

ALS SMO Recert South Cook County EMS

April, 2014

Code 1

- Scene Safety – Assure the safety of all responding personnel
- Care begins at the bedside!
- BSI precautions to help prevent exposure
- For Peds, have a tape or chart like the Broselow tape, available for dosing, sizing, etc.

Code 1 (cont'd)

- AVPU – Alert, Verbal, Pain and Unresponsive for level of consciousness
- ABCDE – Airway, Breathing, Circulation, Disability and Exposure for initial patient care assessments.
- Glasgow Coma Scale – when appropriate during the focused, secondary assessment.
- Contact hospital as soon as patient's condition permits.
- VS/assessments should be rechecked/reassessed at least every 15 minutes and documented with **TIMES**

Zofran ODT (Ondansetron)

Code 1

- Given as 4mg Orally Disintegrating Tablet X 1.
- Used to treat and/or prevent nausea in pts over 1 year of age.
- Zofran ODT (Orally Disintegrating Tablet) is a serotonin 5-HT₃ receptor blocker. It works by blocking a chemical thought to be a cause of nausea and vomiting in certain situations.

Code 1 – Outline for Radio Report (when the patient's condition warrants.)

- 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: AMPLE
- 7. Clinical condition: Survey and V/S
- 8. Treatment initiated and Response

Code 3

Airway Obstruction

- Code 3 only refers to patients that are over 1 year old.
- Finger sweep is used only if FB (foreign body) is visible.
- Use the laryngoscope and forceps and/or suction to visualize the airway.

Code 5 Cardiogenic Shock (Remember Rate/Rhythm/Pump)

- Without Dysrhythmia:
Increase the output with fluids (200 ml increments) or Dopamine to help the pump.
- Dopamine dose of 5mcg/kg/min.
(400mg in 250ml)
- With Dysrhythmia present:
 - Find appropriate SMO to correct it.

