NOTIFICATION OF THE TRAUMA SURGEON FROM THE FIELD (done by the Trauma Center).

→ PATIENTS BEING BYPASSED TO A TRAUMA CENTER MUST BE ADEQUATELY VENTILATED (ET TUBE OR BVM) AND HAVE CERVICAL IMMOBILIZATION AS INDICATED. OTHERWISE, THE PATIENT SHOULD BE TRANSPORTED TO THE CLOSEST COMPREHENSIVE EMERGENCY DEPARTMENT.

■ Blunt or penetrating trauma with unstable vital signs and/or:

- Hemodynamic compromise as evidenced by:  
Adult B/P  $\leq$  90 systolic  
Peds B/P  $\leq$  80 systolic
- Respiratory compromise as evidenced by:  
respiratory rate  $<$ 10 OR  $>$ 29
- Head injury with altered mentation as evidenced by a Glasgow Coma Score  $\leq$  10.

### CATEGORY II

Mechanism of Injury:

- Ejection from a motor vehicle.
- Death in the same passenger compartment.
- Falls  $>$  20 feet.
- Falls  $>$  three times the body length of a child.
- Maternal trauma  $>$  24 weeks.

■ Anatomical Injury:

- Penetrating injury of the head, neck, chest or abdomen.
- Two or more body regions with potential life or limb threat.
- Combination trauma with  $\geq$  20% TBSA.
- Amputation above the wrist or ankle.
- Limb paralysis and/or sensory deficit above the wrist or ankle.
- Flail chest.
- Two or more proximal long bone fractures.

■ All patients who, *in the judgement of the prehospital personnel*, would benefit from the care derived at a Trauma Center- those conditions which may be considered for direct bypass to a Trauma Center may include:

- Head Injury with persistent unconsciousness or focal signs such as seizures, posturing or the inability to respond to simple commands.
- Transmediastinal gunshot wounds
- Spinal cord injury with paralysis
- Maternal trauma with significant mechanism and/or obvious trauma at 20-32 weeks gestation.
- Pediatric trauma including blunt or penetrating head, chest or abdominal trauma.

# Code 15

## REVISED TRAUMA SCORE/GLASGOW COMA SCALE

A standard procedure for assessing revised trauma scores in the field is necessary so that the reliability of that revised trauma score is recognized by both field personnel and emergency department personnel.

The patient is scored by assessing the following vital functions and computing a score - the **REVISED TRAUMA SCORE**.

- A. Respiratory rate
- B. Systolic blood pressure
- C. Glasgow coma scale

For the Glasgow Coma Scale, the examiner determines the best response the patient can make to a set of standardized stimuli.

- I. Eye opening:  
The examiner determines the minimum stimulus that evokes opening of one or both eyes.
  - a. (4 points) SPONTANEOUS
  - b. (3 points) VOICE
  - c. (2 points) PAIN
  - d. (1 point) NONE

Note: If the patient cannot open the eyes because of bandages, edema or direct trauma, please note and document in the patient's record.

- II. Best Verbal Response:  
The examiner determines the BEST response after arousal:
  - a. (5 points) ORIENTED
  - b. (4 points) CONFUSED
  - c. (3 points) INAPPROPRIATE WORDS
  - d. (2 points) INCOMPREHENSIBLE SOUNDS
  - e. (1 point) NO VERBAL RESPONSE

Note: If the patient is intubated, dysphasic or has maxillofacial injuries which may preclude a verbal response, the examiners assessment should be documented in the patient's record.

- III. Best Motor Response:  
The examiner determines the BEST movement from either arm in response to stimulus.
  - a. (6 points) OBEYS SIMPLE COMMANDS
  - b. (5 points) LOCALIZES PAIN
  - c. (4 points) FLEXION WITHDRAWAL
  - d. (3 points) ABNORMAL FLEXION
  - e. (2 points) ABNORMAL EXTENSION
  - f. (1 points) NO MOTOR RESPONSE

Note: If the patient has suspected or known spinal cord injury, this neurologic deficit should be noted in the patient's record.

The components necessary to calculate the Revised Trauma Score and Glasgow Coma Scale will be obtained by prehospital personnel. The actual calculation of these scores will be performed by medical control. These scores are to be obtained when the need for transport to a trauma center is questionable.

## ROUTINE TRAUMA CARE

1. Prehospital providers shall always assess the scene to assure the safety of all personnel.
2. Patient care and treatment begins at the scene.
3. Prehospital personnel shall take all reasonable precautions to prevent exposure to blood and/or body fluids of any patient. Use fluid repellent gloves, gowns, masks and goggles, as situation dictates.
4. For Pediatric Dosing, utilize the length based Pediatric Tape or Chart.

### PRIMARY PATIENT ASSESSMENT

1. ESTABLISH LEVEL OF RESPONSIVENESS
  - Brief history: Any dyspnea or pain?
2. IMMOBILIZE C-SPINE
  - Manual immobilization initially
  - Rigid collar, Cervical Immobilization Device, and backboard prior to transport  
(Refer to **SUSPECTED SPINAL CORD INJURY/SPINAL IMMOBILIZATION CODE 18**)
3. AIRWAY (If obstructed Refer to **OBSTRUCTED AIRWAY CODE 3**)
  - Open or secure as needed
4. CHECK THE NECK
  - Carotid pulses  
If absent: CPR, Accelerated transport (Refer to **TRAUMATIC CARDIOPULMONARY ARREST CODE 20**)
  - Tracheal deviation (Refer to **CHEST TRAUMA CODE 23**)
  - JVD (Refer to **CHEST TRAUMA CODE 23**)
5. BREATHING (Refer to **CHEST TRAUMA CODE 23** and **RESPIRATORY DISTRESS CODE 2**)
  - ASSIST VENTILATION AS REQUIRED
  - Inspect the chest
  - Palpate the chest
  - Auscultate the chest (including the heart)
6. CIRCULATION (Refer to **HEMORRHAGIC SHOCK CODE 17**)
  - Life threatening hemorrhage - STOP THE BLEEDING.  
For uncontrolled hemorrhage, consider use of a hemostatic agent.
  - Peripheral pulses (weak, thready, absent)
  - Capillary refill (if delayed)
7. NEUROLOGIC DEFICIT (Refer to **HEAD TRAUMA/UNCONSCIOUS PATIENT CODE 19**)
  - AVPU
  - Motor & Sensory
  - Pupils

## ROUTINE TRAUMA CARE

### SECONDARY PATIENT ASSESSMENT

1. Vital Signs
2. GCS scoring parameters
3. Systematic head to toe assessment
4. Medications
5. Allergies
6. Reassure patient, provide comfort and loosen tight clothing
7. Evaluate cardiac rhythm, if indicated. (All ALS patients do not necessarily require continuous ECG monitoring or transmission of a strip to the hospital.)
8. Contact hospital as soon as patient's condition permits. Transmit assessment information and await orders. If no radio contact can be established or patient's condition requires immediate treatment, refer to appropriate SMO and begin intervention immediately.
9. Recheck vitals and other pertinent signs at least every 15 minutes and record, noting times.  
If unstable vital signs/sustained hypotension (SBP <90 on two separate readings 5 minutes apart), vital signs should be taken and recorded every 5 minutes.
10. All patients, who, in the judgment of prehospital personnel, would benefit from care derived from a Trauma Center, should be transported accordingly (Refer to **FIELD TRIAGE PROTOCOLS CODE 14**).  
If unable to ventilate, transport to nearest hospital.

### NOTE TO PREHOSPITAL PROVIDERS:

In a combative or uncooperative patient, the requirement to initiate initial routine trauma care, as written, may be altered or waived in favor of rapidly transporting the patient for definitive care. Document the patient's actions or behaviors which interfered with the performance of any assessments and/or interventions.

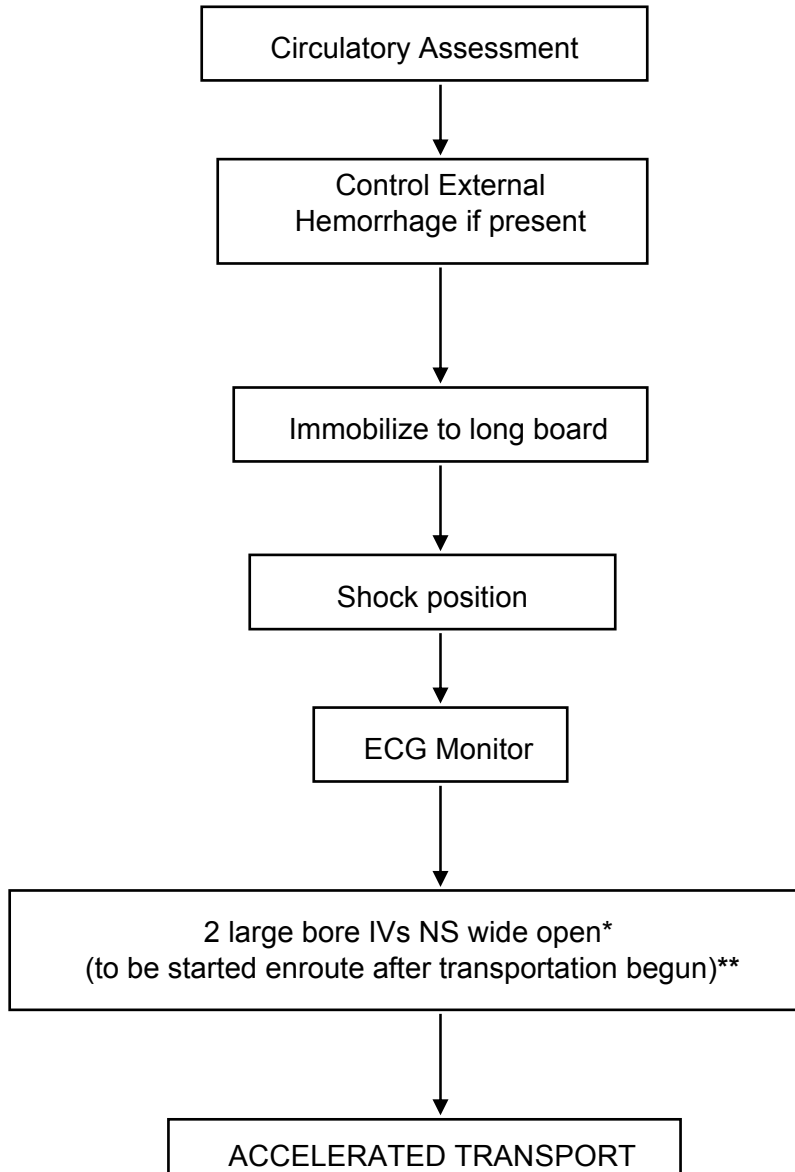
### OUTLINE FOR RADIO REPORT (Transmit using as few words as possible)

- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>1. Name and vehicle number of provider</li> <li>2. Requested destination, closest hospital, and estimated time of arrival</li> <li>3. Age, sex, and approximate weight of patient</li> <li>4. Chief Complaint, to include symptoms and degree of distress</li> <li>5. History of present illness/injury</li> </ol> | <ol style="list-style-type: none"> <li>6. Pertinent Medical History:             <ul style="list-style-type: none"> <li>- Allergies</li> <li>- Medications</li> <li>- Past History of Current Illness</li> <li>- Last Meal</li> <li>- Events surrounding incident</li> </ul> </li> <li>7. Clinical condition:             <ul style="list-style-type: none"> <li>- Focused and detailed patient assessment findings</li> </ul> </li> <li>8. Treatment initiated and Response</li> </ol> |
|---|---|

# Code 17

## HEMORRHAGIC SHOCK

ROUTINE TRAUMA CARE WITH 100% OXYGEN



### **NOTE TO PREHOSPITAL PROVIDERS:**

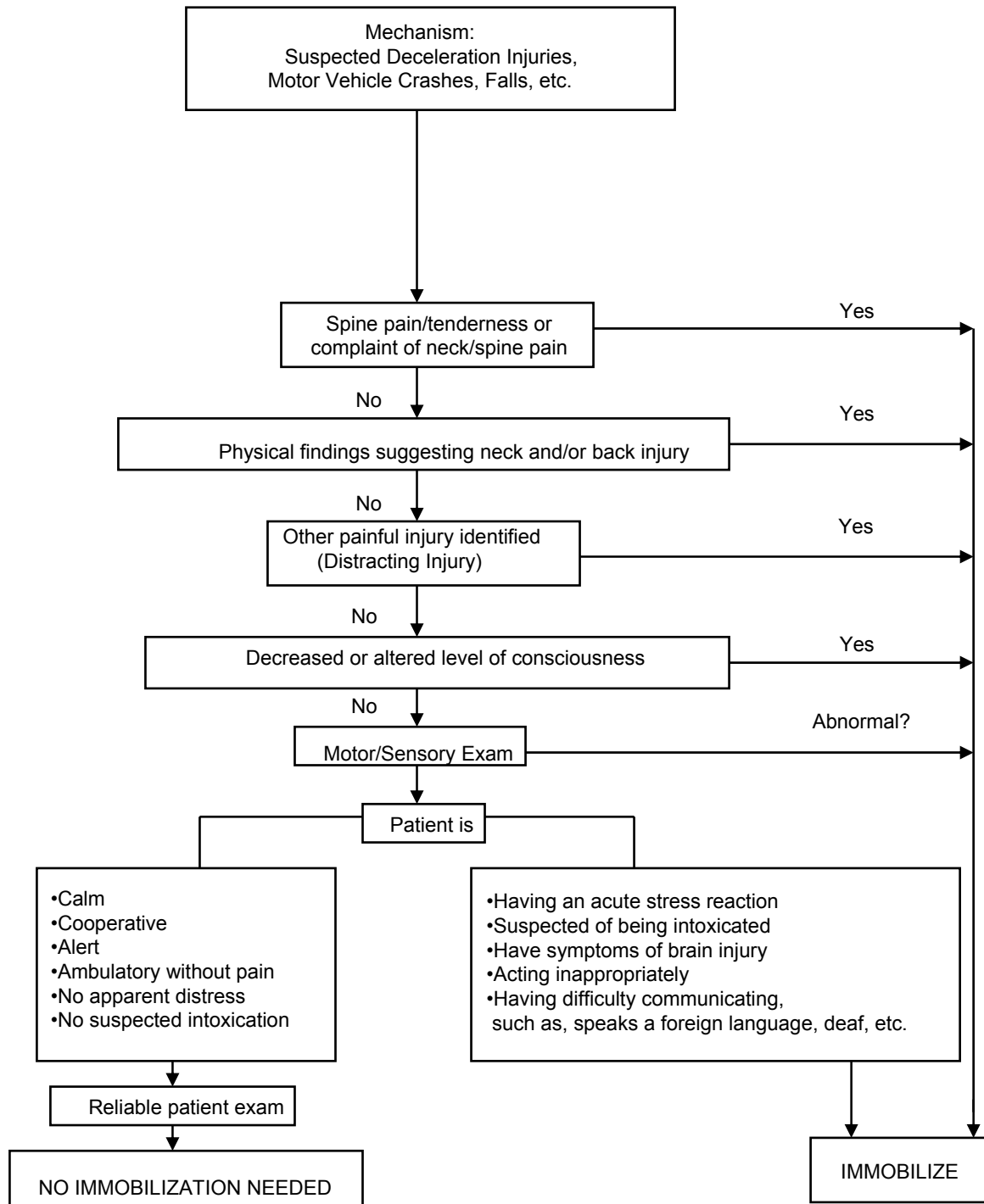
\* If patient unresponsive, consider IO NS wide open.

\*\* If total transport time <30 minutes, no IV should be attempted unless it will not delay transport to the nearest Trauma Center.

Reviewed 10/01/11  
Effective 05/01/98  
ALS

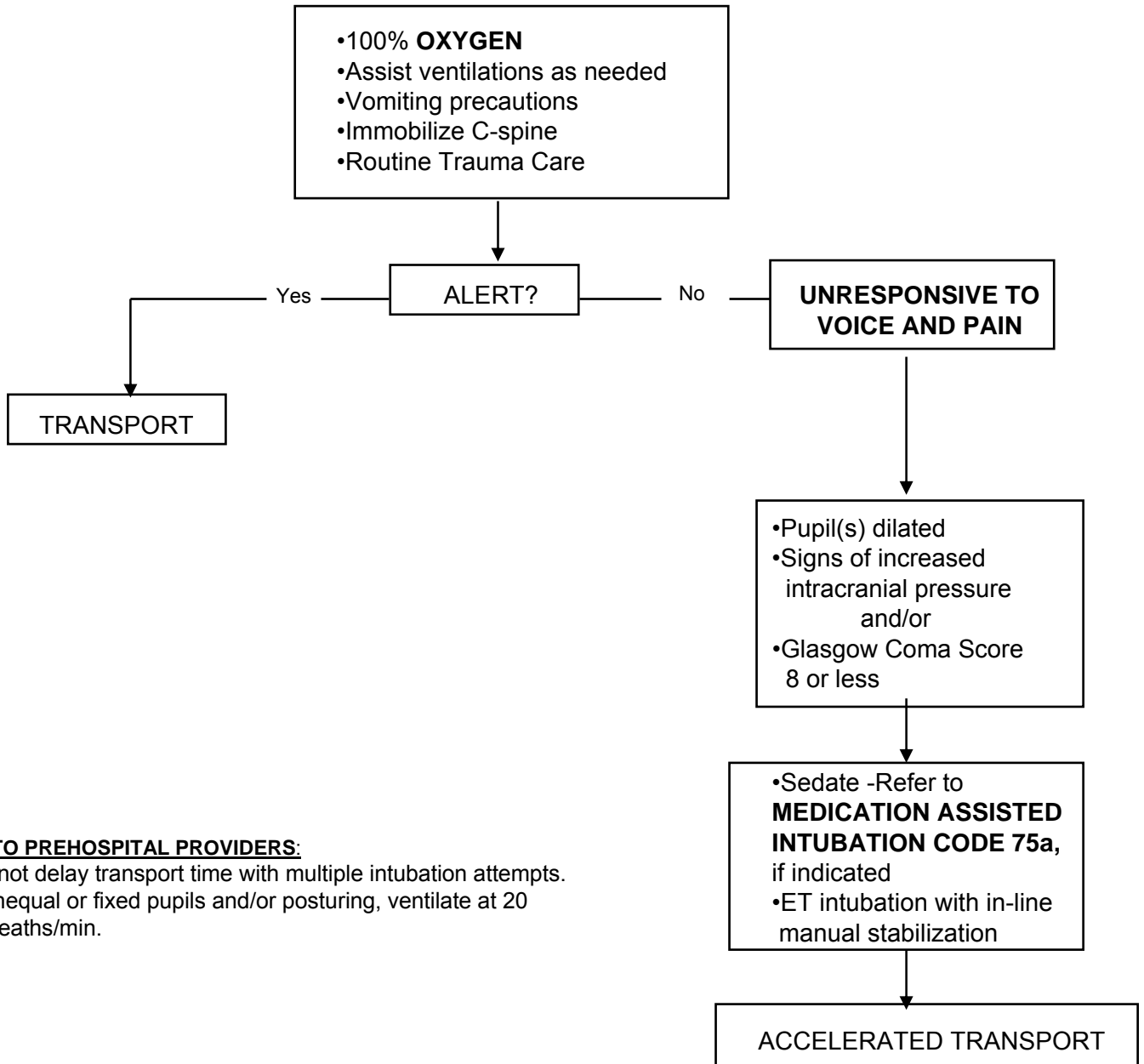
# Code 18

## SUSPECTED SPINAL CORD INJURY SPINAL IMMOBILIZATION



# Code 19

## HEAD TRAUMA/UNCONSCIOUS PATIENT

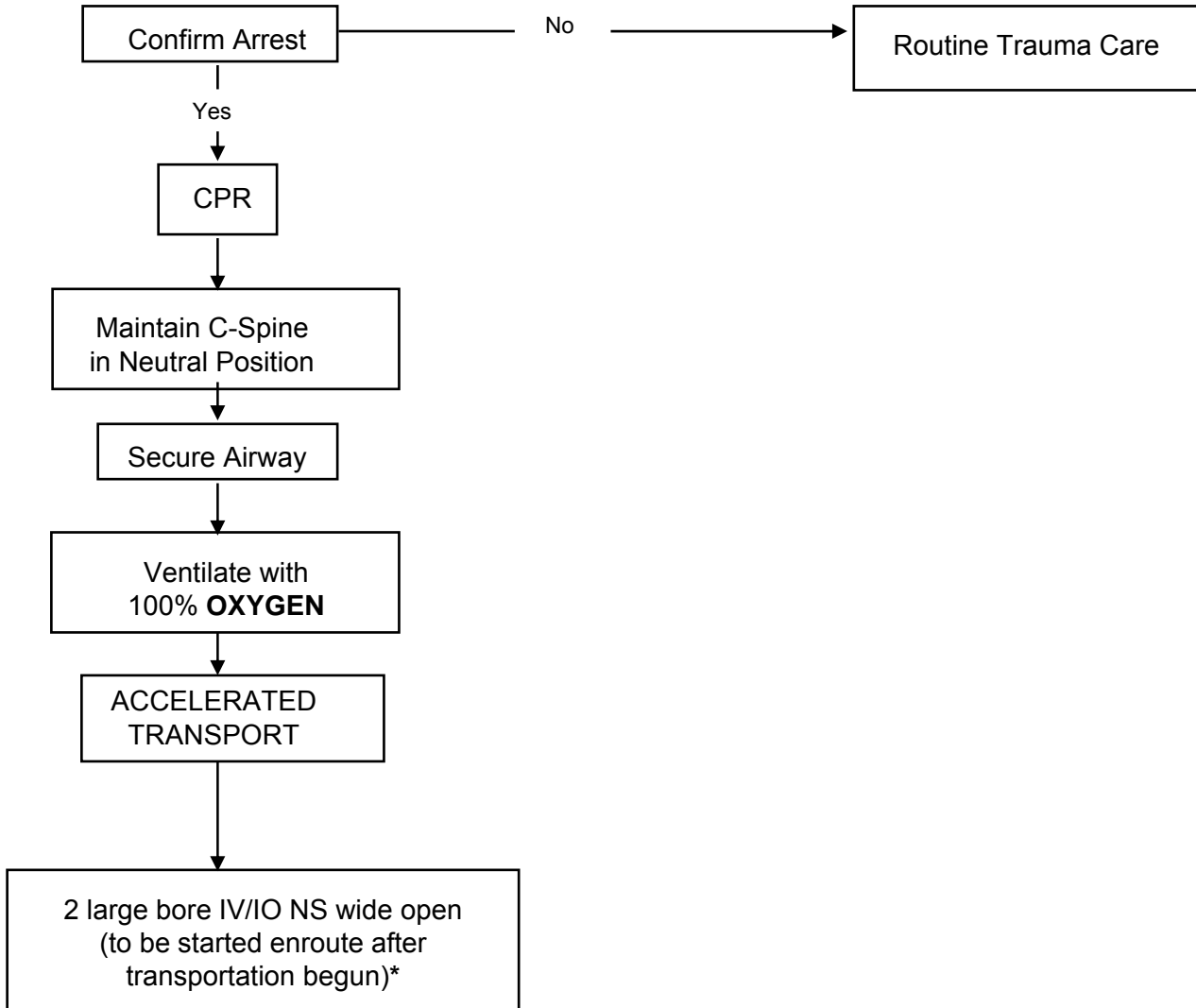


### NOTE TO PREHOSPITAL PROVIDERS:

1. Do not delay transport time with multiple intubation attempts.
2. If unequal or fixed pupils and/or posturing, ventilate at 20 breaths/min.

# Code 20

## TRAUMATIC CARDIOPULMONARY ARREST



### NOTE TO PREHOSPITAL PROVIDERS:

- \* If total transport time <30 minutes, no IV should be attempted unless it will not delay transport to the nearest Trauma Center.
- If IV attempt is unsuccessful, refer to **APPROPRIATE DYSRHYTHMIA CODE**.
- **Reminder: Defibrillation does not require an IV.**
- Consider bilateral chest decompression in Blunt Trauma.

Reviewed 10/01/11  
Effective 05/01/98  
ALS

# Code 21

## ISOLATED EXTREMITY INJURY AND/OR AMPUTATED AND AVULSED PARTS

INITIAL TRAUMA CARE  
(ABCs always take priority over the severed part)

### Control bleeding with direct pressure and elevation

For uncontrolled hemorrhage:

- Consider use of a hemostatic agent
- Use a tourniquet if needed
  - Note time of placement
  - Apply as close to the injury as possible
  - DO NOT release once applied

**NITROUS OXIDE** (optional)

- Wrap part in sterile gauze, sheet or towel.
- Place part in waterproof bag or container and seal.
- DO NOT immerse part in any solutions.
- Place this container in a second one filled with ice, cold water or cold pack.

