OBSTETRICAL Emergencies

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OBJECTIVES

- Discuss risk factors and pathophysiology of Obstetrical Emergencies
- Provide early recognition of Obstetrical Emergencies
- Prioritize nursing interventions for Obstetrical Emergencies

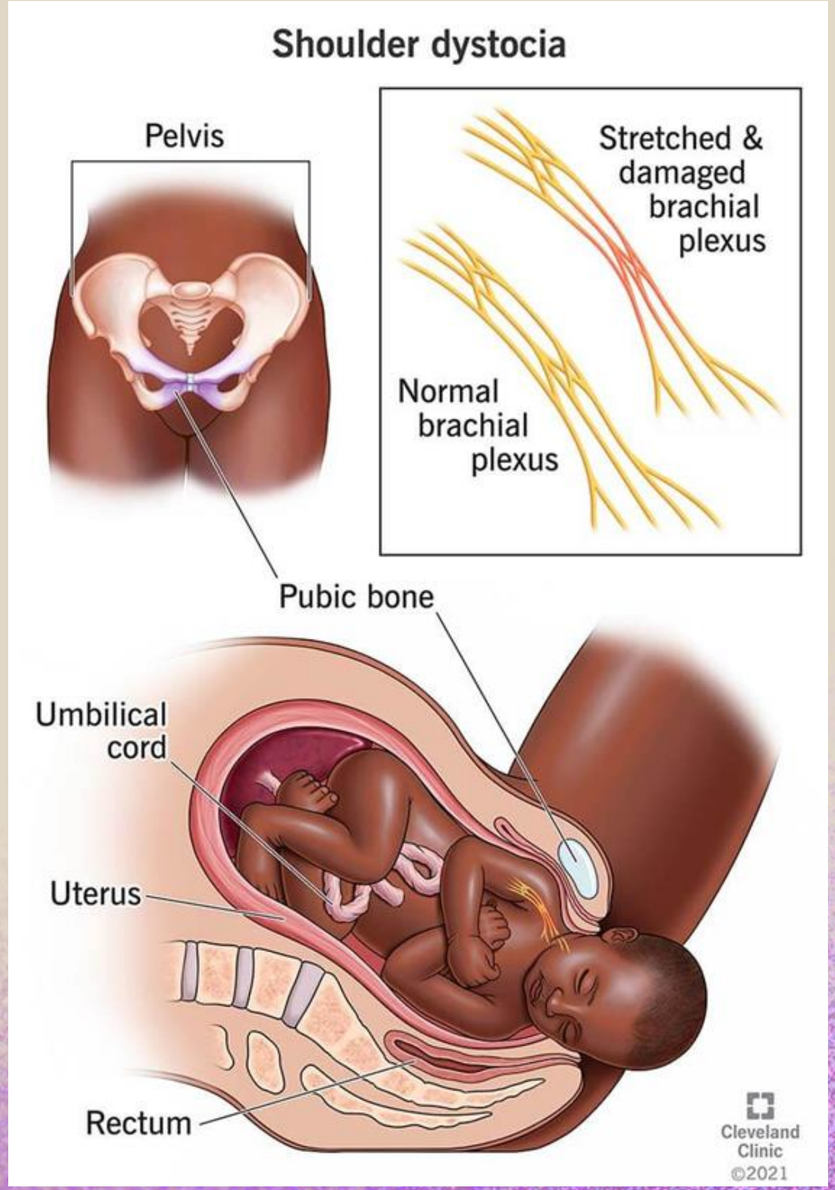
SHOULDER DYSTOCIA

•Definition: Impaction of the fetal shoulders after delivery of the head

•Incidence: 2–3%

•Shoulder dystocia is unpredictable- always be prepared

•Risk factors: fetal macrosomia, prior shoulder dystocia, and preexisting or gestational diabetes mellitus

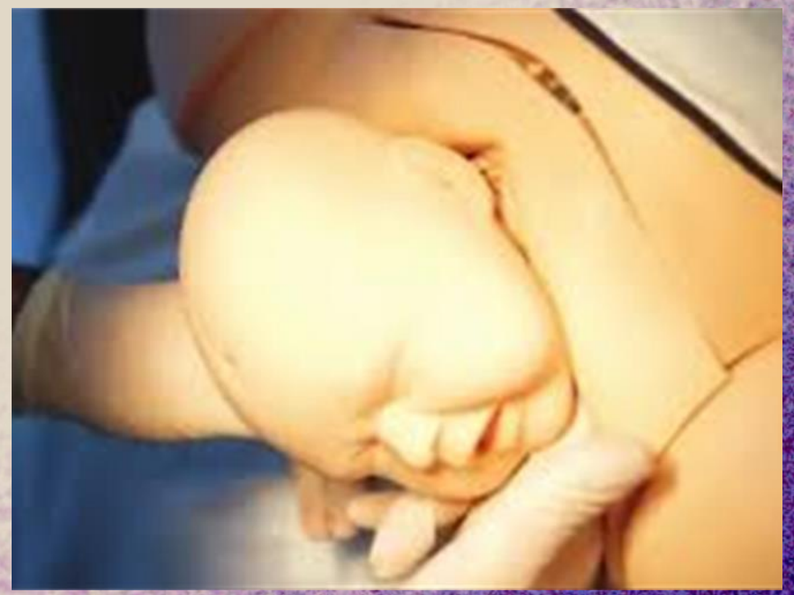


SHOULDER DYSTOCIA

•Warning signs: difficult delivery of face and chin, fetal head retracts against the perineum, failure of the fetal head to restitute, failure of the shoulders to descend