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
Effective 05/01/98
ALS

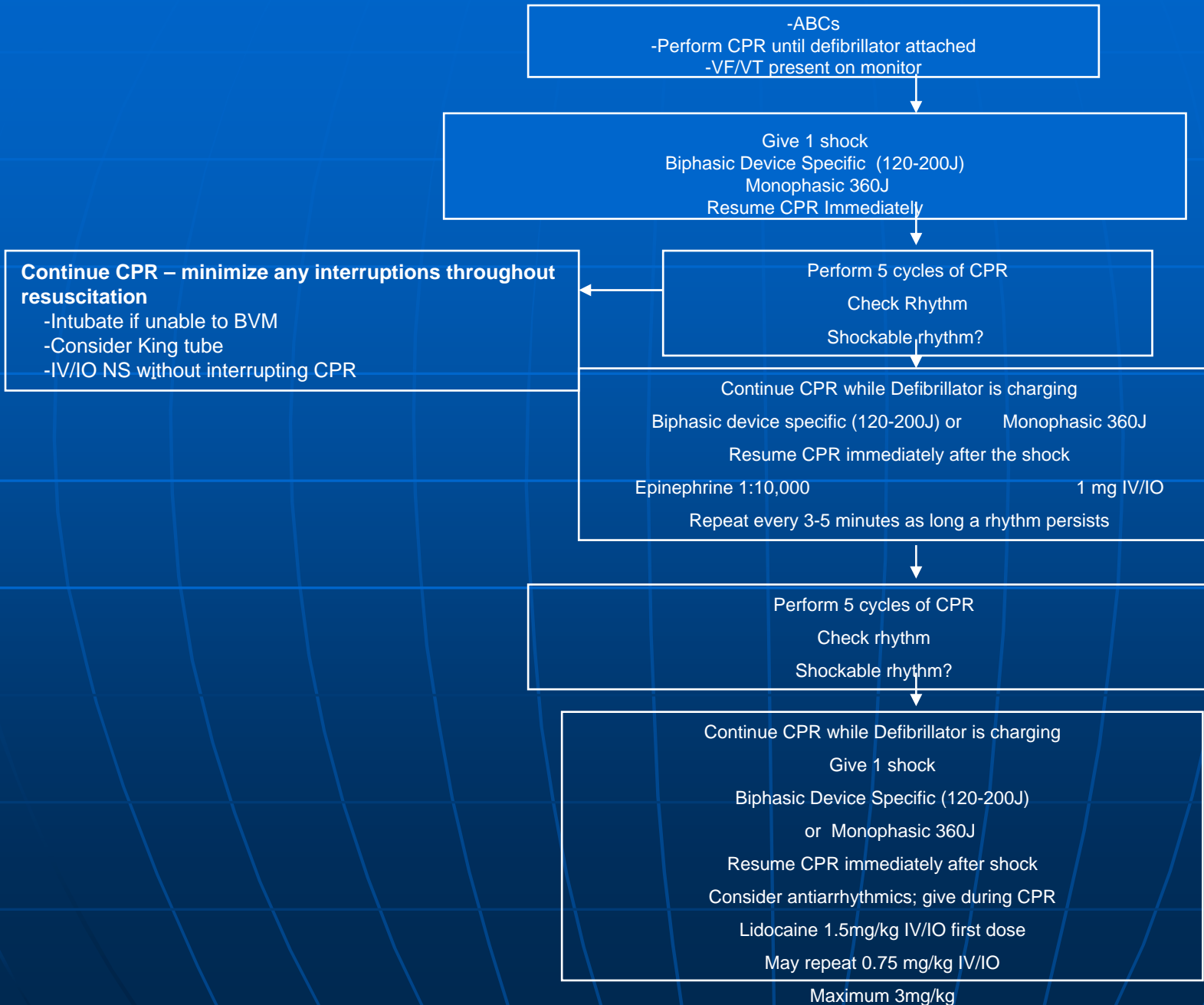
Code 6

V-Fib/Pulseless V-tach

- Stress importance of high quality CPR with minimal interruptions.
- Only spend time on Advanced airway if unable to protect airway or effectively use BVM. Consider King tube
- CPR until defibrillator attached, CPR before and after defibrillation attempts, CPR throughout resuscitation.

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

Valsalva
Maneuvers

ADENOSINE (Adenocard)
6mg IVP

ADENOSINE (Adenocard)
12mg IVP

Continue IMC
and TRANSPORT

Wide
Complex

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:
2nd 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.

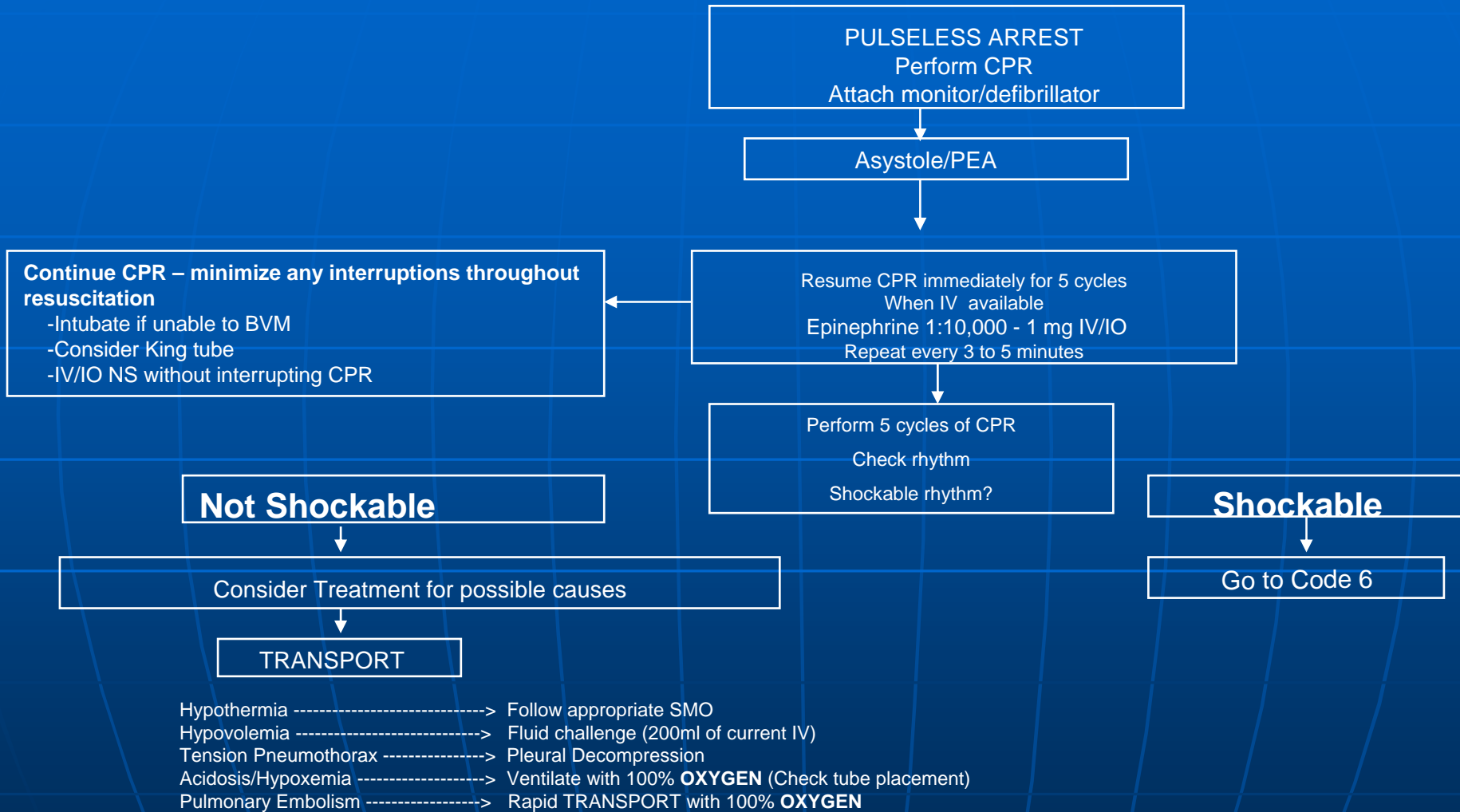
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Code 9 - PEA/Asystole