Transport part to hospital with patient

TRANSPORT

**NOTE TO PREHOSPITAL PROVIDER:**  
MORPHINE SULFATE 5-10mg slow IV in 5mg increments every 5 minutes as necessary for pain.

Reviewed 10/01/11  
Effective 05/01/98  
ALS

# Code 21a

## Crush Injury

Suspected in extended extremity  
and/or  
Torso entrapment

Check for: Pain  
Paresthesia  
Paralysis  
Pallor  
Pulselessness

Not needed, but good indicators

INITIAL MEDICAL CARE

AIRWAY AS NEEDED

Cardiac monitor as soon as possible  
Morphine Sulfate 2mg increments IV/IM as  
needed for pain (do not administer if  
respiratory depression, bradycardia or hypotension SBP < 90)

PRIOR TO RELEASE OF COMPRESSION, INITIATE

IV Normal Saline 1000ml bolus  
Albuterol (Ventolin) 2.5mg via Nebulization

If hyperkalemia suspected

and abnormal ECG rhythm - peaked T-wave or widened QRS → **No** → **Transport**

**YES** ↓

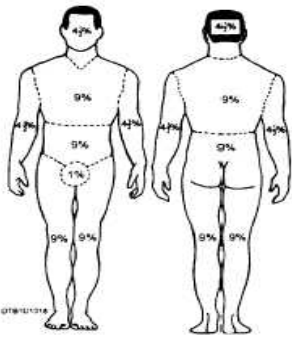
- Sodium Bicarbonate 50 meq IV followed by 20ml Normal Saline flush
- Calcium Chloride 1.0gm slow IV followed by 20ml Normal Saline flush

**TRANSPORT**

**NOTE TO PREHOSPITAL PROVIDERS:**

Consider hypoglycemia and need for 50% Dextrose IV.

Reviewed 10/01/11  
Effective 06/01/06  
ALS



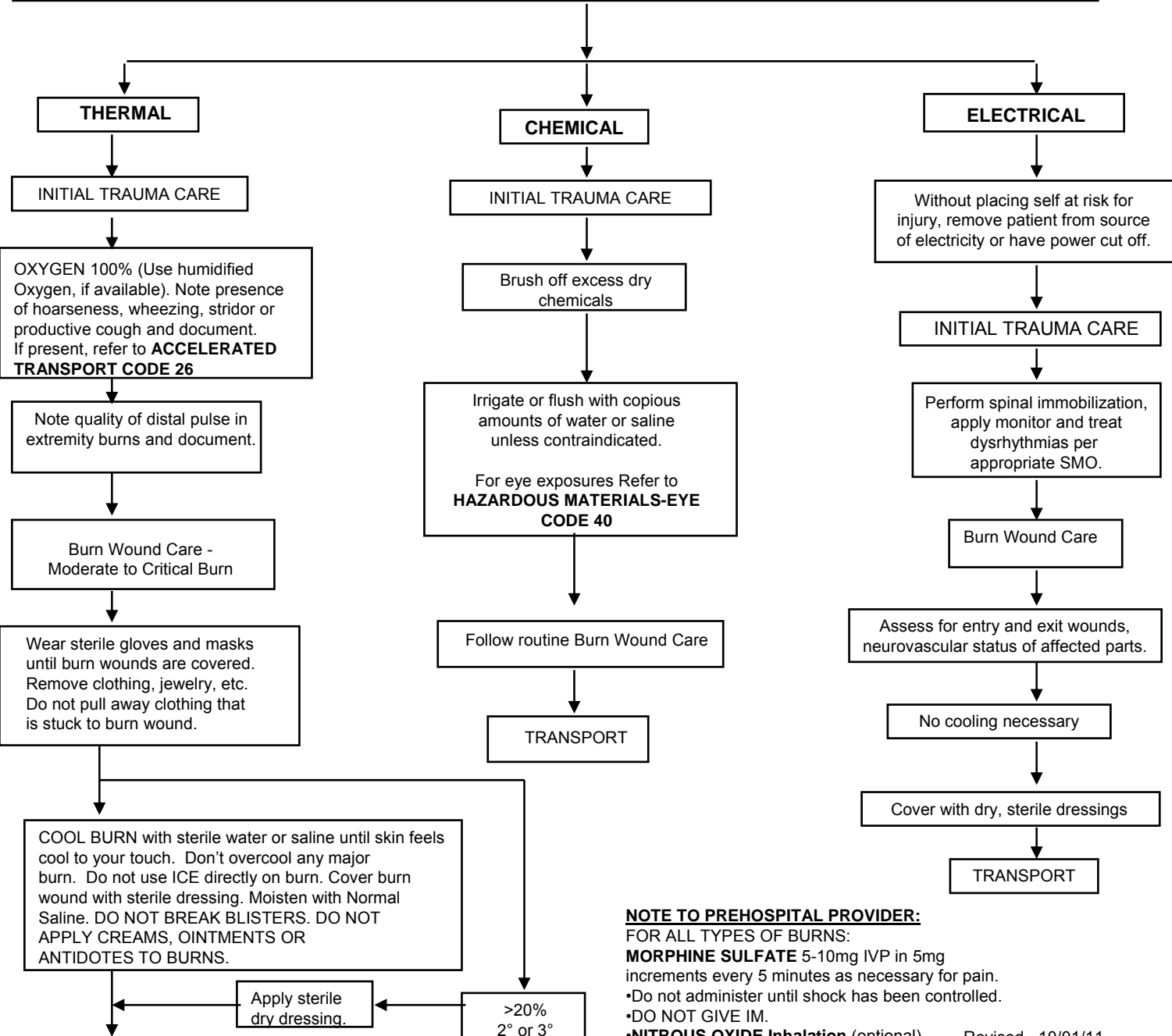
# Code 22

## BURNS

Burn patients are often victims of multiple trauma.  
 Treatment of major traumatic injuries takes precedence over wound management.  
**Isolated burn injury patients should be transferred to the closest available hospital**

### ASSESS

- Total body surface area: use rule of 9s or estimate using patient's palmar surface as 1%
- Depth of burn: partial or full thickness, consider exposure to products of combustion and treat as soon as possible.



### NOTE TO PREHOSPITAL PROVIDER:

FOR ALL TYPES OF BURNS:

**MORPHINE SULFATE** 5-10mg IVP in 5mg

increments every 5 minutes as necessary for pain.

• Do not administer until shock has been controlled.

• DO NOT GIVE IM.

• **NITROUS OXIDE Inhalation** (optional)

Revised 10/01/11

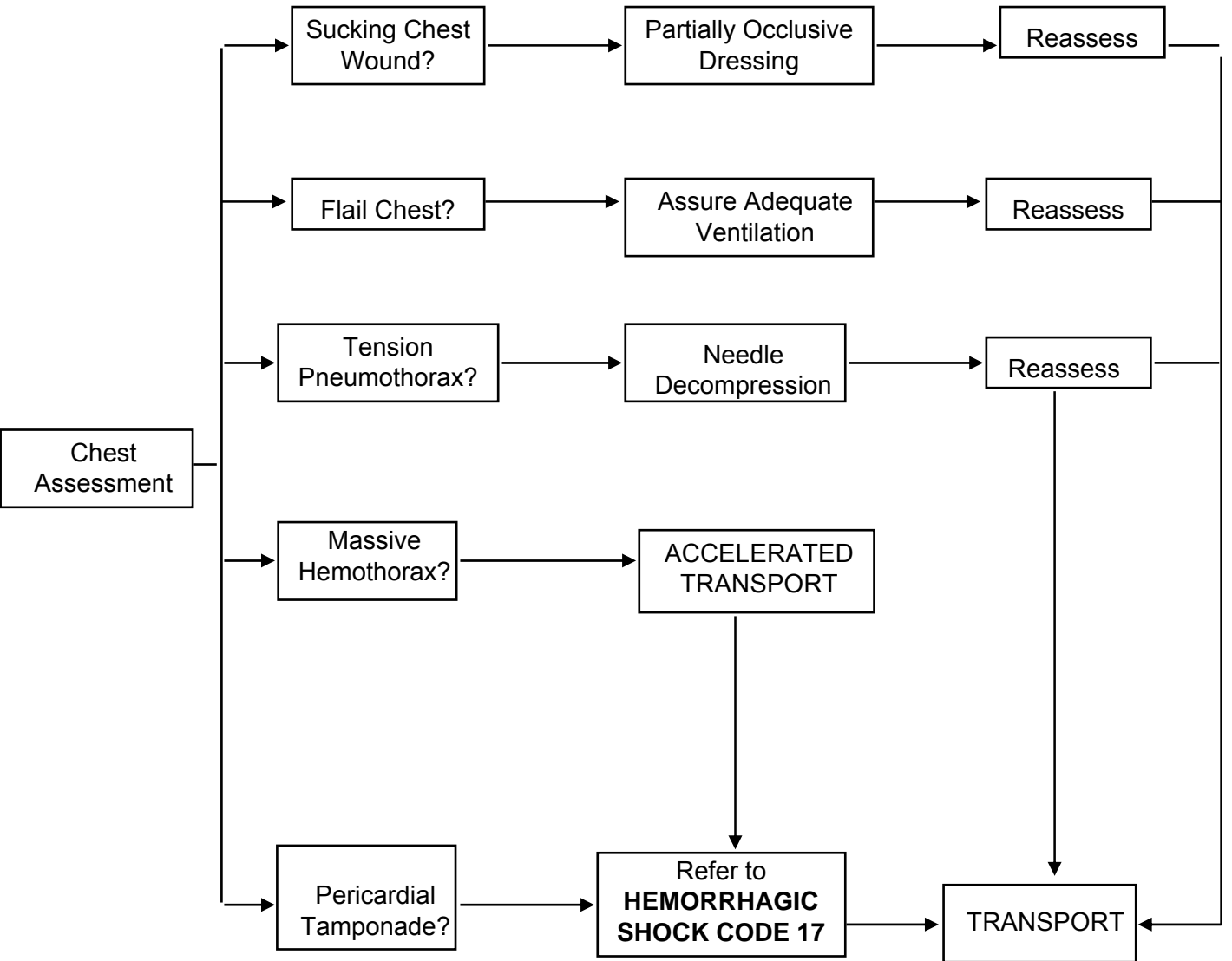
Effective 05/01/98

ALS

Open sterile sheet on stretcher before placing patient for TRANSPORT.  
 Cover patient with dry, sterile sheets and blanket to maintain body temperature.

# Code 23

## CHEST TRAUMA



# Code 24

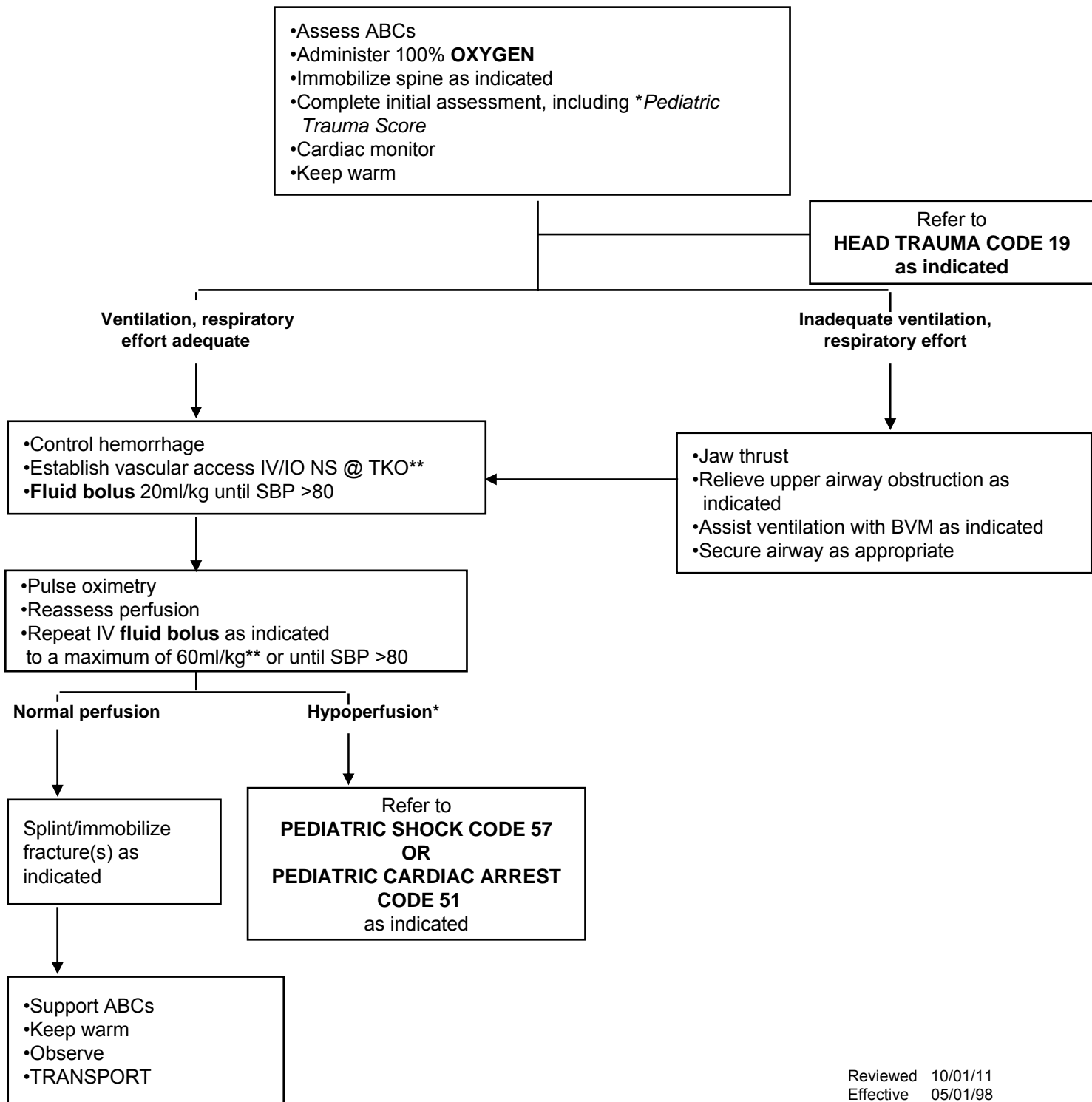
## TRAUMA IN PREGNANCY

### Principles of Management

- A. Routine Trauma Care
- B. Increased IV volume is needed. Establish IV. If total transport time is less than 30 minutes, no IV should be attempted unless it will not delay transport to the nearest Trauma Center
- C. Check externally for uterine contractions.
- D. Check externally for vaginal bleeding.
- E. Unless spinal injury is suspected, transport the patient on her left side to minimize uterine compression of the inferior vena cava.
- F. If a patient with suspected spinal injury becomes hypotensive while supine on backboard, elevate right side of backboard to relieve pressure on vena cava from uterus.
- G. Manually displace the uterus to the left side during CPR.

# Code 25

## INITIAL MANAGEMENT OF THE PEDIATRIC TRAUMA PATIENT



Reviewed 10/01/11  
Effective 05/01/98  
ALS

### NOTE TO PREHOSPITAL PROVIDERS:

\* Refer to **PEDIATRIC ASSESSMENT AND TRAUMA SCORE CODE 28**.

\*\* If total transport time <30 minutes, no IV/IO should be attempted unless it will not delay transport to the nearest Trauma Center.

# Code 26

## ACCELERATED TRANSPORT

**Certain situations require treatment within minutes. These situations occur when a problem is discovered in the primary survey that cannot be rapidly resolved by field intervention. Only airway and spinal immobilization should be managed prior to transport. Further efforts at stabilization should be performed enroute and should not delay transport.**

**If circumstances demand hospital care for patient stability, rapid transport is indicated. Each case will be unique and compelling reasons must be documented. Notify the receiving hospital of the situation so that preparations can be made. Primary resuscitative measures must be initiated. Establish contact with medical control as soon as possible.**

# Code 27

## PEDIATRIC TRAUMA

### I. Routine Trauma Care

- A. Airway - Keep suction available
  - C-Spine immobilization
  
- B. Breathing
  - 1. Note changes in ventilation rates by age
  - 2. 100% **OXYGEN**
  - 3. Assist ventilations as needed-(Refer to **MEDICATION ASSISTED INTUBATION CODE 75a**, as indicated)
  
- C. Circulation
  - 1. Note variation of normal values
  - 2. IV access more difficult
    - Antecubital fossa ideal
    - May attempt external jugular
    - Intraosseous line if patient unconscious and not able to begin peripheral line
    - Do not delay transport to start IV
  - 3. Shock resuscitation = 20ml/kg NS bolus (estimate weight in kg)

### II. Treatment of Suspected Battered or Abused Child

(Refer to **SUSPECTED CHILD ABUSE AND NEGLECT CODE 65**):

- A. Treat obvious injuries
- B. If parents refuse to let you transport the child after treatment:
  - 1. Remain at the scene
  - 2. Call for police assistance
  - 3. Request that the officer place the child under protective custody
  - 4. Assist with transport
- C. You are required by law to report your suspicions to the Department of Children and Family Services (DCFS). Also, document and report your suspicions to the ED physician and/or charge nurse.
- D. Carefully document history, physical findings and environmental surroundings on patient care report.

# Code 28

## PEDIATRIC ASSESSMENT AND TRAUMA SCORE

### Indicators of hypoperfusion:

- Respiratory difficulty
- Cyanosis despite oxygen administration
- Truncal pallor/cyanosis and coolness
- Hypotension (ominous sign)
- Bradycardia (late sign)
- Weak, thready, or absent peripheral pulses
- Decreasing consciousness
- No palpable blood pressure

### Pediatric vital signs:

	Newborn	1 year	3 years	6 years	10 years	15 years
<b>Pulse</b>	100-160	90 - 120	80 - 120	70 - 110	60 - 90	60 - 90
<b>Respirations</b>	30- 60	20 - 30	20 - 30	18 - 25	15 - 20	15 - 18
<b>Systolic Pressure</b>	50- 90	80 - 100	80 - 110	80 - 110	90 - 120	100 - 130

### Pediatric Trauma Score\*:

Component	+2	+1	-1
Weight	>20 kg	10-20 kg	<10 kg
Airway	Normal	Maintainable	Unmaintainable
CNS	Awake	Obtunded	Coma
Systolic BP or **Pulse Palpable	>90mmHg <i>At Wrist</i>	90-50mm Hg <i>At Groin</i>	<50 mmHg or <i>No Pulse Palpable</i>
Open Wound	None	Minor	Major
Skeletal Injury	None	Closed Fx	Open/Multiple Fx

\*\*If proper size BP cuff is unavailable, BP may alternatively be assigned by determining pulse palpable point.

**TOTAL POINTS** \_\_\_\_\_  
(Total points range from -6 to +12)

# Code 29

## PEDIATRIC BURNS THERMAL, ELECTRICAL, CHEMICAL

### ESTIMATING % OF BODY SURFACE AREA

Body Area	Age in Years			
	0-1	1-4	4-9	10-15
Head	19%	17%	13%	10%
Neck	2%	2%	2%	2%
Chest or Back (each)	13%	13%	13%	13%
Buttock (each)	2.5%	2.5%	2.5%	2.5%
Genitalia	1%	1%	1%	1%
Upper Arm (each)	4%	4%	4%	4%
Lower Arm (each)	3%	3%	3%	3%
Hand (each)	2.5%	2.5%	2.5%	2.5%
Thigh (each)	5.5%	6.5%	8.5%	8.5%
Lower leg (each)	5%	5%	5%	6%
Foot (each)	3.5%	3.5%	3.5%	3.5%

- Assess scene safety. As indicated:
- Remove patient to safety
- Appropriate body substance isolation
- Assess ABCs
- Administer 100% OXYGEN
- Complete initial assessment. Assess for:
  - wheezing
  - retractions
  - stridor
  - diminished respirations or apnea
  - tachypnea
  - grunting
  - decreasing consciousness
- Refer to **INITIAL MGMT OF THE PEDS TRAUMA PT CODE 25**
- Assess percentage/depth of burn
- Remove constricting jewelry and clothes.

**Respiratory Compromise**

- Support ventilation with BVM
- Secure airway as appropriate
- Refer to **PEDIATRIC RESPIRATORY DISTRESS CODE 55**

**No Respiratory Compromise**

Follow correct burn type path

**THERMAL BURNS**

**Superficial (1st degree)**

- Cool burned area with water or saline
- If <20% body surface involved, apply sterile saline soaked dressings. DO NOT OVER COOL major burns or apply ice directly to burned areas.

**Partial or Full thickness (2nd or 3rd degree)**

- Wear sterile gloves/mask while burn areas exposed
- Cover burn wound with DRY sterile dressings
- Place patient on clean sheet on stretcher and cover patient with dry clean sheets and blanket to maintain body temperature.
- Establish vascular access IV/IO NS @ TKO as indicated
- Refer to **PEDIATRIC SHOCK CODE 57** as indicated.

