Post Partum Hemorrhage, Preeclampsia, & Eclampsia

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Agenda

- A little A&P as a reminder
- Pre-Eclampsia
- Eclampsia
- Normal post partum timeline
- Abnormal post partum hemorrhaging
  - TONE
- Resources for later

What we are NOT going to talk about today

- The actual childbirth
- Any delivery techniques
  - Including difficult delivery
- Neonatal Resuscitation
- Neonatal Care: Other then “they’re handled”


VERIFIED 100%
BADASS

Believe in Yourself.

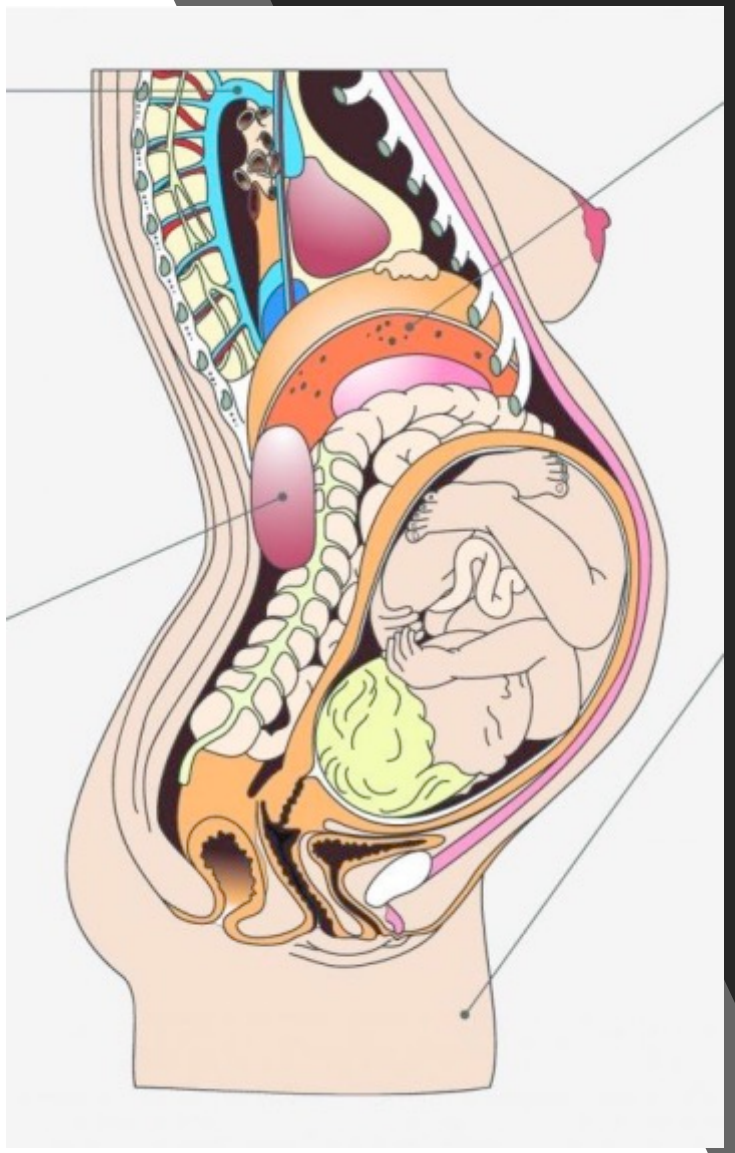
Normal Physiologic changes in pregnancy

Normal Physiologic changes in pregnancy

- **Cardiac:**
  - Cardiac output increases
  - Blood Volume increases:
    - 40- 50%
  - Clotting factors increase