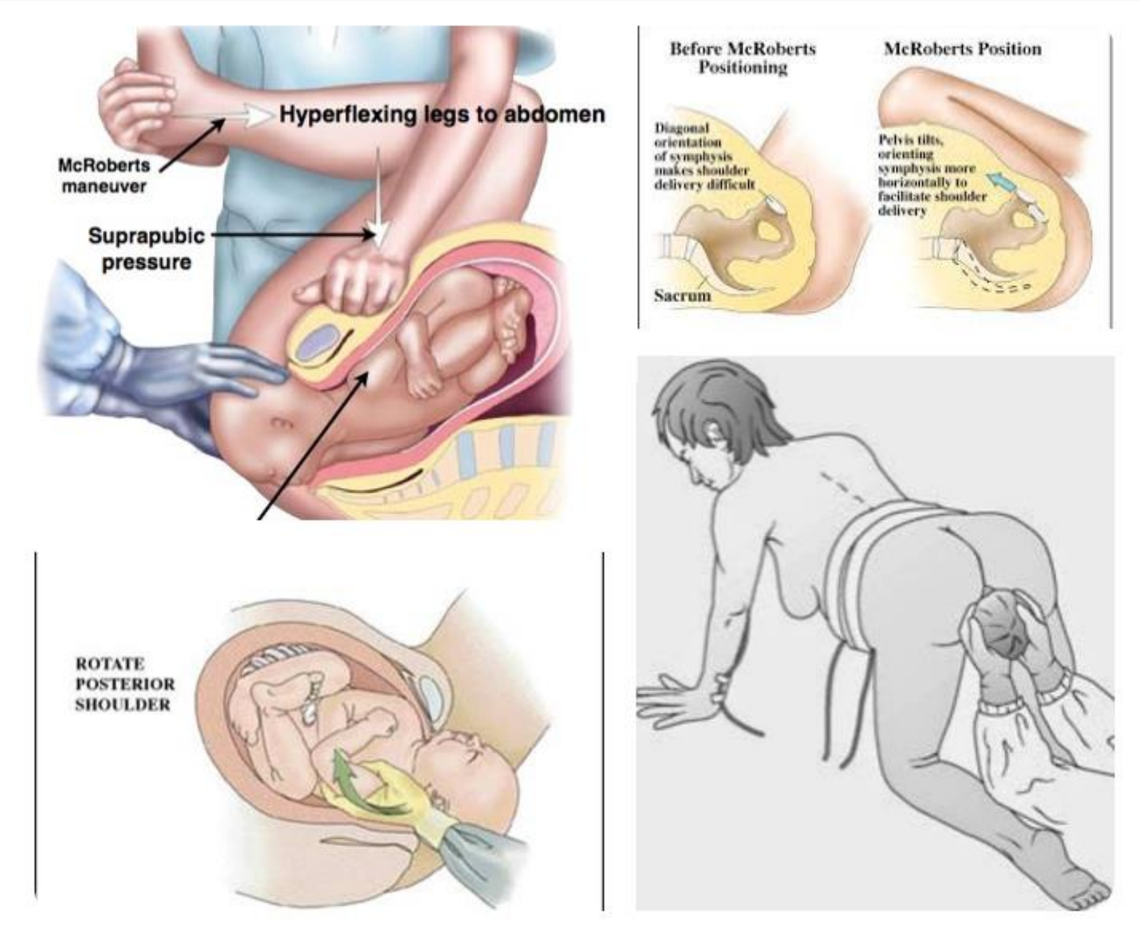
•Fetal complications: umbilical cord compression, brachial plexus injury, asphyxia, fractures, death

•Maternal complications: PPH, uterine atony, cervical/vaginal lacerations, bladder injury, perineal damage, uterine rupture, birth trauma



