Emergency Childbirth

- Low Frequency = Higher Risk
- Natural process – so take a deep breath
- Complications can arise – so be prepared
- Why might these births carry an elevated risk?
- Are there trends that might effect out of hospital birth emergencies?

Anatomy

- Gravida – Number of pregnancies
- Para – Number of deliveries
- APGAR Score – System to rapidly assess newborn status
- Crowning – presentation of head at vaginal opening
- Effacement – Thinning of cervix
- Labor – Process of birth
  - First Stage – beginning of contractions, often starts with appearance of mucus plug and amniotic fluid, ends with complete dilation of cervix
  - Second Stage – Begins with complete dilation and ends at delivery
  - Third Stage – Begins with delivery and ends with expulsion of placenta

Normal Delivery Call

- Scene Size-up
- Initial Impression
- Focused Hx/Exam
- Detailed Hx/Exam
- Ongoing Assessment
- Communication/Documentation

Scene Size-up

- Dispatch info
- Are the surroundings safe?
- What BSI should you have?
- What equipment should you be ready to use?
- Imminent birth? – Where?
Initial Impression
- General Impression
  - Skin color
  - Posture
  - Obvious distress
- Mental Status
  - AVPU
  - Anxiety
- Airway
- Breathing
- Circulation
  - Pt Priority?
  - Deficit in any above
  - Imminent Birth
  - Shock – Early signs may be absent in pregnant women

Focused Hx/Exam
- Crowning?
- Contraction length and separation?
- Para? Gravida? Due Date?
- Complication with current pregnancy?
- Complication with past pregnancies?
  - C-sections?
- Amniotic fluid? Color? Mucus Plug/Discharge?
- Prenatal care? Classes?
- Baseline Vitals
- Re-assess pt priority

Imminent Delivery
- Mother feels urge to bear down and/or strong pressure in rectum
- Crowning
- Rigid Abdomen
- Place and position
- OB Kit – prep area and equipment
  - Extra towels
  - Extra pads – ready for possible bowel movement
  - Bulb syringe
  - Other stuff – continue to ready other supplies

Delivery
- Lightly support head to control for explosive delivery
  - If amnionic sac present rupture with fingers
- As head presents prepare to suction mouth then nose – several time each (note color)
- Assess neck for umbilical cord (Nuchal Cord) – If present attempt to manipulate over shoulders
- Baby should rotate as birth progresses, shoulders next – support, but do not pull.
- After shoulders baby should expel rapidly – support baby with both hands
  - Video

After Delivery
- Keep baby at or above vaginal opening
- Wrap, warm, dry – Clean mouth and nose, re-suction
- You now have two patients
- Have partner assess (APGAR) newborn
- Prep and cut umbilical cord – place clamps 8” and 10” from baby’s abdomen then cut between them
- Watch for delivery of placenta, usually 10 to 20 min.
  - NEVER pull on umbilical cord
  - Retain placenta in plastic bag for ER to exam
  - Observe bleeding – up 500cc normal – after placenta delivery pad vagina with sterile pads
  - Tearing of the perineum may occur – pad
  - Monitor for signs of shock and transport

Two Patients
- Mother
  - Significant change in pt = return to initial impression
  - Massage uterus
    - Place edge of hand above pubis and apply pressure
    - Use other hand to gently massage abdomen around uterus
  - Allow/encourage baby to suckle at nipple
- Newborn
  - APGAR at 1 min. and 5 min.
  - If APGAR score >7 Then:
    - Keep warm and place on mother’s chest where it can suckle
    - Record time of birth
Questions about a normal delivery?

Abnormal Deliveries
- Intervention possible
  - Nuchal Cord
  - Prolapsed Cord
  - Breech
  - Multiple Births
- No Intervention - Medics and rapid transport
  - Limb or Shoulder Presentation
  - Shoulder Dystocia

Nuchal Cord
Potentially Lethal!

Prolapsed Cord
Occurs when the umbilical cord slips down into the vagina or presents externally which can cause fetal asphyxiation.

Occurs in approximately 1 in every 200 pregnancies and should be suspected when fetal distress is present.