**ELECTRICAL BURNS**

- Immobilize as indicated
- Assess cardiac monitor for dysrhythmias and treat according to appropriate protocol
- Establish vascular access IV/IO NS @ TKO as indicated
- Identify and document any entrance and exit wounds
- Assess neurovascular status of affected part
- Cover wounds with dry sterile dressings

**CHEMICAL BURNS**

Refer to **PEDIATRIC TOXIC EXPOSURE/INGESTIONS CODE 61**

- If powdered chemical, brush away excess
- Remove clothing if possible
- Rapid visual acuity
- If eye involvement, irrigate with saline or sterile water continuously. **DO NOT CONTAMINATE THE UNINJURED EYE WITH EYE IRRIGATION**
- Irrigate area with copious amounts of sterile water or saline ASAP and during transport
- Establish vascular access IV/IO NS @ TKO as indicated

**SPECIAL CONSIDERATIONS:**

- Assess for potential child abuse and follow appropriate reporting mechanism
- Keep the child warm and protect from hypothermia. Be cautious with cool dressings.
- Pulse oximetry
- Consider **MORPHINE SULPHATE IV** per length based Pediatric Tape or as directed by Medical Control.
- Consider **NITROUS OXIDE** by INHALATION
- Refer to **NITROUS OXIDE ADMINISTRATION CODE 70**

- Support ABCs
- Observe
- Keep warm
- TRANSPORT

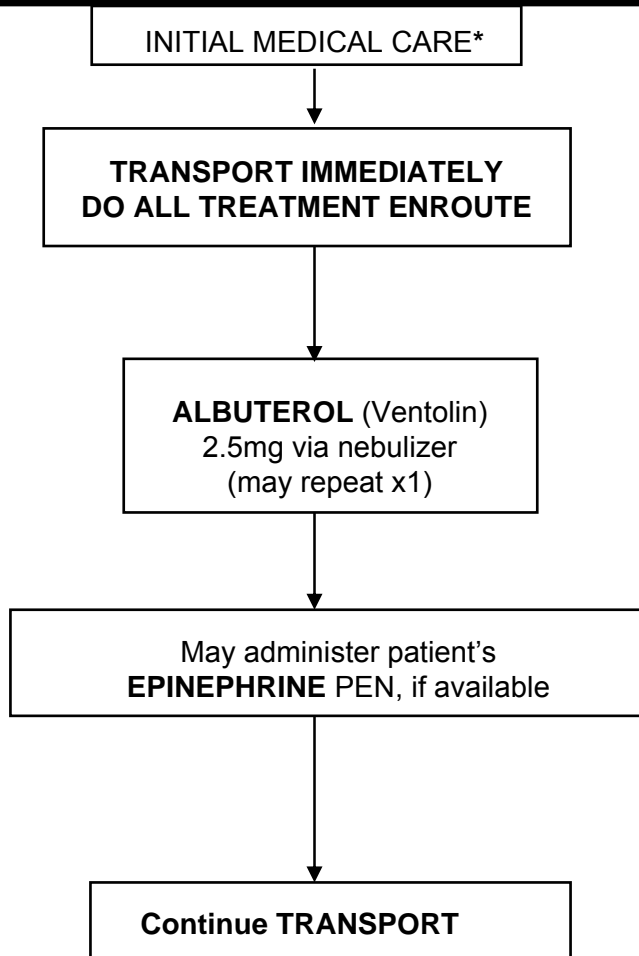
**REGION 7**

**STANDING MEDICAL ORDERS**

**PROTOCOLS FOR  
MEDICAL EMERGENCIES**

# Code 30

## ACUTE ASTHMA/COPD WITH WHEEZING



### AT THE DESCRETION OF A PHYSICIAN/ECRN:

1. Administer **EPINEPHRINE** 1:1000 @ 0.01mg/kg up to 0.3mg IM (may repeat in 15 minutes).
2. CPAP if available

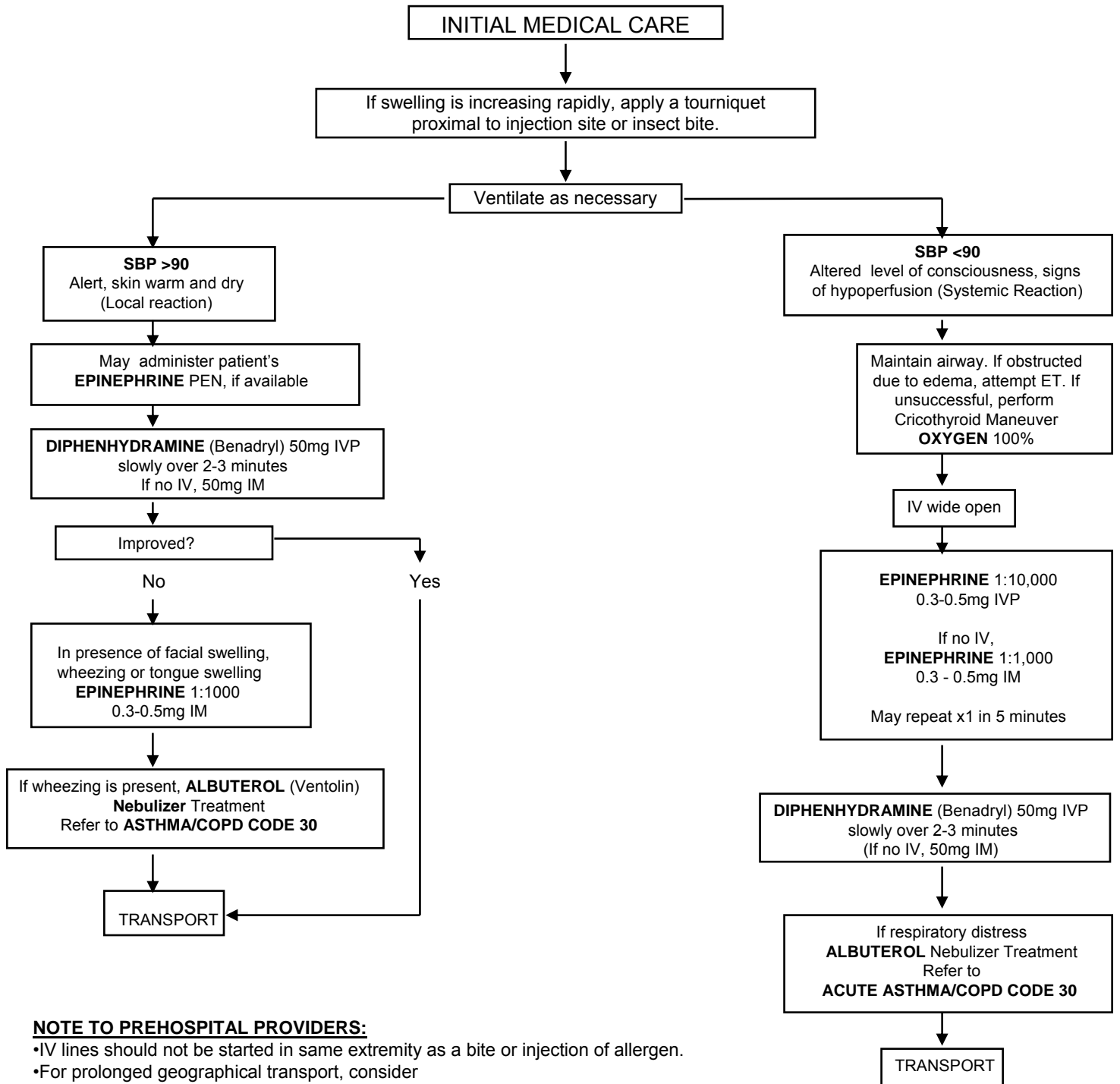
Reviewed 10/01/11  
Effective 05/01/98  
ALS

### NOTE TO PREHOSPITAL PROVIDERS:

- 1) **\*OXYGEN @ 2 - 6L/min.** If severe respiratory distress or cyanosis, 15L NRB
- 2) IV optional unless patient is in severe respiratory distress or pending failure
- 3) For pediatric patients, refer to **PEDIATRIC RESPIRATORY DISTRESS CODE 55.**
- 4) If intubation required, may give **ALBUTEROL** (Ventolin) **in-line** via ET tube.
- 5) For prolonged geographical transport, consider **METHYLPREDNISOLONE** (Solu-Medrol) 125mg IV push.

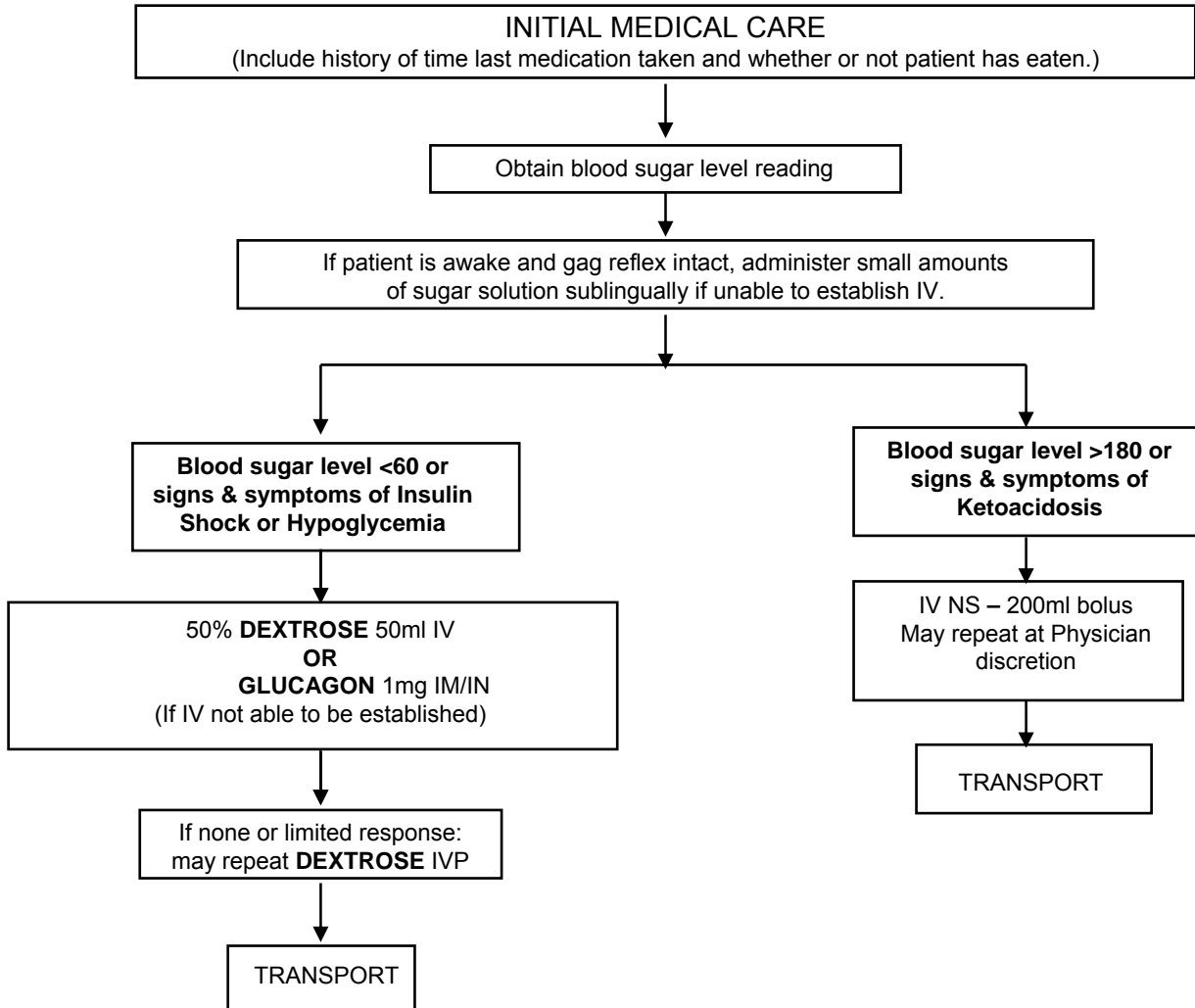
# Code 31

## ALLERGIC REACTION ANAPHYLACTIC SHOCK



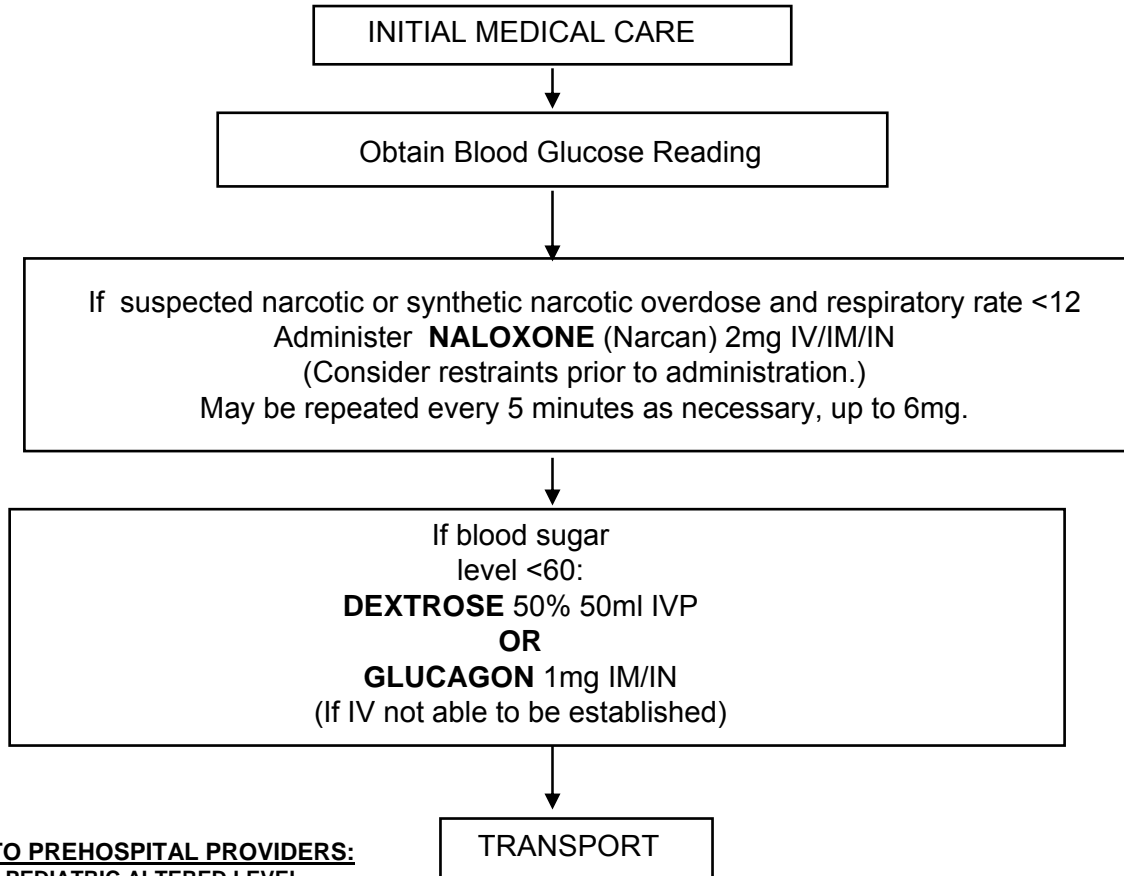
# Code 32

## DIABETIC/GLUCOSE EMERGENCIES



# Code 33\*

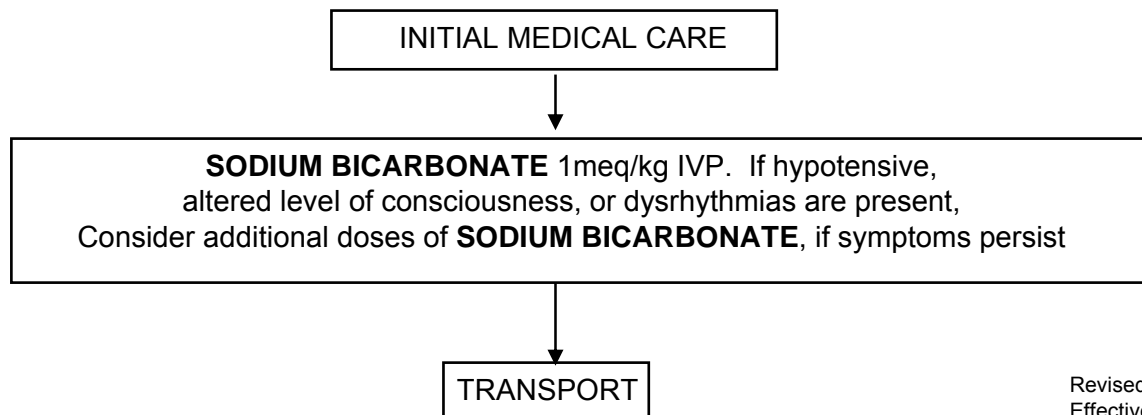
## DRUG OVERDOSE ALCOHOL RELATED EMERGENCIES/POISONING



**NOTE TO PREHOSPITAL PROVIDERS:**

\*Refer to **PEDIATRIC ALTERED LEVEL OF CONSCIOUSNESS CODE 60**, as needed

## SUSPECTED TRICYCLIC ANTIDEPRESSANT OVERDOSE\*\*



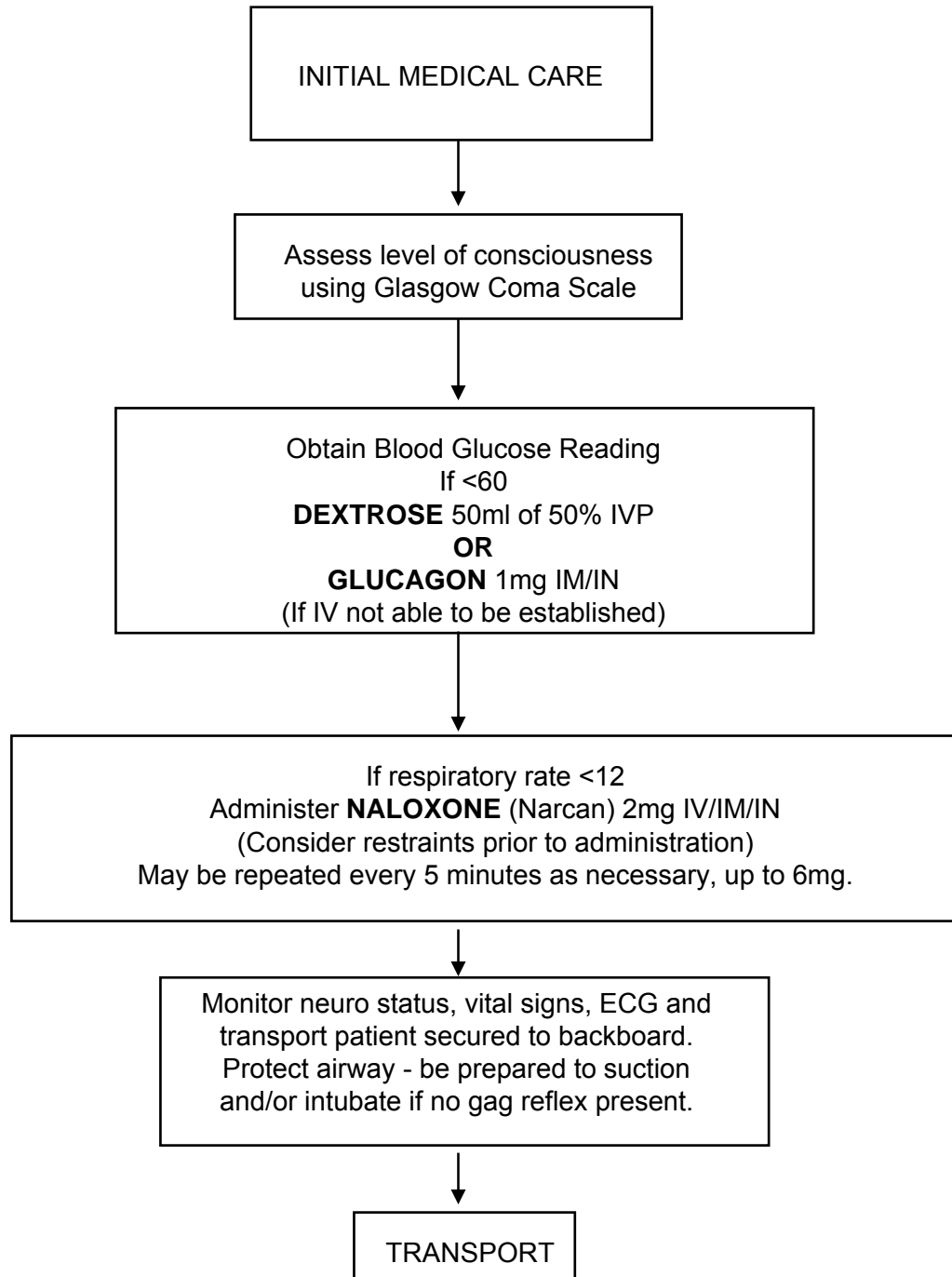
Revised 10/01/11  
Effective 05/01/98  
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**\*\*TRICYCLIC ANTIDEPRESSANTS INCLUDE:**

AMITRIPTYLINE, AMOXAPINE, ASCENDIN, DESIPRAMINE, DESYREL, ELAVIL, ENDEP, IMIPRAMINE, LUDIOMIL, NORPARAMINE, PAMELOR, SINEQUAN, TRIAVIL, TOFRANIL, and others