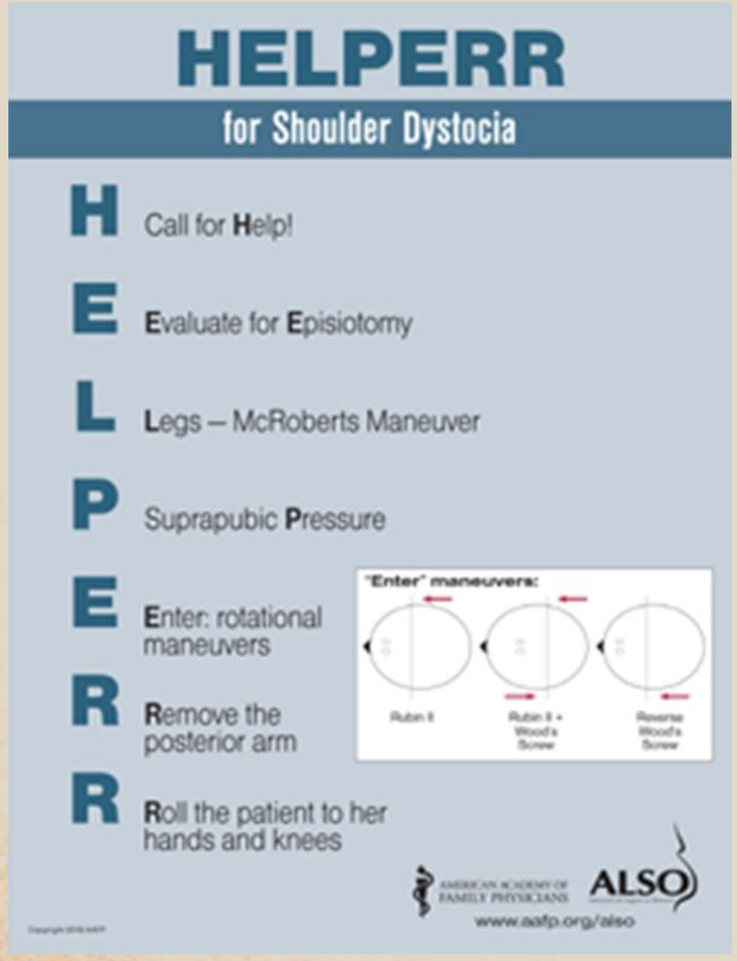
SHOULDER DYSTOCIA-MANEUVERS

- McRoberts
- Suprapubic Pressure (Rubin I, Mazzanti)
- Episiotomy
- Gaskin
- Rubin II
- Wood Screw
- Reverse Wood Screw
- Delivery of Posterior Arm
- Last Resort Maneuvers (Cleidotomy, Symphysiotomy, and Zavanelli)



SHOULDER DYSTOCIA-MANEUVERS

SHOULDER DYSTOCIA- OTHER CONSIDERATIONS



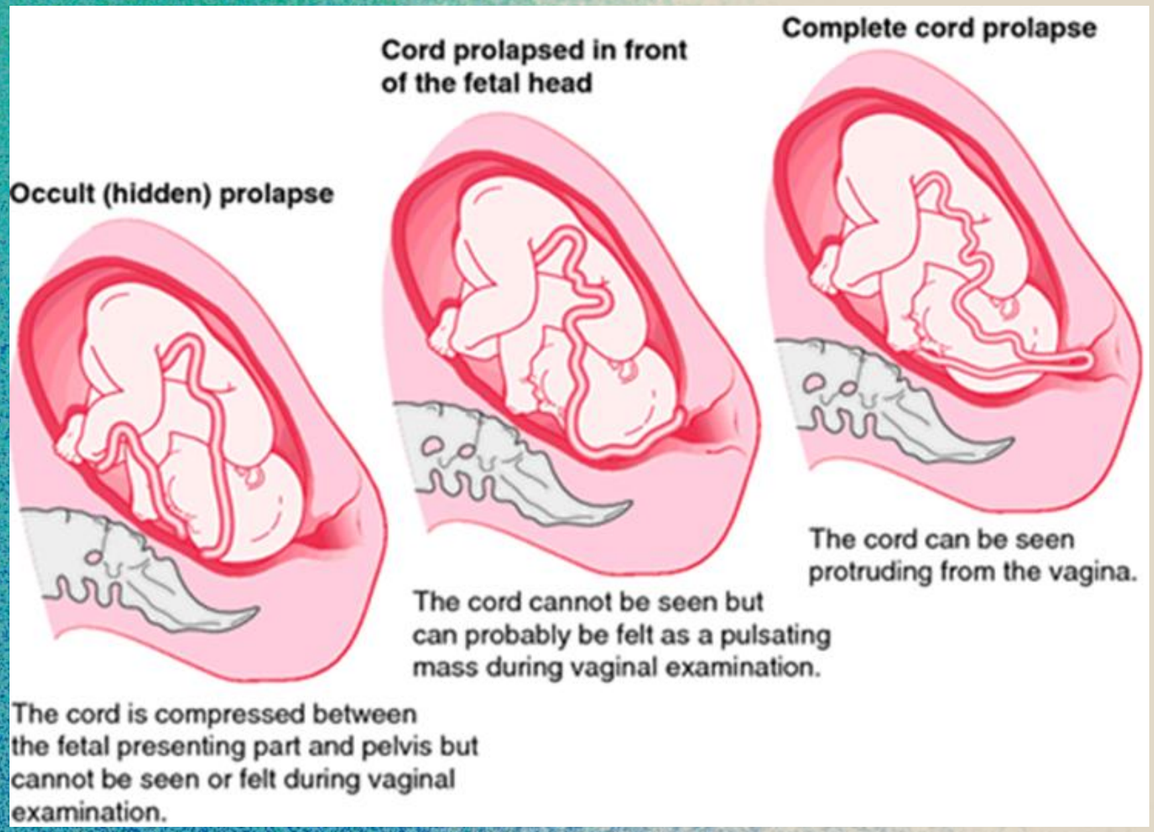
Prior: prepare, education, drills/ simulations (Joint Commission)

•During: work together, designation of roles, closed loop communication

•Post : document, debrief, review, support

•Questions?

UMBILICAL CORD PROLAPSE



- Cord prolapse has been defined as the descent of the umbilical cord through the cervix alongside (occult) or past the presenting part (overt) in the presence of ruptured membranes.

