OBSTETRIC EMERGENCIES

START/INITIAL STEPS FOR EMERGENCIES:

- ***Call OB FAST***
- **LEADER** designates
  - ***Checklist Reader***
  - ***Time Keeper & Scribe***
  - ***Patient & Family Communicator***

IMPORTANT CONTACTS

VOCERA or *33 FROM PHONE
- "Call Blood Bank"
- Code Blue: "Call Emergency"
- "ECMO First Responder"
- "Call Perfusionist"
- RRT: "Call Emergency"
- "Urgent Broadcast Anesthesia Help"

PAGING SYSTEM
- ECMO (VA)
- Trauma Attending

PAGER
- Interventional Radiology 347-0708

PHONE NUMBERS
- STCCU: 984-974-1440

1. ACLS/CARDIAC ARREST/ECMO
2. ALTERED MENTAL STATUS
3. AMNIOTIC FLUID EMBOLISM
4. ANAPHYLAXIS
5. ARRYTHMIA
6. DIABETIC KETOACIDOSIS
7. DIFFICULT AIRWAY
8. ECLAMPSIA
9. HEMORRHAGE
10. HIGH SPINAL
11. HYPERTENSIVE EMERGENCY
12. LOCAL ANESTHESIA SYSTEM TOXICITY
13. MAGNESIUM TOXICITY
14. RESPIRATORY DISTRESS/HYPOXIA
15. SEPSIS
16. SHOULDER DYSTOCIA
17. TRANSFUSION REACTION
18. UTERINE INVERSION

UNC HEALTH SM

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ACLS/CARDIAC ARREST/ECMO

CARD 1

PRESENTATION: Pulseless ventricular tachycardia/fibrillation, pulseless electrical activity, aystole

GOAL: RESUSCITATIVE CESAREAN DELIVERY WITHIN 5 MINUTES FOR >20 WEEKS GESTATION

- Fetal monitoring should NOT guide timing of delivery

START:

- ☐ **Call Code Blue and Code Stork**
- ☐ **Begin CPR**
- ☐ **Bring emergency cart and cesarean section tray**

LEADER designates
- ***Checklist Reader***
- ***Time Keeper & Scribe***
- ***Patient & Family Communicator***

- ☐ Position patient supine on backboard
  - o Manual uterine displacement
- ☐ Ensure two 18 G IVs (humeral IO if no IV access)
- ☐ STOP sedating medications, epidural, and/or inhalational agent
  - o If on magnesium, give calcium gluconate/chloride
- ☐ Proceed with ACLS algorithm - See next page
  - o 100 compressions per minute (rotate every 2 mins)
  - o Prioritize early airway managment by most experienced provider
  - o 2 breaths every 30 compressions (1 every 6 secs if intubated)
  - o Place AED and assess rhythm
  - o Pulse and rhythm check (every 2 mins)
  - o Administer epinephrine
- ☐ RESUSCITATIVE CESAREAN DELIVERY
- ☐ Draw STAT labs

DEFIBRILLATON – V-FIB/V-TACH:

- Turn on defibrillator and set on DEFIB mode, 120J
- Press ANALYZE, do not touch patient
- Press CHARGE, continue compressions during charging
- Press SHOCK
- Increase to 200J for next shock if no response

DRUG DOSES AND TREATMENTS:

Epinephrine (0.1mg/mL)
- Dose: 1 mg IV/IO every 3-5 minutes

Amiodarone – Refractory VT/VF
- Dose: 300 mg IV/IO, then 150 mg IV/IO

Magnesium sulfate – Torsades de Points
- Dose: 2 grams IV/IO

Sodium bicarbonate (8.4%) – consider for pH <7.2
- Dose: 50 mEq x 1

DIFFERENTIAL DIAGNOSIS: H'S & T'S

OB Causes:	
Anesthesia	Embolus
Bleeding	Fever
Cardiac	General (Hs & Ts below)
Drugs	Hypertension

Hypovolemia	Tension pneumothorax
Hypoxia	Tamponade (cardiac)
Hydrogen ion (acidosis)	Toxins
Hypo/hyperkalemia	Thrombosis (pulmonary)
Hypothermia	Thrombosis (coronary)

LABORATORY STUDIES:

- Arterial Blood Gas
- Complete Metabolic Panel
- Complete Blood Count
- Fibrinogen
- PT/PTT/INR
- Urine Drug Screen

Consider BNP, blood cultures, magnesium level, troponins, serum tryptase

POST-EVENT PLANNING:

- Maternal echocardiography – TTE or TEE
- Order STAT chest X-ray & 12 lead ECG
- Consider arterial line
- Initiate targeted temperature management (TTM)
- Transfer to ICU
- Communicate with family

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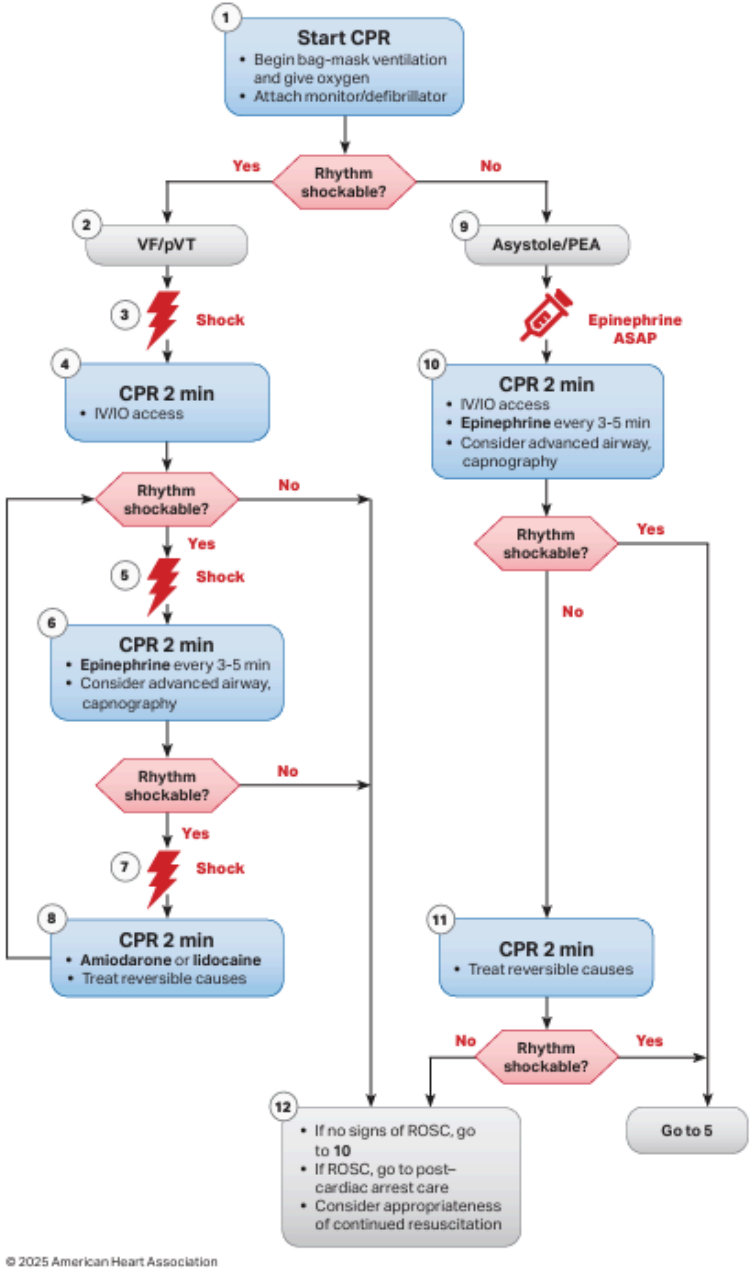
Adult Cardiac Arrest Algorithm (VF/pVT/Asystole/PEA)



High-Quality CPR

- Push hard (at least 2 inches [5 cm]).
- Push fast (100-120/min) and allow complete chest recoil.
- Minimize interruptions in compressions.
- Avoid excessive ventilation.
- Change compressor every 2 minutes, or sooner if fatigued.
- If no advanced airway, use 30:2 compression-ventilation ratio.
- If advanced airway in place, give 1 breath every 6 seconds (10 breaths/min) with continuous chest compressions.
- Continuous waveform capnography
  - If $ETCO_2$ is low or decreasing, reassess CPR quality.

