

Multidisciplinary Reviews on Severe Maternal Morbidity: One Event, Two Lives, Impact Forever

Jason Baxter MD

Inpatient Director, Obstetrics

Deborah A. Cruz MSN, CRNP

Perinatal Nurse Practitioner and Clinical Nurse Specialist

14 Hospitals

- Abington Hospital*
- Abington – Lansdale Hospital**
- Jefferson Bucks Hospital
- Jefferson Cherry Hill Hospital*
- Jefferson Frankford Hospital
- Jefferson Hospital for Neuroscience*
– Vickie and Jack Farber Institute for Neuroscience
- Jefferson Methodist Hospital*
- Jefferson Stratford Hospital*
- Jefferson Torresdale Hospital
- Jefferson Washington Township Hospital*
- Magee Rehabilitation Hospital
- Physicians Care Surgical Hospital
- Rothman Orthopaedic Specialty Hospital
- Thomas Jefferson University Hospital*
– Sidney Kimmel Cancer Center (NCI-designated)

* Magnet[®] designation from the American Nurses Credentialing Center for nursing excellence

** Pathway to Excellence[®] designation from the American Nurses Credentialing Center for sustaining a positive practice environment

6,100 physicians/practitioners

7,400 nurses
(full/part time)

40+ outpatient and urgent care locations

Over **4.5 million**
patient interactions annually

Thomas Jefferson University Hospital

Jefferson

Home of Sidney Kimmel Medical College

GIBSON BUILDING
111
South 10th Street

PHYSICIAN
• University
• Adult
• Pediatrics
• Emergency
• Laboratory
• Radiology
• Pharmacy
• Nutrition
• Safety

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Bank of America

Simulations





Debrief: What does this mean?



Opportunities
for change



What
went well

Debrief:



What went well



Opportunities
for change



Support



Practice opportunities and development

- Strengthen relationships
- Empowerment of communication
 - Each encounter
 - Safety Rounds
 - OBCC
- Emergency cards
- Family and staff support

OBSTETRIC EMERGENCIES

START/INITIAL STEPS FOR ALL EMERGENCIES:

- Call for help (including anesthesia)
- Code cart immediately available
- **LEADER** designates
 - Checklist reader
 - Time Keeper
 - Scribe
- If pregnant, open OR for possible cesarean

1 HEMORRHAGE

2 HYPERTENSION

3 ECLAMPSIA

4 MAGNESIUM TOXICITY

5 ALTERED MENTAL STATUS
AND OPIATE OVERDOSE

6 CARDIAC ARREST/ACLS

7 UNSTABLE TACHYCARDIA

IMPORTANT CONTACT NUMBERS

JEFFERSON CENTER CITY

Code Blue: 123

OB RRT: 5-6074 "OB RRT"

Stat C Section: 5-6074 and say "Anesthesia for stat CS
Delivery Room"

Blood Bank: 5-6356

Anesthesia pager: 22-0056

8 AMNIOTIC FLUID EMBOLISM

9 ANAPHYLAXIS

10 LOCAL ANESTHESIA TOXICITY

11 HIGH SPINAL

12 UTERINE INVERSION

13 SHOULDER DYSTOCIA

14 INDEX OF DRUG DOSES



Jefferson™

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

GOAL: DELIVERY WITHIN 5 MINUTES, RECOMMENDED AT BEDSIDE IF FUNDUS AT UMBILICUS

START:

- Call for help (including anesthesia)
- Code Blue and OB RRT with cardiac arrest
- Bring code cart & cesarean section tray

- LEADER** designates
 - Checklist reader**
 - Time Keeper**
 - Scribe** Note time of arrest
- Position patient supine
 - o Left uterine displacement
 - o On backboard
- Ensure IV access, 2 large bore IVs above diaphragm
- Do not delay CPR** (card 6)
- If magnesium is running, **STOP** magnesium and give IV/IO calcium gluconate
- Activate Massive Transfusion Protocol
 - Aggressive management of uterine atony (card 1)
- Maternal echo - TTE or TEE
 - Evaluate for right ventricular failure (Early phase of AFE)
 - Left ventricular failure & cardiogenic pulmonary edema (Second phase of AFE)
- Avoid excessive fluid administration
- Hemodynamic support with vasopressors and inotropic agents - Norepinephrine, dobutamine, milrinone
- Decrease pulmonary afterload - consider inhaled nitric oxide or prostacyclin per protocol