- Again, stress importance of high quality CPR with minimal interruptions.
- Only spend time on Advanced airway if unable to protect airway or effectively use BVM. Consider King tube
- Only administer **epinephrine** for PEA/Asystole situations.
Atropine is no longer used for PEA/Asystole
Not found to be helpful in PEA. The Pacemaker is not the issue, the cause of the heart not having sufficient mechanical force should be more of the focus here.
Atropine still used as frontline for adult bradycardia.
(Remember **Epinephrine** is the frontline for Peds Bradycardia) and
still used for Organophosphate poisoning

Code 9

PULSELESS ELECTRICAL ACTIVITY/ASYSTOLE



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

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ALS

Code 10

BRADYCARDIA (Pulse < 60)

INITIAL MEDICAL CARE

UNSTABLE

Signs of hypoperfusion*
OR
altered mental status

ATROPINE 0.5mg IV
every 3 to 5 minutes

Up to a total dose of
0.04mg/kg

Transcutaneous Pacemaker**
(if available) at rate=70 Increase MA until
pulse
is present

While pacing, consider sedation with
MIDAZOLAM HYDROCHLORIDE (Versed)
2.5mg slow IV

Titrate **DOPAMINE** Drip
to maintain
SBP
90 - 105
and heart rate >60

STABLE

Patient is alert,
without any signs of
hypoperfusion*

Rapid **TRANSPORT**
Continue IMC
enroute.

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.

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Code 11

Induced Therapeutic Hypothermia

- Induced hypothermia for witnessed ROSC (return of spontaneous circulation) not related to trauma, hemorrhage, or infection.
- Pt should be intubated, have 12 lead (if available), be over 16 and not pregnant with initial temp above 93.2 F. If patient is not intubated, and a King airway is present, call medical control for further orders regarding cooling.
- Initiate cooling via ice packs and cold saline bolus of 30ml/kg up to 2L.

Code 12

Suspected Cardiac Patient

Consider 12-Lead EKG for complaints of:

(may be deferred if patient unstable)