Shock Energy for Defibrillation

- **Biphasic:** Manufacturer recommendation (eg, initial dose of 120-200 J); if unknown, use maximum available. Second and subsequent doses should be equivalent, and higher doses may be considered.
- **Monophasic:** 360 J

Drug Therapy

- **Epinephrine IV/IO dose:** 1 mg every 3-5 minutes
- **Amiodarone IV/IO dose:** First dose: 300 mg bolus Second dose: 150 mg or **Lidocaine IV/IO dose:** First dose: 1-1.5 mg/kg Second dose: 0.5-0.75 mg/kg

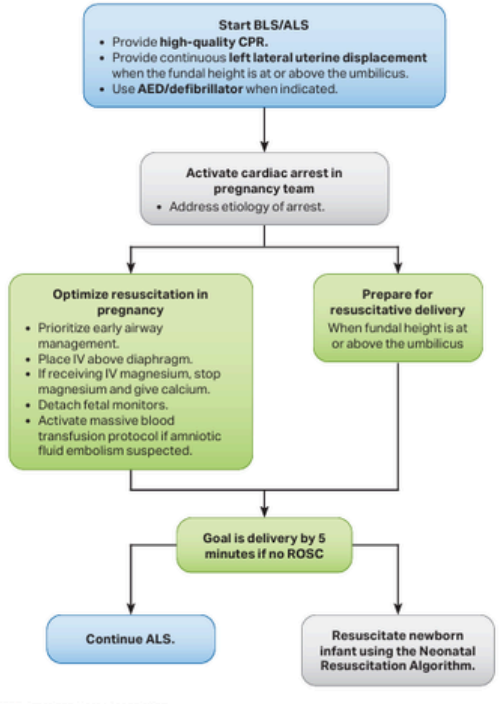
Advanced Airway

- ET intubation or supraglottic advanced airway
- Continuous waveform capnography or capnometry to confirm and monitor ET tube placement

Reversible Causes

- Hypovolemia
- Hypoxia
- Hydrogen ion (acidosis)
- Hypo-/hyperkalemia
- Hypothermia
- Tension pneumothorax
- Tamponade, cardiac
- Toxins
- Thrombosis, pulmonary
- Thrombosis, coronary

Cardiac Arrest in Pregnancy Algorithm



Explanation of Cardiac Arrest Interventions

- Cardiac arrest in pregnancy team will vary according to local resources but may include
  - Team Leader
  - Anesthesiologist
  - Obstetrician
  - Neonatologist
  - Nurses
  - Pharmacists
  - Other professionals
- The goal of left lateral uterine displacement is to relieve aortocaval compression and to facilitate effective chest compressions.
- The goal of resuscitative delivery is to improve the pregnant patient's outcome, and when feasible, the newborn infant's outcome.
- Ideally, perform resuscitative delivery by 5 minutes, depending on local resources.
- In pregnancy, difficult airway is common and is managed (eg, endotracheal intubation or supraglottic airway) by the most experienced professional.

Etiologies of Cardiac Arrest

- **A** Anesthetic complications
- **B** Bleeding
- **C** Cardiovascular
- **D** Drugs
- **E** Embolic (amniotic fluid or pulmonary embolism)
- **F** Fever
- **G** General causes (H's and T's)
- **H** Hypertension (eg, preeclampsia)

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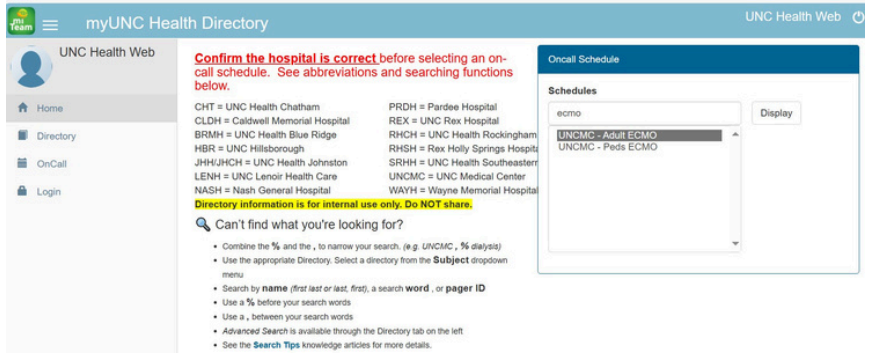
ACLS/CARDIAC ARREST/ECMO

CARD 1

Need ECMO for Maternal Cardiac Arrest?

1. Go to MyUNC Health Directory on the intranet



2. Type "ECMO" in the on-call schedule and select UNCMC Adult ECMO

3. Select contact info under Cardiac/ECPR VA ECMO Attending

Start	End	Shift	Contact
9/18 7:00 am	9/18 5:00 pm	1) Respiratory VV ECMO Attending Day	
9/18 7:00 am	9/19 7:00 am	2) Cardiac/ECPR VA ECMO Attending	

4. Page the attending: "Maternal cardiac arrest, [location & call back #]."

5. Ensure attending to attending conversation occurs with call back

***If cardiac arrest is due to bleeding, ECMO is not appropriate treatment. Page Trauma Attending via MY UNC Health Directory.**

STOP

***Don't forget to Vocera "ECMO First Responder." This does not replace the paging system/attending conversation.**

ALTERED MENTAL STATUS (AMS)

CARD **2**

PRESENTATION: Delirium, obtundation, coma, confusion

START:

- ☐ **Call OB FAST and RRT**
- ☐ **Stop all sedating medications**
  - **Magnesium**
  - **Epidural/PCA**
- ☐ **Bring emergency cart**

LEADER designates
- ***Checklist Reader***
- ***Time Kepper & Scribe***
- ***Patient & Family Communicator***

- ☐ Vital signs every 5 minutes; continuous SpO2
- ☐ Obtain FHR
- ☐ Assess airway; intubation by anesthesia if indicated
- ☐ Ensure two 18 G IVs
- ☐ Review recent medications
- ☐ Fingerstick glucose
- ☐ Stroke assessment
- ☐ Draw STAT labs

STROKE ASSESSMENT:

- Pupils
- Facial droop: show teeth, show smile
- Arm drift: eyes closed, extend arms, palm up x10 secs
- Speech: say "You can't teach old dogs new tricks."
- Sudden onset severe (thunderbolt) headache
- If suspect stroke, RRT will activate Brain Attack Team (BAT)

LABORATORY STUDIES:

- CBC, CMP, Ca/Mg/Phos, serum alcohol level
- ABG + lactate
- Urine Studies: UA, UDS, urine ketones

DRUG DOSES AND TREATMENTS:

Naloxone
- Dose: 0.4 mg IV once as needed for RR <6 or reduced dosing per anesthesia (full doses may case severe pain and/or withdrawal, lower doses may be indicated in the absence of respiratory arrest).
- Can be repeated every 3 mins

Dextrose
- Dose: 12.5 gm of 50% Dextrose 50 ml soln IV q10 min PRN low blood sugar, recheck blood glucose q5 mins or until awake

Glucagon
- Dose: 1 mg IV
- Can give SQ and IM (if no IV)

DIFFERENTIAL DIAGNOSIS:

- Acidosis (Hemorrhage/Sepsis)
- Cerebrovascular Accident (CVA)
- Eclampsia (Card 8)
- Endocrine (Card 6 for DKA)
- Medication
  - Benzodiazepine/Opioid
  - Local Anesthetic Systemic Toxicity (Card 12)
  - Magnesium Toxicity (Card 13)
- Metabolic
- Posterior Reversible Encephalopathy Syndrome (PRES)

