

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

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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)

6,100 physicians/practitioners

7,400 nurses (full/part time)

40+ outpatient and urgent care locations

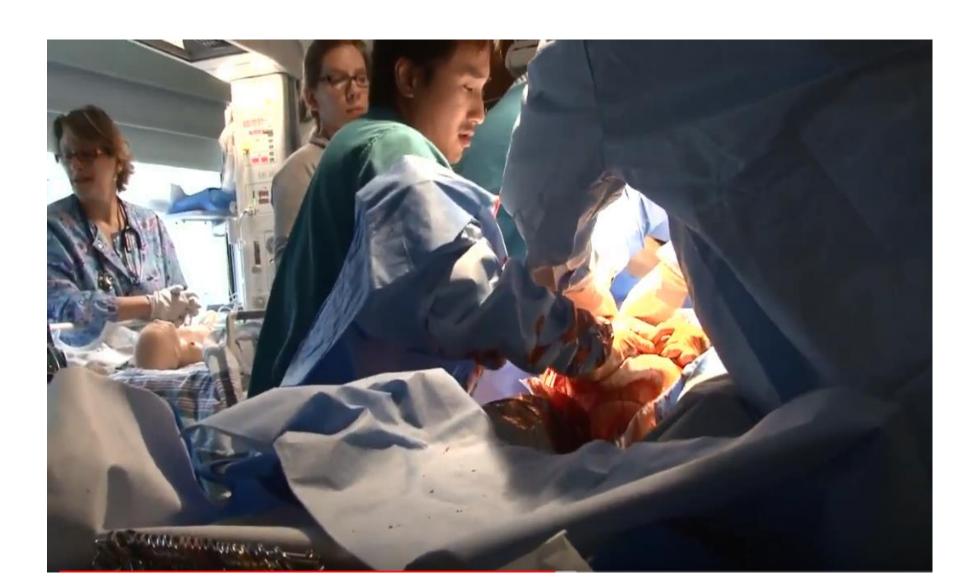
Over 4.5 million patient interactions annually

^{*} 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

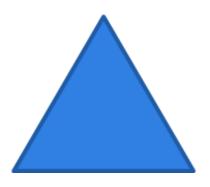


Simulations





Debrief: What does this mean?



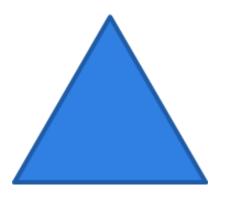
Opportunities for change

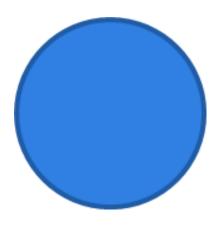
What well



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

Blood Bank: 5-6356 Anesthesia pager: 22-0056

Code Blue: 123

JEFFERSON CENTER CITY

OB RRT: 5-6074 "OB RRT"

AMNIOTIC FLUID EMBOLISM

IMPORTANT CONTACT NUMBERS

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

Delivery Room"

9 ANAPHYLAXIS

10 LOCAL ANESTHESIA TOXICITY

11 HIGH SPINAL

12 UTERINE INVERSION

13 SHOULDER DYSTOCIA

14 INDEX OF DRUG DOSES

1 HEMORRHAGE

2 HYPERTENSION

3 ECLAMPSIA

4 MAGNESIUM TOXICITY

5 ALTERED MENTAL STATUS AND OPIATE OVERDOSE

6 CARDIAC ARREST/ACLS

7 UNSTABLE TACHYCARDIA



AMNIOTIC FLUID EMBOLISM

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					
	Checklist reader					
	LEADER designates Time Keeper					
	Scribe Note time of arrest					
Ш	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					
П	luconate 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



OBSTETRIC EMERGENCIES DRUG DOSING SHEET

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 Anapylaxis	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)	Magnesium toxicity	500 mg	5 mL	IV	over 2 mins
when calcium gluconate unavailable	Hyperkalemia	1 gram	10 mL	IV	over 5 mins
calcium gluconate	Magnesium toxicity	1 gram	10 mL	IV	over 5 mins
(100 mg/mL)	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; AVOID WITH ASTHMA
dextrose 50%	Altered mental status	25 grams	50 mL	IV	over 5 mins
(0.5 grams/mL)	Hyperkalemia	25 grams	50 mL	IV	over 5 mins
EPHEDrine	High spinal	See individual card for indication		IV	max: 50 mg
EPINEPHrine	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
(1 mg/mL)	Local anesthesia toxicity	10 mcg		IV	
EPINEPHrine (0.1 mg/mL)	Pulsiess 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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