Most common with breech presentations, premature membrane ruptures, large fetus, long cord, multiple gestation, preterm labor

Patient Care
- Place two fingers in vagina to relieve pressure off cord, raising fetus off cord.
- Check cord for pulsations
- Mother in knee-chest or hips elevated position.
- Oxygen therapy
- Transport while keeping pressure off cord.
- Moist dressing to exposed cord, do not push back into vagina.
- Medics!
Breech Presentations
3% of all presentations will be breech: either limb or buttocks, more common in premature infants and with uterine abnormalities.

Increased risk for fetal trauma, anoxia, and prolapsed cord

Patient Care
- Place patient in knee-chest position or with buttocks on edge of bed, legs flexed as much as possible.
- Instruct mother to pant with each contraction to prevent bearing down.
- Allow infant to be delivered with contractions, apply pressure at pubis as head passes, support baby.
- Moist dressing to cord to prevent umbilical artery spasm
- Gloved hand to prevent delivery if unable to deliver in field, relieve pressure from cord!
- Oxygen therapy.
- Rapid transport.
- Would you like to invite the Medics?

Shoulder Dystocia
Occurs when the infant’s shoulders are larger than its head, most common with diabetic and obese mothers.

Labor progresses normally with routine head delivery which will retract back into the perineum because shoulders are trapped between the pubis and the sacrum.
Shoulder Dystocia

Anterior shoulder

Posterior shoulder

Patient Care
- Do not pull on baby’s head!
- Oxygen therapy.
- Have mother flex thighs to assist in delivery.
- Apply firm pressure with your open hand above symphysis pubis.
- Oxygen and transport.
- Are you thinking about inviting the Medics?

Shoulder Presentation
- Fetal shoulder lies over the pelvic inlet
- Spontaneous delivery is not possible, delivery of fetus through cesarean only.

Limb Presentation
- Single limb presents through vaginal opening

Gynecological Emergencies
- Two most common chief complaints:
  - Vaginal Bleeding
  - Lower Abdominal or Pelvic Pain

- Position of comfort for mother.
- Oxygen therapy.
- Rapid transport.
- Please, invite the Medics!
As with all calls:

- Scene Size-up
- Initial Impression
- Focused Hx/Exam
- Detailed Hx/Exam
- Ongoing Assessment
- Communication/Documentation

GYN Patient History

Vaginal Bleeding Considerations:
- Amount?
- When and for how long?
- Likelihood of pregnancy?
- LMP?
- Associated with pain, other functions?
- Other medical problems?
- Obstetric history? (Gravida/Para)

GYN Patient History

Abdominal/Pelvic Pain Considerations:
- Onset? When did this start?
- Provocation? Anything make it worse or better?
- Quality? Dull ache or sharp pain?
- Radiation? Does the pain go anywhere?
- Severity? 1-10 Scale (onset & now)
- Time? How long has it been going on?

GYN Patient Exam

- Respect patient modesty
- ABCs
- Vital signs
- Patient medical history
- Need to palpate the abdomen!
- Sexual assault = crime scene
- Minors and parental rights

Differential Diagnosis

- Pelvic Inflammatory Disease
- Vaginal Bleeding
- Sexual Assault
- Ovarian Cysts
- Cystitis
- Endometritis
- Endometriosis
- Ectopic Pregnancy
- Spontaneous abortion/miscarriage

Scenario #1

Dispatched to a 23 year old female complaining of sudden onset of severe abdominal pain with radiation to the right shoulder.
Patient Care

- Patient position of comfort.
- Reassure and provide emotional support.
- Monitor vital signs.
- Control bleeding.
- Oxygen therapy.
- Nothing by mouth.
- Police notification for sexual assault.
- Remember when to invite the Medics!

ALS Indicators for the GYN patient

- Altered level of consciousness
- BP < 90 systolic
- Sustained tachycardia > 100 - 120
- Pelvis pain with high likelihood of unstable condition during transport
- Excessive vaginal bleeding
- Seizures

Obstetrical Emergencies

These could be the best calls that you will ever go on or the absolute worst nightmares you could ever imagine!

OB Emergency Considerations

Remember that you have TWO patients
History is important, don't forget to ask about prenatal care
Third trimester bleeding is not normal
Prepare for the unexpected
Use Dad as the coach (if you can)
Fetal heart tones?
Ask about last time baby movement felt

ALS Indicators for the Obstetrical Patient

- Imminent or recent birth
- Decreased LOC of mother/newborn
- BP<90 systolic or >140 systolic
- Third trimester vaginal bleed/pelvic pain
- History of complications at birth
- Multiple births
- Breech presentations
- Prolapsed or nuchal cord
- Shoulder dystocia
- Postpartum hemorrhage

Abruptio Placentae

The partial or complete detachment of a normally implanted placenta at more than 20 weeks.