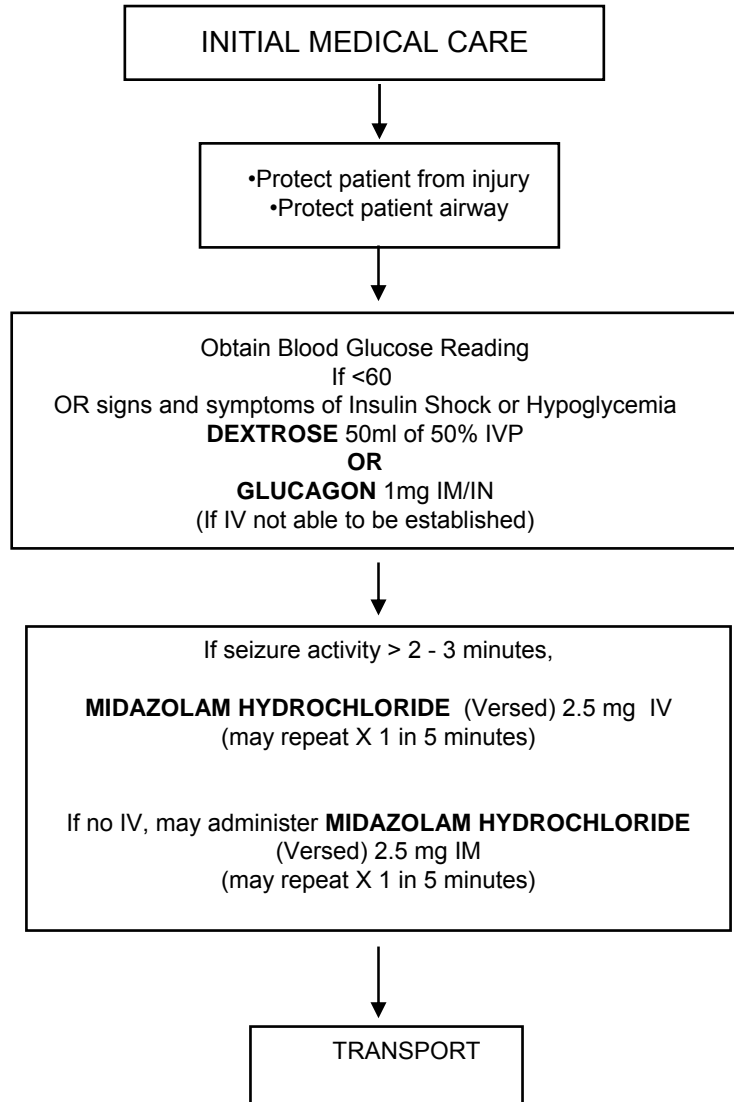
# Code 34

## COMA OF UNKNOWN ORIGIN (NO HISTORY OF TRAUMA)



# Code 35

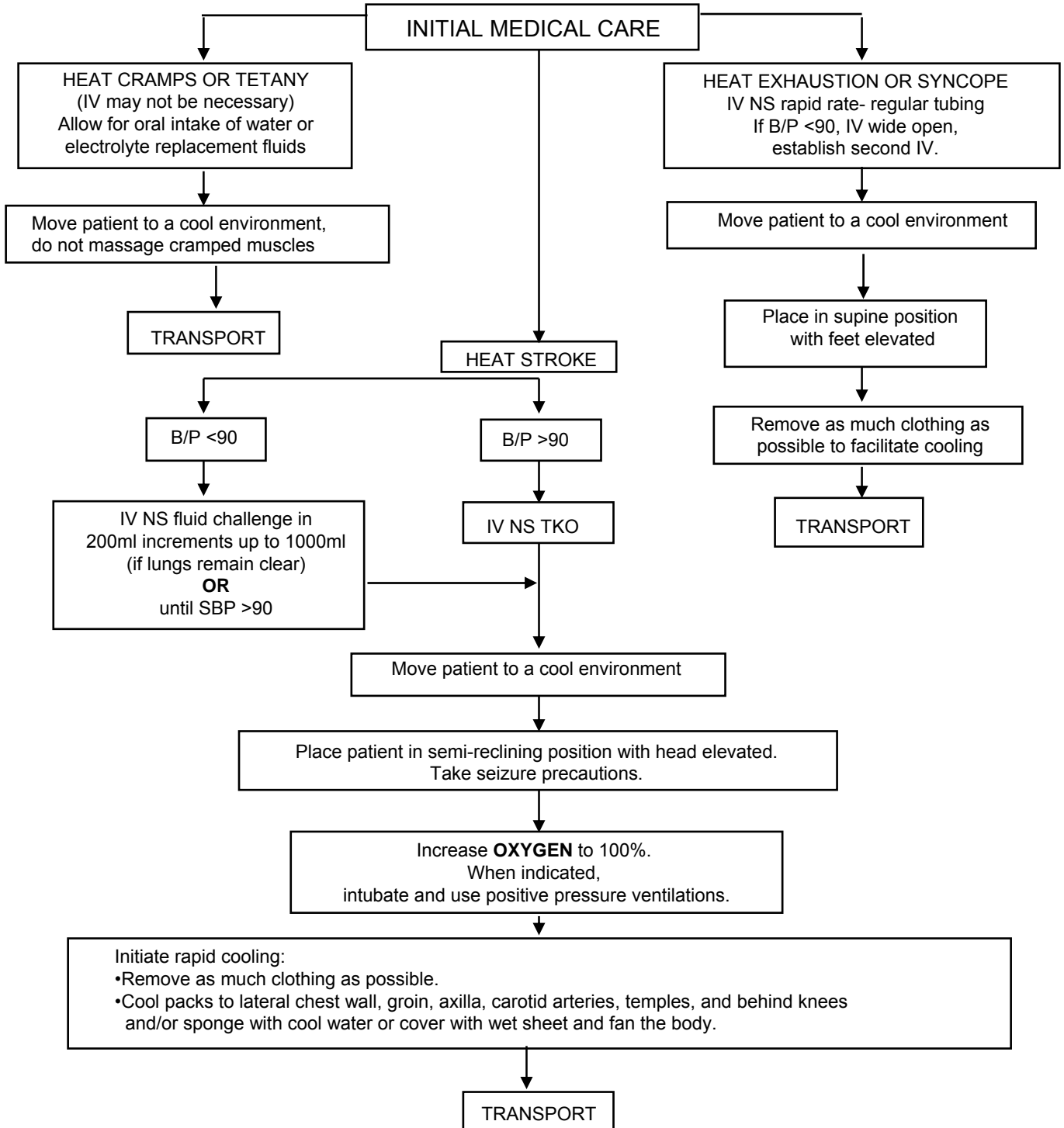
## SEIZURES/STATUS EPILEPTICUS\*



\* Refer to **PEDIATRIC SEIZURES CODE 59**, as indicated

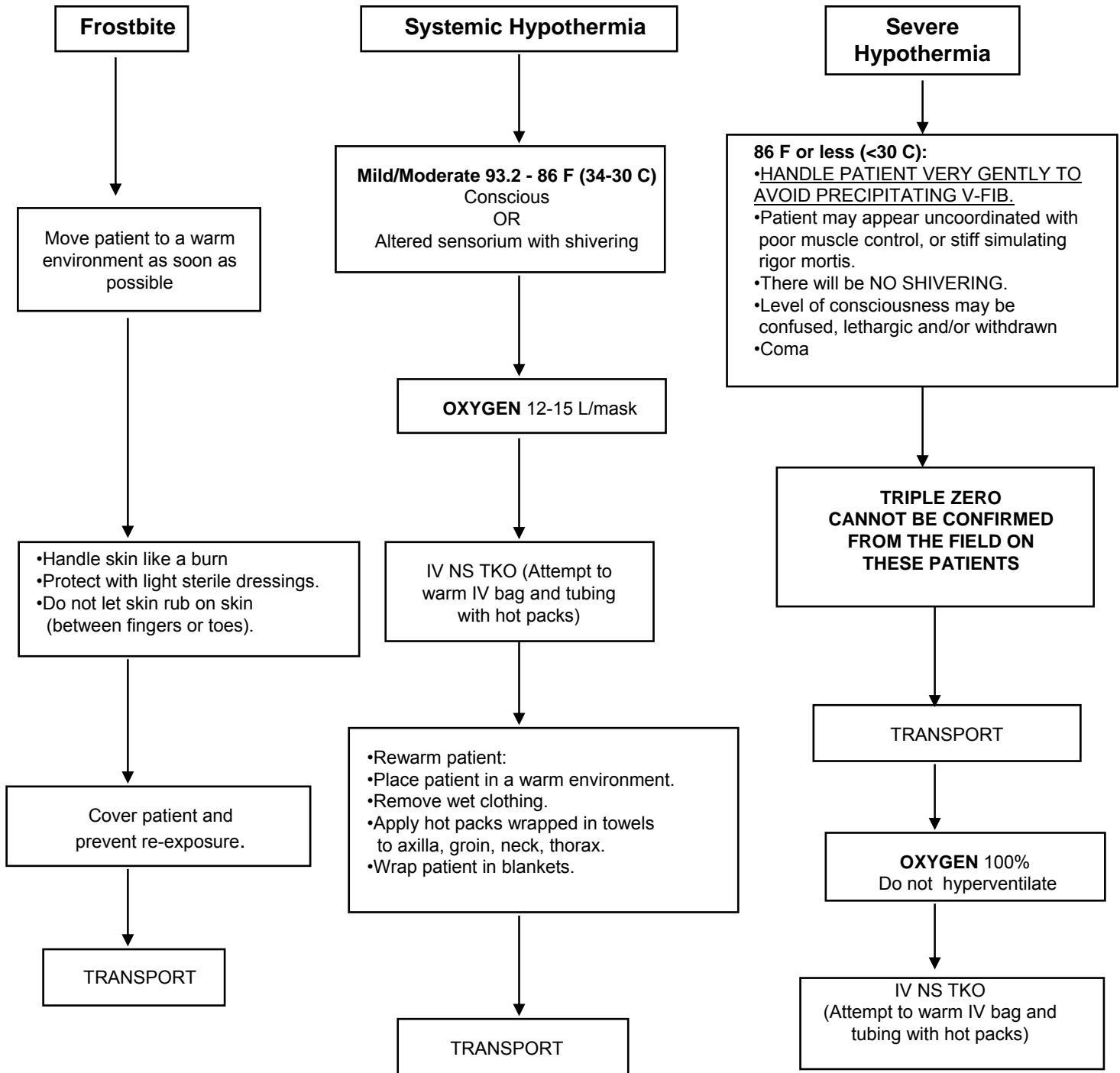
# Code 36

## HEAT EMERGENCIES



# Code 37

## COLD EMERGENCIES



### AT DISCRETION OF A PHYSICIAN OR ECRN :

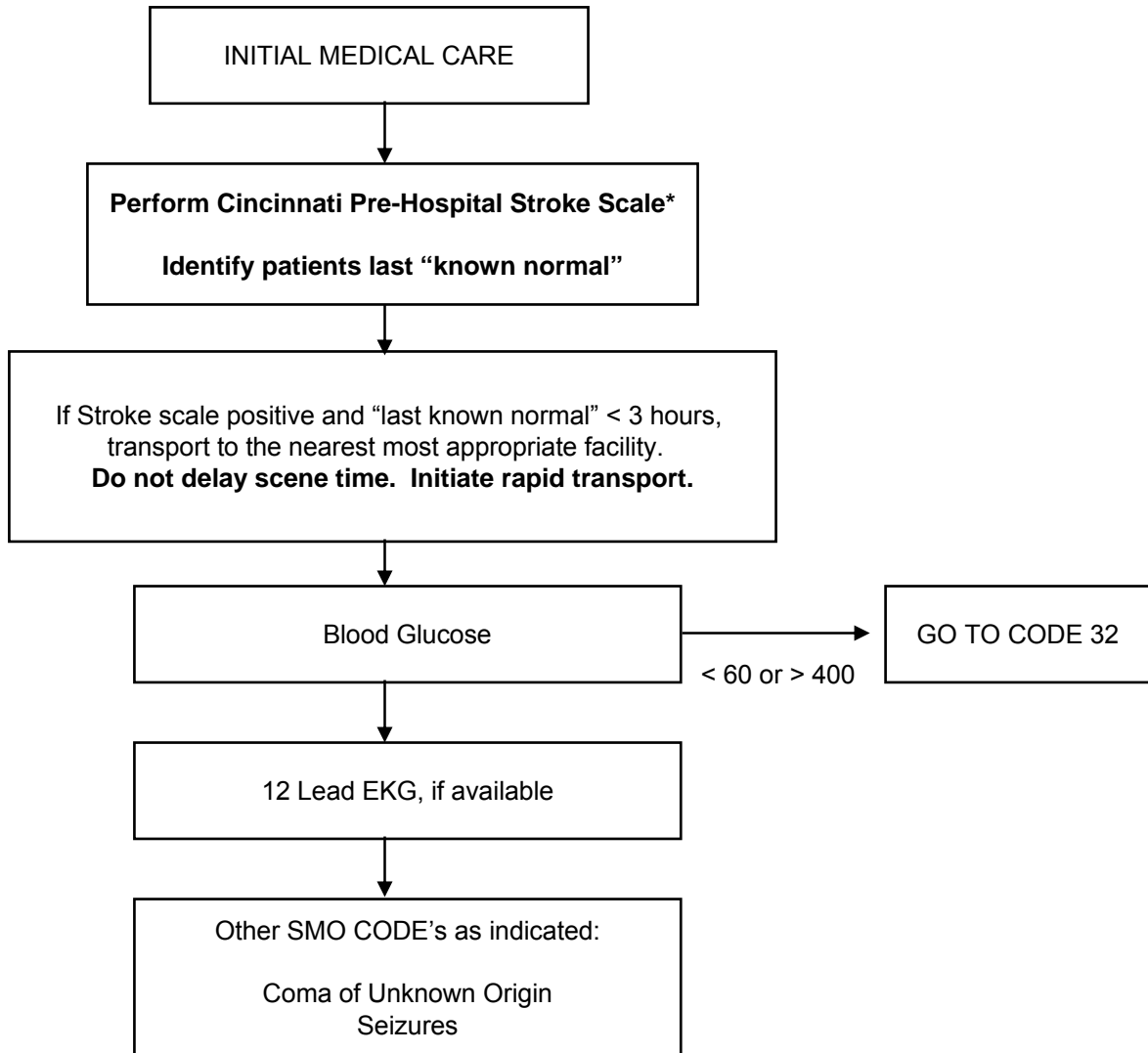
- NITROUS OXIDE** by Inhalation (optional)
- MORPHINE SULFATE** 5-10mg slow IVP in 5mg increments every 5 minutes as necessary for severe pain.

### NOTE TO PREHOSPITAL PROVIDERS:

- Assess pulse for 30-45 seconds before beginning CPR.
- DO NOT GIVE ANY DRUGS!
- May attempt defibrillation X 1 at maximum setting

# Code 38

## SUSPECTED STROKE



### \*Cincinnati Prehospital Stroke Scale

Facial Droop (Have the patient show teeth or smile)

- Normal – Both sides of face move equally well
- Abnormal – One side of face does not move as well as the other side

Arm Drift (Patient closes eyes and holds both arms straight out for 10 seconds)

- Normal – Both arms move the same or both arms do not move at all (other findings, such as pronator grip, may be helpful)
- Abnormal – One arm does not move or one arm drifts down compared with the other

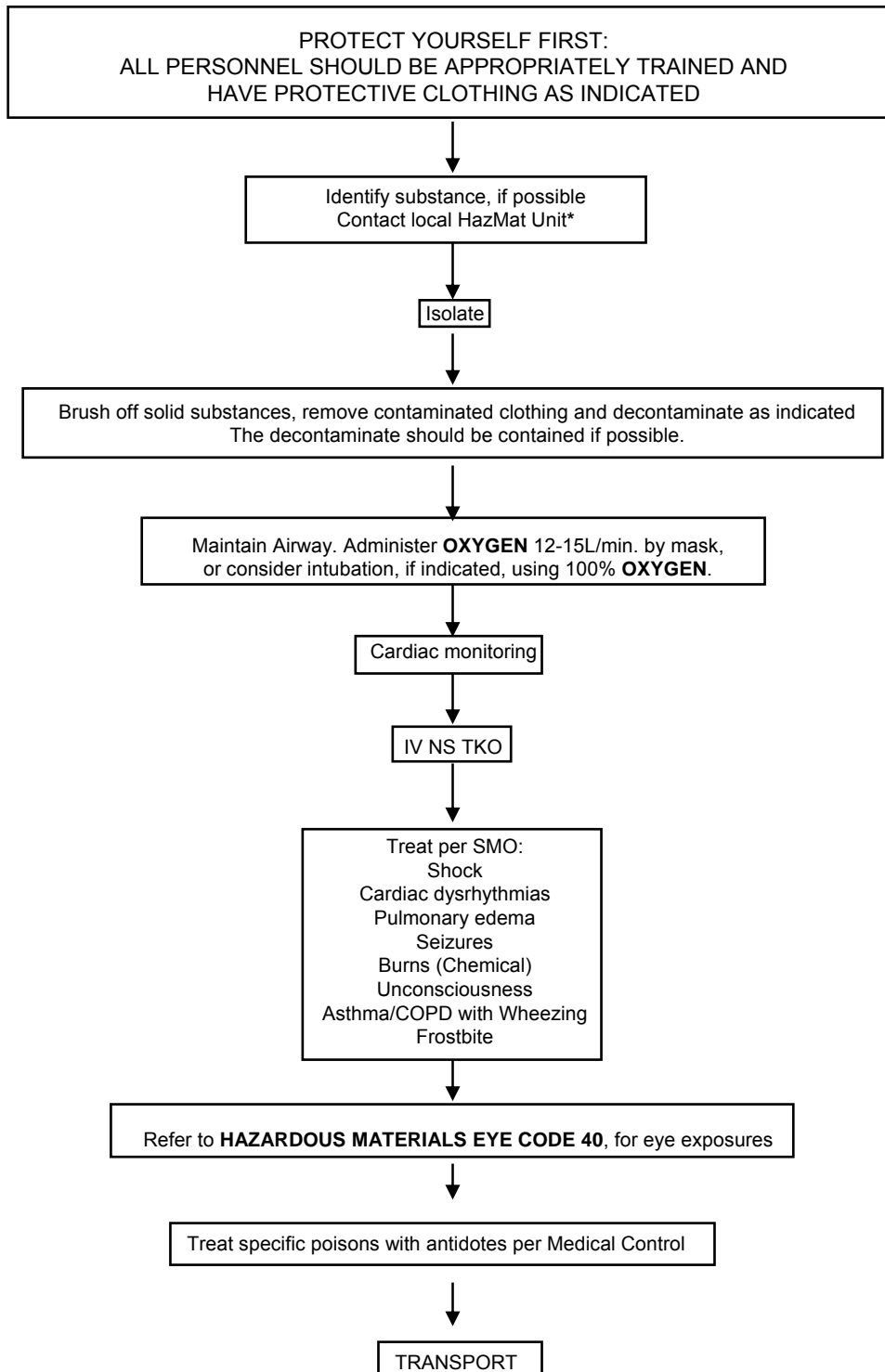
Speech (Have the patient say, "You can't teach an old dog new tricks.")

- Normal – Patient uses correct words with no slurring
- Abnormal – Patient slurs words, uses inappropriate words, or is unable to speak

Revised 10/1/11  
Effective 05/01/10  
ALS

# Code 39

## HAZARDOUS MATERIALS GENERAL



**NOTE TO PREHOSPITAL PROVIDERS:**

\*Consult Hazardous Materials Injuries,  
A Handbook for Prehospital Care,  
The North American ERG, MSDS sheet or similar text.

Reviewed 10/01/11  
Effective 05/01/98  
ALS

# Code 40

## HAZARDOUS MATERIALS EYE

### EYE IRRIGATION

Indication: Suspected or actual HazMat eye exposure  
(Refer to **HAZARDOUS MATERIALS GENERAL CODE 39** as needed)

- Identify substance
- Decontamination
- Initial Medical Care

Instill **TETRACAINE HCL** 0.5% 1-2 drops to the eye(s) to provide local anesthesia. (May repeat as needed.)  
Caution: Eye anesthesia prevents the patient from being able to sense further eye injury by eliminating discomfort.  
Patient should be advised to avoid rubbing eyes

- Establish Medical Control contact ASAP
- Eye irrigation with Normal Saline may be instituted prior to contact.  
Irrigate at "wide-open" rate, using IV tubing attached to 1000ml NS

Confirm that contact lenses are not present, or remove if present.

Volume to be used is 1000ml Normal Saline per eye, minimum.  
For suspected or actual alkali exposure, continue irrigation until advised by Medical Control to stop.

TRANSPORT

# Code 41

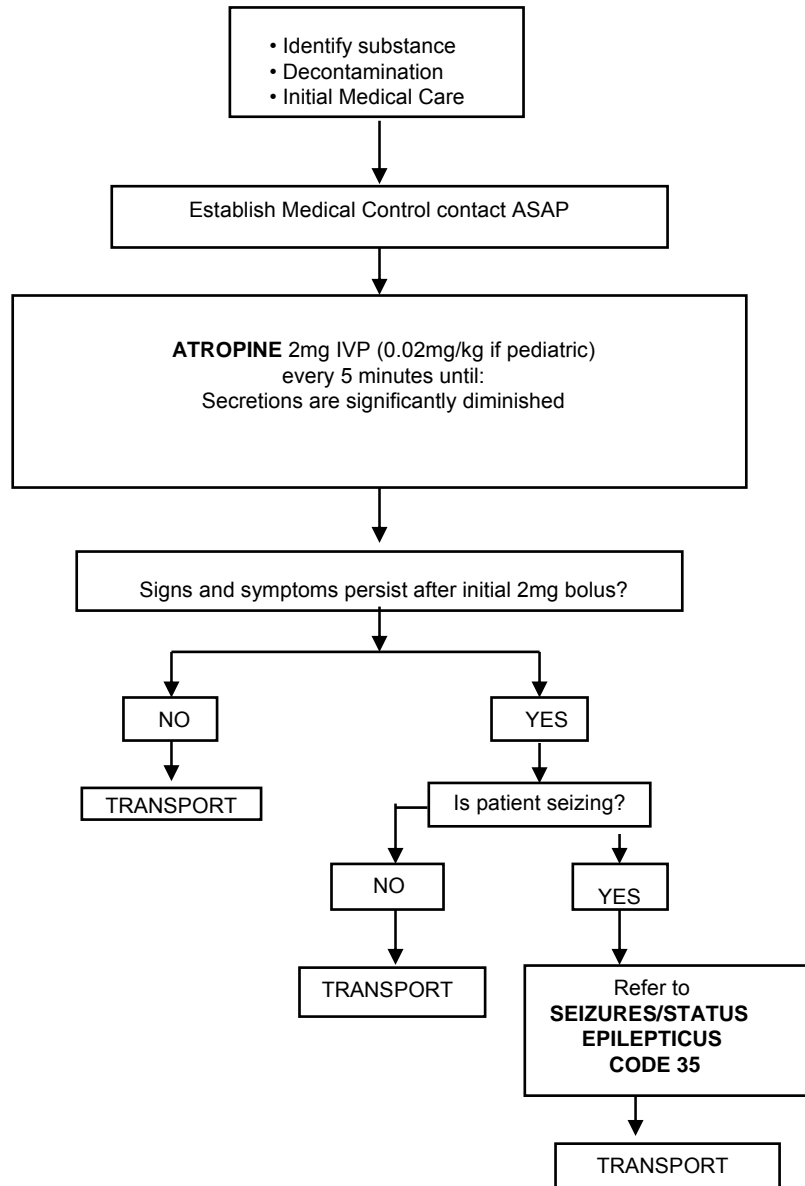
## HAZARDOUS MATERIALS PESTICIDE/NERVE AGENT

### Indications:

Poisoning with anticholinesterase agents (e.g., chemicals or pesticides of the organophosphate class)

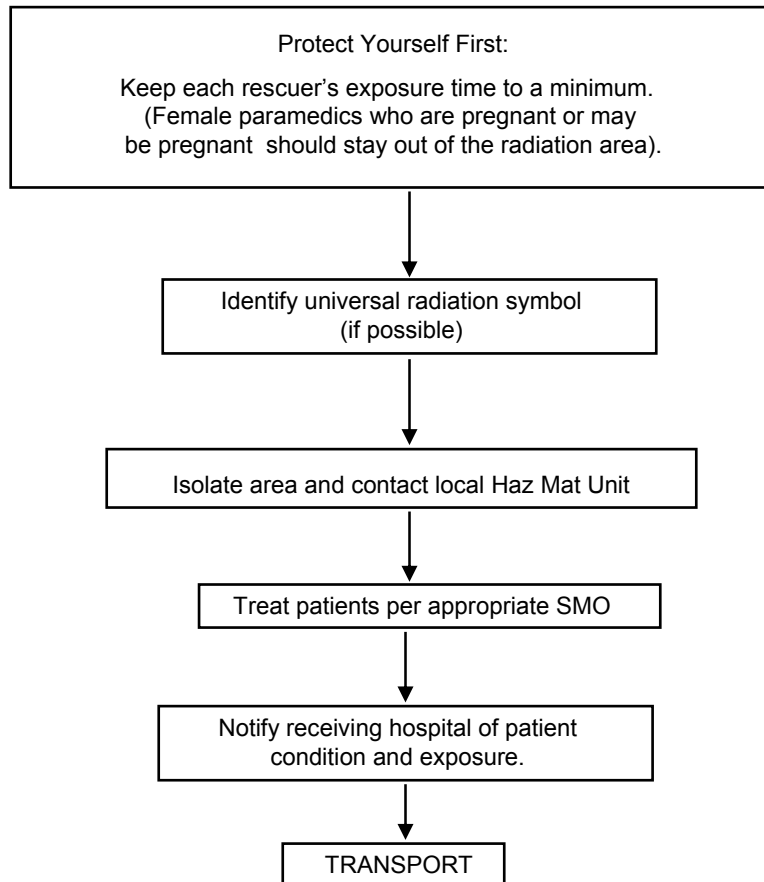
### Signs & Symptoms:

Bradycardia leading to heart block  
Chest tightness and wheezing due to bronchospasm  
Increased salivation, sweating and tearing  
Increased urination  
Abdominal cramps with nausea and vomiting  
Constricted pupils  
Weakness, muscle tremors/twitching/cramps  
Seizures, coma, shock, respiratory arrest



# Code 42

## HAZARDOUS MATERIALS RADIATION



# Code 43

## RENAL PROTOCOLS

### Venous Access in a Dialysis Patient

Do not take blood pressure or perform routine venipunctures/IVs in arm with fistula, graft or other external venous access devices.

**If patient is in cardiac arrest**, a fistula, graft or other external venous access device can be used to administer life-saving drugs and/or IV fluids. **For all other situations, contact Medical Control.**

If indicated, use 21 gauge butterfly or 20 gauge angiocath to puncture fistula/graft. More resistance will be encountered when entering fistula/graft than a normal vein. The higher pressure in the fistula/graft may require that a B/P cuff or pressure bag be applied to the IV bag or that the IV bag must be hung higher to achieve sufficient IV flow.

If accessing a fistula, graft or other external venous access device and the site infiltrates, pressure must be applied for a full 5 minutes to establish hemostasis.

### Cardiac Arrest in a Dialysis Patient

In the event of cardiac arrest, follow the appropriate SMO, including dosage of medications.

**DO NOT GIVE EXCESSIVE FLUIDS.** Use enough IV fluid to establish a B/P then maintain a TKO rate.

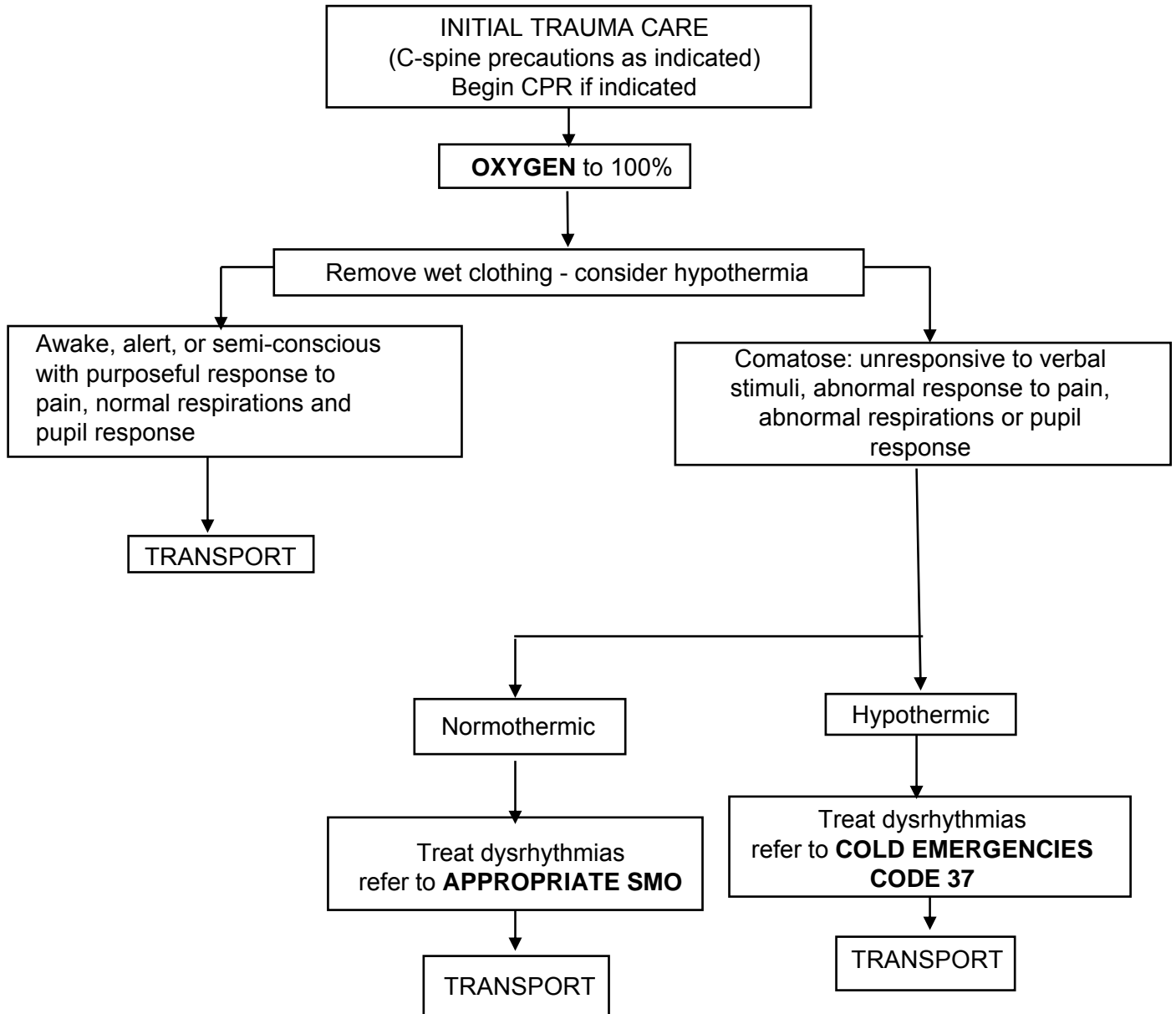
Consider **CALCIUM CHLORIDE** under the direction of Medical Control.