LABORATORY STUDIES:

- T&S, and crossmatch
- CBC
- CMP
- Calcium, magnesium, phosphate
- Liver function tests
- Troponin
- Brain natriuretic peptid
- Coags - PT/PTT/INR, fibrinogen
- Arterial blood gas
- Tryptase

DRUG DOSES AND TREATMENTS:

Norepinephrine

- Dose: 0.05 mcg/kg/min - Vasopressor

Dobutamine

- Dose: 2.5 mcg/kg/min - Inotrope

Milrinone

- Dose: 0.3 mcg/kg/min - Inotrope

Inhaled nitric oxide

- For pulmonary hypertension
- Administer per protocol by anesthesia or respiratory therapy
- Follow methemoglobin levels every 6 hours

Consider Atropine, Ondansetron, Ketoralac, "AOK"

ADDITIONAL STUDIES:

- Portable chest X-Ray
- CT or V/Q scan when stable
- Echo

DIFFERENTIAL DIAGNOSIS:

- Hemorrhage (card 1)
- Myocardial infarction
- Massive pulmonary embolism
- Air embolism
- High neuraxial anesthesia (card 11)
- Magnesium toxicity (card 4)
- Local anesthesia toxicity (card 10)
- Sepsis
- Pulmonary edema
- Pneumothorax
- Asthma exacerbation



DRUG	INDICATION	DOSAGE	VOLUME	ROUTE	COMMENTS
adenosine (3 mg/mL)	SVT	6 mg	2 mL	IV	rapid IV push; followed by 20 mL 0.9% NaCl flush, may repeat with 12 mg (4 mL) x 2 if no response
albuterol sulfate (2.5 mg/3 mL)	Bronchospasm secondary to Anaphylaxis	2.5 mg	3 mL	NEB	via high flow nebulizer
amiodarone (150 mg/3 mL)	Refractory VT/VF	300 mg	6 mL	IV/IO	may repeat with 150 mg (3 mL) if no response
atropine (0.1 mg/mL)	High spinal/ Anesthesia toxicity	1 mg	10 mL	IV	rapid IV push; may repeat Q3min and double previous dose if no response
calcium chloride (100 mg/mL) **when calcium gluconate unavailable**	Magnesium toxicity	500 mg	5 mL	IV	over 2 mins
	Hyperkalemia	1 gram	10 mL	IV	over 5 mins
calcium gluconate (100 mg/mL)	Magnesium toxicity	1 gram	10 mL	IV	over 5 mins
	Hyperkalemia				
carboprost tromethamine (250 mcg/mL)	Hemorrhage	250 mcg	1 mL	IM	use filter needle; may repeat Q15min for up to 8 doses (2 mg) if no response; <i>AVOID WITH ASTHMA</i>
dextrose 50% (0.5 grams/mL)	Altered mental status	25 grams	50 mL	IV	over 5 mins
	Hyperkalemia	25 grams	50 mL	IV	over 5 mins
EPHEDrine	High spinal	See individual card for indication		IV	max: 50 mg
EPINEPHrine (1 mg/mL)	Anaphylaxis	0.3 mg	0.3 mL	IM	mid or outer thigh; may repeat Q15min for a max of 3 doses (0.9 mg) if no response
	Local anesthesia toxicity	10 mcg		IV	
EPINEPHrine (0.1 mg/mL)	Pulsless arrest	1 mg	10 mL	IV/IO	Q3min during CPR
glucagon (1 mg/mL)	Altered mental status	1 mg	1 mL	IM/SubQ/IV	over 5 mins; may repeat Q15min for up to 5 doses (5 mg) if no response

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Dear
first-time *Mom*
who is waiting on
Labor to Start





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