- Incidence: 0.1–0.6% (1% in breech)

- Unpredictable, fetal emergency

- Risk factors: cord presentation, preterm labor, PPROM, AROM before engaged fetal head, non-vertex position, hydramnios, multiple gestation

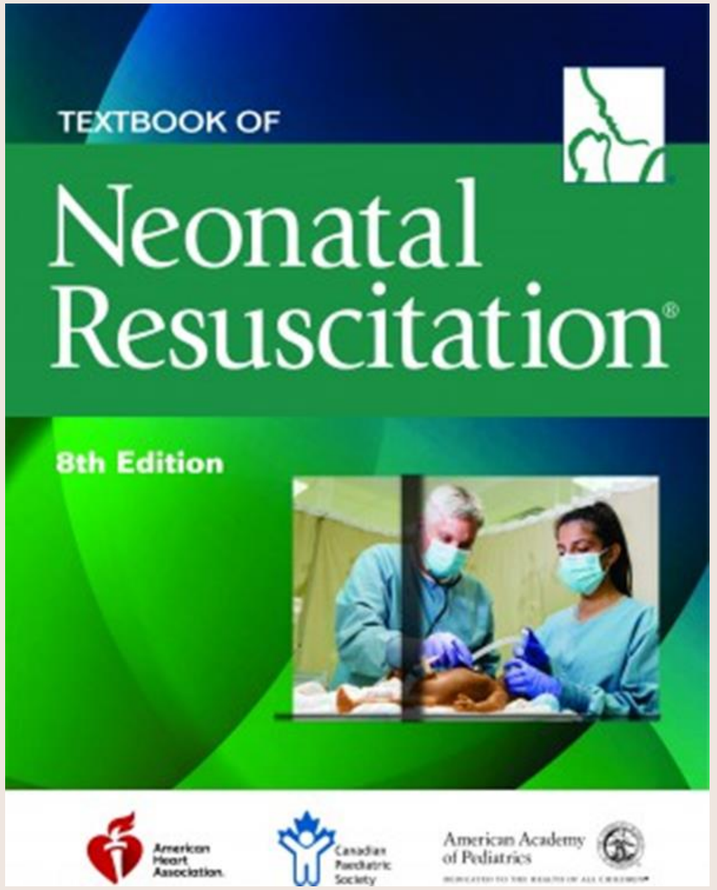
UMBILICAL CORD PROLAPSE

- Recognition:
  - Variable decelerations
  - Evidence of prolapse into the vagina, palpable through intact membranes, in front of presenting part

- Management:
  - Emergency cesarean
  - Elevate fetal presenting part
  - Insert foley -> fill with 400-500 mL of sterile saline
  - Patient in knee-chest position

UMBILICAL CORD PROLAPSE- OTHER CONSIDERATIONS

- Prior: prepare, education, drills/ simulations
- During: work together, designation of roles, closed loop communication
- Post : document, debrief, review, support
- Questions?