### Pulmonary Edema in a Dialysis Patient

Give high flow **OXYGEN** via a non-rebreather mask if possible. Place patient in upright position. May assist patient's preload and afterload status with **NITROGLYCERIN SL** and **MORPHINE SULFATE** 2-10mg IVP in 1-2mg increments every 5 minutes. Refer to **PULMONARY EDEMA DUE TO HEART FAILURE CODE 13.**

# Code 44

## DROWNING



### NOTE TO PREHOSPITAL PROVIDERS:

After 90 minutes of documented submersion time, the receiving hospital should be contacted for concurrence of no resuscitative efforts on recovery of the patient.

The Dive Team will at this time go from rescue to recovery mode.

Reviewed 10/01/11  
Effective 05/01/98  
ALS

**REGION 7**

**STANDING MEDICAL ORDERS**

**OBSTETRIC/GYNECOLOGICAL  
PROTOCOLS**

# Code 45

## EMERGENCY CHILDBIRTH LABOR AND DELIVERY

Obtain history and determine if there is adequate time to transport.  
# of pregnancies  
# of live births  
Due date  
How far apart are contractions  
Duration of contractions  
Length of previous labors - in hours  
Bag of waters intact or time since membrane rupture  
High risk concerns - Drug use, multiple births, amniotic fluid color

If mother is hyperventilating encourage slow deep breaths.  
Administer **OXYGEN** 12-15L/mask

### PREPARE FOR DELIVERY IF ANY OF THE FOLLOWING ARE PRESENT:

- Bulging perineum
- Crowning

DO NOT ATTEMPT TO RESTRAIN OR DELAY DELIVERY

Place mother in a supine position, put on sterile gloves,  
open OB pack and drape mother's abdomen and perineum.

Cord around neck

Delivery

Normal presentation

In unable to loosen and remove  
cord from around infant's neck,  
clamp x2 and cut between  
clamps.

Control delivery of head so it does not emerge too quickly. Support infant's head as it emerges and protect perineum with gentle hand pressure. Tear amniotic membrane if it is still intact and visible outside vagina. When infant's head delivered, suction and maintain airway. As shoulders emerge, guide head and neck downward to deliver anterior shoulder. Support and lift head and neck slightly to deliver posterior shoulder. Remainder of infant's delivery should occur with passive participation. Maintain a firm hold on the baby.  
Refer to **RESUSCITATION AND CARE OF THE NEWBORN CODE 48**

Wrap in blanket and position on side or back with constant airway monitoring

Administer post-partum care - Refer to **MATERNAL CARE CODE 49**

TRANSPORT

# Code 46

## OBSTETRICAL COMPLICATIONS

### THIRD TRIMESTER BLEEDING - 6-9 MONTHS (Placenta Previa, Abruptio Placenta, Trauma)

TRANSPORT IMMEDIATELY

IV NS; run to maintain systolic B/P  $\geq$  90mmHg, 100% **OXYGEN**, place mother on LEFT side

Note type and amount of bleeding and/or discharge. Do NOT place gloved hand in vagina to check for bleeding. Palpate uterus externally for tonicity

TRANSPORT

### PRE-ECLAMPSIA OR TOXEMIA

TRANSPORT IMMEDIATELY

**OXYGEN** 12-15 L/mask

INITIAL MEDICAL CARE:  
Gentle handling

Place mother on LEFT side

Minimal CNS stimulation - do not check pupillary light reflex

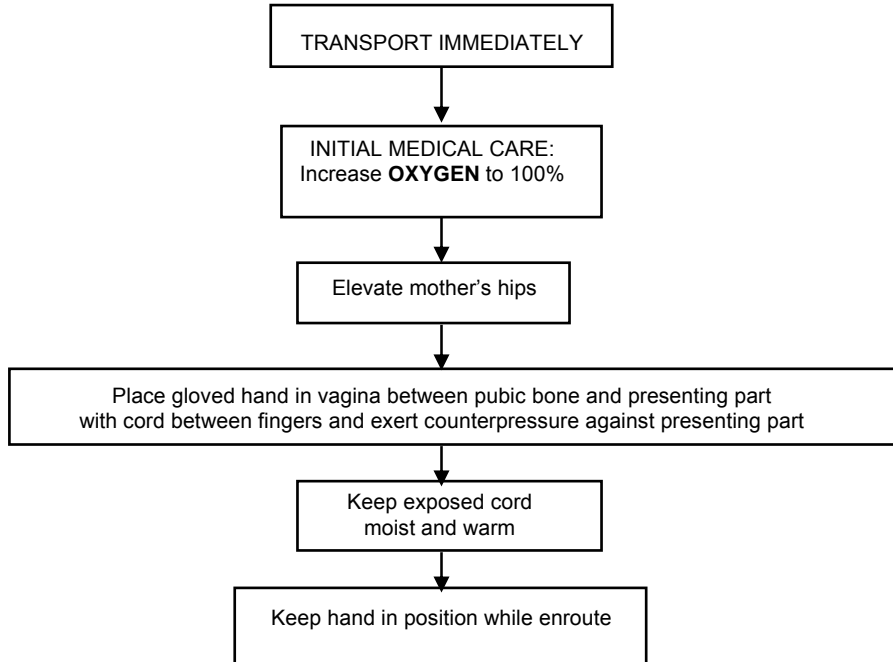
Seizure precautions

If seizures occur: Increase **OXYGEN** to 100% and  
Refer to SEIZURES/STATUS EPILEPTICUS CODE 35

# Code 47

## ABNORMAL DELIVERIES

### PROLAPSED CORD



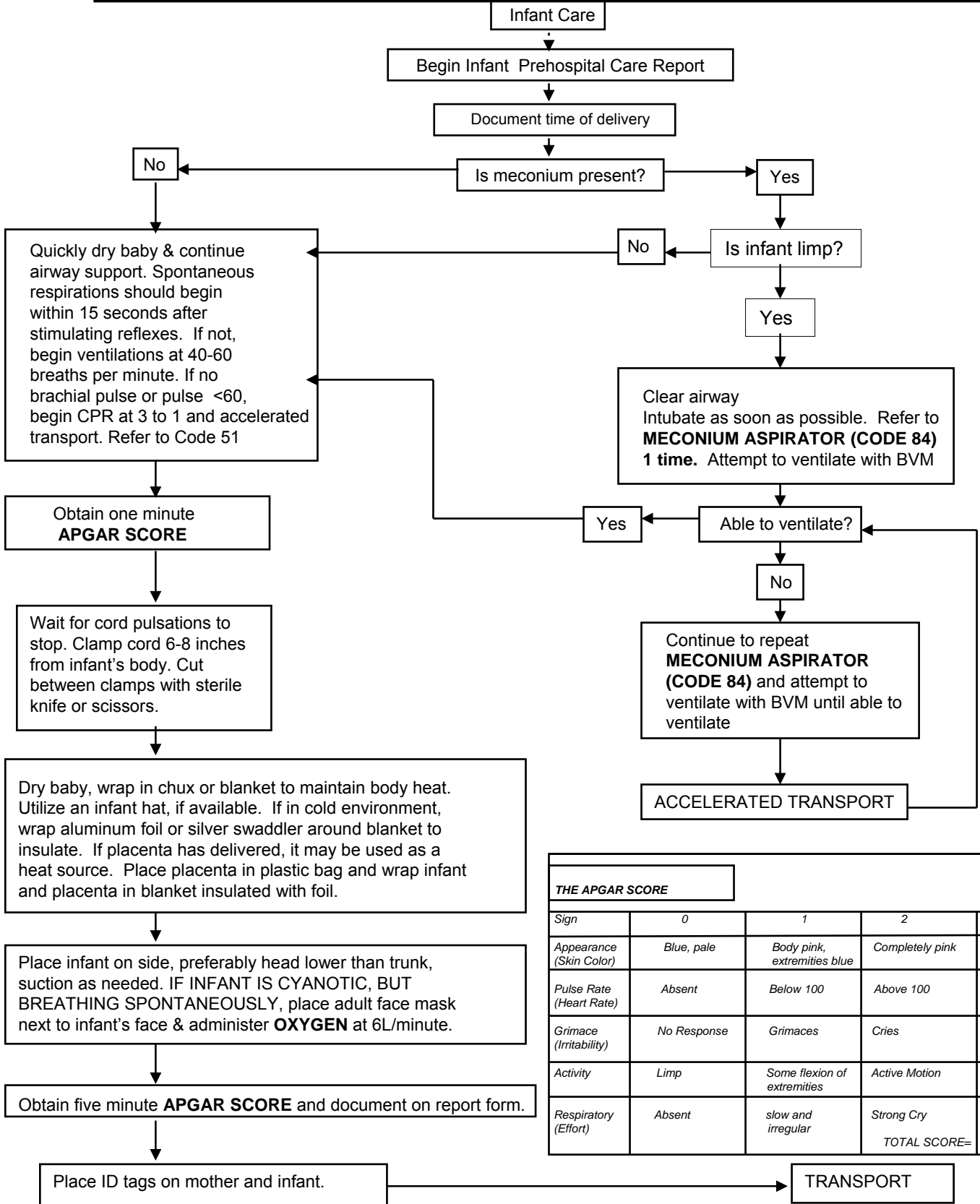
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### BREECH BIRTH

- Accelerated transport indicated with care enroute
- NEVER ATTEMPT TO PULL THE BABY FROM THE VAGINA BY THE LEGS OR TRUNK.
- As soon as legs are delivered, support baby's body, wrapped in towel.
- After shoulders are delivered, gently elevate trunk and legs to aid in delivery of head (if face down). Head should deliver in 30 seconds. IF NOT, reach two gloved fingers into the vagina to locate infant's mouth. Press vaginal wall away from baby's mouth to form an airway and apply gentle pressure to mother's mid upper abdomen. Maintain this position until delivery or arrival at the hospital.

# Code 48

## RESUSCITATION AND CARE OF THE NEWBORN



THE APGAR SCORE				Score	
Sign	0	1	2	1 min	5 min
Appearance (Skin Color)	Blue, pale	Body pink, extremities blue	Completely pink		
Pulse Rate (Heart Rate)	Absent	Below 100	Above 100		
Grimace (Irritability)	No Response	Grimaces	Cries		
Activity	Limp	Some flexion of extremities	Active Motion		
Respiratory (Effort)	Absent	slow and irregular	Strong Cry		
				TOTAL SCORE=	

# Code 49

## MATERNAL CARE

TRANSPORT IMMEDIATELY

Allow the placenta to deliver on its own, but **DO NOT** delay transport waiting for it.  
(It should deliver within 20 - 30 minutes.)  
**DO NOT** pull on cord to facilitate delivery. If delivered, collect placenta in a plastic bag and bring to hospital.

If the perineum is torn and bleeding, apply direct pressure with a sterile dressing or sanitary pad.

Observe for profuse bleeding (>500ml). If present, massage uterus and give 1000ml bolus of NS IV.

Mother may be encouraged to breastfeed to stimulate uterine contraction.

**REGION 7**

**STANDING MEDICAL ORDERS**

**PEDIATRIC PROTOCOLS**

## PEDIATRIC INITIAL ASSESSMENT

### I. SCENE SIZE UP

- \*Identify possible hazards.
- \*Assure safety for patient and responder.
- \*Observe for mechanism of injury/nature of illness.
- \*Note anything suspicious at the scene, i.e., medications, household chemicals, other ill family members.
- \*Assess any discrepancies between the history and the patient presentation, i.e., infant fell on hardwood floor - however floor is carpeted.
- \*Initiate appropriate body substance isolation (BSI) precautions
- \*Determination of number of patients.

### II. GENERAL APPROACH TO THE STABLE/CONSCIOUS PEDIATRIC PATIENT

- A. Assessments and interventions must be tailored to each child in terms of age, size and development.
- \* Smile if appropriate to the situation.
  - \* Keep voice at even quiet tone, don't yell.
  - \* Speak slowly, use simple, age appropriate terms.
  - \* Use toys or penlight as distracters; make a game of assessment.
  - \* Keep small children with their caregiver(s);
  - \* Kneel down to the level of the child if possible.
  - \* Be cautious in use of touch. In the stable child, make as many observations as possible before touching (and potentially upsetting) the child.
  - \* Adolescents may need to be interviewed without their caregivers present if accurate information is to be obtained regarding drug use, alcohol use, LNMP, sexual activity, child abuse.
- B. While walking up to the patient, observe/inspect the following:
- \* General appearance, age appropriate behavior.
  - \* Malnourished appearance? Is child looking around, responding with curiosity or fear, playing, sucking on a pacifier or bottle, quiet, eyes open but not moving much or uninterested in environment?
  - \* Obvious respiratory distress or extreme pain.
  - \* Position of the child. Are the head, neck or arms being held in a position suggestive of spinal injury? Is the patient sitting up or tripodding?
  - \* Level of consciousness, i.e., awake vs asleep or unresponsive.
  - \* Muscle tone: good vs limp.
  - \* Movement: spontaneous, purposeful, symmetrical.
  - \* Color: pink, pale, flushed, cyanotic, mottled.
  - \* Obvious injuries, bleeding, bruising, impaled objects or gross deformities.
  - \* Determine weight - Use length/weight tape to determine kilos for medication administration. A length/weight tape will be utilized to determine medication dosing.

## III. INITIAL ASSESSMENT

## A. Airway Access/Maintenance with Cervical Spine Control

- \* Maintainable with assistance: positioning.
- \* Maintainable with adjuncts: oral airway, nasal airway.
- \* Maintainable with endotracheal tube.
- \* Listen for any audible airway noises, i.e., stridor, snoring, gurgling, wheezing.
- \* Patency: suction secretions as necessary.

## B. Breathing

- \* Rate and rhythm of respirations. Compare to normal rate for age and situation.
- \* Chest expansion - symmetrical.
- \* Breath sounds - compare both sides and listen for sounds (present, absent, normal, abnormal).
- \* Positioning - sniffing position, tripod positions.
- \* Work of breathing - retractions, nasal flaring, accessory muscle use, head bobbing, grunting.

## C. Circulation

- \* Heart rate - compare to normal rate for age and situation.
- \* Central/truncal pulses (brachial, femoral, carotid) - strong, weak or absent.
- \* Distal/peripheral pulses - present/absent, thready, weak, strong.
- \* Color - pink, pale, flushed cyanotic, mottled.
- \* Skin temperature - hot, warm, cool.
- \* Blood pressure - compare to normal for age of child. Must use appropriate sized cuff.
- \* Hydration status - anterior fontanel in infants, mucous membranes, skin turgor, crying tears, urine output history.

## D. Disability - Brief Neuro Examination

- \* Assess Responsiveness
  - A Alert
  - V Responds to verbal stimuli
  - P Responds to painful stimuli
  - U Unresponsive
- \* Assess pupils
- \* Assess for transient numbness/tingling.

## E. Expose and Examine

- \* Expose the patient as appropriate based on age and severity of illness.
- \* Initiate measures to prevent heat loss and keep the child from becoming hypothermic.

## IV. FOCUSED HISTORY/PHYSICAL ASSESSMENT

## A. Tailor assessment to the needs of the patient. Rapidly examine areas specific to the chief complaint.

- \* S Signs & Symptoms as they relate to the chief complaint.
- \* A Allergies to medications, foods, environmental
- \* M Medications: prescribed, over-the-counter, compliance with prescribed dosing regimen, time, date and amount of last dose
- \* P Past Pertinent Medical History
  - Pertinent medical or surgical problems
  - Preexisting diseases/chronic illness
  - Previous hospitalizations
  - Currently under medical care
  - For infants, obtain a neonatal history (gestation, prematurity, congenital anomalies, was infant discharged home at the same time as the mother)
- \* L Last oral intake of liquid/food ingested.
- \* E Events surrounding current problem
  - Onset, duration and precipitating factors
  - Associated factors such as toxic inhalants, drugs, alcohol
  - Injury scenario and mechanism of injury
  - Treatment given by caregiver

## B. Responsive Medical Patients

- \* Perform rapid assessment based on chief complaint. A full review of systems may not be necessary. If chief complaint is vague, examine all system.

## C. Unresponsive Medical Patients

- \* Perform rapid assessment: ABCs, quick head-to-toe exam.
- \* Emergency care based on signs and symptoms, initial impressions and standard operating procedures.

## D. Trauma patient with NO significant mechanism of injury.

- \* Focused assessment is based on patient complaint.

## E. Trauma patient WITH significant mechanism of injury

- \* Perform rapid assessment of all body systems.

## V. DETAILED ASSESSMENT

## A. Performed to detect non-life-threatening conditions and to provide care for those conditions/injuries. Usually performed enroute. May be performed on scene if transport is delayed.

- \* Inspect and palpate each of the major body systems for the following:

- \* Deformities
- \* Contusions
- \* Abrasions
- \* Penetrations/punctures
- \* Burns
- \* Tenderness
- \* Lacerations
- \* Swelling/edema
- \* Instability
- \* Crepitus

- \* Auscultation of breath and heart sounds as well as blood pressure readings may be required in the field.

## VI. ONGOING ASSESSMENT

To effectively maintain awareness of changes in the patient's condition, repeated assessments are essential and should be performed at least every 5 minutes on the unstable patient, and at least every 15 minutes on the stable patient.

## VII. CONSIDERATIONS FOR CHILDREN WITH SPECIAL HEALTHCARE NEEDS (CSHN)

- \* Be familiar with CSHN in your service community and with both the child as well as their anticipated emergency care needs.
- \* Refer to child's emergency care plan formulated by their medical providers, if available. Understanding the child's baseline will assist in determining the significance of altered physical findings. Parents/caregivers are the best source of information on: medications, baseline vitals, functional level/normal mentation, likely medical complications, equipment operation and troubleshooting, emergency procedures.
- \* Regardless of underlying condition, assess in a systematic and thorough manner. Use parents/caregivers/home health nurses as medical resources.
- \* Be prepared for differences in airway anatomy, physical development, cognitive development and possibly existing surgical alterations or mechanical adjuncts. Common home therapies include: respiratory support (oxygen, apnea monitors, pulse oximeters, tracheostomies, mechanical ventilators), nutrition therapy (nasogastric or gastrostomy feeding tubes), intravenous therapy (central venous catheters), urinary catheterization or dialysis (continuous ambulatory peritoneal dialysis), biotelemetry, ostomy care, orthotic devices, communication or mobility devices, or hospice care.
- \* Communicate with the child in an age appropriate manner. Maintain communication with and remain sensitive to the parents/caregivers and the child.
- \* The most common emergency encountered with these patients is respiratory related and so familiarity with respiratory emergency interventions/adjuncts/treatment is appropriate.

# Code 51

## PEDIATRIC CARDIAC ARREST

- Establish unresponsiveness
- Position airway
- Determine breathlessness
- Ventilate with BVM 100% **OXYGEN**
- Determine pulselessness
- Initiate compressions, and continue as indicated
- Maintain airway
- Quick look/cardiac monitor

### Ventricular Fibrillation or Pulseless Ventricular Tachycardia

**Defibrillate 2 J/kg**  
Resume CPR Immediately

Give 5 cycles of CPR (15 : 2)  
During CPR  
Secure airway and confirm placement  
Establish vascular access IV/IO  
NS @ TKO

**Continue CPR**  
**Defibrillate 4 J/kg**  
Resume CPR immediately

**EPINEPHRINE 1:10,000**  
IV/IO: 0.01mg/kg (0.1ml/kg)

**Repeat every 3-5 minutes**

**Defibrillate 4 J/kg**  
Resume CPR immediately  
Give 5 cycles of CPR (15 : 2)

**LIDOCAINE**-repeated every 3-5 minutes  
IV/IO: 1mg/kg (maximum dose 3mg/kg)

- Support ABCs
- Complete initial assessment
- Observe
- Keep warm
- TRANSPORT

### Pulseless Electrical Activity (PEA)/Asystole

Resume CPR immediately  
During CPR  
Secure airway and confirm placement  
Establish vascular access IV/IO  
NS @ TKO

**EPINEPHRINE 1:10,000**  
IV/IO: 0.01mg/kg (0.1ml/kg)

**Repeat every 3-5 minutes**

#### Identify and treat causes

- Severe hypoxemia
- Severe acidosis
- Severe hypovolemia
- Tension pneumothorax
- Cardiac tamponade
- Profound hypothermia

- Fluid bolus** 20ml/kg, may repeat as indicated to maximum of 60ml/kg
- D25%** IV/IO 2ml/kg
- D12.5%** for infants under 2 months\*\*  
IV/IO 4ml/kg
- BICARB 8.4%\*** IV/IO 1meq/kg OR 1ml/kg
- BICARB 4.2%\*** IV/IO 1meq/kg OR 2ml/kg for infants under 3 months
- NARCAN** IV/IO 0.1 mg/kg

#### NOTE TO PREHOSPITAL PROVIDERS:

- Acidosis in children is primarily a problem of ventilation and oxygenation.
- BICARBONATE** administration should be reserved for unobserved arrests or for prolonged resuscitations of 10 minutes or greater.
- \* To make **BICARBONATE 4.2%** dilute **BICARBONATE 8.4%** 1:1 with sterile water or normal saline
- \*\* 1. To make **D25%** dilute **D50%** 1:1 with sterile water or normal saline
- 2. To make **D12.5%** dilute **D25%** 1:1 with sterile water or normal saline
- 3. To make **D12.5%** from **D50%** follow steps 1 & 2

# Code 52

## PEDIATRIC BRADYCARDIA

- Assess ABCs
- Administer 100% **OXYGEN**
- Complete initial assessment. Assess for:
  - Respiratory difficulty
  - Cyanosis despite **OXYGEN** administration
  - Truncal cyanosis and coolness
  - Hypotension
  - No palpable blood pressure
  - Weak thready, absent peripheral pulses
  - Decreasing consciousness
- Cardiac Monitor

**No cardiorespiratory compromise**

**Severe cardiorespiratory compromise**

- Secure airway as appropriate
- Support ventilation with BVM as indicated
- Pulse oximetry

Perform chest compressions if despite oxygen and ventilation, heart rate <60/min. with hypoperfusion. Continue compressions as indicated.