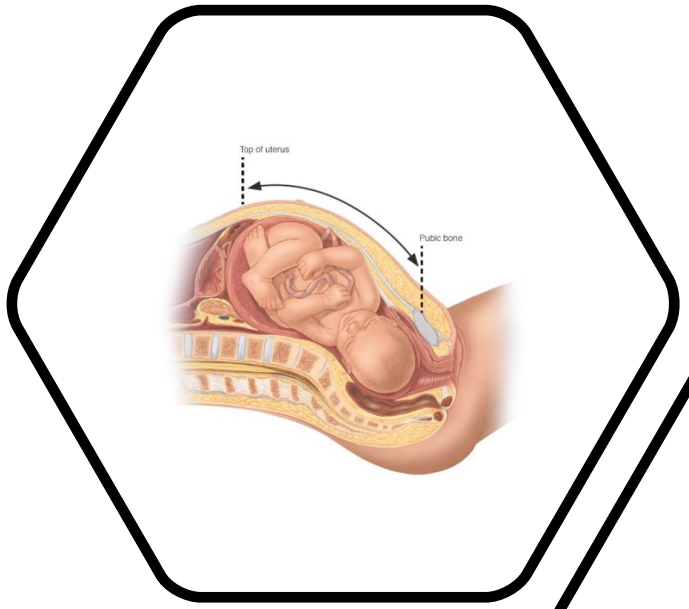
Normal Physiologic changes in pregnancy

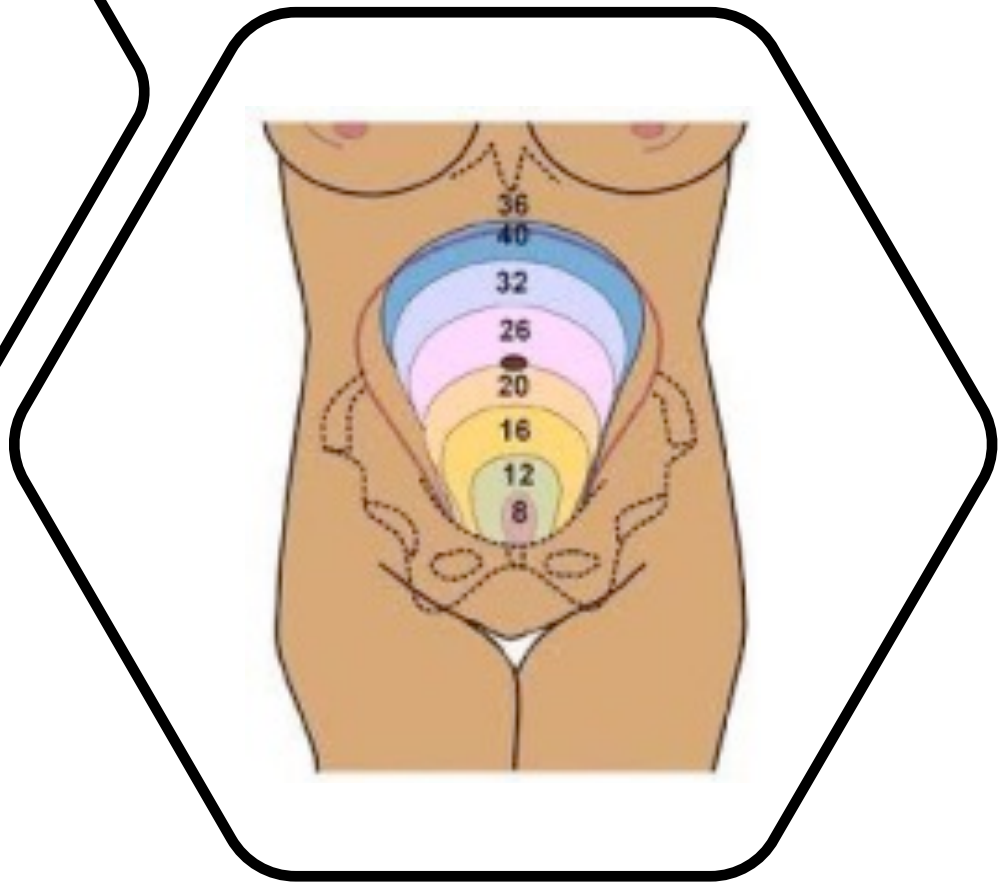
- **Cardiac:**
  - Cardiac output increases
  - Blood Volume increases:
    - 40- 50%
  - Clotting factors increase
- **Lungs:**
  - Increased needs
  - Less space for expansion