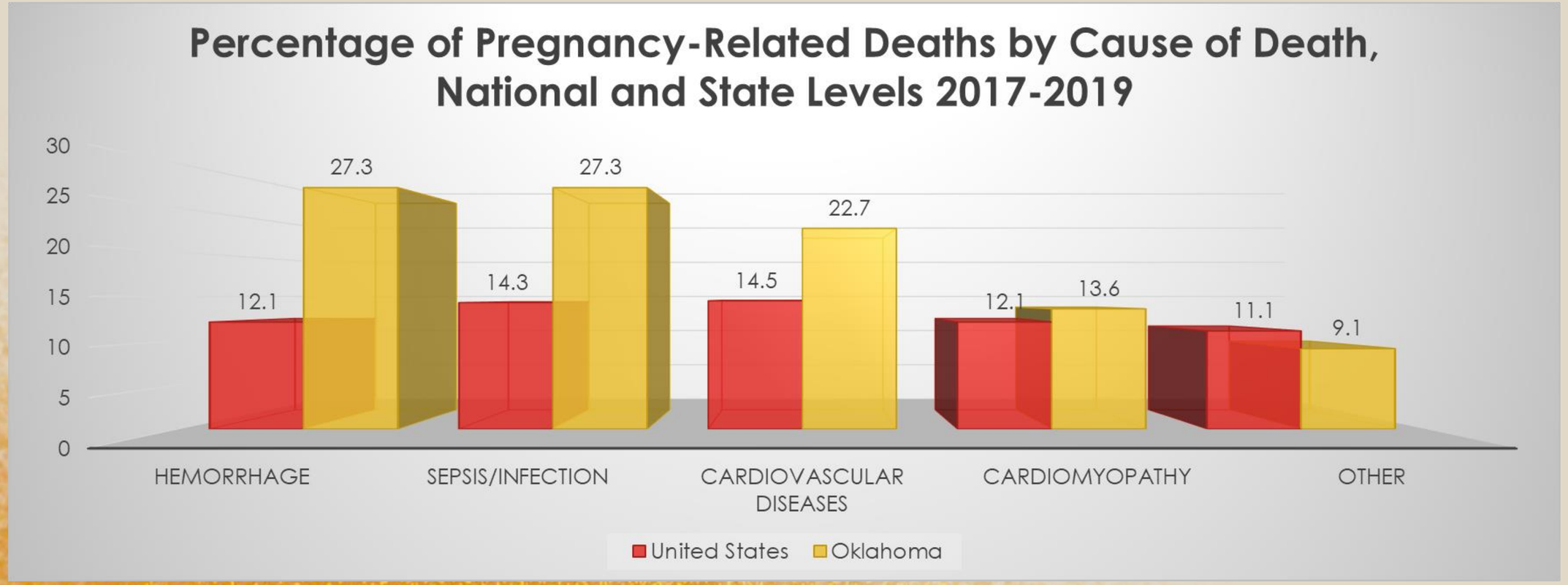


MATERNAL SEPSIS

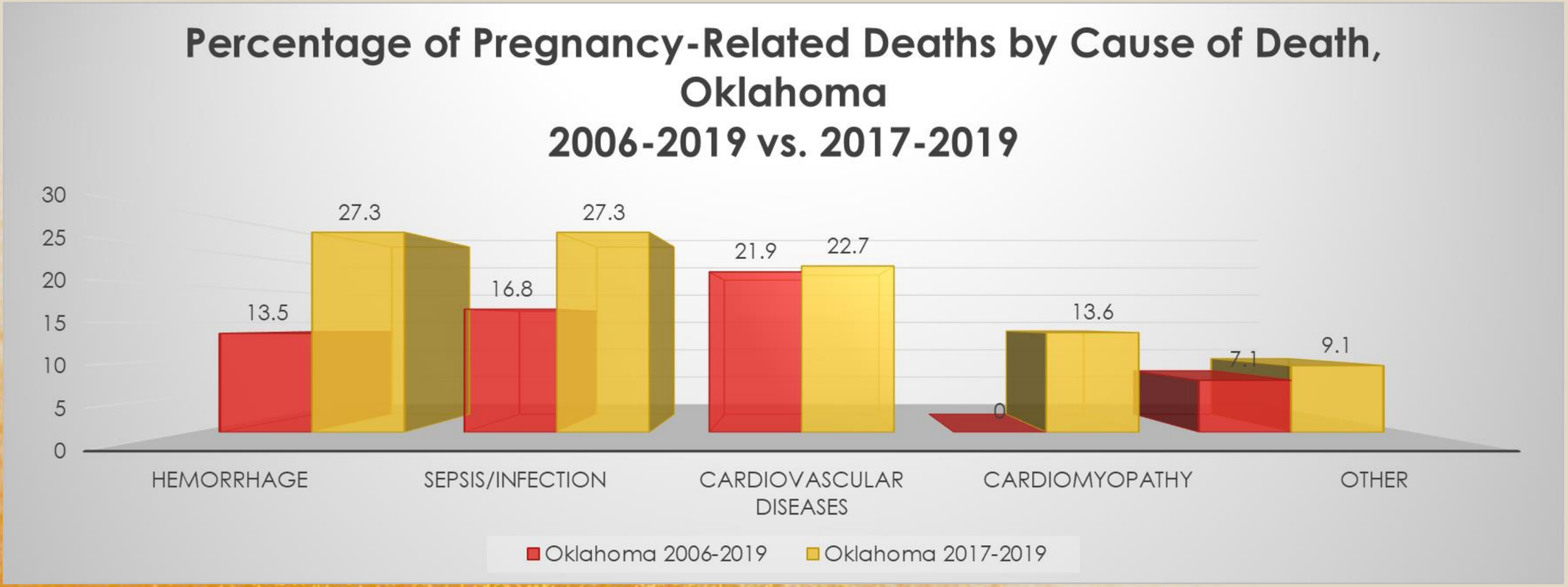
•Definition: a life-threatening condition defined as organ dysfunction resulting from infection during pregnancy, childbirth, post-abortion, or postpartum period (WHO, 2016).

•Identification criteria for maternal sepsis cases should be based on the presence of suspected or confirmed infection plus signs of mild to moderate organ dysfunction