Establish vascular access IV/IO NS @ TKO

**EPINEPHRINE** 1:10,000  
IV/IO: 0.01mg/kg (0.1ml/kg)

May repeat every 3-5 minutes

**ATROPINE**  
IV/IO: 0.02mg/kg

- Minimum dose: 0.1mg
- Maximum single dose:
  - child- 0.5mg
  - adolescent-1mg
- May be repeated once in 5 minutes

**Improved cardiac status**

**Continued severe cardiac compromise**

- Per Medical Control, consider **external pacing\***
- Refer to **PEDIATRIC CARDIAC ARREST CODE 51**

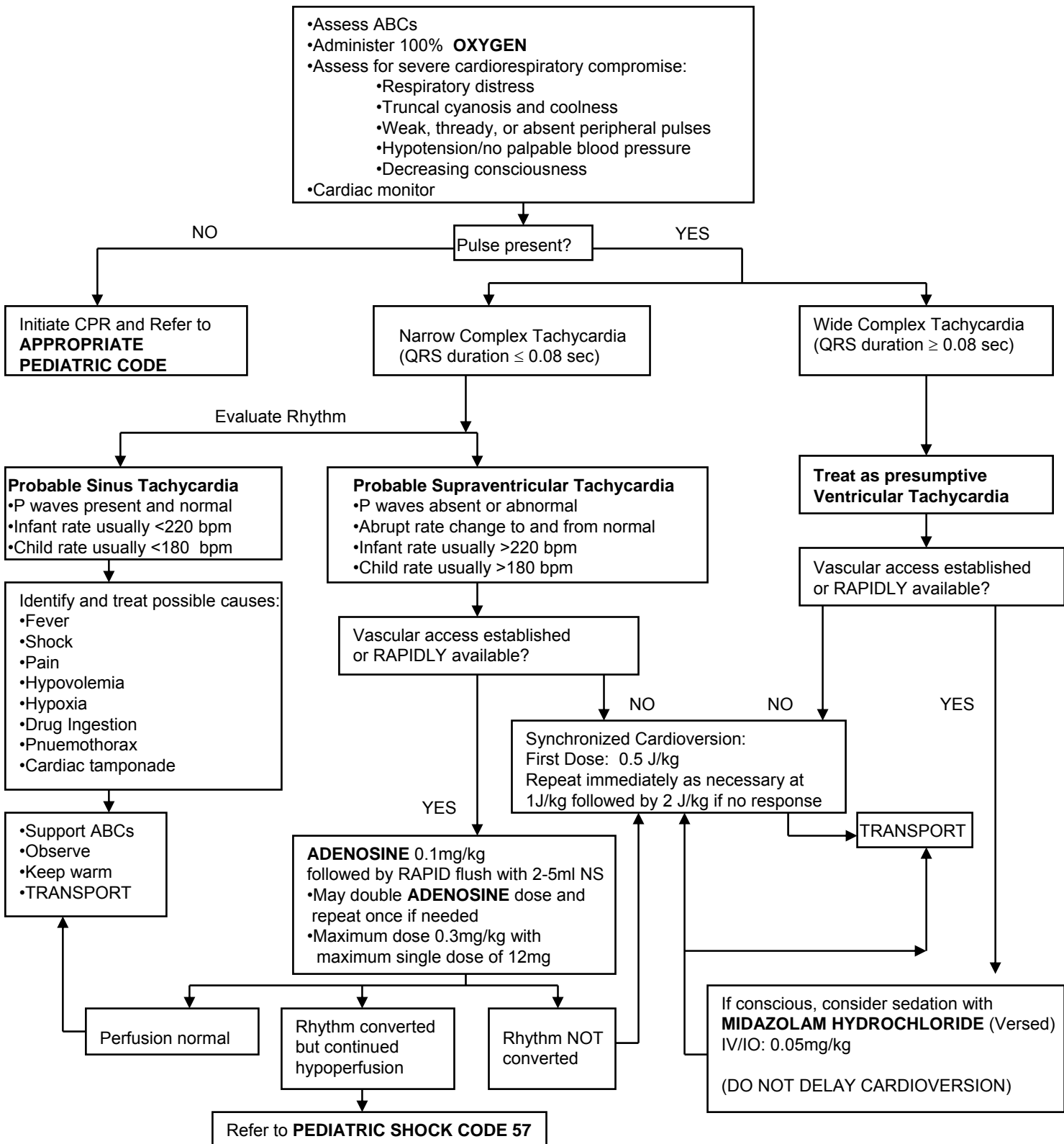
- Support ABCs
- Observe
- Keep warm
- TRANSPORT

### NOTE TO PREHOSPITAL PROVIDERS:

- Hypoglycemia has been known to cause bradycardia in infants. Refer to **PEDIATRIC ALTERED LEVEL OF CONSCIOUSNESS CODE 60**
- Special conditions may apply in the presence of severe hypothermia. Refer to **PEDIATRIC COLD EMERGENCIES CODE 63**, as needed
- \*Limited pediatric data on efficacy of external pacing.

# Code 53

## PEDIATRIC TACHYCARDIA WITH POOR PERFUSION



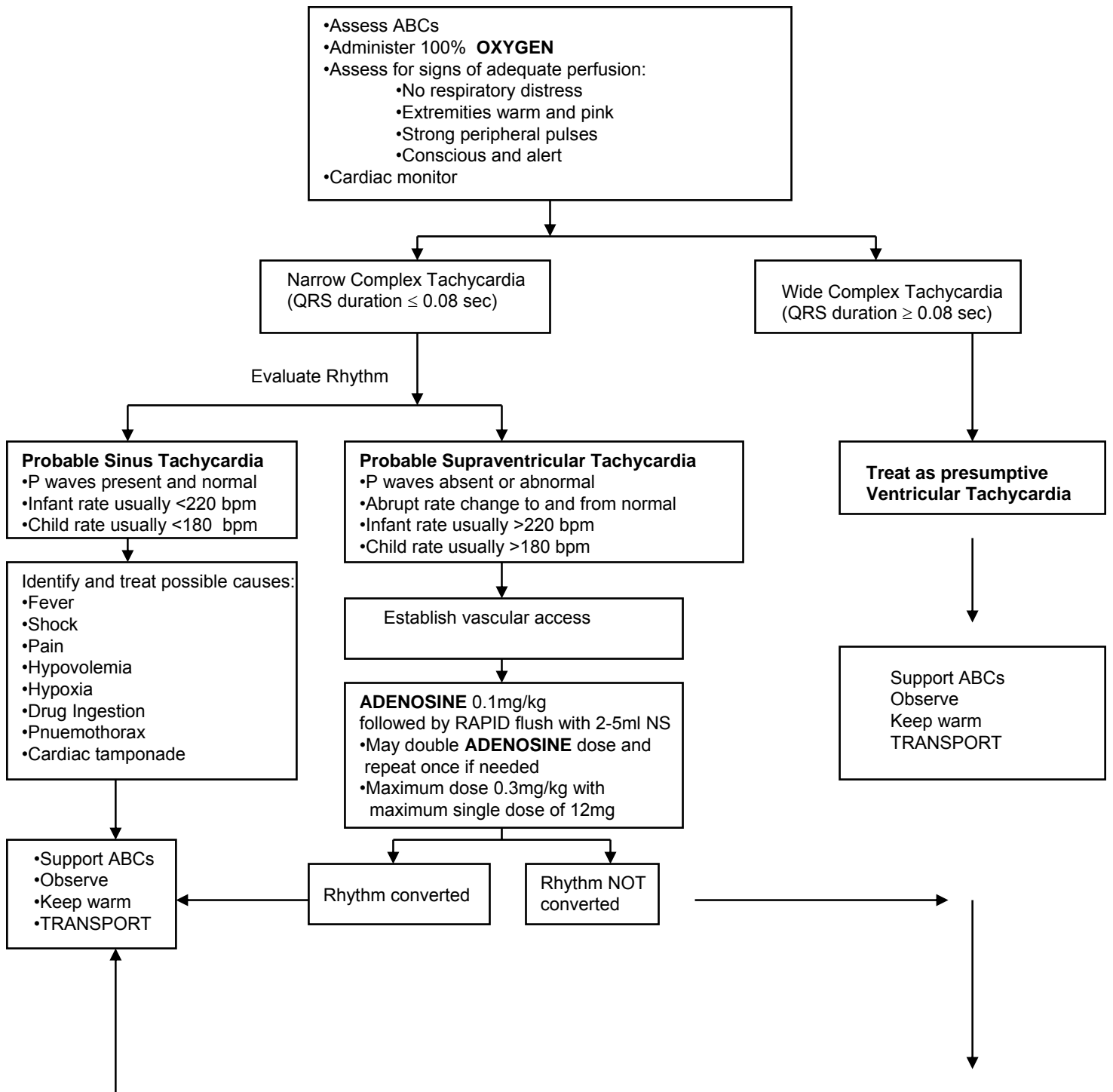
### NOTE TO PREHOSPITAL PROVIDERS:

•Vagal maneuvers may precipitate asystole and therefore should be employed with caution and only under the direction of Medical Control in a cardiac monitored child with IV access

Reviewed 10/01/11  
Effective 05/01/98  
ALS

# Code 54

## PEDIATRIC TACHYCARDIA WITH ADEQUATE PERFUSION



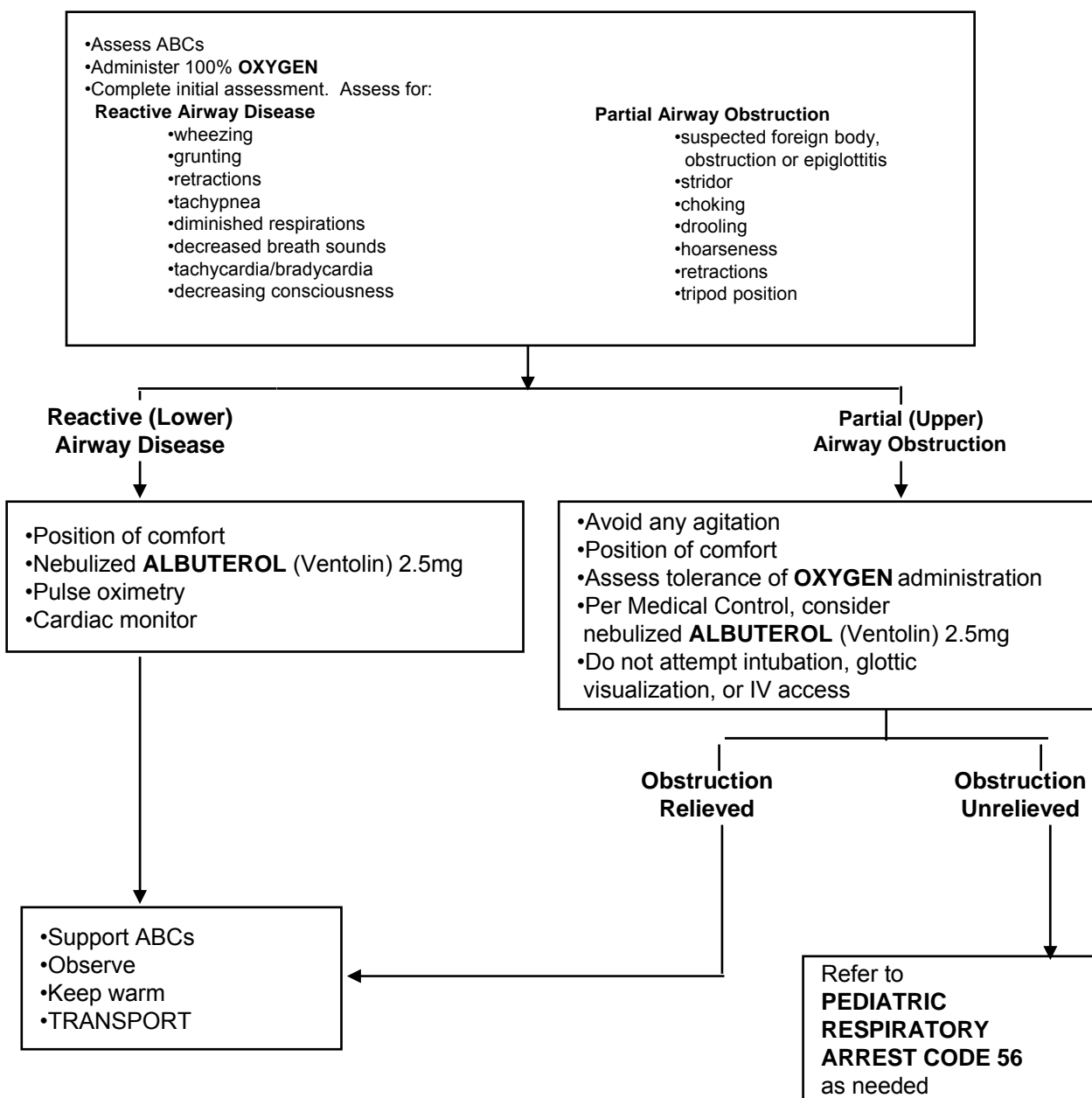
### NOTE TO PREHOSPITAL PROVIDERS:

•Vagal maneuvers may precipitate asystole and therefore should be employed with caution and only when authorized by Medical Control in a cardiac monitored child with IV access

Reviewed 10/01/11  
Effective 05/01/98  
ALS

# Code 55

## PEDIATRIC RESPIRATORY DISTRESS



# Code 56

## PEDIATRIC RESPIRATORY ARREST

Assess Airway

- Perform airway maneuver, maintaining in-line C-spine stabilization.
  - jaw thrust or chin lift/head tilt
  - suction
  - oropharyngeal airway
- C-spine immobilization as indicated

Breathing resumed

Not Breathing

- Administer 100% **OXYGEN**
- Support ventilation with BVM as indicated
- Secure airway as appropriate
- Establish vascular access IV/IO NS @ TKO
- Consider **NALOXONE** (Narcan) IV/IO/IM if respiratory rate <12: per length based Pediatric Tape
- Consider blood glucose test and administration of:
  - **D25%** IV/IO: 2ml/kg
  - OR
  - **D12.5%** IV/IO for infants under 2 months\*  
IV/IO 4ml/kg

- Administer 100% **OXYGEN**
- Support ventilation with BVM
- Age appropriate rate

Chest Rise Adequate

Chest Rise Inadequate

Hypoperfusion\*\*

Normal Perfusion\*\*

Refer to **PEDIATRIC SHOCK CODE 57** or **PEDIATRIC CARDIAC ARREST CODE 51**

- Support ABCs
- Complete initial assessment
- Cardiac monitor
- Pulse oximetry
- Observe
- Keep warm
- TRANSPORT

- Relieve Upper Airway Obstruction
- Reposition airway
- Consider back slaps, chest/abdominal thrusts (age dependent)
- Direct laryngoscopy, foreign body removal with Magill forceps if indicated
- Secure airway as appropriate
- Consider needle cricothyrotomy

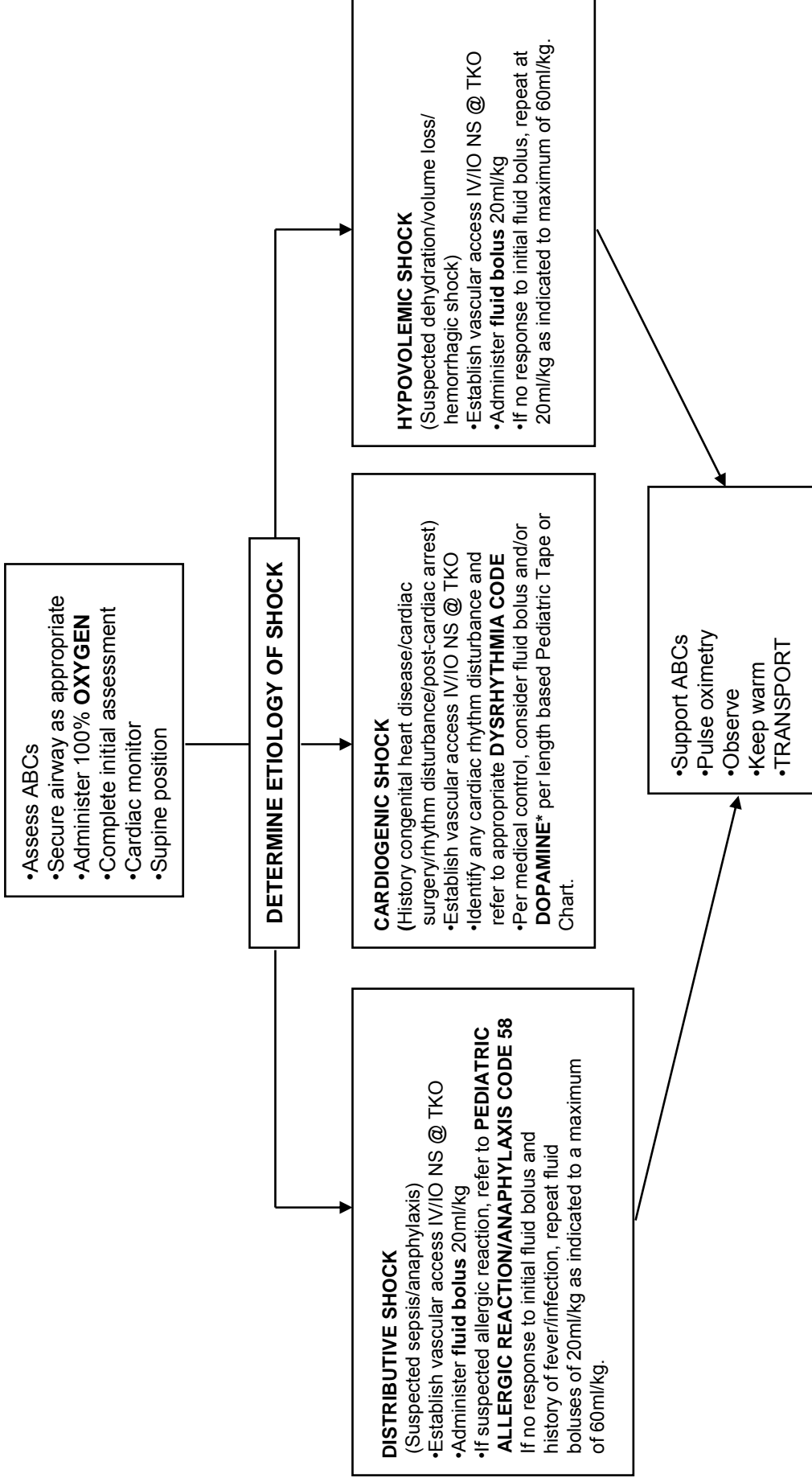
### NOTE TO PREHOSPITAL PROVIDERS:

Respiratory arrest may be a presenting sign of a toxic ingestion or metabolic disorder.

\*\*Refer to **PEDIATRIC ASSESSMENT AND TRAUMA SCORE CODE 28**

# Code 57

## PEDIATRIC SHOCK



### NOTE TO PREHOSPITAL PROVIDERS:

- Caution** - Fluids may need to be restricted in Cardiogenic Shock.
- \***DOPAMINE** must be administered per mini drip tubing.

# Code 58

## PEDIATRIC ALLERGIC REACTION/ANAPHYLAXIS

- Assess ABCs
- Secure airway as indicated
- Support ventilation with BVM as indicated
- Administer 100% **OXYGEN**
- Complete initial assessment

Local Reaction

Mild Respiratory Distress

Severe Cardiorespiratory Compromise

Apply ice/cold pack to site\*

- EPINEPHRINE** 1:1000 @ 0.01mg/kg IM  
Do not exceed 0.3mg (or 0.3ml)
- May administer patient's **EPINEPHRINE Pen**, if available

- EPINEPHRINE** 1:1000 @ 0.01mg/kg IM  
Do not exceed 0.3mg (or 0.3ml)
- May administer patient's **EPINEPHRINE Pen**, if available

- Nebulized **ALBUTEROL** (Ventolin) 2.5mg
- Reassess
- Pulse oximetry

- Establish vascular access IV/IO NS @ TKO\*\*
- EPINEPHRINE** 1:10,000 IV/IO as indicated per length based Pediatric tape
- Administer fluid bolus 20ml/kg. Repeat as indicated to a maximum of 60ml/kg
- Cardiac monitor and pulse oximetry
- Reassess
- Administer continuous nebulized **ALBUTEROL** (Ventolin) for severe wheezing.

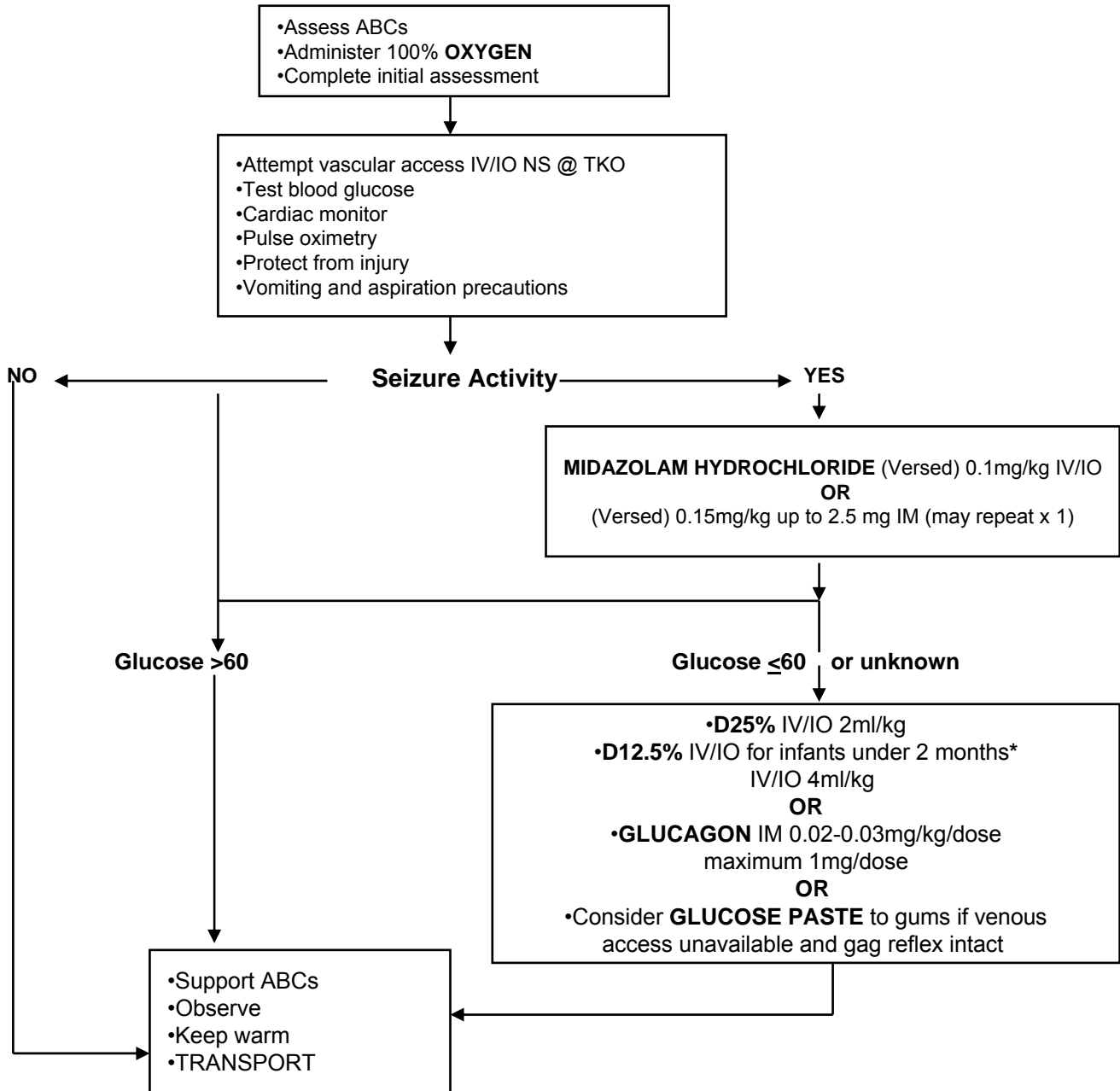
- Support ABCs
- Observe
- Keep warm
- TRANSPORT

### NOTE TO PREHOSPITAL PROVIDERS:

- If prolonged transport, per medical control consider **DIPHENHYDRAMINE** (Benadryl) IV 1mg/kg
- \*Simple hives do not require any additional field treatment.
- \*\*Avoid IV initiation or medication administration into same extremity as bite or allergen site.
- For prolonged geographical transport, consider **METHYLPREDNISOLONE** (Solu-Medrol) IV 2mg/kg

# Code 59

## PEDIATRIC SEIZURES



### NOTE TO PREHOSPITAL PROVIDERS:

- Anticipate respiratory depression if **MIDAZOLAM HYDROCHLORIDE (Versed)** is administered
- Refer to **PEDIATRIC RESPIRATORY ARREST CODE 56** as indicated
- NALOXONE (Narcan)** should be used only for suspected **ACUTE** narcotic exposure.

- \*1. To make **D25%** dilute **D50%** 1:1 with sterile water or normal saline
2. To make **D12.5%** dilute **D25%** 1:1 with sterile water or normal saline
3. To make **D12.5%** from **D50%** follow steps 1 & 2

### AT THE DESCRETION OF PHYSICIAN/ECRN:

\*For prolonged transport, may consider additional doses of **MIDAZOLAM HYDROCHLORIDE (Versed)**

# Code 60

## PEDIATRIC ALTERED LEVEL OF CONSCIOUSNESS

- Assess ABCs
- Immobilize spine as indicated
- Administer 100% **OXYGEN**
- Support ventilation with BVM as indicated
- Complete initial assessment
- Test blood glucose
- Consider other causes of altered mentation and refer to indicated protocol(s).
- Cardiac monitor
- Pulse Oximetry
- Seizure Precautions

Glucose >60 mg/dl

Glucose ≤ 60 mg/dl, or unknown

- Establish vascular access IV/IO NS @ TKO
  - D25%** IV/IO 2ml/kg
  - D12.5%** IV/IO 4ml/kg for infants under 2 months\*
- OR
- GLUCAGON** IM 0.02-0.03mg/kg/dose maximum 1mg/dose
- OR
- Consider **GLUCOSE PASTE** to gums if venous access unavailable and gag reflex intact

Reassess respiratory effort

Altered level of consciousness

Improved level of consciousness

Inadequate respiratory effort

Adequate respiratory effort

- Secure airway as appropriate
- NALOXONE** (Narcan) 0.1mg/kg IV/IO/IM if respiratory rate < 12

- Support ABCs
- Observe
- Keep warm
- TRANSPORT

### NOTE TO PREHOSPITAL PROVIDERS:

- NALOXONE** (Narcan) should be used only for suspected **ACUTE** narcotic exposure.