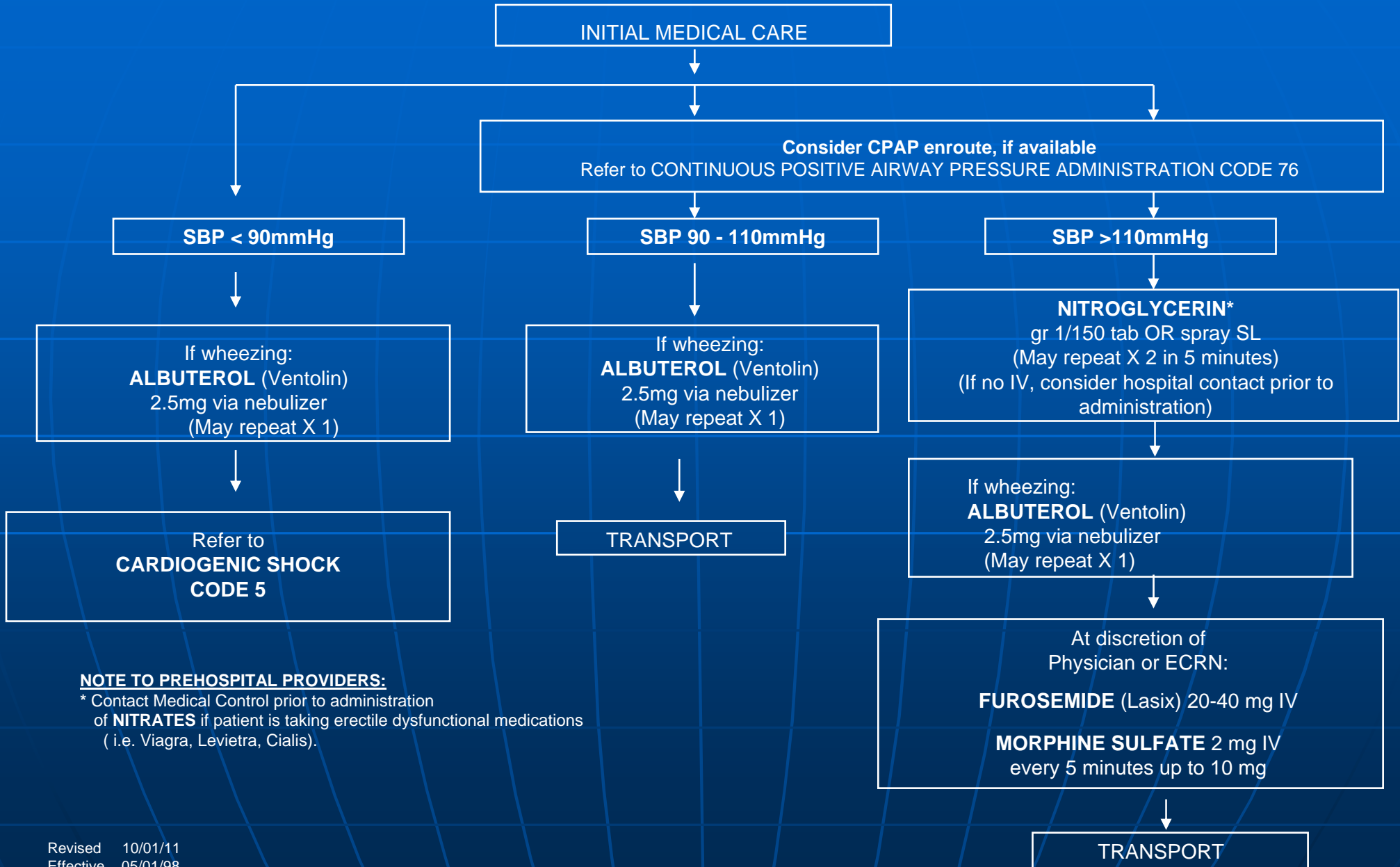
- Chest pain/Discomfort/Pressure
- Arm Pain (non-traumatic)
- Jaw Pain (non-traumatic)
- Upper back pain (non-traumatic)
- Unexplained diaphoresis
- Vomiting without fever or diarrhea
- Shortness of breath
- Dizziness/syncope
- Epigastric pain
- Fall in the elderly (unexplained)
- Weakness/Fatigue
-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

All 12 leads should be performed prior to administration of NTG, if possible.

If the patient has taken NTG prior to your arrival, notify Medical Control that NTG is already on board.

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).

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 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.

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ALS

Code 21

ISOLATED EXTREMITY INJURY AND/OR AMPUTATED AND AVULSED PARTS

Stress the importance of bleeding control with the use of tourniquet, if needed. All ambulances should have a tourniquet on board. *Always:*

- Note time of placement
- Apply as close to the injury as possible
- DO NOT release once applied

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.

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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.

THERMAL

INITIAL TRAUMA CARE

OXYGEN 100% (Use humidified Oxygen, if available). Note presence of hoarseness, wheezing, stridor or productive cough and document.
If present, refer to **ACCELERATED TRANSPORT CODE 26**

Note quality of distal pulse in extremity burns and document.