MATERNAL SEPSIS

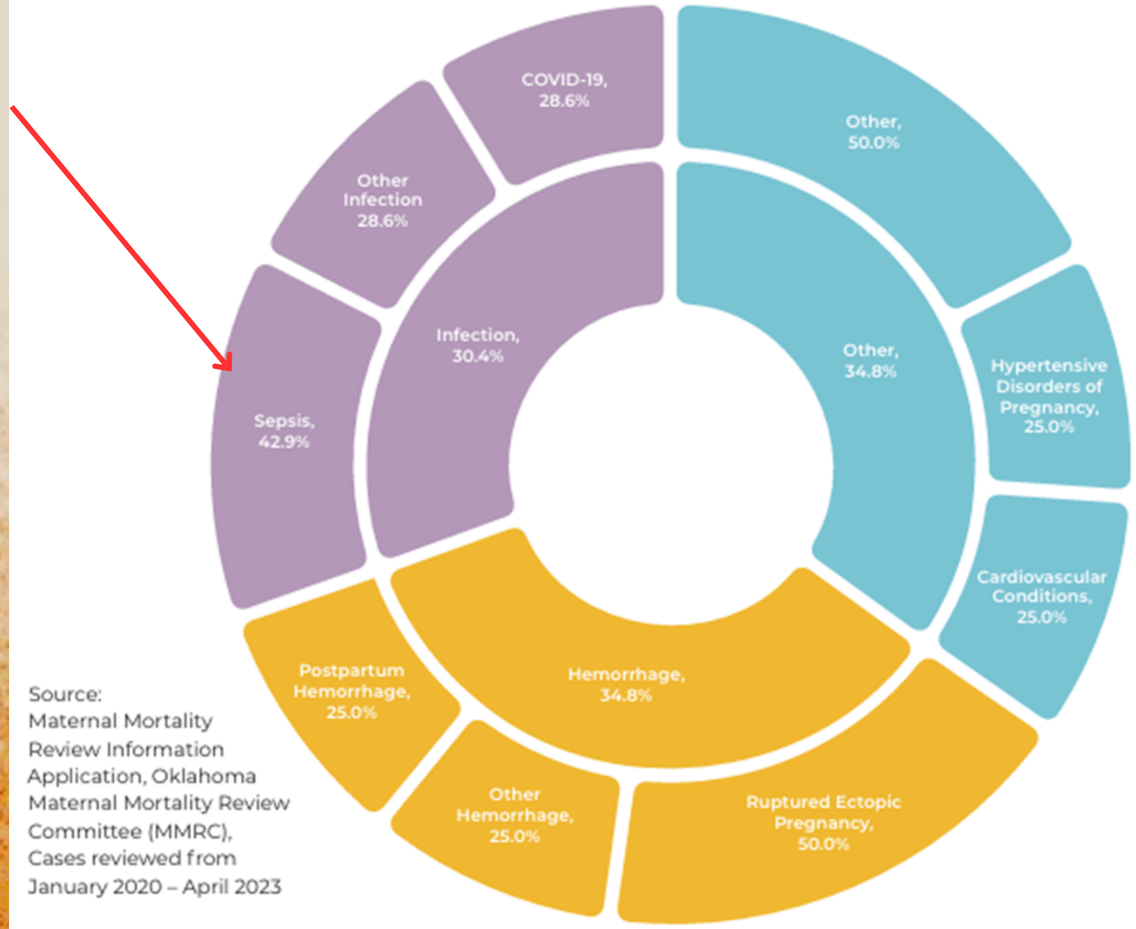


MATERNAL SEPSIS



MATERNAL SEPSIS

Chart 12: Causes of Pregnancy-Related Deaths, Oklahoma MMRC Reviews January 2020 - April 2023



Source:
Maternal Mortality Review Information Application, Oklahoma Maternal Mortality Review Committee (MMRC), Cases reviewed from January 2020 – April 2023

Table 3: Top 5 Causes of Severe Maternal Morbidity by Race, Oklahoma 2019-2021

	American Indian / Alaska Native	Black / African American	White	Overall (Includes Other Race)
1	Adult Respiratory Distress Syndrome	Acute Renal Failure	Adult Respiratory Distress Syndrome	Adult Respiratory Distress Syndrome
2	Acute Renal Failure	Adult Respiratory Distress Syndrome	Disseminated Intravascular Coagulation	Disseminated Intravascular Coagulation
3	Eclampsia	Disseminated Intravascular Coagulation	Hysterectomy	Acute Renal Failure
4	Ventilation	Pulmonary Edema / Acute Heart Failure	Acute Renal Failure	Sepsis
5	Disseminated Intravascular Coagulation; Hysterectomy	Sepsis	Sepsis	Hysterectomy

NOTE: Oklahoma utilizes the Alliance for Innovation on Maternal Health (AIM) definition of severe maternal morbidity.
Source: Oklahoma State Department of Health, Health Care Information, Oklahoma Hospital Discharge Data, 2019-2021

MATERNAL SEPSIS- PATHOGENS

- Bacteria, viral, fungal
- Polymicrobial
- No causative organism identified

- Most common: E. coli
- Most deadly: Group A Streptococcus

- Risk factors: AMA, PPROM, PTL, multiple SVE, operative vaginal delivery, C-Section, tobacco use, comorbidities, hemorrhage, retained products, blood transfusion, low socioeconomic status, minority status