Normal Physiologic changes in pregnancy

- **Renal:**
  - Increased glomerular filtration
  - Frequent urination
- **Metabolism:**
  - 20% increase in oxygen demand
  - 15% increase in metabolic rate
  - Increased Fe and Folate requirements
- **GI:**
  - Decreased gastric emptying
  - Slowed gastric motility
  - Relaxed esophageal sphincter





Fundal height can be an estimate of gestational age


PUEBLO OF
ZUNI


PAST
FUTURE
PRESENT

What do we look for with blood loss?

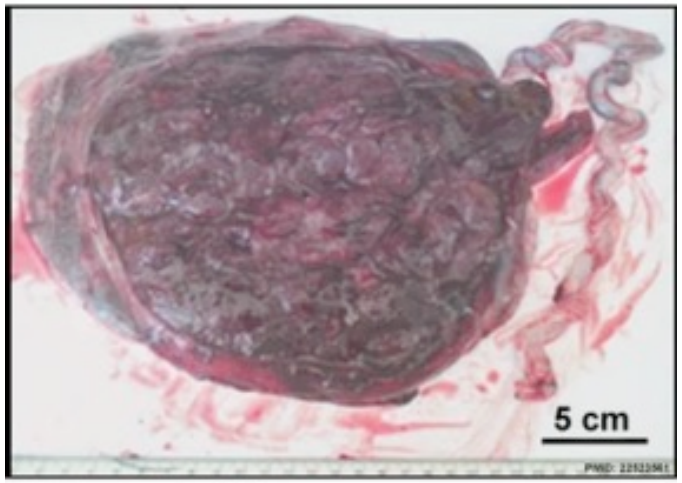
- Vitals
  - Hypotension
  - Tachycardia
  - Mentation
  - Pallor

- Treatment?

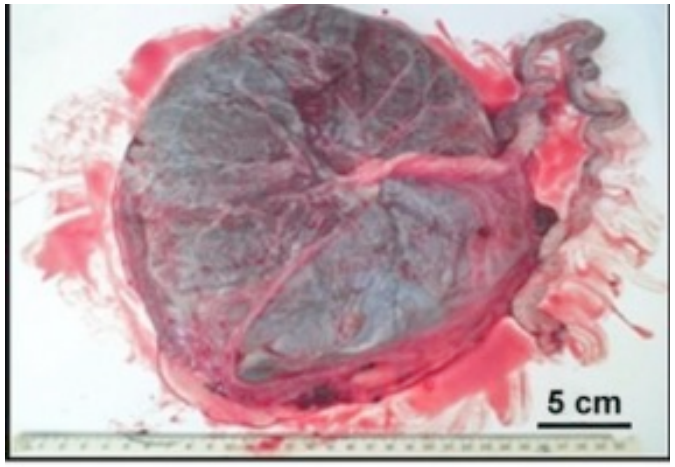

N394P
EMS

Placental Delivery

- Don’t Pull!!!!!
  - Can take up to 30 minutes to delivery
- Mom will feel more contractions
  - Watch for the cord lengthening
  - Small Gush of blood
- Save the placenta in a bag and send with mom and baby to hospital
- Monitor for continued bleeding