WRAP UP

- Determine disposition of patient
- Discuss with family and patient
- Debrief and file a SAFE report

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AMNIOTIC FLUID EMBOLISM

CARD 3

PRESENTATION: Sudden hypoxia and hypotension, followed by coagulopathy, in relation to labor and delivery; cardiac arrest

START:

Cardiovascular Collapse

LEADER designates
- ***Checklist Reader***
- ***Time Keeper & Scribe***
- ***Patient & Family Communicator***

- ☐ Start CPR (See Card 1)
- ☐ Call Code Blue and Code Stork (if pregnant)
- ☐ Resuscitative cesarean delivery (incision by 4 minutes, delivery < 5 minutes)
- ☐ Page VA-ECMO (See Card 1)

Hemorrhage/DIC

- ☐ Activate MTP and thaw cryoprecipitate
- ☐ See Card 9 for hemorrhage

RV Failure

- ☐ Diagnose with TTE/TEE
- ☐ Consider ionotrophic & vasopressor support
- ☐ Consider pulmonary vasodilators
- ☐ Minimize fluid administration
- ☐ Consider CVC & invasive BP monitoring

ADDITIONAL STUDIES:

- ECHO - TTE/TEE
- Portable chest X-Ray
- CT-Chest
- 12 lead ECG

DRUG DOSES AND TREATMENTS:

Vasopressor:
- Epinephrine Dose: 0.01-1 mcg/kg/min
- Norepinephrine Dose: 0.05-3.3 mcg/kg/min

Inotropes:
- Dose: Dobutamine 2.5-5 mcg/kg/min
- Dose: Milrinone 0.25-0.75 mcg/kg/min

Inhaled nitric oxide:
- 40 Parts Per Million
- Call 'NCCC RT' on Vocera

*Please note that some ICUs do not use weight-based dosing. Review upon transfer to ICU.

VA-ECMO:
Page VA ECMO (See Card 1) and Vocera "ECMO First Responder"

DIFFERENTIAL DIAGNOSIS:

- Anaphylaxis (Card 4)
- Arrythmia (Card 5)
- Eclampsia (Card 8)
- High Spinal (Card 10)
- Local anesthetic toxicity (Card 12)
- Myocardial Infarction
- Pulmonary Embolism
- Respiratory Distress (Card 14)

LABORATORY STUDIES:

- ABG/Lactate
- Pro BNP
- CBC
- CMP
- Coags & Fibrinogen
- LFTs
- Troponin
- Tryptase

WRAP UP

- Determine disposition of patient
- Discuss with family and patient
- Debrief and file a SAFE report
- Consider AFE Foundation Hotline 307-END-AFE

STOP

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ANAPHYLAXIS

CARD 4

PRESENTATION: Rash, facial edema, respiratory distress, hypotension, vomiting

START:

- ☐ ***Call OB FAST and RRT***
- ☐ ***Stop all medications***
- ☐ ***Bring emergency cart***

LEADER designates
- ***Checklist Reader***
- ***Time Keeper & Scribe***
- ***Patient & Family Communicator***

- ☐ Vital signs every 5 minutes; continuous SpO2
- ☐ Administer epinephrine
- ☐ Assess and maintain airway
- ☐ Administer 100% O2 via non-rebreather
- ☐ Ensure two 18G IVs
- ☐ Continuous fetal heart rate monitoring
- ☐ Consider left uterine displacement
- ☐ Administer fluid bolus
- ☐ Prepare operating room for possible delivery

Hypotension:

- ☐ Administer 1-2 L rapidly. Repeat as needed
- ☐ Repeat epinephrine
- ☐ Consider secondary medications

Respiratory distress/hypoxia:

- ☐ Intubate for impending airway obstruction from angioedema
- ☐ Maintain saturation with 100% O2 via non-rebreather 8-10 L/min
- ☐ Albuterol via nebulizer

LABORATORY STUDIES:

- Tryptase (immediately, 4 hours, and 18-24 hours post-reaction)
- CBC, BMP, figerstick glucose
- BMP
- ABG and lactate

DRUG DOSES AND TREATMENTS:

FIRST LINETREATMENT

Epinephrine (1 mg/mL)
- Dose: 0.3-0.5mg IM (autoinjector if available)
  0.01-0.1mg IV (anesthesia only)
- Repeat every 5-15 minutes as needed
- Infusion should be initiated for severe or refractory symptoms (0.1 mcg/kg/min)

SECONDARY MEDICATIONS

Albuterol
- Dose: 2.5mg via nebulizer

Diphenhydramine
- Dose: 25-50mg IV every 4 hours as needed

Famotidine (H2 blocker)
- Dose: 20mg IV

Methylprednisolone
- Dose: 125mg IV

Vasopression
- Dose: 1-2U bolus for refractory hypotension, 0.04U/hr for infusion

DIFFERENTIAL DIAGNOSIS:

- Acute asthma exacerbation
- Pulmonary edema
- Pulmonary or amniotic fluid embolism (Card 3)
- Transfusion reaction (Card 17)

WRAP UP

- Determine disposition of patient
- Discuss with family and patient
- Debrief and file a SAFE report
- **Add allergen to patient's EMR**

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ARRHYTHMIA

CARD **5**

PRESENTATION: Hypotension, signs of shock, ischemic chest pain, acute mental status change, acute pulmonary edema

START:

- ☐ ***Call OB FAST and RRT***
- ☐ ***Bring emergency cart and cesarean tray***

LEADER designates
- ***Checklist Reader***
- ***Time Keeper & Scribe***
- ***Patient & Family Communicator***

- ☐ ***If pregnant, open OR for possible cesarean***
- ☐ ***If pregnant, vital signs every 5 minutes, continuous SpO2***
- ☐ Position patient left lateral decubitus
- ☐ Administer oxygen
  - o Via facemask even with normal O2 saturation
- ☐ Continuous fetal heart rate monitoring
- ☐ Ensure two 18G IVs
- ☐ EKG
  - o SVT--carotid massage or adenosine while preparing cardioversion
  - o Treat underlying cause of sinus tachycardia
- ☐ Consult cardiology & notify of plans for cardioversion
- ☐ Cardioversion – Apply pads
  - o Sedate patient – Anesthesia management
  - o Turn on defibrillator
  - o Set to SYNCHRONIZED mode
  - o Confirm spike on R wave confirming sync, adjust as needed
  - o Set appropriate biphasic cardioversion energy level
  - o Press CHARGE – Do not touch patient
  - o Press and hold SHOCK
  - o Check monitor
    - Persistent tachycardia – Increase energy
    - Re-engage SYNC after each shock

DRUG DOSES AND TREATMENTS:

Adenosine
- Dose: 6 mg IV rapid push, then 20 mL 0.9% NaCl flush immediately after & elevation of extremity
- Repeat 2 additional doses of 12 mg if needed
- Max: 3 doses (30 mg)

DIFFERENTIAL DIAGNOSIS: H'S & T'S

EKG Findings	Conditions
Narrow, regular	SVT, Sinus tachycardia
Narrow, irregular	A-fib, A-flutter, multifocal atrial tachycardia
Wide, regular	Ventricular tachycardia
Wide, irregular	A-fib with pre-excitation, A-fib with aberrancy, polymorphic V tach/Torsades de pointes (may precipitate ventricular fibrillation)

BIPHASIC CARDIOVERSION ENERGY

Condition	Energy Level Progression
Narrow, regular	50J/100J/150J/200J
Narrow, irregular	120J/150J/200J*
Wide, regular	100J/150J/200J
Wide, irregular	Treat as VF - 200J (see card 6)

* Do not convert without considering risk of embolic stroke

WRAP UP

- Determine disposition of patient
- Discuss with family and patient
- Debrief and file a SAFE report

STOP

DIABETIC KETOACIDOSIS

CARD 6

PRESENTATION: Nausea, vomiting, abdominal pain, lethargy, confusion, hypotensive, Kussmaul breathing

START:

LEADER designates
- ***Checklist Reader***
- ***Time Keeper & Scribe***
- ***Patient & Family Communicator***

- ☐ ***Call RRT if patient on L&D/Antepartum***
- ☐ Ensure two 18 G IVs
- ☐ Draw STAT labs
- ☐ EKG
- ☐ MICU and/or endocrinology consultation
- ☐ Initiate fluid repletion
- ☐ Continuous electronic fetal monitoring
- ☐ Update family/patient

LABORATORY STUDIES:

- CMP and anion gap and CBC with differential
- Serum glucose and ketones
- Urinalysis
- Plasma osmolality
- ABG with lactate
- Consider: Urine, sputum, and blood cultures, serum lipase/ amylase on case-by-case basis

ADDITIONAL STUDIES:

- EKG
- Consider chest X-ray

DIFFERENTIAL DIAGNOSIS:

- Starvation/Alcohol ketoacidosis
- Anion gap acidosis (uremia, salicylate/ethylene glycol/methanol toxicity, etc)
- Metabolic encephalopathy
- Rhabdomyolysis

FLUID AND ELECTROLYTE REPLETION

Fluid Repletion – in hypovolemic patients (without shock and heart failure), use lactated ringers at 15-20 ml/kg/hr for 2-3 hours.
- In patients with hypovolemic shock, lactated ringers should be infused as quickly as possible.

Potassium – initiate immediately if K <5.3 mEq/L as long as urine output is adequate. Maintain a K in the range of 4-5 mEq/L
- If K < 3.3 mEq/L -->give IV KCl 20-40 mEq/L
- If K between 3.3 and 5.3 mEq/L -->give IV KCl 20-30 mEq/L

Insulin– Initiate regular insulin in patients with moderate-severe DKA who have a K>3.3 mEq/L per protocol in unit.
- Delay insulin if K below 3.3 mEq/L to prioritize fluid and potassium replacement.

DELIVERY CONSIDERATIONS

Fetal heart rate tracings are often non-reactive or non-reassuring in DKA. Delivery should be DEFERRED as correction of DKA can result in resolution of a concerning tracing.
The team should deliver in the event of:

- Terminal bradycardia
- Worsening fetal status despite improving maternal status

Decisions regarding thresholds for urgent/emergent delivery ought to be made with OB, nursing, and OB anesthesia.

WRAP UP

- Determine disposition of patient
- Discuss with family and patient
- Debrief and file a SAFE report

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DIFFICULT AIRWAY

CARD 7

PRESENTATION: Failure to intubate, unable to see cords or pass the ETT into the trachea

START:

- [ ] **Broadcast Anesthesia Help**
- [ ] **Call early for surgical backup**
- [ ] Announce failed intubation; bring airway tower if needed
- [ ] Assess fetal status via ultrasound or EFM

LEADER designates
- ***Checklist Reader***
- ***Time Keeper + Scribe***
- ***Patient & Family Communicator***

- [ ] No more than 3 laryngoscopy attempts; each attempt must improve conditions or change technique
- [ ] If facemask ventilation adequate, assess fetal status/urgency for surgery. Consider awakening patient.

If unable to ventilate:

- [ ] Place supraglottic airway/LMA (maxiumum 2 attempts)
- [ ] If ventilation successful, assess maternal/fetal status
  - If essential/safe to proceed, consider proceeding with surgery.
  - If non-essential/unsafe, awaken patient and proceed with neuraxial or alternative airway plan.

Can't intubate, can't ventilate:

- [ ] Maintain 100% FiO2
- [ ] Exclude laryngospasm
- [ ] Proceed with surgical airway (cricothyrotomy/tracheostomy)

Maneuvers/Interventions:

- [ ] Ensure 100% FiO2
- [ ] Optimize patient positioning
- [ ] Oral airway/nasal airway
- [ ] Intubating LMA; bougie; flexible bougie; fiberoptic

DRUG DOSES AND TREATMENTS:

Suggamadex Dose:
- 16 mg/kg (emergent reversal of Rocuronium)

DIFFERENTIAL DIAGNOSIS:

- Bronchospasm
- Mainstem intubation
- Equipment malfunction

LABORATORY STUDIES:

- ABG/Lactate

ADDITIONAL STUDIES:

- Consider portable chest X-Ray
- Consider POCUS - Lung

WRAP UP

- Determine disposition of patient
- Discuss with family and patient
- Debrief and file a SAFE report

STOP

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ECLAMPSIA

CARD 8

PRESENTATION: New-onset tonic-clonic, focal, or multifocal seizures in the absence of other causative conditions

START:

- ☐ ***Call OB FAST***

LEADER designates
- ***Checklist Reader***
- ***Time Keeper & Scribe***
- ***Patient & Family Communicator***

- ☐ Position patient left lateral decubitus
- ☐ Support airway; administer oxygen via facemask
- ☐ Vital signs every 5 minutes; continuous SpO2
- ☐ Ensure two18 G IVs
- ☐ Draw STAT labs
- ☐ Administer magnesium sulfate; IV preferred
- ☐ Control severe hypertension

Order set: OB IP Management of Hypertension (card 11)

Additional Considerations:

- ☐ Ensure fetal monitoring
- ☐ Consider lorazepam and STAT page neurology if still seizing
- ☐ Place urinary catheter
- ☐ ***If pregnant, open OR for possible cesarean***

LABORATORY STUDIES:

- Drug screen
- Magnesium level
- CBC, CMP, T+S, PT/PTT/INRCBC, CMP, T+S, PT/PTT/INR
- Urine studies: urinalysis, toxicology, fentanyl, oxycodone

FETAL MANAGEMENT:

- Expect fetal bradycardia 3-5 minutes
- If fetal bradycardia persists for 10 minutes despite maternal resuscitation, proceed with emergent cesarean

DRUG DOSES AND TREATMENTS:

Magnesium
- Dose IV: 6 g IV over 30 minutes
  - Infusion: 2 grams IV per hour
- Recurrent eclampsia: 2 gram IV over 5 minutes
- Dose IM: 10 g IM; divided into 2.5 g in 4 injections (max 5 mL per injection)
- If no IV access, consider IO (in PPH cart); standard mini-bag bolus

Lorazepam
- Dose: 4 mg IV once
- Repeat dose in 2-5 minutes

MAGNESIUM CRITICAL CONSIDERATIONS:

- Contraindications: myasthenia gravis
- Dosing modifications for renal insufficiency:
  - Bolus is unchanged
  - Cr 1.0 to 1.5: decrease maintenance dose to 1 gram/hour
  - Cr >1.5: administer bolus, do not give maintenance dose
  - Severe renal failure: discuss with MFM and ICU teams
  - Oliguria: <30mL/hr for 4 hours: decrease maintenance dose to 1 gram/hr
  - Obtain magnesium levels every 4 hours

DIFFERENTIAL DIAGNOSIS:

- Altered Mental Status (Card 2)
- Local anesthesia toxicity (Card 12)
- Magnesium toxicity (Card 13)
- Seizure disorder (consider neurology consult)
- Vasovagal syncope

WRAP UP

- Determine disposition of patient
- Discuss with family and patient
- Debrief and file a SAFE report

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HEMORRHAGE

CARD 9

PRESENTATION: QBL > 1000mL ***with ongoing bleeding*** or signs of concealed hemorrhage

START:

☐ **Call OB FAST**

LEADER designates
- ***Checklist Reader***
- ***Time Keeper & Scribe***
- ***Patient & Family Communicator***

STAGE 0:

QBL 500-1000 cc with ongoing bleeding at vaginal birth

- ☐ Discuss bleeding with patient and family
- ☐ Fundal massage
- ☐ Determine etiology and treat, consider Jada
- ☐ Ensure two 18 G IVs for access
- ☐ Draw STAT labs; consider using **YELLOW** STAT lab slip; hand deliver labs
- ☐ Start 1 liter Lactated Ringers bolus
- ☐ Bedside uterine ultrasound
- ☐ Empty bladder