Burn Wound Care - Moderate to Critical Burn

Wear sterile gloves and masks until burn wounds are covered. Remove clothing, jewelry, etc. Do not pull away clothing that is stuck to burn wound.

COOL BURN with sterile water or saline until skin feels cool to your touch. Don't overcool any major burn. Do not use ICE directly on burn. Cover burn wound with sterile dressing. Moisten with Normal Saline. **DO NOT BREAK BLISTERS. DO NOT APPLY CREAMS, OINTMENTS OR ANTIDOTES TO BURNS.**

Apply sterile dry dressing.

CHEMICAL

INITIAL TRAUMA CARE

Brush off excess dry chemicals

Irrigate or flush with copious amounts of water or saline unless contraindicated.
For eye exposures Refer to **HAZARDOUS MATERIALS-EYE CODE 40**

Follow routine Burn Wound Care

TRANSPORT

>20%
2° or 3°

ELECTRICAL

Without placing self at risk for injury, remove patient from source of electricity or have power cut off.

INITIAL TRAUMA CARE

Perform spinal immobilization, apply monitor and treat dysrhythmias per appropriate SMO.

Burn Wound Care

Assess for entry and exit wounds, neurovascular status of affected parts

No cooling necessary

Cover with dry, sterile dressings

TRANSPORT

NOTE TO PREHOSPITAL PROVIDER:

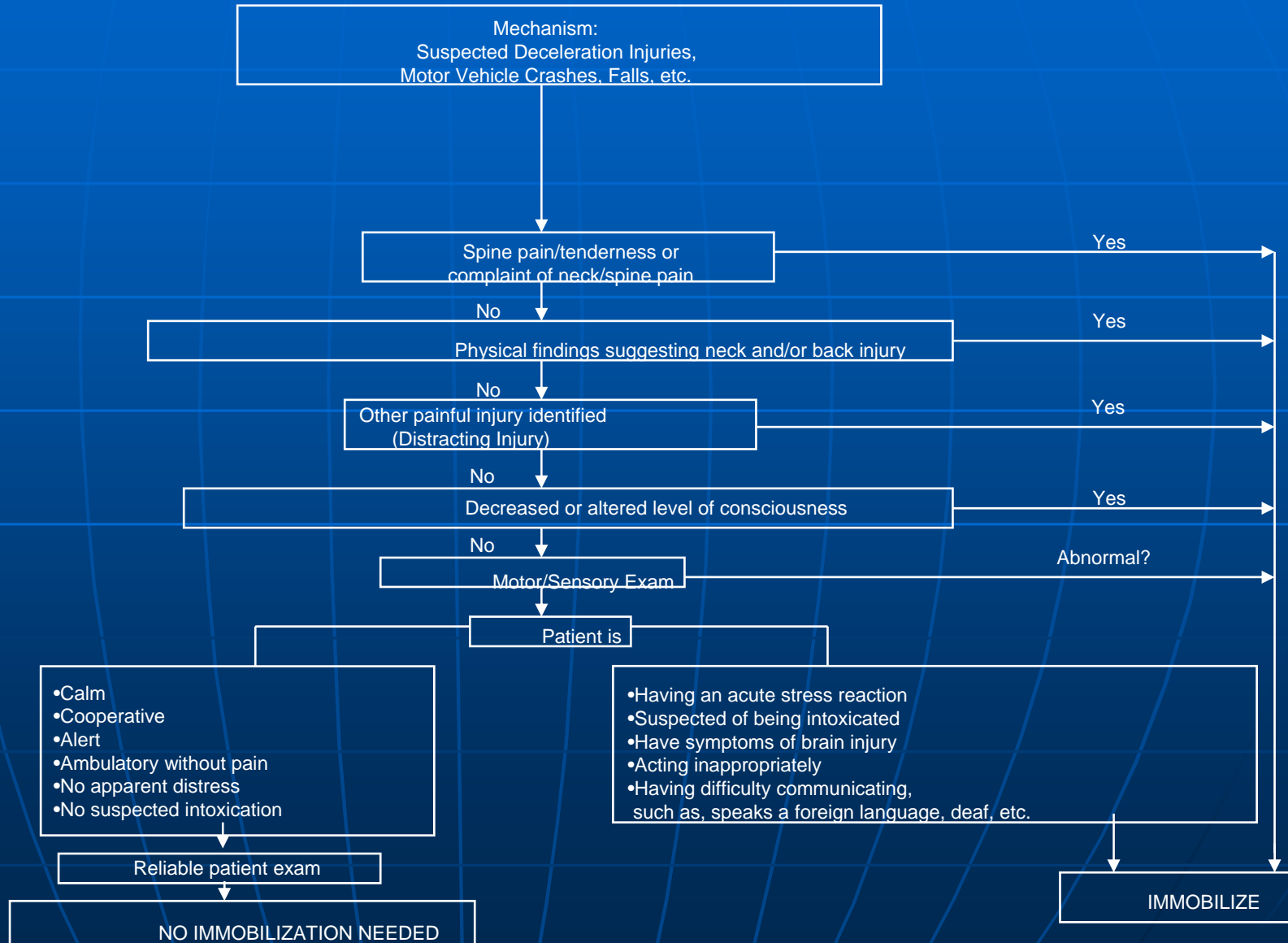
- FOR ALL TYPES OF BURNS:
MORPHINE SULFATE 5-10mg IVP in 5mg increments every 5 minutes as necessary for pain.
• Do not administer until shock has been controlled.
• **DO NOT GIVE IM.**
• **NITROUS OXIDE Inhalation** (optional)