Maternal side



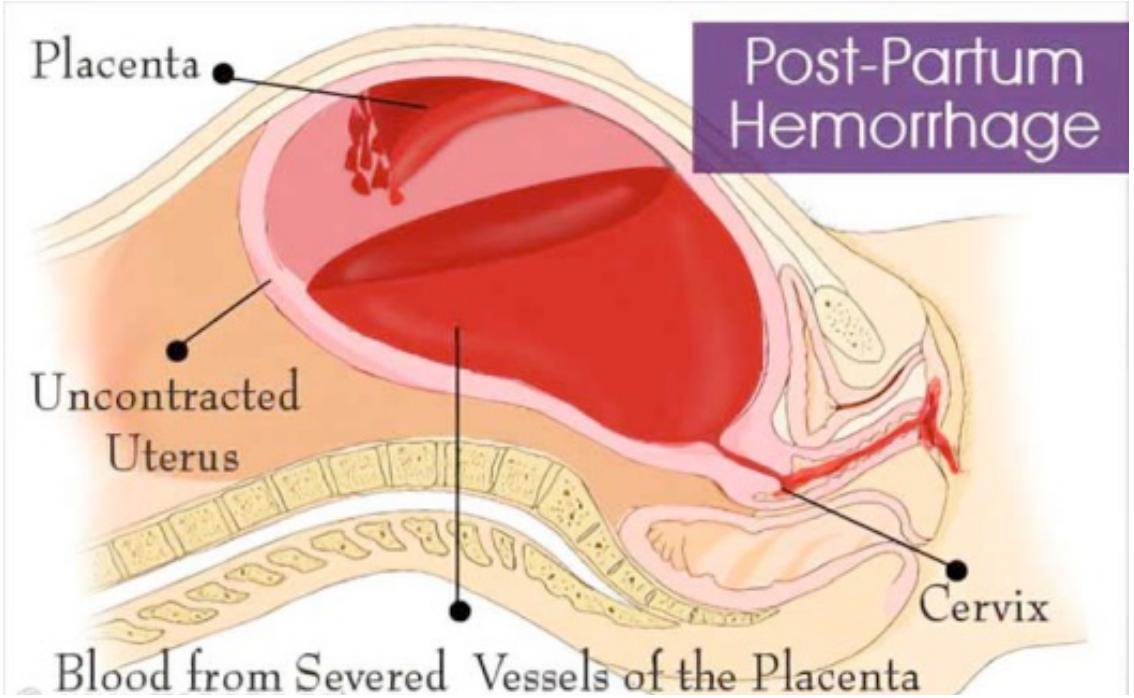
Fetal side


BLOOD
BLOOD EVERYWHERE
makeameme.org

Post Partum Hemorrhage => 500mls

- Tone
- Trauma
- Tissue
- Thrombin

- More meds!



2 Large Bore IVs, Fluid, Uterine Massage
Encourage Breast Feeding


EMS PHYSICIAN
1663
EMS PHYSICIAN

CHILDBIRTH – POSTPARTUM HEMORRHAGE

Effective 2/20/2020

GENERAL

- Postpartum hemorrhage is the loss of more than 500 mL of blood immediately following vaginal delivery, occurring in about 5% of deliveries. Steps that can be taken during and immediately following delivery that may decrease the risk of postpartum hemorrhage include:
  - Controlled delivery of the head
  - Administration of **Oxytocin** within 1 minute of delivery
  - Controlled, gentle umbilical cord traction until placenta delivers
  - Firm massage of the uterus after the placenta delivers

