Objectives

• Enhance knowledge of Obstetrics through application of simulated patient cases
• Practice skills helpful in the early stages of residency
• Discuss critical issues necessary for success in residency

Milestones in Obstetrics

• Demonstrates basic knowledge of normal obstetrical care and common medical complications seen in pregnancy
• Demonstrates basic knowledge of routine/uncomplicated intrapartum obstetrical care, including conduct of normal labor
• Demonstrates basic knowledge of normal postpartum care
• Demonstrates basic surgical principles, including use of universal precautions and aseptic technique
• Performs basic procedures, including speculum examination and cervical examination
Milestones in Obstetrics

- Performs initial warming and drying of a non depressed infant
- Demonstrates basic knowledge of normal pelvic floor anatomy
- Recognizes limitations and failures of a team approach in health care as the leading cause of preventable patient harm
- Understands the importance of providing cost effective care
- Understands the role of physicians in advocating for appropriate women's health care

Milestones in Obstetrics

- Understands the importance of compassion, integrity, and respect for others
- Demonstrates sensitivity and responsiveness to patients
- Understands physicians are accountable to patients, society and the profession
- Acts with honesty and truthfulness
- Understands the importance of respect for patient privacy and autonomy
- Understands the ethical principles of appropriate patient/physician relationships

Milestones in Obstetrics

- Demonstrates adequate listening skills
- Communicates effectively in routine clinical situations
- Understands the importance of relationship development, information gathering and sharing, and teamwork
Obstetric Case Simulation

- A 27 year old, gravida 3, para 2, at 38 weeks gestation presents to labor and delivery complaining that she thinks she is in labor.

What are Key Elements in the History?

- Last menstrual period?
- Estimated date of delivery?
- Loss of fluid?
- Fetal movement?
- History of infections?
- Past medical history
- Social history
- Pregnancy and obstetric history
- Vaginal bleeding?
- Contractions?
- Group B streptococcus status?
- Past surgical history
What are Key Elements in the Physical?

- Vital signs
- Abdominal examination
- Speculum examination
- Cervical examination
- Leopold

Obstetric Case Simulation

- History:
  - Last menstrual period 39 weeks ago
  - Uncomplicated pregnancy to date, two prior full term vaginal deliveries
  - Possible leaking, no bleeding, painful contractions every 8-10 minutes
  - No history of sexually transmitted infections
  - No significant past medical or surgical history, no allergies
Obstetric Case Simulation

• Physical:
  • Vitals: blood pressure 90/60, heart rate 102 bpm, respiratory rate 12, temperature 37.6 Centigrade
  • Abdomen: term uterus, fundal height 39 cm, cephalic, otherwise soft, non-tender
  • Speculum examination: negative for pooling, ferning and nitrazine
  • Hemoglobin 12.1 g/dL.
  • Blood type O+, antibody screen negative

Prenatal Care

• Visit frequency
  • Every 4 weeks through 28 weeks
  • Every 2 weeks through 36 weeks
  • Every week thereafter
• Accomplish the following:
  • Assess well being
  • Ongoing education
  • Perform routine screening

Prenatal Care

• Routine measurements
  • Blood pressure, weight, uterine size, fetal heart rate, urine dipstick
• Routine lab
  • HIV, hepatitis B, syphilis, chlamydia, gonorrhea, urine culture
  • Blood type, Rh status, antibody screen
  • Complete blood count
  • Glucose screening at 24-28 weeks
  • Group B streptococcal screening at 35-37 weeks
Prenatal Care

- Immunizations
  - Influenza, pertussis
- Other considerations
  - Genetic screening options
  - Alpha fetal protein
  - Hemoglobin electrophoresis
  - Cystic fibrosis screening

Medical Complications – Asthma

- Increased risks of prematurity and low birth weight (growth restriction)
- Intermittent – symptoms < 2 days per week, < 2 nights per month, peak flow > 80%, no activity limitation, albuterol as needed
- Mild persistent – not daily but > 2 days per week, > 2 nights per month, peak flow > 80%, minor activity limitation, low dose inhaled corticosteroid
- Moderate persistent – daily symptoms, nights more than 1 per week, peak flow 60-80%, some activity limitation, low dose inhaled corticosteroid and salmeterol
- Severe persistent – throughout the day, nights more than 4 per week, peak flow < 60%, extreme activity limitation, high dose inhaled corticosteroid and salmeterol, possible oral corticosteroid
- Moderate and severe asthma – fetal surveillance with growth ultrasounds and antenatal testing starting at 32 weeks

Medical Complications – Obesity

- Increased risks of spontaneous abortion, cardiac dysfunction, sleep apnea, gestational diabetes, preeclampsia, congenital anomalies
- Weight gain
  - Overweight (body mass index 25-29.9) – 15 to 25 pounds
  - Obese (body mass index >30) – 11 to 20 pounds
- Recommend early glucose tolerance screening, consider additional evaluation for sleep apnea
- Postpartum – consider additional pharmacologic management for thromboembolic disease, increased risk for surgical site infection
Medical Complications – Hypertension

- **Preeclampsia**
  - Blood pressure >140/90, 2 occasions > 4 hours apart after 20 weeks, or
    >160/110 over short intervals (minutes)
  - Urine protein/creatinine ratio > 0.3

- **Gestational hypertension**
  - Blood pressure elevation after 20 weeks in absence of proteinuria or systemic findings

- **Chronic hypertension**
  - Blood pressure elevations predate pregnancy or prior to 20 weeks
  - >140/90

Medical Complications – Hypertension

- **Preeclampsia without severe features and gestational hypertension**
  - Manage blood pressures <160/110
  - Delivery by 37 weeks 0 days