- \*1. To make **D25%** dilute **D50%** 1:1 with sterile water or normal saline.
- 2. To make **D12.5%** dilute **D25%** 1:1 with sterile water or normal saline.
- 3. To make **D12.5%** from **D50%** follow steps 1 & 2

## PEDIATRIC TOXIC EXPOSURES/INGESTIONS

- Assess scene safety as indicated:
  - Appropriate body substance isolation
  - Refer to appropriate **HAZMAT CODE**
  - Stop exposure
- Assess ABCs
- Secure airway as appropriate
  - Intubate for GCS  $\leq$  8
- Support ventilation with BVM as indicated
- Administer 100% **OXYGEN**
- Cardiac monitor
- Pulse oximetry
- Establish vascular access IV/IO NS @ TKO
- Complete initial assessment



- Initial interventions per Medical Control as indicated for identified exposure
- Support ABCs
- Observe
- Bring container(s) of drug or substance to the ED
- TRANSPORT

**NOTE TO PREHOSPITAL PROVIDERS:**

- Anticipate vomiting, respiratory arrest, seizure, dysrhythmias and refer to indicated protocols.
- Do not induce vomiting.

## PEDIATRIC TOXIC EXPOSURE/INGESTION

### EXPOSURE TO OR INGESTION OF NARCOTICS OR UNKNOWN SUBSTANCES

For altered level of consciousness consider per length based Pediatric Tape:

- **NALOXONE** (Narcan) 0.1mg/kg IV/IO/IM if respiratory rate <12
- If seizures occur, refer to **PEDIATRIC SEIZURES CODE 59** as indicated
- **GLUCOSE**
- **DO NOT INDUCE VOMITING.**

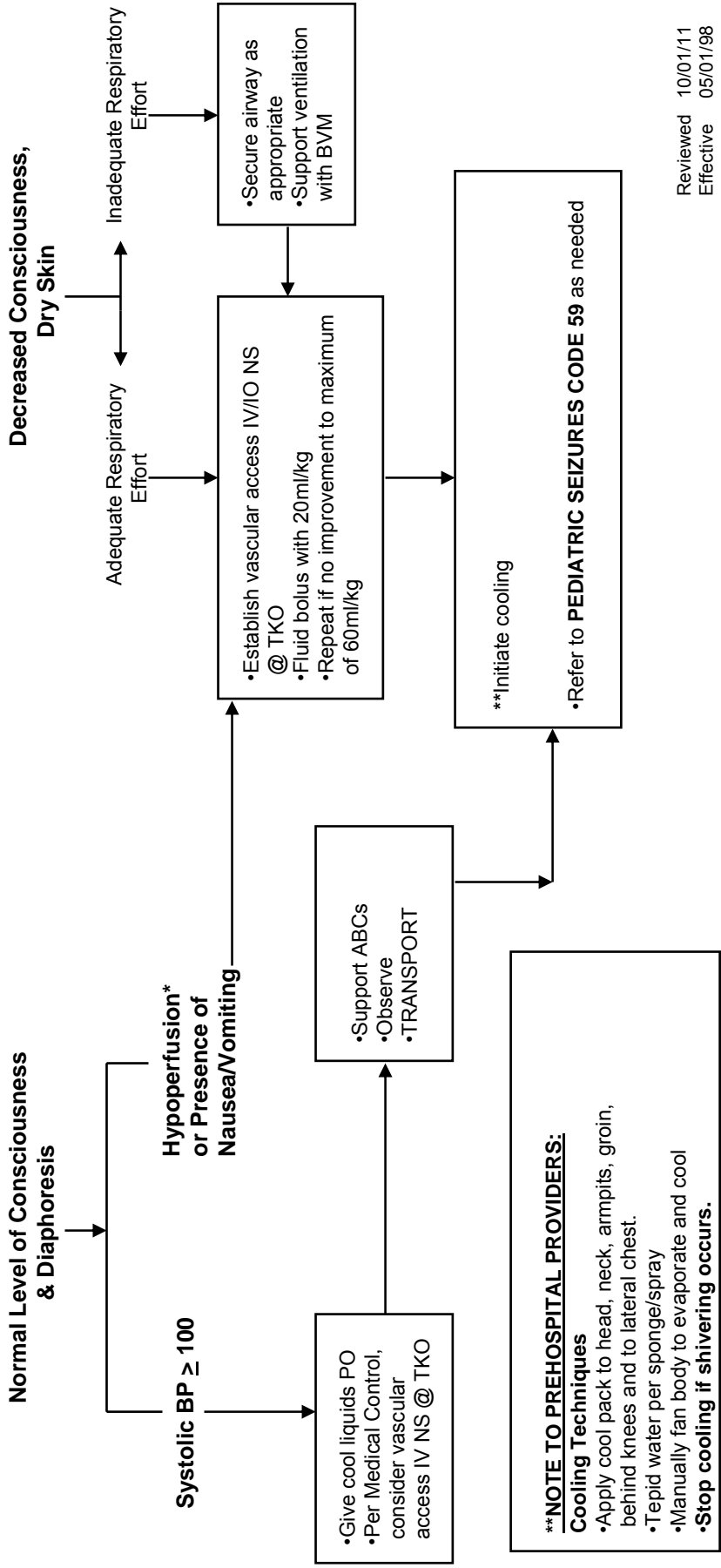
### POTENTIAL EXPOSURES

- Burning overstuffed furniture = Cyanide
- Old burning buildings = Lead fumes and Carbon monoxide
- Pepto-bismol = Aspirin
- Pesticides = Organophosphates & Carbamates
- Common poisonous plants:
  - Dieffenbachia
  - Foxglove
  - Holly leaves and berries
  - Lilly of the Valley
  - Nightshade
  - Philodendron
  - Rhubarb leaves
  - Tobacco
- Smells:
  - Almond = Cyanide
  - Fruit = Alcohol
  - Garlic = Arsenic, parathion, DMSO
  - Mothballs = Camphor
  - Natural gas = Carbon monoxide
  - Rotten eggs = Hydrogen sulfide
  - Silver polish = Cyanide
  - Stove gas = Think CO (CO and methane are odorless)
  - Wintergreen = Methyl salicylate

# Code 62

## PEDIATRIC HEAT EMERGENCIES

- Assess ABCs
  - Administer 100% OXYGEN
  - Complete initial assessment. Assess for:
    - Hot, dry, flushed or ashen skin
    - Tachycardia
    - Tachypnea
    - Diaphoresis
    - Decreasing consciousness
  - Assess scene for environmental risks
    - Place in a cool environment
    - Remove clothing as appropriate
  - Cardiac Monitor
- 
- Profound weakness and fatigue
  - Vomiting, diarrhea
  - Hypoperfusion
  - Muscle cramps



\*Refer to PEDIATRIC ASSESSMENT AND TRAUMA SCORE CODE 28

# Code 63

## PEDIATRIC COLD EMERGENCIES

### Frostbite

Move patient to a warm environment as soon as possible

- Handle skin like a burn
- Protect with light sterile dressings.
- Do not let skin rub on skin (between fingers or toes).

Cover patient and prevent re-exposure.

TRANSPORT

### Systemic Hypothermia

**Mild/Moderate 86-93.2 F(30-34 C):**  
Conscious  
OR  
altered sensorium with shivering

**OXYGEN** 12-15 L/mask

IV NS TKO (Attempt to warm IV bag and tubing with hot packs)

Rewarm patient:  
•Place patient in a warm environment.  
•Remove wet clothing.  
•Apply hot packs wrapped in towels to axilla, groin, neck, thorax.  
•Wrap patient in blankets.

TRANSPORT

### Severe Hypothermia

**86 F or less (<30 C):**

- HANDLE PATIENT VERY GENTLY TO AVOID PRECIPITATING V-FIB.
- Patient may appear uncoordinated with poor muscle control, or stiff simulating rigor mortis.
- There will be **NO SHIVERING.**
- Level of consciousness may be confused, lethargic and/or withdrawn
- Coma

**TRIPLE ZERO CANNOT BE CONFIRMED FROM THE FIELD ON THESE PATIENTS**

TRANSPORT

**OXYGEN 100%**  
Do not hyperventilate

IV NS TKO  
(Attempt to warm IV bag and tubing with hot packs)

**AT DISCRETION OF A PHYSICIAN OR ECRN :**  
**MORPHINE SULFATE 0.1mg/kg IV/IM**

### **NOTE TO PREHOSPITAL PROVIDERS:**

- Assess pulse for 30-45 seconds before beginning CPR.  
DO NOT GIVE ANY DRUGS!
- May attempt defibrillation X 1 at 2 Joules/kg if V-fib.
- Refer to **PEDIATRIC CARDIAC ARREST CODE 51.**

# Code 64

## PEDIATRIC DROWNING

- Assess airway, ventilation, and respiratory effort
- Assess for hypothermia:  
Refer to **PEDIATRIC COLD EMERGENCIES CODE 63**

Adequate ventilation and respiratory effort

- Administer 100% **OXYGEN**
- Immobilize spine as indicated

- Complete initial assessment
- Remove wet clothing
- Warm. Place heat packs to axilla and groin, taking care to avoid direct skin contact.

- Establish vascular access IV/IO NS @ TKO
- Cardiac monitor
- Pulse Oximetry
- Refer to:  
**PEDIATRIC SEIZURES CODE 59**  
OR  
**APPROPRIATE PEDIATRIC DYSRHYTHMIA CODE**

- Support ABCs
- Keep warm
- Observe
- TRANSPORT

Inadequate ventilation and respiratory effort

- Perform airway maneuver, maintaining in-line C-spine stabilization:
  - Jaw thrust
  - Suction
- Relieve upper airway obstruction as indicated
- Support ventilation with BVM and 100% **OXYGEN**
- Spinal immobilization if indicated

Reassess airway patency

patent

obstructed

Refer to:  
**PEDIATRIC RESPIRATORY ARREST CODE 56**  
OR  
**PEDIATRIC CARDIAC ARREST CODE 51**  
as needed

**REGION 7**

**STANDING MEDICAL ORDERS**

**PROTOCOLS FOR  
SPECIAL SITUATIONS**

Reviewed 10/01/11

Effective 05/01/98

ALS

## SUSPECTED CHILD ABUSE AND NEGLECT

- Assess ABCs
- Complete initial assessment

Treat obvious injuries. Refer to  
**PEDIATRIC TRAUMA CODE 27**

- Note:**
- Environmental surroundings
  - Child's interaction with parents
  - Physical assessment findings
  - Discrepancies in child and parent history and injuries

TRANSPORT, regardless of extent of injuries.

Transport agreed upon  
by parent/caregiver

Transport refused  
by parent/caregiver

- Support ABCs
- Observe
- TRANSPORT
- Document all findings

- Assess scene safety
- If possible, remain at site
- Call police/Medical Control and request protective custody
- Do not confront caregivers

Report Suspicions to ED physician, ED charge nurse AND DCFS (1-800-25-ABUSE)  
(1-800-252-2873)

**SUSPECTED CHILD ABUSE & NEGLECT****NOTE TO PREHOSPITAL PERSONNEL:**

1. You are required by law to report your suspicions.
2. Suspect battered or abused child if any of the following is found:
  - A discrepancy exists between history of injury and physical exam.
  - Caregiver provides a changing or inconsistent history.
  - There is a prolonged interval between injury and the seeking of medical help.
  - Child has a history of repeated trauma.
  - Caregiver responds inappropriately or does not comply with medical advice.
  - Suspicious injuries are present, such as:
    - Injuries of soft tissue areas, including the face, neck and abdomen
    - Injuries of body areas that are normally shielded, including the back and chest
    - Fractures of long bones in children under 3 years of age
    - Old scars, or injuries in different stages of healing
    - Bizarre injuries, such as bites, cigarette burns, rope marks, imprint of belt or other object
    - Trauma of genital or perianal areas
    - Sharply demarcated burns in unusual areas
    - Scalds that suggest child was dipped into hot water
3. The following are some common forms of neglect:
  - Environment is dangerous to the child (e.g. weapons within reach, playing near open windows without screen/guards, perilously unsanitary conditions, etc.).
  - Caretaker has not provided, or refuses to permit medical treatment of child's acute or chronic life-threatening illness, or of chronic illness, or fails to seek necessary and timely medical care for child.
  - Abandonment
  - Caretaker appears to be incapacitated (e.g. extreme drug/alcohol intoxication, disabling psychiatric symptoms, prostrating illness) and cannot meet child's care requirements.
  - Child appears inadequately fed (e.g. seriously underweight, emaciated, or dehydrated) inadequately clothed, or inadequately sheltered.
  - Child is found to be intoxicated or under the influence of an illicit substance(s).

## PSYCHOLOGICAL EMERGENCIES

### DOMESTIC VIOLENCE

#### SPOUSAL ABUSE

#### GERIATRIC ABUSE

#### SEXUAL ASSAULT

#### I. PURPOSE/DEFINITION

Given the magnitude of the problems of abuse and violence in our society, early detection of domestic violence victims, appropriate legal and social service referrals and the delivery of timely medical care are essential.

Domestic violence is a pattern of coercive behavior engaged in by someone who is or who was in an intimate or family relationship with the recipient. These behaviors may include: repeated battering, psychological abuse, sexual assault or social isolation such as restricted access to money, friends, transportation, health care or employment. Typically, the victims are female, but it must be recognized that males can be victims of abuses as well.

#### II. DOMESTIC VIOLENCE INDICATORS

While sometimes the specific history of abuse is offered, many times the victim of abuse, (either out of fear or because of the coercive nature of the relationship or out of desire to protect the abuser) will not volunteer a true history but instead ascribe injuries to another cause. Therefore, an appropriate review must be undertaken with respect to patients presenting with injuries:

- That do not seem to correspond with the explanation offered.
- That are of varying ages.
- That have the contour of objects commonly used to inflict injury (hand, belt, rope, chain, teeth, cigarette).
- During pregnancy.

Other factors include:

- Partner accompanies patient and answers all questions directed to patient.
- Patient reluctant to speak in front of partner.
- Denial or minimalization of injury by partner or patient.
- Intensive, irrational jealousy or possessiveness expressed by partner.

Physical injuries commonly associated with domestic violence:

- Central injuries, specifically to the face, head, neck, chest, breasts, abdomen, or genital areas.
- Contusions, lacerations, abrasions, stab wounds, burns, human bites, fractures (particularly of the nose and orbits) and spiral wrist fractures
- Complaints of acute or chronic pain without tissue injury
- Signs of sexual assault
- Injuries of vaginal bleeding during pregnancy, spontaneous or threatened miscarriage
- Direct impact of domestic violence on pregnancy may include:

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ALS

<b>PSYCHOLOGICAL EMERGENCIES</b>
----------------------------------

- Abdominal trauma leading to abruption, pre-term labor, and delivery
- Fetal fracture
- Ruptured maternal liver, spleen, uterus
- Antepartum hemorrhage
- Exacerbation of chronic illness

\* Multiple injuries in different stages of healing

### III. APPROACHES FOR INTERVIEWING THE PATIENT

The goals of the physical examination are to identify injuries requiring further medical intervention and to make observations and collect evidence that may corroborate the patient's report of abuse. A thorough physical examination is essential to uncover hidden injuries or compensated trauma. If the patient reports sexual assault, the sexual assault protocol should be followed:

\* Always interview the patient in a private place, away from anyone accompanying them to the ED. Questioning the patient in front of the batterer may place the patient and any children in danger.

\* You may be the first person or professional to acknowledge the abuse. It is important that you convey your concerns about what has happened to the patient to the Emergency Physician and Nurse.

\* When interviewing, do not ask the patients if they were battered or abused (many battered persons do not consider themselves in this light). Instead you can ask the patient:

“Have you had a fight with someone?”

“Did anyone hurt you?”

“Many times we have seen these types of injuries in patients who are hurt by someone else, did someone hurt you?”

“I am concerned that someone may be hurting you or scaring you, can you tell me what happened?”

\* Most battered persons feel very shamed and humiliated about what has happened to them. It is important to acknowledge that you understand how difficult it is to talk about what has happened.

\* Many battered persons will minimize the abuse or blame themselves for what happened. It is important that you repeatedly reinforce that no one deserves to be hurt no matter what they may or may not have done.

\* Questions/attitude **Not** to Ask/Express:

- What keeps you with a person like that?
- Do you get something out of the violence?
- What did you do at the moment that caused them to hit you?
- What could you have done to avoid or defuse the situation?

### IV. PRACTICE

\* Treat obvious injuries; transport.

\* Report your suspicion and supporting findings to the Emergency Department Physician and on the prehospital report form.

\* Document the name of the physician and/or nurse to whom you reported your suspicion on the prehospital report form.

\* If the patient refuses transport, make appropriate referral and document on run sheet.

\* Document your findings on the prehospital report form:

- Presenting condition
- Any suspicious indicators
- Any suspicious commentary made by the patient on interviewing the patient.
- Physical exam including any evidence of abuse.
- Treatment rendered

# Code 67

## TRIPLE ZERO/DNR/CRITERIA FOR INITIATION CPR

Personnel, whether operating at a Basic, Intermediate, or Advance Life Support levels, are required to immediately initiate CPR whenever clinical signs of death exist.

THERE ARE ONLY TWO (2) EXCEPTIONS TO THIS REQUIREMENT:

A. Triple Zero: Signs of Explicit Biological Death Exists

The use of the term "Triple Zero" helps to alleviate the possibility of hysteria from family and/or bystanders due to any radio communications they may overhear and clearly alerts the hospital telemetry personnel to the likelihood of the patient arriving DOA.

1. The field unit will notify the hospital over telemetry, "We have a TRIPLE ZERO." This indicates that they have a patient who is pulseless, non-breathing, and exhibits one or more of the following long-term indications of death:
  - a. Profound dependent lividity
  - b. Rigor mortis without profound hypothermia
  - c. Patient who has suffered decapitation
  - d. Skin deterioration or decomposition
  - e. Mummification or dehydration, especially in infants
  - f. Putrefaction

2. Transmit a rhythm strip via telemetry, and give the appropriate hospital the known patient history. (Rhythm strip may be omitted for b through f.)
3. The hospital will confirm the Triple Zero and will give orders to transport providing it is not a county medical examiner's case.
4. The confirmation of a Triple Zero is not to be construed as a pronouncement of death.
5. Transport of Triple Zero - Situations may arise where prolonged delays resulting from dispensations of obviously dead patients would tie up an ALS vehicle for unreasonable lengths of time. If the paramedics encounter a patient whom they confirm to be a Triple Zero over telemetry, they may transfer responsibility for transportation of that patient to another ambulance service, either ALS, ILS or BLS, the appropriate police department, or an agency who is reasonably appropriate for the circumstance, who may transport the patient to a hospital to have death pronounced by an individual legally authorized to do so.

B. DNR (Do Not Resuscitate) - See System Policy

C. Except in the conditions listed above, CPR is to be initiated immediately and continued until one (1) of the following occurs:

1. Effective spontaneous circulation and ventilation have been restored.
2. Resuscitation efforts have been transferred to other persons of at least equal skill, training and experience.
3. The rescuers are exhausted and physically unable to continue resuscitation.
4. A direct order from on-line medical control is given to discontinue CPR.

D. A system hospital is to be contacted over telemetry in ALL cases of cardiac arrest, whether or not the patient has signs of clinical death, meets the criteria for Triple Zero (Biological Death) or has a "Do Not Resuscitate" order.

In cases where the patient's status is unclear and the appropriateness of CONTINUED CPR is questioned, paramedics should call the appropriate system hospital AFTER initiation of CPR.

# Code 68

## RESTRAINTS AND BEHAVIORAL EMERGENCIES

**Maintain situational awareness and scene safety.** Introduce yourself to the patient, and attempt to gain their confidence in a non-threatening manner. If the patient refuses assistance, attempt to determine their mental status. This includes determining their orientation and the presence of anything that could produce an altered mental status, such as drug/alcohol intoxication or withdrawal, trauma (head injury), hypoxia, hypotension, hypoglycemia, stroke, infections, psychological emergencies (i.e. homicidal, suicidal, psychosis, etc.) or dementia (i.e. acute or chronic organic brain syndromes).

No

If the mental status is judged to be abnormal, prehospital personnel must carry out treatment and transport in the patient's best interest.

In any form of intervention, prehospital personnel must **ALWAYS CONSIDER THEIR OWN SAFETY FIRST!**

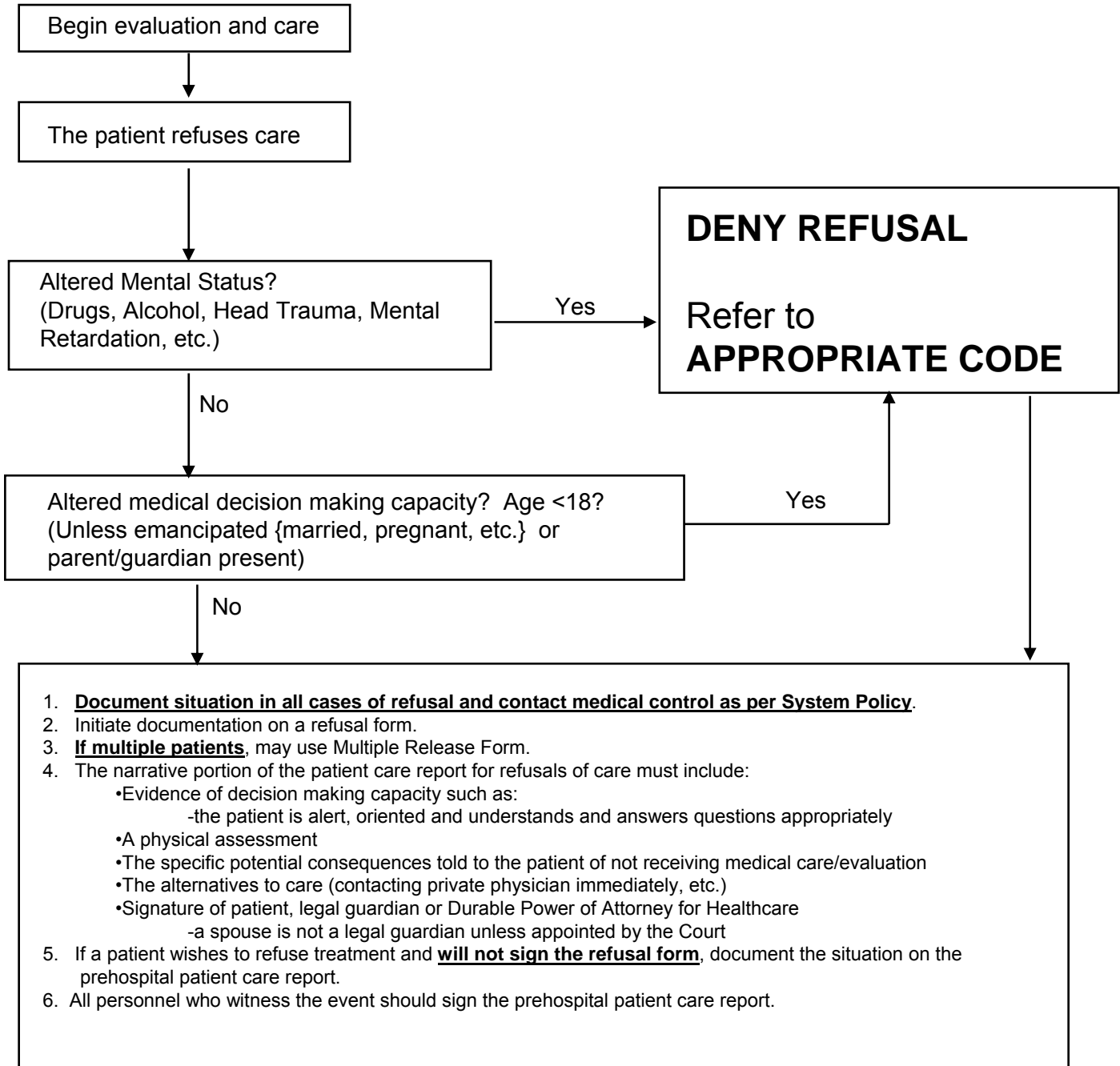
1. Again attempt to verbally reassure the patient and seek their willing cooperation.
2. If it is necessary to physically restrain a patient, perform all the following:
  - A. Prepare all the necessary equipment.
  - B. Use police and /or fire personnel if needed. If available, have one person assigned to each extremity and one to hold equipment.
  - C. Apply the restraints as loosely as possible to maintain a safe situation, but prevent neurovascular compromise and undue patient discomfort. Apply restraints over clothing when possible.
  - D. Never place restraints over a patient's chest or on the abdomen of a pregnant patient.
  - E. Perform routine and specific medical care as indicated by the patient's condition. Routinely document the neurovascular status of the patient's extremities distal to the restraints.
  - F. Notify the receiving hospital of the situation, and request security assistance upon arrival.
  - G. Continue to attempt to verbally reassure the patient and seek their cooperation. Inform the patient's family of the reasons for the use of restraints.
  - H. Thoroughly document the situation including the reasons for using restraints and how they were applied.
  - I. At no time will towels, washcloths or other devices be placed over the mouth and/or nose of a restrained patient for any reason.
  - J. Never restrain a patient in the prone position.
  - K. For reasons of medical safety, any patient who is under police hold and requires handcuffs, must have a police officer accompany the patient in the back of the ambulance while enroute to the hospital or provide the transporting EMS personnel with keys to the handcuffs.