ALL PROVIDERS

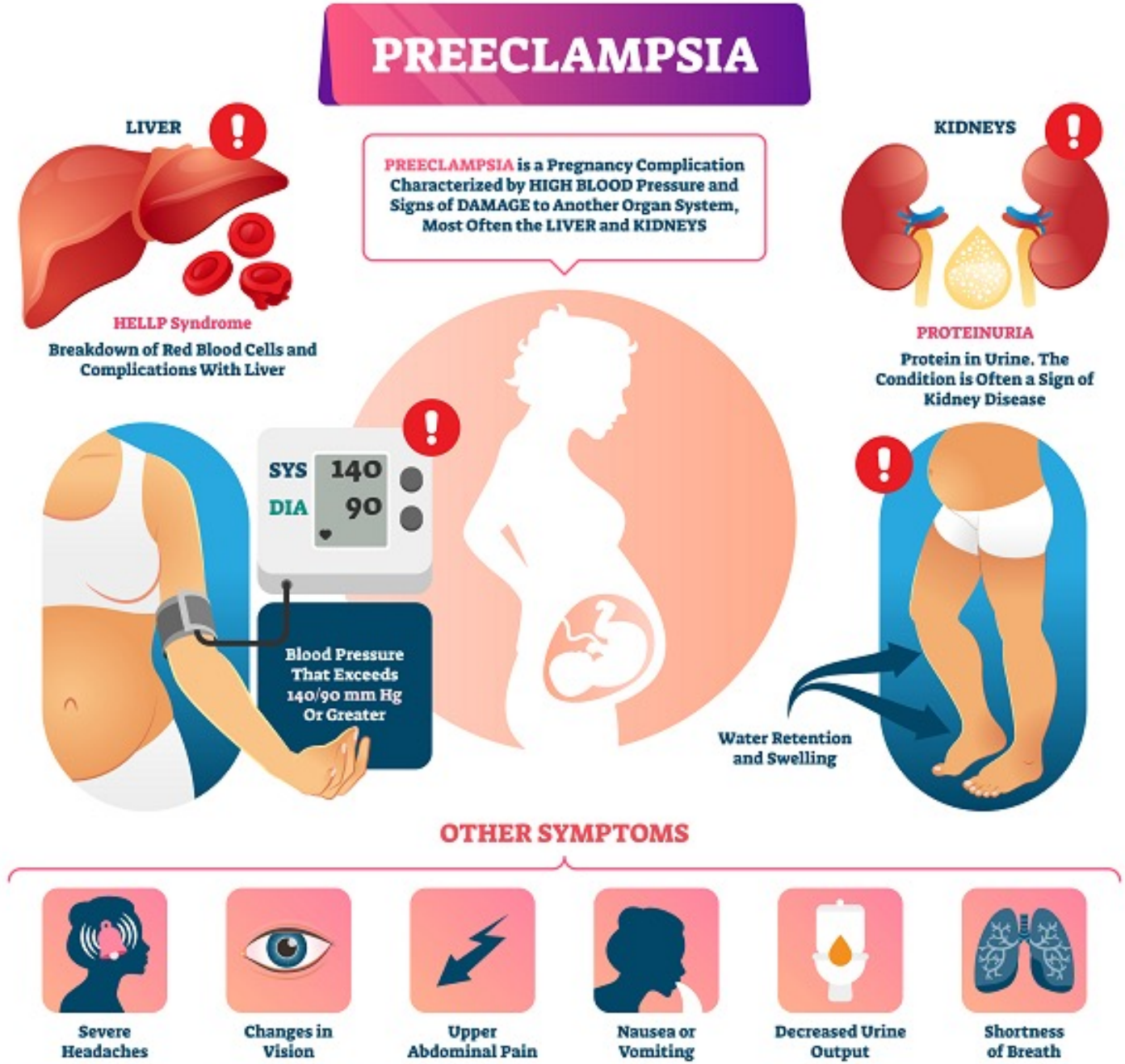
- Reference **Primary Management Guideline**
- If perineal lacerations are present, apply direct pressure to perineum with sterile dressings. Do not place dressings inside the vagina
- Firmly massage the uterine fundus
- Put baby to breast as this may help the uterus contract
- Administer high-flow **Oxygen** to the mother via non-rebreather mask

INTERMEDIATE

- Administer a 10 mL/kg bolus of **Normal Saline or Lactated Ringers** to patients with hemodynamic instability; repeat for persistent hemorrhage, persistent maternal tachycardia, or persistent hypotension

PARAMEDIC

- Administer **Oxytocin**
  - Initial Dose: 10 units IM within 1 minute of delivery of the infant
  - If hemorrhage persists despite IM Oxytocin, add 10 units to 1 L of **Normal Saline or Lactated Ringers** and run wide open