Medications:
- ☐ Ensure oxytocin is infusing
- ☐ Uterotonics, avoid contraindicated meds
- ☐ Address pain control

Blood Bank:
- ☐ T&C 2 units pRBC

STAGE 1:

QBL >1000 mL with normal vital signs and lab values

- ☐ Critical pause, identify leader
- ☐ Call OB FAST HEMORRHAGE and activate PPH Narrator
- ☐ Vital signs every 5 minutes; continous SpO2
- ☐ Transfer to L&D if on different floor
- ☐ Determine etiology and treat
- ☐ Keep patient warm
- ☐ If atony unresponsive, place Bakri or Jada
- ☐ Ensure transfusion consent is signed

Medications:
- ☐ Ensure oxytocin is infusing
- ☐ Uterotonics, avoid contraindicated meds
- ☐ Give TXA

DRUG DOSES:

Use available Pyxis Kit:
Postpartum Hemorrhage Medical Center

Methylergonovine (Methergine)
- Dose: 0.2 mg IM, may repeat every 2 hours
- Max: 5 doses
- Contraindications: hypertension

Misoprostol (Cytotec)
- Dose: 1000 mcg PR
- Dose: 600 mcg buccal or sublingual
- Max single dose: 1000 mcg

Carboprost (Hemabate)
- Dose: 250 mcg IM, may repeat every 15 minutes
- Max: 8 doses
- Contraindications: asthma

Tranexamic Acid (TXA)
- Dose: 1 gram IV over 10 minutes, may be repeated once after 30 minutes
- May be given as an infusion under direction from anesthesia

LABORATORY STUDIES

- T&S and ABO confirmatory
- CBC, PT/PTT/INR, fibrinogen
- ABG, lactate
- Consider **YELLOW** STAT lab ticket and hand deliver t
lab

CONTINUED ON NEXT PAGE

HEMORRHAGE, CONTINUED.

STAGE 2:

QBL less than 1500ml AND HR >110, BP <85/45, O2 Sat < 95%

- ☐ Critical pause (If in OR, anesthesia led)
- ☐ Report QBL every 5-10 minutes
- ☐ Interventions not performed in prior stages
- ☐ Discuss with patient and family

Medications:

- ☐ Continue uterotonics, avoid contraindicated meds
- ☐ Repeat TXA 30 minutes after first dose

Blood Bank:

- ☐ Transfuse per vital signs and QBL, do not wait for lab results
- ☐ Thaw 2 units FFP
- ☐ Fibrinogen repletion as indicated

STAGE 3:

QBL > 1500 mL OR >2 units PRBCs given OR unstable VS OR suspicion of DIC

- ☐ Critical pause, identify leader
- ☐ Move to OR if not already there
- ☐ Place patient in lithotomy
- ☐ Interventions not performed in prior stages
- ☐ Call in surgical backup
- ☐ Consider cell saver
- ☐ Warm patient and warm room to 70 degrees
- ☐ Arterial line
- ☐ Calcium chloride 1 G IV; dilution recommended
- ☐ Consider central venous catheter
- ☐ Consider intubation
- ☐ Redose preoperative antibiotics
- ☐ Consider ICU consult/bed request

Blood Bank:

- ☐ Initiate Massive Transfusion Protocol
- ☐ Thaw cryoprecipitate (see fibrinogen repletion box)

STAGE 4:

Hypovolemic shock

- ☐ Critical pause, identify leader
- ☐ Immediate surgical intervention (hysterectomy)

Medications:

- ☐ ACLS

Blood Bank:

- ☐ Simultaneous aggressive MTP
- ☐ Add cryoprecipitate for each round of massive transfusion

FIBRINOGEN REPLETION RECOMENDATIONS

- <200 mg/dL
- <250 mg/dL and ongoing blood loss
- < 300 mg/dL and severe ongoing blood loss
- Cryoprecipitate preferred; if unavailable, use fibrinogen concentrate in severe bleeding

POSSIBLE INTERVENTIONS:

- Consult OB (if applicable)
- Laceration repair
- Packing of hematoma
- Bakri balloon
- Jada device
- Exploratory laparotomy
- Compression suture/B-Lynch suture
- Uterine artery ligation
- Hysterectomy
- Interventional Radiology

WRAP UP

- Determine disposition of patient
- Discuss with family and patient
- Discuss epidural removal plan
- Debrief
- File a SAFE report
- Cancel MTP

STOP

HIGH SPINAL

CARD 10

PRESENTATION: Dyspnea, weak grip, respiratory compromise, hypoxemia, hypotension, cardiac arrest

START:

- ☐ ***Call OB FAST if in labor room***
- ☐ ***Bring emergency cart***

LEADER designates
- ***Checklist reader***
- ***Time Keeper & Scribe***
- ***Patient & Family Communicator***

- ☐ STOP epidural infusion
- ☐ ***If pregnant, open OR for possible cesarean***
- ☐ *Position patient-left uterine displacement and HOB eleveted*
- ☐ Ensure two 18 G IVs
- ☐ High flow oxygen via facemask
- ☐ Treat bradycardia – atropine, glycopyrrolate, EPINEPHrine
- ☐ Treat hypotension – IV fluids, phenylephrine, EPINEPHrine
- ☐ If absence of pulse, start CPR (card 5)

FETAL MANAGEMENT:

- Once stable, start fetal monitoring
- If non reassuring fetal monitoring persists for 10 minutes despite maternal resuscitation, proceed with STAT cesarean delivery

DRUG DOSES AND TREATMENTS:

IF BRADYCARDIA:

Atropine
- Dose: 0.5 mg IV/IM every 3 minutes
- Max: 3 mg

Glycopyrrolate
- Dose: 0.1 mg IV every 3 minutes

IF HYPOTENSION:

Consider:
- Phenylephrine
- EPHEDrine

DIFFERENTIAL DIAGNOSIS:

- Amniotic fluid embolism (Card 3)
- Asthma exacerbation
- Hemorrhage (Card 9)
- Local anesthesia toxicity (Card 12)
- Magnesium toxicity (Card 13)
- Pulmonary embolism
- Pneumothorax
- Pulmonary edema
- Sepsis (Card 15)

WRAP UP

- Determine disposition of patient
- Discuss with family and patient
- Debrief and file a SAFE report

HYPERTENSIVE EMERGENCY

CARD 11

PRESENTATION: Confirmed blood pressure ≥ 160 systolic or ≥ 110 diastolic over 15 minutes

START:

LEADER designates
- ***Checklist reader***
- ***Time Keeper & Scribe***
- ***Patient & Family Communicator***

- ☐ Check cuff and repeat BP in 15 minutes
- ☐ Notify provider immediately
- ☐ Notify charge nurse
- ☐ Administer escalating short acting antihypertensives
- ☐ Administer escalating long acting antihypertensives

Order set: OB IP Management of Hypertension

- ☐ If difficulty establishing IV access, administer oral antihypertensives
- ☐ Consider magnesium sulfate for seizure prophylaxis
- ☐ Draw STAT labs
- ☐ If fetus is viable, initiate fetal monitoring

LABORATORY STUDIES:

- CBC, CMP, urine protein: creatinine ratio, PT/PTT/INR

MAGNESIUM CRITICAL CONSIDERATIONS:

- Contraindications: myasthenia gravis
- Dosing modifications for renal insufficiency:
  - Bolus is unchanged
  - Cr 1.0 to 1.5: decrease maintenance dose to 1 gram/hour
  - Cr >1.5: administer bolus, do not give maintenance dose
  - Severe renal failure: discuss with MFM and ICU teams
  - Oliguria: <30mL/hr for 4 hours: decrease maintenance dose to 1 gram/hr
  - Obtain magnesium levels every 4 hours

DRUG DOSES AND TREATMENTS:

SHORT ACTING ANTIHYPERTENSIVE MEDICATION:

Labetalol
- Dose: 20 → 40 → 80 mg mg IV escalating every 10 minutes
- Max 24 hour dose: 300 mg
- Contraindication: pulse <60 bpm, moderate persistent asthma, heart failure