**NOTE TO PREHOSPITAL PROVIDERS:**

Once restrained, continue to be conscious of the patient's airway and other medical needs.

# Code 69

## REFUSALS OF CARE



**Contact Medical Control with any questions.**

**REGION 7**

**STANDING MEDICAL ORDERS**

**PROCEDURAL PROTOCOLS**

# Code 70

## **NITROUS OXIDE ADMINISTRATION**

- INDICATIONS FOR **NITROUS OXIDE** ANALGESIA INCLUDE:

- Severe pain due to musculoskeletal trauma
- Non-respiratory burns
- Kidney stones

- **NITROUS OXIDE** is to be administered as a fixed 50/50 concentration with **OXYGEN** only.

-The monitoring of the patient's oxygen saturation via pulse oximetry is mandatory.

- The delivery device utilized must be fixed and not adjustable.

- **NITROUS OXIDE** must be self administered by the patient.

- There must be no contraindications to the use of **NITROUS OXIDE**.

- CONTRAINDICATIONS INCLUDE:

- Altered mental status that would make the patient unable to self administer
- Shock
- Severe maxillofacial injuries
- Chronic Obstructive Pulmonary Disease
- Abdominal trauma
- Head injury
- Fire hazard situations
- Any other situation in which the patient cannot self administer **NITROUS OXIDE**

# Code 71

## EXTERNAL JUGULAR VEIN CANNULATION

- Position patient in trendelenberg position.
- Turn the head away from the side to be cannulated.
- Prep the skin with cleansing prep
- Apply traction to the skin just above the clavicle.
- Insert the catheter, “bevel up,” at a 30-degree angle, directed toward the shoulder on the same side. The needle should enter midway between the angle of the mandible and the clavicle. There will be a flash of blood as you enter the vein.
- Carefully lower the needle and catheter and advance them about 2mm further into the vein.
- Advance the catheter over the needle into the vein and remove the needle.
- Discard the needle in a sharps container - **do not recap the needle.**
- Attach IV tubing to the hub of the catheter and open the flow regulator to assure fluid flows freely.
- Secure the catheter to the skin.

# Code 72

## DECOMPRESSION OF TENSION PNEUMOTHORAX

- Assure the patient is receiving high-flow oxygen.
- Identify the side of the chest needing decompression (this is the side with decreased breath sounds.)
- Prep the site (second intercostal space in the midclavicular line or 4th intercostal space mid axillary line) with a cleansing prep.
- Introduce the needle into the second intercostal space, directing it perpendicularly over the superior aspect of the 3rd rib or 4th intercostal space mid axillary line.
- Insert the needle until a rush of air exits
- Remove the needle, leaving the catheter in place.
- Secure the catheter to the chest wall.
- Reassess breath sounds.

## PEDIATRIC MANUAL INTRASOSEOUS NEEDLE INSERTION

- **Equipment**
  - IV fluid and tubing
  - Intraosseous needle
  - Cleansing prep
  - Tape, 4x4 gauze
  - 10ml syringe
  - Sterile gloves
  - 60ml syringe
  
- **Procedure**
  - Prepare equipment.
  - Identify landmarks: anteromedial aspect of the proximal tibia, 1-3cm below the tibial tuberosity. (Distal femur or distal tibia may also be used.)
  - Prep the site with cleansing prep
  - Using a twisting motion, introduce the needle at a 90-degree angle, directing away from the knee. There will be a “pop” as the needle enters the marrow.
  - Remove the stylet (discard in sharps box) and aspirate with a 10ml syringe to confirm needle placement.
  - Remove the syringe, attach IV fluids to be given. Flush with 5ml of Normal Saline.
  - Secure the needle.
  - Bolus fluid by hand, using 60ml syringe.

## OTHER INTRAOSSEOUS NEEDLE INSERTION

### Indications:

- See appropriate SMOs

### Contraindications:

- Infection at the site selected for insertion (choose alternate site)
- Fracture of the bone selected for IO infusion (choose alternate site)
- Excessive tissue preventing identification of landmarks (choose alternate site)
- Previous significant orthopedic procedures, such as a prosthesis (choose alternate site)
- Previous IO insertion attempt to this site within the last 24 hours (choose alternate site)

### “Power driver” Insertion Steps:

1. BSI.
2. Aseptic technique.
3. Locate insertion site (**Approved sites:** proximal tibia or proximal humerus).
4. Prepare insertion site.
5. Prepare infusion system.
6. Ensure that the driver and needle set are securely seated.
7. Remove and discard the needle set safety cap from the IO needle set installed on the power driver.
8. Insert.

**Important:** Do not touch the needle set with your hand or fingers.

**Important:** Control the patient's movement prior to and during the needle set insertion.

- a. Position driver at insertion site with the needle set at a 90-degree angle to the bone.

**Gently** power or press needle set until needle set tip touches bone.

- b. Ensure at least 5 mm of the catheter is visible.
- c. Penetrate bone cortex by squeezing the driver's trigger and applying **gentle, steady downward pressure**.
- d. Release driver's trigger and stop insertion process when:
  1. A sudden “give” or “pop” is felt upon entry into the medullary space.
  2. A desired depth is obtained.

**Important:** Use gentle-steady pressure. Do not use excessive force. Allow the catheter tip rotation and gentle downward pressure to provide the penetrating action. Note: If the driver stalls and will not penetrate the bone you may be applying too much downward pressure.

# Code 73

## OTHER INTRAOSSEOUS NEEDLE INSERTION

### “Power driver” Insertion Steps continued:

- Remove power driver and stylet.
  - Confirm catheter stability.
  - Attach primed extension set to catheter hub’s luer lock.  
Do not attach a syringe directly to the catheter hub.
12. Flush the adult catheter with 10ml of Normal Saline. Flush the pediatric catheter with 5ml of Normal Saline.

**Important:** Prior to flush consider the aspiration of a small amount of blood to confirm placement.

- \* No Flush = No Flow Failure to appropriately flush the IO catheter may result in limited or no flow.
- \* Once IO catheter has been flushed, administer fluids or medications as indicated.

**Note:** Frequently monitor the insertion site for extravasation.

# Code 74

## PERCUTANEOUS TRANSTRACHEAL VENTILATION (NEEDLE CRICOTHYROTOMY)

- Attempt to ventilate the patient with BVM
- Attach an empty syringe to a large gauge angiocath
- Locate the thyroid notch, the cricothyroid notch, and the cricoid cartilage.
- Cleanse area with cleansing prep
- Grasp the thyroid cartilage firmly in the nondominant hand.
- While aspirating, puncture the cricoid membrane with the angiocath, directing it caudally, at a 45-degree angle. **(The plunger of the syringe will move freely when the needle has entered the trachea.)**
- Remove the needle from the catheter and advance the catheter into the trachea.
- Reattach the syringe to the catheter and aspirate again to insure correct placement.
- Attach the plastic adapter from a #3 ET tube to the catheter.
- Attach ambu bag to the adapter and ventilate the patient.
- Ventilate with 2-3 seconds of inspiration followed by passive exhalation.
- Auscultate bilateral axillae and epigastrium.

# Code 75

## ENDOTRACHEAL INTUBATION ADULT AND PEDIATRIC

- Assure that the patient is being adequately oxygenated/ventilated prior to intubation.
- Have suction ready
- Continuous pulse oximetry and cardiac monitoring
- Select and prepare proper ET tube:
  - ET tube size is determined by comparison of the patient's nares or little finger (refer to the Length Based Pediatric Tape for Pediatric population)
- Insert stylet
- Check ET tube for cuff leakage
- Lubricate tube
- Prepare laryngoscope:
  - Select proper blade
  - Check light
- Place patient in "sniffing position," unless contraindicated
- Preoxygenate patient with 100% O<sub>2</sub> via BVM
- Insert laryngoscope:
  - Hold in left hand, insert blade into right side of mouth, sweep tongue to the left
- Visualize vocal cords:
  - **Straight blade:** Direct blade below epiglottis and lift handle up and away from you
  - **Curved blade:** Direct blade into vallecula and lift handle up and away from you
- **DO NOT USE TEETH AS A FULCRUM**
- Using right hand, insert tube between vocal cords
- Remove stylet, if used
- Check tube placement by:
  - Auscultation of both axillae and epigastrium
  - Pulse oximetry reading
  - Use of appropriate CO<sub>2</sub> detector
- Inflate cuff with 5-10ml of air, if appropriate
- Secure tube appropriately
- Reassess tube placement while ventilating patient

# Code 75a

## MEDICATION ASSISTED INTUBATION

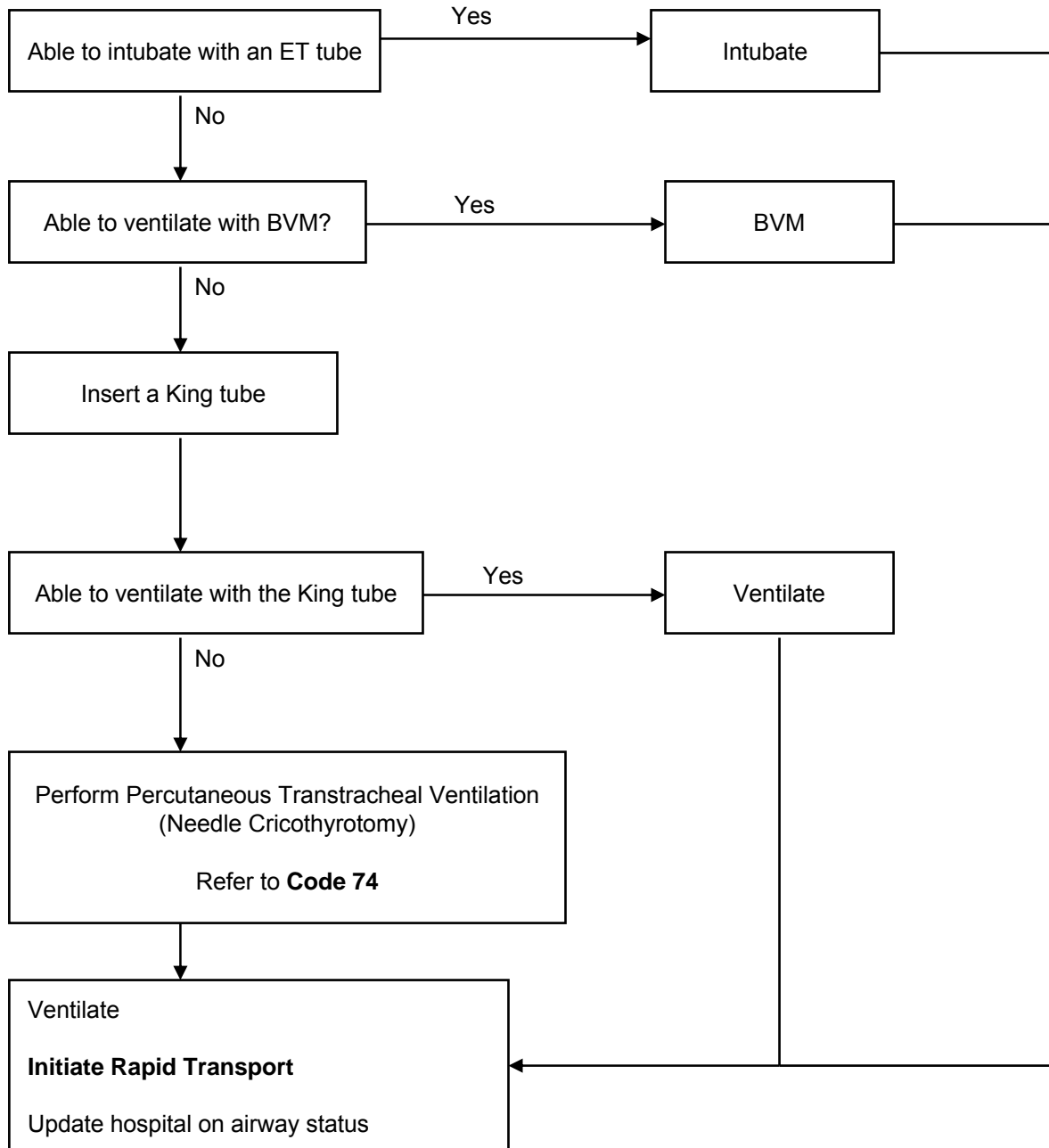
- Indications that may require Medication Assisted Intubation:
  - Glasgow Coma Score <8
  - Imminent respiratory arrest
  - Imminent tracheal/laryngeal closure due to severe edema secondary to trauma or an allergic process
  - Severe flail chest and/or severe open chest wounds with cyanosis and a respiratory rate >30 or <10
- Initial Medical Care
- **Always have King tube and/or needle cricothyrotomy equipment available**
- Prepare patient and equipment to perform intubation-Refer to **ENDOTRACHEAL INTUBATION CODE 75**

Adults	Pediatrics
-Continue to assist ventilations during the procedure	-Continue to assist ventilations during the procedure
<b>MIDAZOLAM HYDROCHLORIDE</b> (Versed) 2.5mg increments slow IV until sedation is achieved up to a maximum of 10mg  If no IV, may administer <b>MIDAZOLAM HYDROCHLORIDE</b> (Versed) 2.5 mg IM (may repeat x 1)	<b>MIDAZOLAM HYDROCHLORIDE</b> (Versed) 0.05mg/kg slow IVP every 2 minutes up to a total dose of 5mg  If no IV, may administer <b>MIDAZOLAM HYDROCHLORIDE</b> (Versed) 0.15 mg/kg up to 2.5mg IM (may repeat x 1)

- If intubation successful-Refer to **ENDOTRACHEAL INTUBATION CODE 75**
- If intubation unsuccessful:**
  - Continue to assist ventilations with BVM
  - Refer to **FAILED AIRWAY CODE 75b**
  - Contact Medical Control

# Code 75b

## FAILED ADULT AIRWAY



# Code 76

## CONTINUOUS POSITIVE AIRWAY PRESSURE ADMINISTRATION

- Observe body substance isolation at all times
- Oxygenate the patient with 15 liters via non-rebreather mask while setting up CPAP
- Connect fixed generator to portable oxygen regulator
- Open CPAP disposable package and attach patient corrugated tubing to bottom of generator and add filter to side of generator
- Attach other end of patient tubing to bottom of mask
- Attach 10cm isobaric peep valve to front of mask
- Connect head strap to top of one side of mask
- Turn oxygen tank on
- Encourage patient to place mask over mouth and nose, then firmly attach mask using final connection on side of mask
- When patient has been placed in the ambulance, “quick connect” generator to on-board oxygen
- Monitor patient’s level of consciousness and vital signs continuously. If patient develops decreased mental status or decreased blood pressure-**DISCONTINUE CPAP**.
- Continuous cardiac monitoring and pulse oximetry required

Note: If aerosol medication treatment is indicated, cut the patient’s corrugated tubing at first smooth part closest to the patient’s face. Place a “T” connector between the tubing and follow **ALBUTEROL** administration protocol.

If port is available for Albuterol administration, follow manufacturers guidelines.

# Code 77

## MEDICATION ADMINISTRATION - IV PUSH

- Observe body substance isolation at all times
- Confirm patient is not allergic to the medication
- Inspect medication
  - Identify concentration
  - Inspect for contamination
  - Check expiration date
- Assemble preload syringe
- Eject any air from syringe
- Assure IV is patent
- Cleanse IV port with cleansing prep
- Insert needle into IV port or attach syringe utilizing needless system
- Pinch line above port
- Inject correct amount of medication
- Withdraw needle or remove syringe and flush tubing
- Properly dispose of needle and syringe
- Observe patient for medication effect
- Reassess vital signs after medication administration and document on prehospital patient care report

# Code 78

## MEDICATION ADMINISTRATION - IV DRIP

- Observe body substance isolation at all times
- Confirm patient is not allergic to medication
- Inspect medication ordered
  - Identify concentration
  - Inspect for contamination
  - Check expiration date
- Withdraw proper amount of medication into syringe
- Eject any air from syringe
- Select appropriate secondary IV bag port and cleanse with alcohol swab
- Inject correct amount of medication into IV bag
- Withdraw needle and mix bag without shaking
- Assure that primary IV is patent
- Select appropriate primary injection port and cleanse with alcohol swab
- Insert secondary IV line needle or attach secondary line utilizing needless system into primary IV port
- Set secondary line infusion at prescribed rate
- Label secondary IV bag appropriately:
  - EMT's name
  - Medication name and concentration
  - Date
  - Dosage rate
- Properly dispose of needle and syringe
- Observe patient for medication effect
- Reassess vital signs after medication administration and document on prehospital patient care report

# Code 79

## MEDICATION ADMINISTRATION - INTRAMUSCULAR

- Observe body substance isolation at all times
- Confirm patient is not allergic to medication
- Select medication ordered
- Inspect medication
  - Identify concentration
  - Inspect for contamination
  - Check expiration date
- Explain procedure to patient
- Withdraw correct amount of medication into syringe
- Eject any air from syringe
- Select appropriate site and cleanse with cleansing prep:
  - Commonly used sites are the deltoid muscle and the upper outer quadrant of the gluteus muscle
- Stretch the skin over the site with your fingers
- Advise the patient that there will be a “stick”
- Insert the needle into the muscle at a 90 degree angle
- Aspirate to assure that there is no blood return
- Inject the drug slowly
- Withdraw the needle and apply pressure to the site
- Properly dispose of needle and syringe
- Observe patient for medication effect
- Reassess vital signs after medication administration and document on prehospital patient care report

# Code 80

## MEDICATION ADMINISTRATION - NEBULIZED INHALATION

- Observe body substance isolation at all times
- Confirm patient is not allergic to medication
- Explain procedure to patient
- Take baseline vital signs and peak flow measurement
- Check medication
  - Identify concentration
  - Inspect for contamination
  - Check expiration date
- Assemble nebulizer device
- Dispense proper dose of medication and saline
- Connect device to oxygen at 6-12 L/min
- Position patient in sitting position
- Have patient breathe through mouthpiece of nebulizer
- Observe patient for medication effects and repeat peak flow measurement
- Reassess vital signs after medication administration and document on prehospital patient care report

# Code 81

## TRANSCUTANEOUS CARDIAC PACING

- Place pacing electrodes
  - Anterior/Posterior Electrode Placement
    - Place negative electrode on left anterior chest, halfway between the xiphoid process and the left nipple, with upper edge of the electrode below the nipple line
    - Place positive electrode on the left posterior chest beneath the scapula and lateral to the spine
    - (NOTE: If Anterior/posterior position is contraindicated, anterior/anterior position may be used)
  - Anterior/Anterior Electrode Placement
    - Place negative electrode on left chest over the fourth intercostal space in the midaxillary line
    - Place positive electrode on anterior right chest in the subclavicular area
    - (NOTE: Anterior/anterior position should only be used if anterior/posterior position cannot be used)
- Apply pacing cables to pacing electrodes
- Obtain milliamperage (MA) and rate setting from base station
- Activate “pacing” switch
- Adjust MA setting
- Select desired heart rate (usually 70 beats per minute)
- Activate “start/stop” switch
- Observe monitor for capture and monitor patient response and pulse
- Slowly turn up the MA until evidence of electrical and mechanical capture occurs (usually 50-150 MA)
  - Mechanical capture is indicated by the presence of a palpable pulse
  - Electrical capture is evidenced by a spike followed by a wide QRS complex and a broad T wave
  - Skeletal muscle twitching does not indicate capture
- Conscious patients may require sedation and/or analgesia

**NOTE TO PREHOSPITAL PROVIDERS:**

If **MIDAZOLAM HYDROCHLORIDE** (Versed) is administered for sedation, the patient's oxygen saturation must be monitored via pulse oximetry.

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ALS

# Code 82

## DEFIBRILLATION

- Place the patient in a safe environment, away from pooled water and metal surfaces.
- Apply monitor-defibrillator electrode pads to patient chest or appropriate conductive medium to paddles
- Turn on defibrillator
- Set energy level
- Charge capacitor
- Ensure proper placement of electrodes on chest: (Apical and high right parasternal)
- If using hand-held paddles, apply firm pressure on them
- Assure that no personnel are in direct or indirect contact with the patient (Call “clear”)
- Deliver shock by depressing both discharge buttons simultaneously
- Reassess patient

# Code 83

## SYNCHRONIZED CARDIOVERSION

- Place patient in safe environment, away from pooled water and metal surfaces
- Apply monitor-defibrillator electrode pads to patient chest or appropriate conductive medium to paddles
- Turn on defibrillator
- Set energy level
- Activate “synchronous” mode
- Charge capacitor
- Ensure proper placement of electrodes on chest: (Apical and high parasternal)
- If using hand-held paddles, apply firm pressure and maintain until machine discharges
- Assure that no personnel are in direct or indirect contact with the patient (Call “clear”)
- Deliver shock by depressing both discharge buttons simultaneously. Hold buttons down until machine discharges
- Reassess patient

**NOTE TO PREHOSPITAL PROVIDERS:**

If **MIDAZOLAM HYDROCHLORIDE** (Versed) is administered for sedation, the patient’s oxygen saturation must be monitored via pulse oximetry.

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# Code 84

## MECONIUM ASPIRATOR

### FINISH DELIVERING THE INFANT

- Clear Airway
- Clamp and cut the cord
- Avoid manipulation or stimulation
- If the infant is limp:
  - 100% **OXYGEN** should be blown by infant's face
  - Intubate immediately
  - Attach suction tube to Meconium aspirator, leave suction off
  - Place Meconium aspirator to the end of the ET tube
  - Turn on suction
  - Withdraw the ET tube while suctioning
- Attempt to ventilate with BVM
- If unable to ventilate, repeat the process with a new ET tube and meconium aspirator
- If unable to ventilate, follow **CODE 48**

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# Code 85

## INTRANASAL ADMINISTRATION

- Observe body substance isolation at all times
- Assess ABC's and support ventilation as needed
- Inspect medication
  - Identify concentration
  - Inspect for contamination
  - Check expiration date
- For suspected Opiate overdose,
  - Remove the medication atomization device (MAD) tip from the syringe
  - Draw up **NALOXONE** (Narcan) 2ml (1mg/ml) and replace the MAD Intransasal Atomizer tip (OR place the MAD tip on a luer-lock prefilled syringe)
  - Tilt the patients head back, if possible
  - Place atomizer in the nare opening and advance it until the cone tip is sealed against the opening.
  - Depress the plunger and administer 1ml briskly in each nostril
  - Remove the device
  - Monitor the patient for desirable and undesirable effects
  - Continue to support respirations as needed

Important note: If a patient fails to awaken after intranasal Narcan, they may still respond to intravenous administration.
- For hypoglycemia (blood sugar < 60) and altered level of consciousness when an IV is not able to be established,
  - Reconstitute **GLUCAGON** 1mg in 1ml sterile water
  - Remove the medication atomization device (MAD) tip from the syringe
  - Draw up the reconstituted GLUCAGON (1mg/ml) and replace the MAD Intransasal Atomizer to syringe
  - Tilt the patient's head back, if possible
  - Place atomizer in the nare opening and advance it until the cone tip is sealed against the opening.
  - Depress the plunger and administer 0.5 ml briskly in each nostril
  - Remove the device
  - Continue to monitor closely for desirable and undesirable effects