Credit: VectorMine/Shutterstock.com

Preeclampsia

- Two or more SBPs >160 and/or DBP >110 over 15 mins
- Gestation > 20 weeks

OR

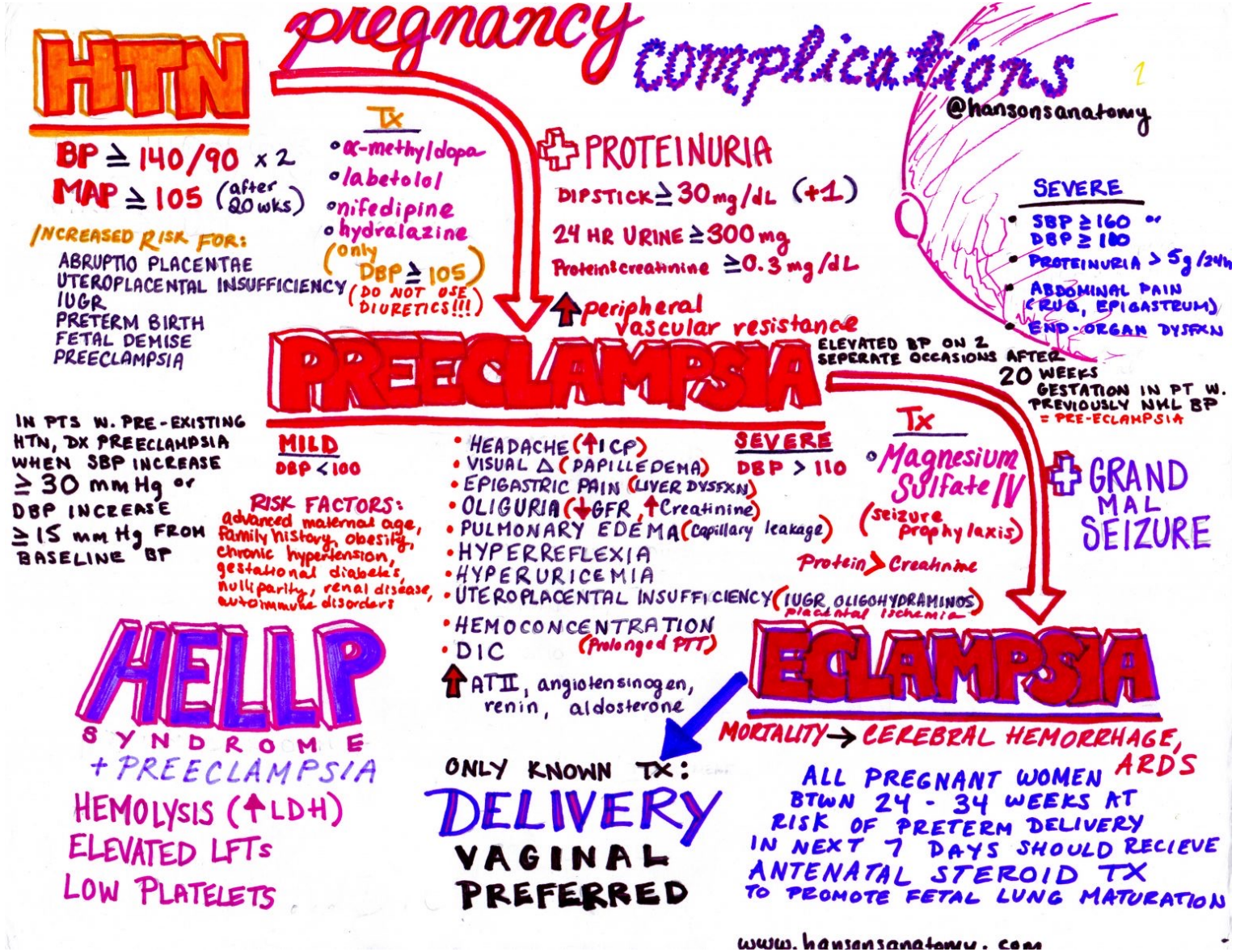
- Elevated blood pressure with any of these accompanying clinical symptoms:
  - Severe headache
  - Blurred Vision
  - RUQ or Epigastric abdominal pain

Preeclampsia Treatment

- Magnesium 4 grams IV/IO infusion over 10 minutes
  - Followed by a maintenance drip of 2 grams per hour