Occurs in 0.5-2.0% of all pregnancies and will result in fetal death in 1 out of 400 cases of abruption.

Predisposing conditions include maternal hypertension, preeclampsia, multiple births, trauma, and previous abruption
Abrutio Placentae

Placenta Previa

Placental implantation in the lower uterine segment encroaching on or covering the cervix.

- Occurs in approximately 1 in 200 to 1 in 400 deliveries with the highest incidence in preterm births.
- Associated with increased maternal age, multiple births, previous cesarean and placenta previa.

Placenta Previa

Uterine Rupture

Spontaneous or traumatic rupture of the uterine wall.

- Occurs in approximately 1 in 1400 deliveries with a 5 – 15% maternal mortality rate and a 50% fetal death rate.
- Abdomen is usually rigid with diffuse pain, fetal parts easily palpated through the abdominal wall.

Scenario

Dispatched to a 32 year old female, 26 weeks pregnant, has skipped her last 3 MD visits because of lack of insurance. Patient c/o sudden onset of left-sided, very sharp abdominal pain now with bright red vaginal bleeding.

Patient Care

- ABCs
- Oxygen therapy
- Place patient in left lateral recumbent position.
- Control bleeding.
- Monitor vital signs.
- Invite the Medics?
Supine Hypotensive Syndrome

Usually occurs in the third trimester of pregnancy, occurs when the gravid uterus compresses the inferior vena cava when the mother lies in a supine position.

Hypotension and dizziness are the main characteristics.

Preeclampsia (Toxemia)

Hypertensive disorder of unknown origin that usually occurs in 5 – 8% of all pregnancies.

Responsible for approximately 25% of all maternal and preterm fetal deaths.

Associated with maternal age, chronic HTN, renal disease, diabetes, systemic lupus, and multiple births.

Eclampsia

(aka Preeclampsia that is really bad)

Characterized by the same signs and symptoms as preeclampsia plus seizures or coma.

Scenario

Dispatched to a dental office for a 33 year-old pregnant female, in active seizures.

You enter the office and find the patient unconscious/unresponsive in tonic/clonic seizures. The dental staff informs you that the patient is 34 weeks pregnant and her blood pressure prior to the dental procedure was 142/90.

Patient Care

- ABCs
- Oxygen therapy
- Place patient in left lateral recumbent position.
- Handle patient gently and minimize sensory stimulation to avoid precipitating seizures.
- Blood glucose check?
- Invite the Medics?
Newborn Concerns
- Meconium Staining
- Sign of fetal stress
- Aspiration of fluid increase chances of respiratory infection and pneumonia
- Premature Birth

Neonatal Resuscitation Basics
- Open the airway, position, suction
- Prevent heat loss
- Provide tactile stimulation
- Evaluate the infant with the APGAR score
- The majority of newborns will respond very well to these simple procedures
- And, as always, invite the Medics!

APGAR
- DRY
- WARM
- STIMULATE
- APGAR 1 and 5 min
  - 7-10 ok
  - 4-6 needs O2
  - 0-3 CPR
- Inverted Pyramid

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Neonatal Resuscitation
- Assess and Support: Temperature (warm and dry)
- Activity: (position and suction)
- Breathing: (stimulate to cry)
- Condition: (heartbeat and color)

Appearance
- The APGAR Score: Appearance (Skin Color)
- Score 2: Body is pink, but the extremities are blue
- Score 1: Entire body is blue (pewter), or pale, grey

Grimace and Activity
- APGAR Score: Response to Stimulation
- Score 2: Vigorous, strong crying
- Score 1: Miniature cry, only upon stimulation
- Score 0: Unresponsive
Patient Care

- Prevent heat loss, keep baby warm.
- Open the airway, side or back position, suction airway with bulb syringe.
- Provide tactile stimulation.
- Evaluate and re-evaluate the infant’s respirations, heart rate, and color.
- If necessary, provide O₂ via BVM
- Don’t hesitate to call on your friend in emergency care…the Medics!

Questions?

- Video