Hydralazine
- Dose: 5-10 mg IV → 10 mg IV escalating every 20 minutes
- Max 24 hour dose: 25 mg

Nifedipine immediate release (IR)
- Dose: 10 → 20 → 20 mg PO every 20 minutes
- Max 24 hour dose: 180 mg

LONG ACTING ANTIHYPERTENSIVE MEDICATION:

Labetalol
- Dose: 200 mg PO escalating doses every 8 to12 hours
- Max single dose: 800 mg
- Max 24 hour dose: 2400 mg

Nifedipine extended release (XL)
- Dose: 30 mg PO every 24 hours
- Max 24 hour dose: 120 mg

***Reaching max IV dosing does not preclude reaching max PO doses of same medication.**

OTHER CRITICAL CONSIDERATIONS:

- Transfer patient to L&D for closer monitoring if repetitive dosing is required
- For refractory severe hypertension, consult cardiology, establish telemetry, nicardipine vs esmolol drip, transfer to ICU

STOP

Version 3; 07/01/2026

LOCAL ANESTHESIA TOXICITY

CARD 12

PRESENTATION: Tinnitus, metallic taste, circumoral numbness, alterned mental status, seizures, hypotension, bradycardia, ventricular arrthymias, cardiovascular collapse

START:

- ☐ ***Call OB FAST & RRT – Code Blue with cardiac arrest***
- ☐ Call for intralipid kit
  - Administered by anesthesia

LEADER designates
- ***Checklist reader***
- ***Time Keeper & Scribe***
- ***Patient & Family Communicator***

- ☐ **If pregnant, open OR for possible cesarean**
- ☐ Assess airway; consider endotracheal intubation
- ☐ Ensure two 18 G IVs
- ☐ Administer fluid bolus
- ☐ Assess
  - Vital signs every 5 minutes; continuous SpO2; include RR
  - Consider POCUS exam as indicated
  - Continuous fetal heart rate monitoring

If hypotensive:

- ☐ Administer EPINEPHrine

If seizing:

- ☐ Administer benzodiazepine

If pulseless:

- ☐ Start CPR (card 1)

DRUG DOSES AND TREATMENTS:

Lipid Emulsion
- Dose: Bolus 1.5 mL/kg IV
  - o Then start infusion at 0.25 mL/kg/min
- If remains unstable, repeat bolus and double infusion.
- Max dose 12 ml/kg
- Located in top of regional carts & core OR Pyxis ('fat emulsion')

EPINEPHrine
- Reduced code dose epinephrine (<1 mcg/kg IV)

Lorazepam
- Dose: 2 mg IV/IM over two minutes every 10 minutes
- Max: 4 mg

CRITICAL CONSIDERATIONS:

- May require prolonged resuscitation (>1 hr)
- Consider invasive monitoring (A-line)
- AVOID: vasopressin, calcium channel blockers, beta blockers, and local anesthetics
- Resuscitative cesarean delivery (PMCD) in cardiac arrest
- Consider cardiopulmonary bypass if refractory to treatment
- Once stable, continue lipid emulsion ≥ 15 mins

WRAP UP

- Determine disposition of patient
- Discuss with family and patient
- Debrief and file a SAFE report

Version 3; 07/01/2026

MAGNESIUM TOXICITY

CARD 13

PRESENTATION: Loss of reflexes, respiratory depression, cardiac arrest in a patient on magnesium sulfate

START:

- ☐ ***Call OB FAST (consider RRT if severe toxicity)***

LEADER designates
- ***Checklist reader***
- ***Time Keeper & Scribe***
- ***Patient & Family Communicator***

- ☐ Bring emergency cart
- ☐ Stop magnesium sulfate infusion and all sedating medications (including epidural)
- ☐ Vital signs every 5 minutes; continous SpO2
- ☐ Administer calcium gluconate IV per provider discretion
- ☐ Left lateral positioning
- ☐ Maintain fetal monitoring (if applicable)
- ☐ Cardiorespiratory supportive measures PRN
- ☐ Draw STAT Labs
- ☐ EKG
- ☐ If pregnant, open OR for possible cesarean
- ☐ Update family/patient

LABORATORY STUDIES:

- Serum magnesium level
- CBC, CMP, PT/PTT/INR, Fibrinogen
- ABG with lactate

ADDITIONAL STUDIES:

- EKG
- Chest X-ray

MAGNESIUM SULFATE TOXICITY

mEq/L	Signs/Symptoms
7-10	Loss of DTRs
10-13	Respiratory Paralysis
>15	Cardiac Arrhythmias
>25	Cardiac Arrest

Therapeutic Mg Level: 4.8-8.4

DRUG DOSES AND TREATMENTS:

Calcium gluconate
- Location: L&D, 3WH Pyxis, and WSU Pyxis
- Dose 1 gram IV over 2 minutes
- May re-dose 1g IV every 10-20 minutes (Max 3g IV in 1 hour)
- For those with cardiac arrest or severe cardiac toxicity, dose 1.5-3 gram IV over 2 to 5 minutes
- Consider IV administration of furosemide 20-40 mg

If calcium gluconate not available use:
Calcium chloride (Location: Code Cart)
- Dose: 500-1000 mg IV over 2 to 5 minutes

DIFFERENTIAL DIAGNOSIS:

- ACLS/Cardiac Arrest/ECMO (Card 1)
- Altered mental status (Card 2)
- Eclampsia (Card 8)

WRAP UP

- Determine disposition of patient
- Discuss with family and patient
- Debrief and file a SAFE report

RESPIRATORY DISTRESS/HYPOXIA

CARD 14

PRESENTATION: Desaturation, shortness of breath, wheezing

START:

- ☐ ***Call RRT and OB FAST***
- ☐ ***Bring emergency cart***

LEADER designates
- ***Checklist reader***
- ***Time Keeper & Scribe***
- ***Patient & Family Communicator***

- ☐ Place patient on 100% oxygen via non-rebreather
- ☐ Assess airway, breathing, and circulation:
  - o Vital signs every 5 minutes; continuous SpO2, including RR
  - o Auscultate lungs
  - o Order STAT ECG and CXR
  - o Consider POCUS TTE and/or lung ultrasound
- ☐ Assess need for ventilatory support (CPAP, BiPAP, intubation)
- ☐ Ensure two 18 G IVs
- ☐ Send STAT labs including ABG
- ☐ Position patient--left uterine displacement and elevate head of bed
- ☐ Administer diuresis or antibiotics if indicated
- ☐ Consider reversal agent (i.e. naloxone) if medication effect causing or contributing to distress
- ☐ Consider imaging:
  - o CT PE protocol

LABORATORY STUDIES:

- ABG and lactate
- CBC with differential
- Complete metabolic panel
- Magnesium level
- Troponin
- BNP

DRUG DOSES AND TREATMENTS:

Albuterol
- For mild to moderate asthma exacerbations
- Dose: 2.5mg via nebulizer, can be given every 20 minutes for the first hour

Furosemide
- For acute pulmonary edema
- Dose: 20-40mg IV, can be repeated or increased by 20mg every 1-2 hours

DIFFERENTIAL DIAGNOSIS:

Hypoventilation
- Drugs (narcotics, benzodiazepines, residual neuromuscular blockade)
- High neuraxial blockade
- Magnesium toxicity
- Obesity

VQ Mismatch
- AFE/PE
- Air embolism
- Aspiration
- Asthma/ Bronchospasm
- Atelectasis
- Pleural effusion
- Pneumothorax
- Pulmonary edema
- Pulmonary hypertension

Right to Left Shunt
- Intracardiac AVMs
- Physiologic (pneumonia, ARDS)

WRAP UP

- Determine disposition of patient
- Discuss with family and patient
- Debrief and file a SAFE report

STOP

SEPSIS

CARD 15

PRESENTATION: New onset altered mental status, oxygen demand, oliguria, tachypnea, hypotension, febrile, tachycardia

START:

LEADER designates
- ***Checklist reader***
- ***Time Keeper & Scribe***
- ***Patient & Family Communicator***

- ☐ ***Call RRT (RRT will activate a Code Sepsis)***
- ☐ *Ensure* two 18G IVs
- ☐ Draw 2 blood cultures from 2 sites prior to antibiotics
  - RRT or phlebotomy must draw blood cultures
- ☐ Start antibiotics within 1 hour of diagnosis

☐ **Use Epic specific tools below for ordering**

- ☐ Respiratory support if needed
- ☐ Volume resuscitation on pressure bag
  - ☐ 1-2 L crystalloid in first 2 hours
    If hypotensive or lactate ≥4 mmol/L
  - ☐ Vasopressor if MAP <65 mm Hg
- ☐ Continuous fetal heart rate monitoring
- ☐ Consider steroids if <34 weeks for fetal indications
- ☐ Vitals signs every 15 minutes
- ☐ Delivery decision should be made with multidisciplinary team

EPIC SPECIFIC TOOLS:

- Order set: IP Adult Sepsis or IP Adult Sepsis IV Fluid Boluses + Antibiotics + Meds
- Nursing Documentation: Sepsis Narrator
- Provider Documentation:
  - Open a note and enter smart phrase: .SEPSISSMARTFORM
    - Choose note type
      - IP initial sepsis exam
      - Sepsis post fluid exam

DRUG DOSES AND TREATMENTS:

Norepinephrine
- Dose: 0.01-0.1 mcg/kg/min

Epinephrine
- Dose: 0.01-0.1 mcg/kg/min IV

LABORATORY STUDIES:

- Lactate
- CBC
- CMP
- Glucose
- PT/PTT/INR
- ABG

OBTAIN CULTURES (AS APPROPRIATE):

- Blood
- Urine
- Sputum
- CSF
- Wound
- Stool
- Vascular access site

DIFFERENTIAL DIAGNOSIS:

- Amniotic fluid embolism (Card 3)
- Anaphylaxis (Card 4)
- Cardiogenic shock
- Hemorrhagic shock (Card 9)

WRAP UP

- Determine disposition of patient
- Discuss with family and patient
- Debrief and file a SAFE report
- Trend lactate if elevated

STOP

SHOULDER DYSTOCIA

CARD **16**

PRESENTATION: Turtle sign, failure to deliver fetal shoulders

START:

- ☐ ***Call OB FAST and NCCC (CODE)***

LEADER designates
- ***Checklist Reader***
- ***Time Keeper & Scribe***
- ***Patient & Family Communicator***

- ☐ Tell patient to stop pushing
- ☐ Stool to bedside
- ☐ State out loud the maneuvers being performed
- ☐ Time keeper:
  - o Notes time of head delivery
  - o Notes aloud every 15 seconds that passes
- ☐ 1st - McRoberts
- ☐ 2nd - Suprapubic Pressure
  - o Delivering clinician notes which direction force should be applied
- ☐ 3rd - Delivery of posterior arm, posterior sling, or Gaskins
- ☐ Reposition patient
  - o Primary providers should state what maneuvers have been attempted and if a second provider is needed to attempt
- ☐ Second provider attempts maneuvers, then consider:
  - o Episiotomy if additional access is needed to perform maneuvers
  - o Rubin maneuver
  - o Woods screw maneuver
- ☐ In rare cases:
  - o Clavicular fracture
  - o Move to the operating room for Zavenelli or abdominal rescue

DELIVERY DOCUMENTATION TO INCLUDE:

- Record in delivery summary that shoulder dystocia occurred
- All present providers
- Which shoulder was anterior
- Time it took to deliver the shoulder
- All maneuvers and orders used
- Birthweight
- Apgar scores
- Cord gases sent
- If infant was moving all extremities after delivery
- NCCC called for delivery
- Type of lacerations
- Quantitative blood loss

WRAP UP

- Determine disposition of patient
- Discuss with family and patient
- Debrief and file a SAFE report
- Review delivery summary documentation to ensure accuracy

MANEUVERS:

- McRoberts: sharp flexion of thighs back against abdomen
- Suprapubic pressure: apply pressure above the pubis with palm or fist downward and laterally toward the fetal face/sternum.
- Posterior arm: provider places hand in the vagina and delivers posterior arm or hand
- Rubin maneuver: provider places hand on the back surface of the posterior fetal shoulder and rotates towards fetal face
- Woods Screw maneuver: provider places hand on the front of the posterior fetal shoulder and rotates toward the fetal back
- Gaskins maneuver: have the patient move to a hands and knees position
- Posterior Axilla Sling: provider's fingers are looped through the posterior axilla and apply downward traction
- Zavanelli Maneuver - Reverse the cardinal movements of labor and then replace the fetal head into the pelvis and proceed with cesarean
- Clavicular fracture - pull the anterior clavicle outward
- Abdominal rescue – hysterotomy facilities manual dislodging of anterior shoulder from above.

TRANSFUSION REACTION

CARD 17

PRESENTATION: Fever, chills, pruritus, urticaria, wheezing, respiratory , distress, chest pain, red colored urine, hyper/hypotension, pink frothy airway secretions

START:

- ☐ ***Call OB FAST and RRT (if not in OR)***
- ☐ ***Bring code cart***
- ☐ ***STOP blood transfusion***

LEADER designates
- ***Checklist reader***
- ***Time Keeper & Scribe***
- ***Patient & Family Communicator***

- ☐ Vital signs every 5 minutes; continuous SpO2
- ☐ Inform blood bank *(Vocera: 'call blood bank')*
- ☐ Assess symptoms: fever, hypotension, urticaria, respiratory distress, urine output/color
- ☐ Check unit number and patient identifier (exclude clerical error)
- ☐ Order STAT labs (see 'Lab Studies')
  - Return the following to Blood Bank:
    - Blood product bag & tubing from patient - 2 labeled pink-tops
    - Completed 'Transfusion Reaction Paper' *(charge RN station)*
- ☐ Ensure two18 G IVs for access
- ☐ Consider additional testing: ECG, CXR, POCUS TEE
- ☐ Continuous fetal heart rate monitoring

Critical Considerations:

- Supportive therapy for severe transfusion reactions
- If suspected hemolytic transfusion reaction, maintain UOP >100 ml/hr
- ***If ongoing hemodynamic instability from hemorrhage, send emergency release (pink slip) to blood bank for additional product***

DRUG DOSES AND TREATMENTS:

Norepinephrine
- Dose: 0.01-0.1 mcg/kg/min IV

Epinephrine
- Dose: 0.01-0.1 mcg/kg/min IV

LABORATORY STUDIES:

- ABG + lactate
- Blood cultures
- BNP
- CBC + differential
- Complete metabolic panel
- Fibrinogen
- PT/PTT/INR
- Serum tryptase
- Transfusion Reaction Evaluation
  - Prints 2 stickers for 2 pink tops
- Urinalysis

DIFFERENTIAL DIAGNOSIS:

- Amniotic/Pulmonary Fluid Embolism (Card 3)
- Anaphylaxis (Card 4)
- Febrile non-hemolytic reaction
- Hemorrhage (Card 9)
- Hemolytic Transfusion Reaction
- Transfusion-associated circulatory overload (TACO)
- Transfusion-related acute lung injury (TRALI)
- Sepsis (Card 15)
- Simple allergic reaction

WRAP UP

- Determine disposition of patient
- Discuss with family and patient
- Debrief and file safe report