NAVAJO NATION
EMERGENCY MEDICAL SERVICE

Spectrum of Disease



PREECLAMPSIA

Revised 2/8/2022

GENERAL

- Preeclampsia is a hypertensive disorder of pregnancy and is a major cause of both maternal and fetal morbidity and mortality
- Preeclampsia develops after 20 weeks' gestation and can occur up to six weeks postpartum
- Preeclampsia is defined as a sustained BP of 140/90 mm Hg or higher for two or more measurements at least 4 hours apart in a patient who is at or beyond 20 weeks' gestation
- **EMS definition of Severe Preeclampsia:**
  - Two or more blood pressures of SBP >160 mm Hg and/or DBP >110 mm Hg over 15 minutes in a patient who is at or beyond 20 weeks' gestation OR
  - Elevated blood pressure with any of these accompanying clinical symptoms:
    - Severe headache
    - Blurred vision
    - Right upper quadrant or epigastric abdominal pain

ALL PROVIDERS

- Reference **Primary Management Guideline**
- If patient begins seizing, reference **Eclampsia Guideline**
- Apply high-flow **Oxygen** via non-rebreather mask
- Cardiac monitor to capture rhythm
- Obtain 12-lead ECG, if available

INTERMEDIATE

- Initiate an IV/IO for medication administration

PARAMEDIC

- If patient meets **EMS Definition of Severe Preeclampsia**, administer **Magnesium Sulfate** 4 grams IV/IO infusion, administer over 10 minutes, followed by an IV/IO maintenance infusion of 2 grams per hour
  - Initial dose of Magnesium Sulfate 4 grams may be given IM if IV access is not readily available
  - Maintenance infusion of Magnesium Sulfate should be administered via infusion pump if available; reference **Infusion Pump Guideline**
  - Initial dose of Magnesium Sulfate 4 grams may be given IM if IV access is not readily available

ECLAMPSIA

Revised 2/8/2022

GENERAL

- Eclampsia occurs when a patient with preeclampsia progresses to seizures
- Some patients will progress directly into coma without an observed seizure
- Most patients who develop eclampsia show marked edema, increased BP and other features of severe pre-eclampsia but up to 30% of eclampsia patients do not have these classic signs and symptoms

ALL PROVIDERS

- Reference **Primary Management Guideline**
- Reference **Airway Management Guideline**
- Cardiac monitor to capture rhythm; obtain 12-lead ECG if available

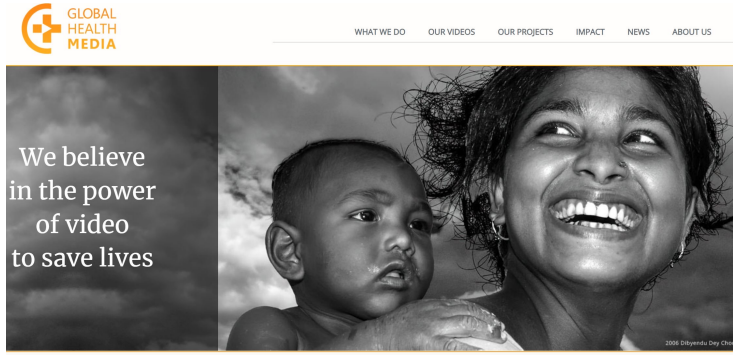
INTERMEDIATE

- Initiate an IV/IO for medication administration

PARAMEDIC

- **Magnesium Sulfate** 4 grams IV/IO infusion, administer over 10 minutes, followed by an IV/IO maintenance infusion at a rate of 2 grams per hour
  - Initial dose of Magnesium Sulfate 4 grams may be given IM if IV access is not readily available
  - Maintenance infusion of Magnesium Sulfate should be administered via infusion pump if available; reference **Infusion Pump Guideline**
  - If seizures continue despite administration of Magnesium Sulfate, reference **Seizures/Convulsions Guideline**

Resources



- https://www.uptodate.com/contents/hypertensive-disorders-in-pregnancy-approach-to-differential-diagnosis?search=eclampsia&source=search_result&selectedTitle=2~150&usage_type=default&display_rank=2
- https://www.uptodate.com/contents/overview-of-postpartum-hemorrhage?search=postpartum%20hemorrhage&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1


Questions?
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