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ALS

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

Code 18

SUSPECTED SPINAL CORD INJURY SPINAL IMMOBILIZATION



Code 30

Acute Asthma/COPD with Wheezing

TRANSPORT IMMEDIATELY

DO ALL TREATMENT ENROUTE

CPAP should be considered, at the discretion of the Physician/ECRN, when available and as appropriate.

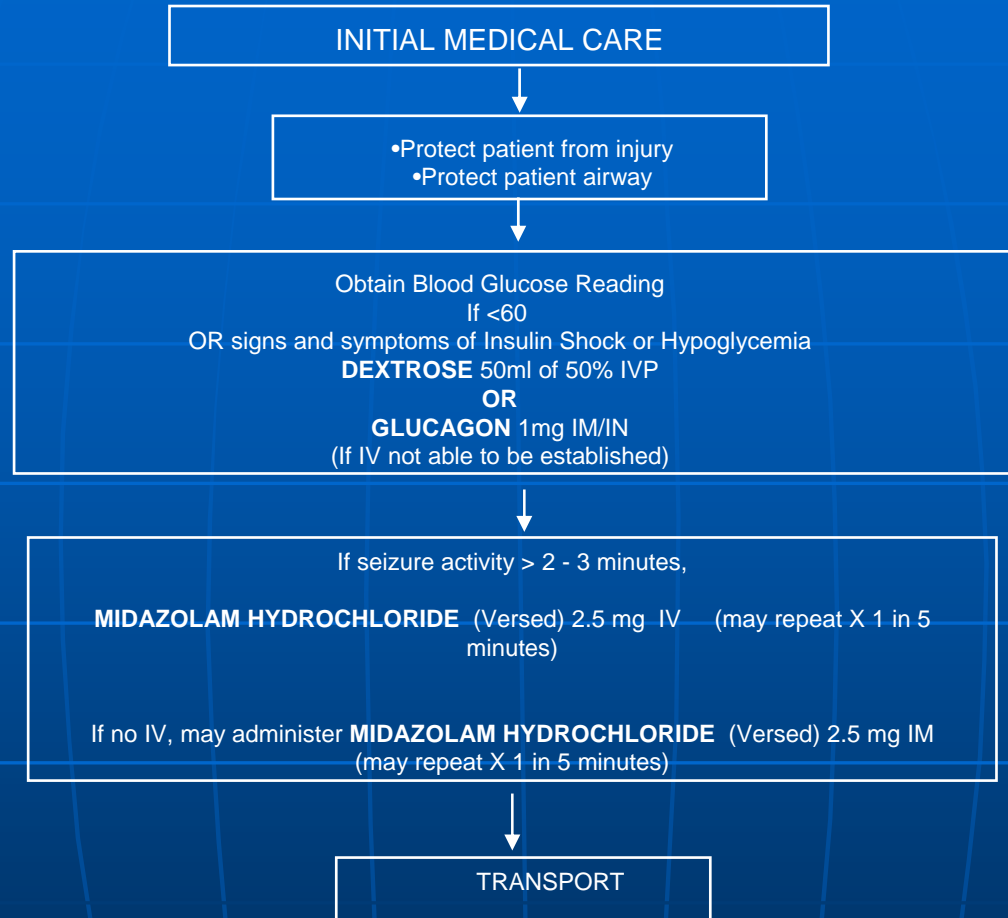
Code 32, 33, 34 (Diabetes, Overdose & Coma)

Addition of Intranasal Med

- Narcan and Glucagon may be given intranasally.
- Mix and draw med and dose as normal.
- Replace needle with a MAD (medication atomization device) tip.
- Place in nostril till cone seals.
- Administer half the dose.
- Repeat in other nostril for second half of the dose.