- **Chronic hypertension**
  - Manage blood pressures between 120-160/80-105
  - Initial treatment:
    - Labetalol, nifedipine or methyldopa
    - Angiotensin converting enzyme inhibitors and angiotensin receptor blockers not recommended

OB Case Simulation

- **Hands-on Exercise:**
  - Perform a cervical examination on the series of models provided
  - Record your estimate for each model for discussion and feedback
Stages of Labor

• First stage: onset of labor until complete dilation and effacement
  • Latent: gradual cervical change
  • Active: rapid cervical change (contemporary data = 6 cm)

• Second stage: complete cervical dilation to delivery
  • May have passive and active components

• Third stage: from delivery of infant to delivery of the placenta

Abnormal Labor

• Prolonged latent phase
  • Greater than 20 hours nulliparous, 14 hours multiparous
  • No longer an indication for cesarean delivery

• Active phase arrest in the first stage
  • 6 cm or greater dilation, with ruptured membranes, failing to progress with 4 hours of adequate uterine contractions (>200 Montevideo units)
  • Or 6 hours of oxytocin administration with inadequate uterine activity and no cervical change

Abnormal Labor

• Arrest of labor in the second stage
  • No specific maximum time identified
  • At least 2 hours of pushing in multiparous
  • At least 3 hours of pushing in nulliparous
  • Longer durations may be appropriate if progress documented and maternal/fetal status permits
Fetal Heart Rate Monitoring

- Baseline: Rounded to nearest 5, minimum of 2 minute duration in a 10 minute segment, 110 to 160 normal
- Variability: fluctuations in the baseline
  - Absent: undetectable
  - Minimal: <5 bpm
  - Moderate (normal): 6-25 bpm
  - Marked: >25 bpm
- Acceleration: abrupt increase (less than 30 sec) in FHR
  - Before 32 weeks: 10 beats above baseline for 10 seconds
  - After 32 weeks: 15 beats above baseline for 15 seconds

Fetal Heart Rate Monitoring

- Early deceleration: gradual decrease and return to baseline associated with contraction
  - Nadir of deceleration same time as peak of contraction
- Late deceleration: gradual decrease and return to baseline associated with contraction
  - Deceleration delayed, with nadir occurring after peak of contraction
  - Variable deceleration: abrupt decrease in the fetal heart rate (less than 30 seconds)
  - Prolonged deceleration: decrease in baseline > 15 bpm, lasting > 2 minutes and < 10 minutes
  - Sinusoidal pattern: sine wave like undulating pattern, 3-5 cycles per minute for at least 20 minutes

Fetal Heart Rate Monitoring

- Intermittent decelerations: occur with less than 50% of contractions
- Recurrent decelerations: occur with greater than 50% of contractions
- Bradycardia: fetal heart rate baseline is less than 110 beats per minute
Fetal Heart Rate Monitoring

• Category I
  • Baseline 110-160 bpm, variability moderate, no late or variable decelerations, early decelerations may be present, accelerations may be present

• Category III
  • Absent variability with any of the following: recurrent late decelerations, recurrent variable decelerations, bradycardia
  • Sinusoidal pattern

• Category II
  • Everything else

OB Case Simulation

• Group Exercise

As a group, please review the fetal heart rate tracings provided

Please utilize the previous slides for vocabulary, commenting on: baseline, variability, presence of accelerations and decelerations, and overall category

Cardinal Movements of Labor
Perineal Anatomy
OB Case Simulation

- Hands-On Exercise

Each student will perform an uncomplicated vaginal delivery using the simulation model.

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APGAR Score

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<th>0</th>
<th>1</th>
<th>2</th>
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<tbody>
<tr>
<td>Heart Rate</td>
<td>Absent</td>
<td>&lt;100</td>
<td>&gt;100</td>
</tr>
<tr>
<td>Respiration</td>
<td>Absent</td>
<td>Hypoventilation/weak cry</td>
<td>Regular crying</td>
</tr>
<tr>
<td>Tone and Movement</td>
<td>Limp</td>
<td>Moderate</td>
<td>Astir</td>
</tr>
<tr>
<td>Color</td>
<td>Totally blue</td>
<td>Blue extremities</td>
<td>Pink</td>
</tr>
<tr>
<td>Reflex irritability</td>
<td>No response</td>
<td>Whimpering/Grimace</td>
<td>Crying</td>
</tr>
</tbody>
</table>

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Newborn Assessment

- Three characteristics:
  - Is the baby full term?
  - Is the baby breathing with regular rhythm or crying?
  - Does the baby have good muscle tone?

- If you answered yes:
  - Baby does not require resuscitation and may remain with the mother skin to skin
  - Baby should be dried and covered with dry linen to maintain temperature while skin to skin
What are Key Elements to Postpartum Care?

- Blood pressure every 15 minutes for the first 2 hours
- Temperature every 4 hours for the first 8 hours
- Early ambulation (with assistance the first time)
- Regular diet
- Ice pack to perineum
- Assess for postpartum mood disorder
- Pericare performed vulva to anus (not other way)
- Void as soon as possible (and monitor for the first 24 hours)
- Length of stay (24 - 48 hours for vaginal, 36 - 72 hours for cesarean)
- Postpartum visit within 4-6 weeks
- Postpartum contraception discussed
- Immunizations: Tdap (if not done), anti-D immune globulin, Rubella, influenza (if not done and in season)

### Postpartum Care Plan

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<th>Element</th>
<th>Instructions</th>
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<td>Tdap for the first 24 hours</td>
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<td>Anti-D immune globulin</td>
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<tr>
<td>Rubella</td>
<td>Rubella</td>
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<tr>
<td>Influenza</td>
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</table>

Postpartum Care Plan

A COG Committee Opinion 736, May 2018
Thank you for your participation!

Please remember to fill out your post-course evaluation prior to leaving.