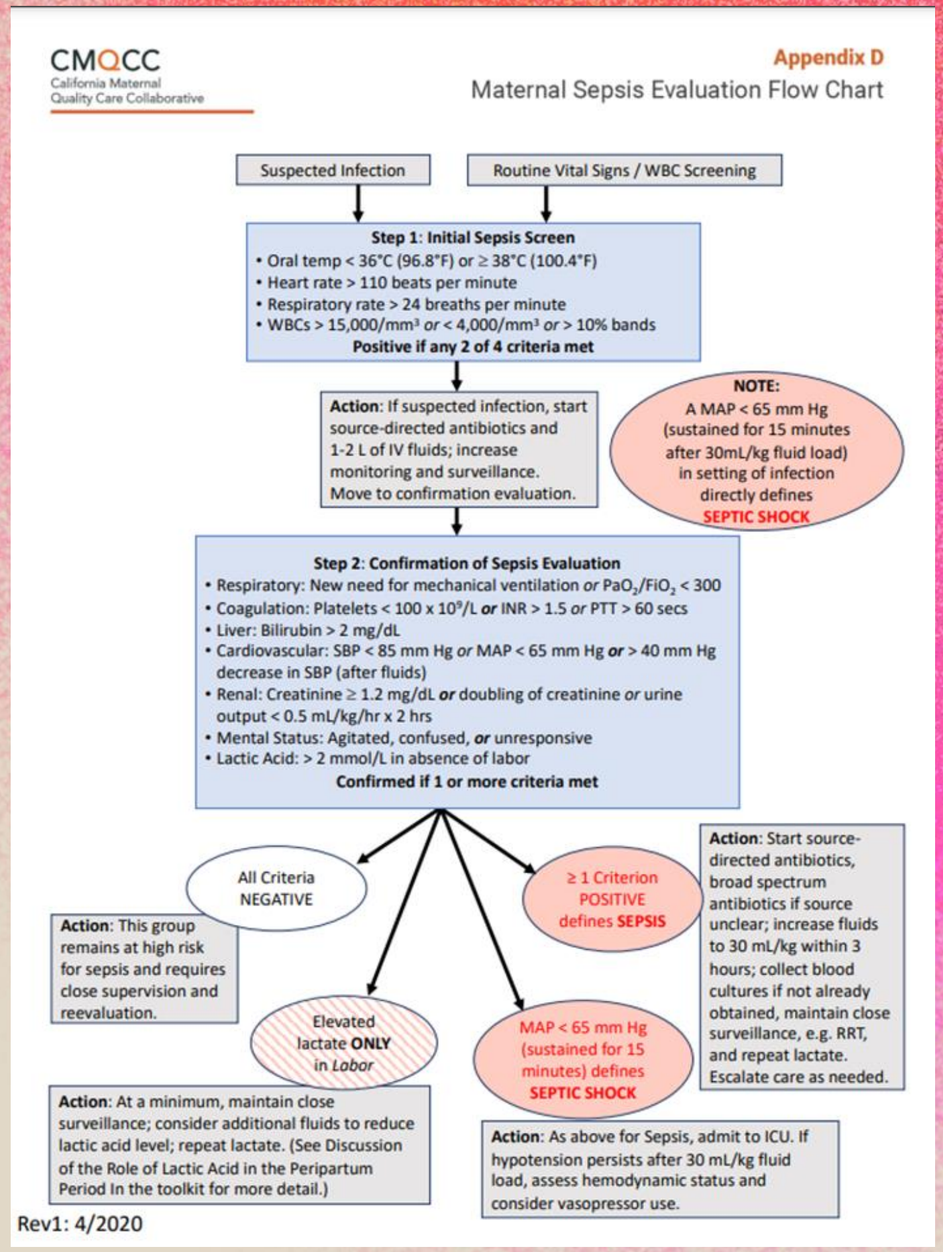
MATERNAL SEPSIS-SCREENING

- Early identification of women with possible severe maternal infections to enable prompt therapeutic action; and

- Confirmation of maternal sepsis for epidemiological and disease classification purposes (confirmed maternal sepsis)

- Treatment: Initiate IV fluids and administer broad spectrum antibiotics (include labs and cultures)

- BEGIN WITHIN 1 HOUR –> each hour that passes increases mortality by 7%



MATERNAL SEPSIS- OTHER CONSIDERATIONS

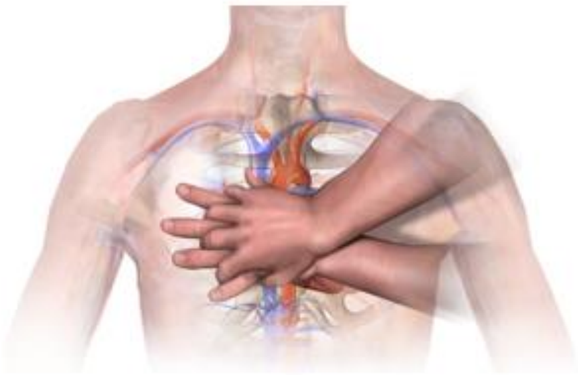
P	Prompt bedside evaluation by physician
A	Assess for fluid responsiveness
C	Consider vasopressors
T	Transfer to ICU
D	Debrief, review, support!

MATERNAL CARDIAC ARREST

- In the U.S., the most common causes of maternal cardiac arrest include bleeding, heart failure, and amniotic fluid embolism
- Incidence: rare, 1 in 12,000 admissions in the United States
- Among cases with severe maternal morbidity, there was an overall case fatality rate of 1:53

MATERNAL CARDIAC ARREST

- TIME COUNTS!
- Call for help- use CODE BLUE
- Call Rapid Response
- Crash Cart to Bedside
- Place patient in supine position
- Immediate BLS/ALS- chest compressions
- Hard (5cm depth)-back board
- Fast (100/min)
- Uninterrupted (30/2)



Position Hands Over Sternum

MATERNAL CARDIAC ARREST

Bleeding

Embolic

Anesthetic Complications

Uterine Atony

Cardiovascular Causes

Hypertension

Other: Non-obstetrical

Placental Abruption, Previa

Sepsis

Drugs

MATERNAL CARDIAC ARREST

- Perform defibrillation early for shockable rhythm
- Apply oxygen -> jaw thrust -> oral airway -> bag mask ventilation -> intubation
- Large bore IVs above diaphragm
- Administer ALS medication, administer calcium gluconate if indicated, no high dose oxytocin

MATERNAL CARDIAC ARREST- FETAL CONSIDERATIONS

Left uterine displacement with 2-handed technique

Left uterine displacement using 1-handed technique

- Remove fetal monitors
- Perform manual left uterine displacement
- Prepare for Perimortum C-Section
- Unless rapid vaginal delivery feasible
- Unless return of spontaneous maternal circulation
- DO NOT MOVE PATIENT
- Incision at 4 minutes -> delivery at 5 minutes
- Anticipate full neonatal resuscitation

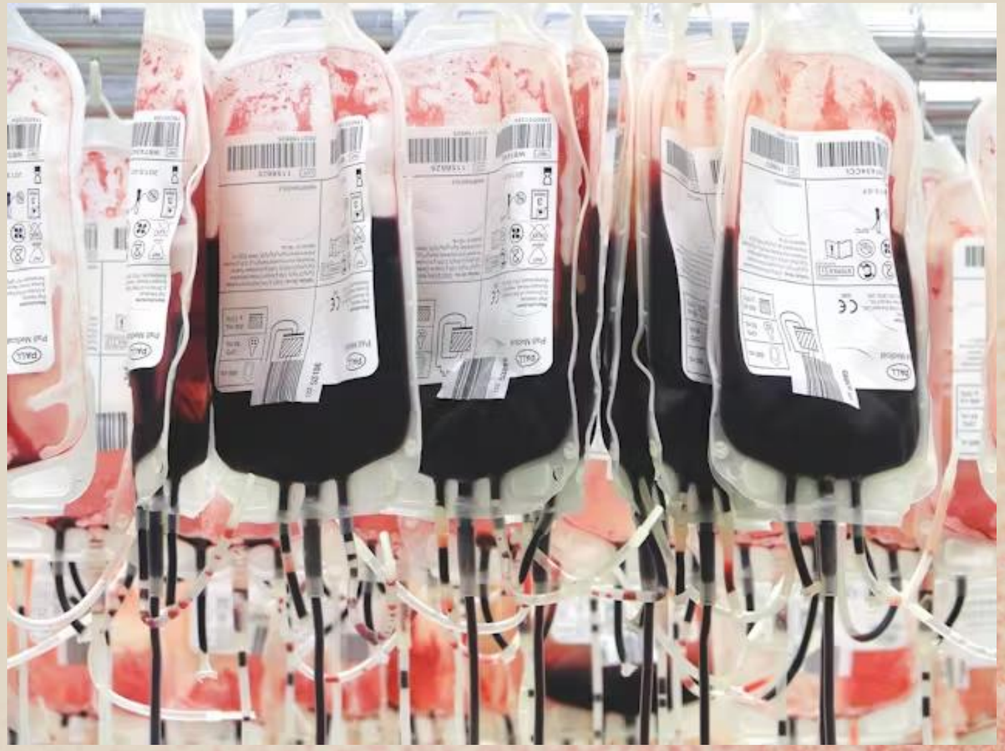
PREPARE FOR MASSIVE TRANSFUSION (MTP)