Code 35

SEIZURES/STATUS EPILEPTICUS*



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

Code 33*

DRUG OVERDOSE ALCOHOL RELATED EMERGENCIES/POISONING

INITIAL MEDICAL CARE

Obtain Blood Glucose Reading

If suspected narcotic or synthetic narcotic overdose and respiratory rate <12
Administer **NALOXONE** (Narcan) 2mg IV/IM/IN
(Consider restraints prior to administration.)
May be repeated every 5 minutes as necessary, up to 6mg

If blood sugar
level <60:
DEXTROSE 50% 50ml IVP
OR
GLUCAGON 1mg IM/IN
(If IV not able to be established)

TRANSPORT

NOTE TO PREHOSPITAL PROVIDERS:

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

SUSPECTED TRICYCLIC ANTIDEPRESSANT OVERDOSE**

INITIAL MEDICAL CARE

SODIUM BICARBONATE 1meq/kg IVP. If hypotensive, altered level of consciousness, or dysrhythmias are present, Consider additional doses of **SODIUM BICARBONATE**, if symptoms persist

TRANSPORT

****TRICYCLIC ANTIDEPRESSANTS INCLUDE:**

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

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ALS

Code 36

HEAT EMERGENCIES

INITIAL MEDICAL CARE

HEAT CRAMPS OR TETANY
(IV may not be necessary)
Allow for oral intake of water or
electrolyte replacement fluids.

Move patient to a cool environment,
do not massage cramped muscles

TRANSPORT

B/P <90

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

HEAT STROKE

B/P >90

IV NS TKO

Move patient to a cool environment

Place patient in semi-reclining position with head elevated.
Take seizure precautions.

Increase **OXYGEN** to 100%.
When indicated,
intubate and use positive pressure ventilations.

Initiate rapid cooling:

- Remove as much clothing as possible.
- Cool packs to lateral chest wall, groin, axilla, carotid arteries, temples, and behind knees
and/or sponge with cool water or cover with wet sheet and fan the body.

TRANSPORT

HEAT EXHAUSTION OR SYNCOPE
IV NS rapid rate- regular tubing
If B/P <90, IV wide open,
establish second IV.