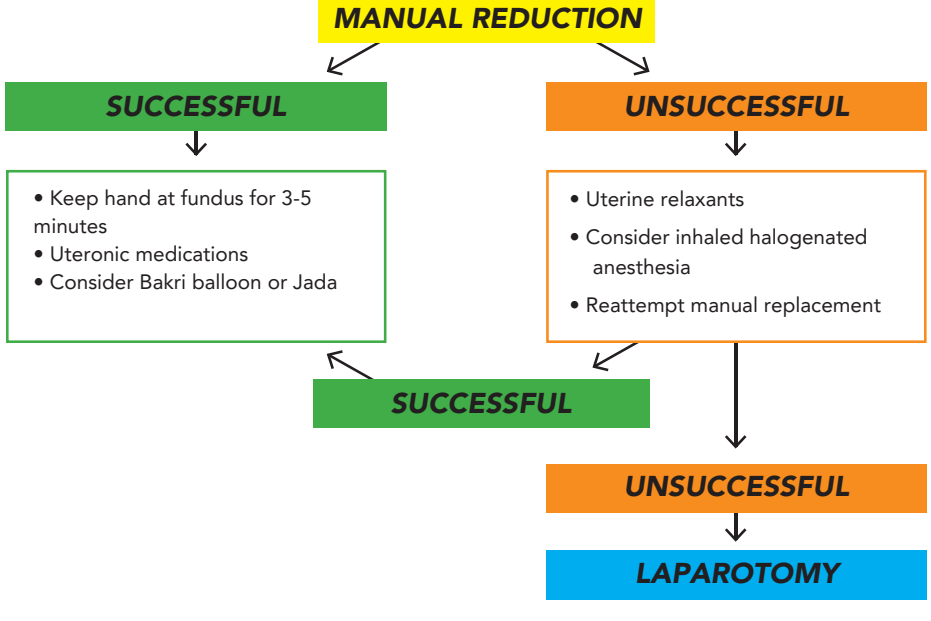
UTERINE INVERSION

CARD 18

PRESENTATION: Mass in cervix or vagina, inability to palpate fundus abominally

START:

- ☐ ***Call OB FAST***
- ***LEADER*** designates
  - ***Checklist Reader***
  - ***Time Keeper & Scribe***
  - ***Patient & Family Communicator***
- ☐ Discontinue uterotonic medications
- ☐ Obtain hemorrhage kit in room
- ☐ Ensure two 18 G IVs
- ☐ Type and cross 2 units packed RBC
- ☐ Consider moving to operating room
- ☐ Obtain vital signs (every 5 mins)
- ☐ EKG leads
- ☐ Bolus regional anesthesia
- ☐ Remove placenta if easily accomplished
  - o If not easy to remove while inverted, leave placenta attached and remove once uterus is reduced



DRUG DOSES AND TREATMENTS:

UTERINE RELAXANTS:

Terbutaline
- Dose: 0.25 mg SQ, may repeat every 20 minutes
- Max: 1 mg in 4 hours

Nitroglycerine
- Dose: 100 mcg IV, may repeat 100 mcg IV if no response
- Max: 200 mcg

UTEROTONICS:

Oxytocin (Pitocin)
- Dose: Bolus 250 milli-units/minute over 1 hour

Methylergonovine (Methergine)
- Dose: 200 mcg IM, may repeat every 2 hours
- Max: 5 doses
- Contraindications: hypertension

Carboprost (Hemabate)
- Dose: 250 mcg IM, may repeat every 15 minutes
- Max: 8 doses
- Contraindications: asthma

Misoprostol (Cytotec)
- Dose: 1000 mcg PR
- Dose: 600 mcg buccal or sublingual
- Max single dose: 1000 mcg

ADDITIONAL MEDICATIONS:

Tranexamic Acid (TXA)
- Dose: 1 gram IV over 10 minutes
- May be repeated once after 30 minutes

WRAP UP

- Determine disposition of patient
- Debrief
- Update family and patient
- File a SAFE report

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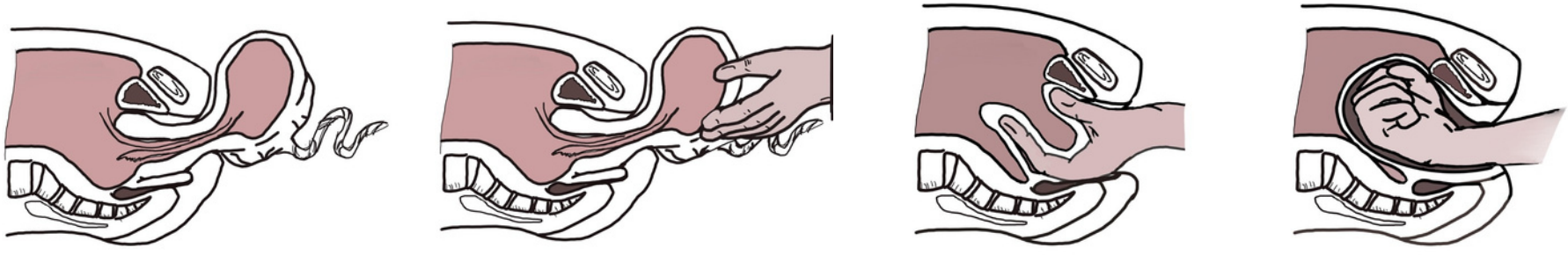
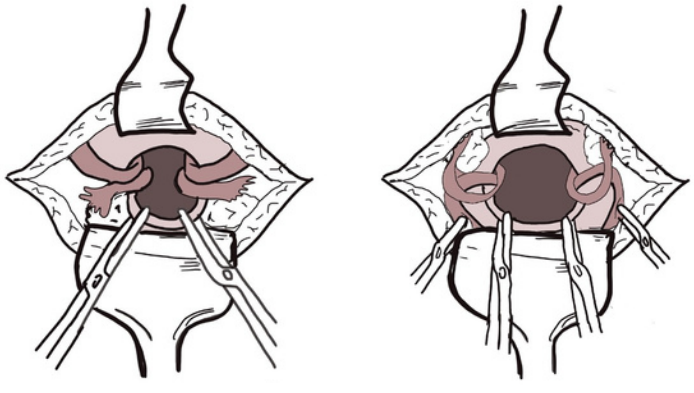
UTERINE INVERSION, CONTINUED.

MANUAL REDUCTION:



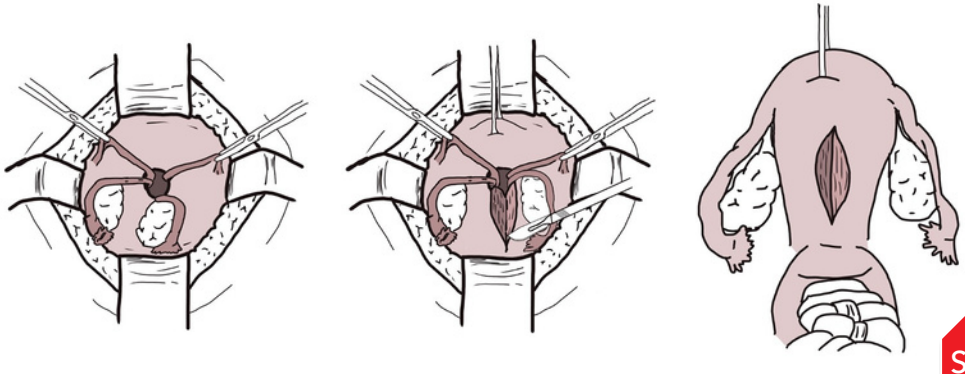
HUNTINGTON PROCEDURE:

- ☐ Abdominal incision
- ☐ Locate cup of the uterus formed by inversion
- ☐ Dilate the constricting cervical ring digitally
- ☐ Stepwise traction on the funnel of inverted uterus or the round ligament with Allis forceps or traction suture
- ☐ Reapply progressively as fundus emerges
- ☐ If unsuccessful, consider Haultain procedure



HAULTAIN PROCEDURE:

- ☐ Longitudinal incision posterior through uterine wall and constriction ring
- ☐ Reposition the corpus on inverted fundus through vagina by assistant
- ☐ Once the corpus is repositioned, the incision on the posterior uterus must be sutured closed in manner similar to classical cesarean delivery



CLINICAL USE DISCLAIMER

The information in these checklists should not be construed as dictation of patient treatment or procedures. They should be used with appropriate clinical judgement. Each checklist may be adapted to individual hospital resources. Standardization of checklists within an institution is strongly encouraged.

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