•Bring rapid transfuser to bedside

•Initiate MTP per physician order
•Cryoprecipitate for DIC

•What is DIC? Disseminated intravascular coagulation that occurs when an event triggers release of a surplus amount of thromboplastins into the blood stream

•Acutely presenting DIC often manifests as petechiae and ecchymosis, along with blood loss from intravenous (IV) lines and catheters. In postoperative DIC, bleeding can occur in the vicinity of surgical sites, drains, and tracheostomies, as well as within serous cavities.

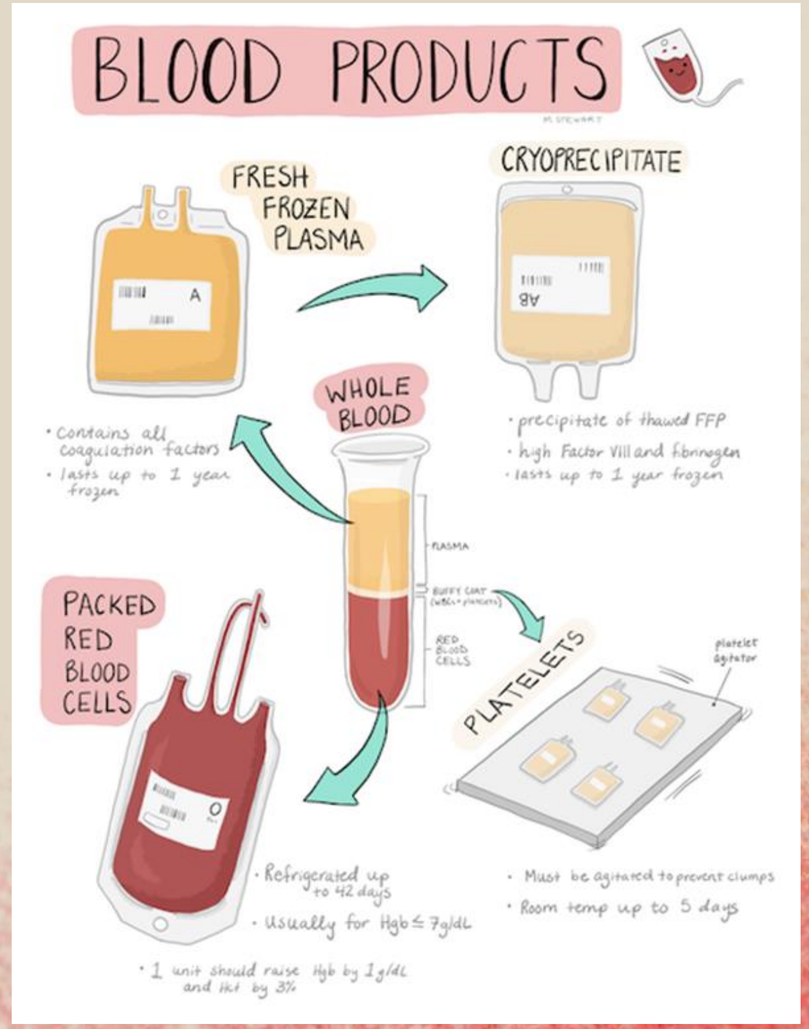


DISSEMINATED INTRAVASCULAR COAGULATION (DIC)

- **Treatment: replace blood components, stabilize women, deliver baby if not already delivered**

- **Labs: PT/PTT, CBC (platelets), fibrinogen**

- **Blood products:**
  - **1:1:1 and 6:4:1**
  - **PRBC: FFP or cryoprecipitate to platelets**



POST ARREST/MATERNAL DEATH

•Post arrest care: if pregnant place patient in full left lateral position, transfer to ICU, continue multidisciplinary care

•Post DIC: transfer to ICU

•Maternal death:

- Team member to accompany provider
- Viewing of body
- Calling family, friends, clergy
- Discuss postmortem examination
- Arrange follow up meeting if needed
- Provide contract information
- Provide resources for bereavement

FOR THE HEALTH CARE PROVIDER

- Debrief (more than once)
- Review
- Support (peer-to-peer emotional support)
- Awareness of second victimization
- EAP/mental health resources
-
- There is HOPE!

Questions?

For references, please see additional handout

Oklahoma Blood Institute

Together, we can
Be the Light
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