Move patient to a cool environment

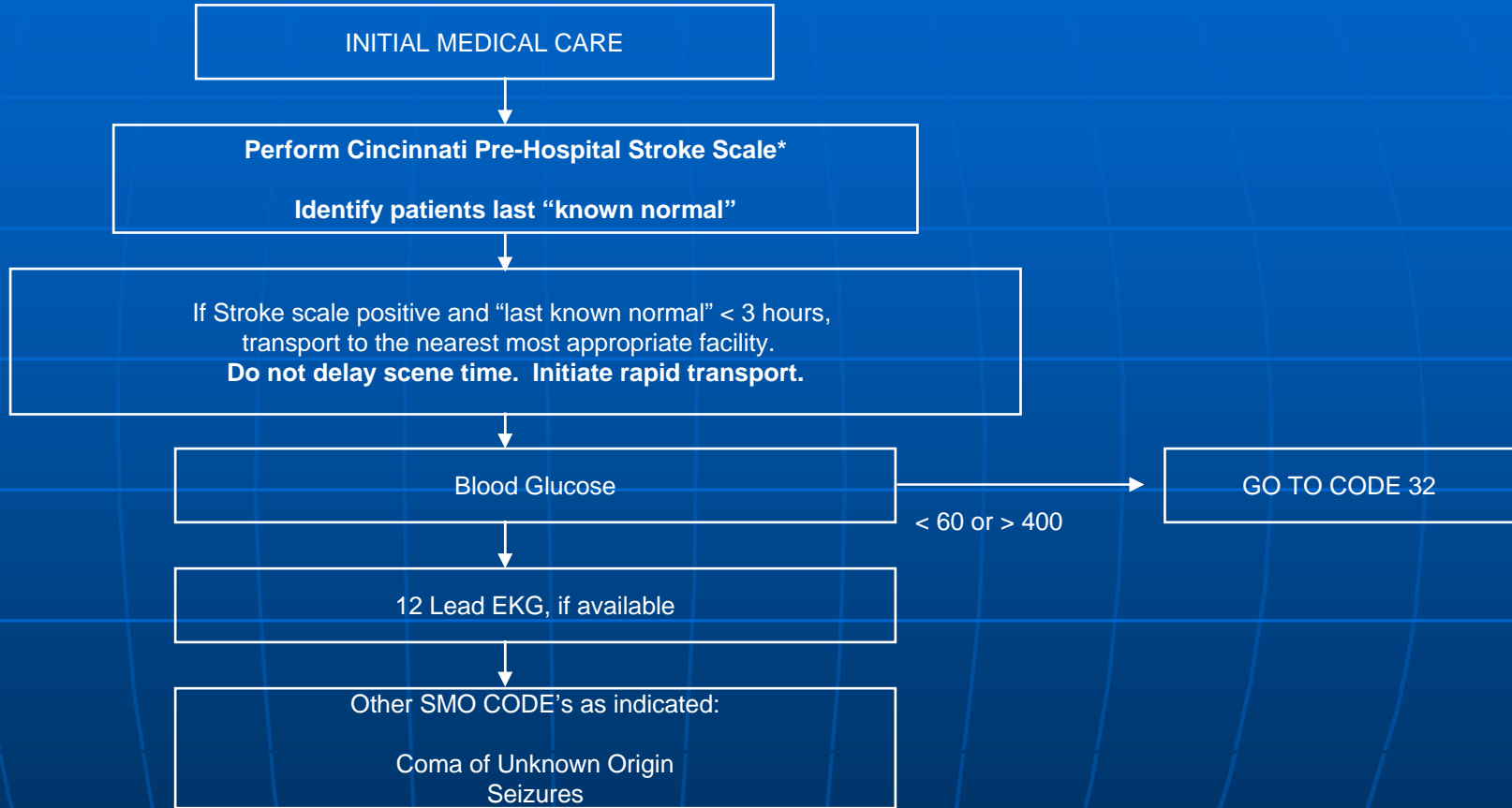
Place in supine position
with feet elevated

Remove as much clothing as
possible to facilitate cooling

TRANSPORT

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

Code 47

ABNORMAL DELIVERIES

PROLAPSED CORD

TRANSPORT IMMEDIATELY

INITIAL MEDICAL CARE:
Increase **OXYGEN** to 100%

Elevate mother's hips

Place gloved hand in vagina between pubic bone and presenting part
with cord between fingers and exert counterpressure against presenting part

Keep exposed cord
moist and warm

Keep hand in position while enroute

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.

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 73 Intraosseous Needle insertion (Adult)

Contraindications:

- Infection at the site of insertion
- Fracture of the bone at the site of insertion
- Excessive tissue preventing identification of landmarks
- Previous significant orthopedic procedures
- Previous IO insertion attempt at this site within the last 24 hours

Approved Sites: Proximal tibia or proximal humerus

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 86

Concealed/Carry Firearm

PATIENT CARE

- All legal efforts should be utilized to avoid having to transport the weapon to the Emergency Department. However, if the Patient's condition requires immediate transportation, then transportation should not be delayed unless there is an imminent life threat to the providers. If the patient is stable, and Police are in route, transportation may be delayed to relinquish the weapon to the Police Officer.

SAFETY

- Scene safety remains the top priority for EMS responders. If the EMS responders feel that there is a valid life threat to themselves, then retreat to a safe zone is indicated. Stage in a safe location to be able to reenter the scene when secured by Law Enforcement.
- When you must transport the weapon, it **must** be secured to prevent accidental discharge.

NOTIFICATION TO THE EMERGENCY DEPARTMENT

- When transporting the weapon on the Ambulance, the provider will contact the Emergency Department early. The report needs to contain the verbiage "***I have a CODE 86***". This informs the Emergency Department that there is a secured weapon on the ambulance and will require someone from the Hospital to take custody of the weapon upon arrival.

TRANSFERRING THE WEAPON AT THE HOSPITAL

- Upon arrival, relinquish the weapon to the Hospital's designee as soon as possible. Do not leave the weapon unattended at any time.