Prenatal Care and How to Avoid an Unnecessary Cesarean Section

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Objectives

1. Recognize the basic components of prenatal care.
2. Describe pregnancy complications that can be detected and/or prevented with adequate prenatal care.
3. Know the signs of preterm labor and what to do if they occur.
4. Understanding when a cesarean section is medically necessary.
5. Recognize that reconnection of perinatal care will make a difference.
Basic Components of Prenatal Care

• Why is prenatal care important?
  – Is it quantity or quality that matters

• General appointment scheduling
  – Traditional – evidence to support?
  – What about CPSP in California

• What percent of women in US are ‘low risk’?
Definition of ‘Low Risk’

• NQF (2006)
  A pregnancy occurring in a woman aged 18-39 who has no previous diagnosis of essential hypertension, renal disease, collagen-vascular disease, liver disease, cardiovascular disease, placenta previa, multiple gestation IUGR, smoking, pregnancy-induced hypertension, premature rupture of membranes, or other previously documented condition that poses a high risk of poor pregnancy outcome

• CDC (2014)
  A low-risk woman is defined as one with a full-term, singleton pregnancy, with vertex fetal presentation
What has been shown to impact outcome

- Early entry into care
- Continuity of care
- Education – topics
  - Diet/nutrition
  - Exercise
  - Genetic screening
  - Classes - CBE, breastfeeding, infant care
  - Immunizations – pregnancy and infant
  - PTL precautions
  - Fetal movement count
  - When to call/where to go
  - General newborn procedures and follow-up
  - Car seat safety
  - Contraception
Has prenatal care made a difference

• Identify cost savings from early access to care
• CPSP has shown savings – get info
• So why is there not more funding for prenatal/postpartum care as reward?
Where can we make a difference?

- Pre/Interconception care
- Nutrition
- Exercise
- Support
- Exclusive breastfeeding
- Recognition that pregnancy and childbirth are NORMAL (not a disease)
- Decreasing fear of birth
- Prevention of PPD/PTSD
Prenatal Care leads to Birth

• Most common admission diagnosis to hospitals in US
  ➢ Childbirth
• Most common surgery performed in US
  ➢ Cesarean Section – 33% in US
• Nearly 40% of pregnancies have labor induced
• Societally we have moved from pregnancy/childbirth as a normal process to a fear based high-risk until proven otherwise process
Induction of Labor
Cascade of intervention in first-time mothers who experienced labor
Base: first-time mothers with full term births who experienced labor \( n=821 \)

- **Induction No**: 53%
  - **Epidural No**: 39%
    - **Cesarean Yes**: 5%
  - **Epidural Yes**: 61%
    - **Cesarean Yes**: 20%
- **Induction Yes**: 47%
  - **Epidural No**: 22%
    - **Cesarean Yes**: 19%
  - **Epidural Yes**: 78%
    - **Cesarean Yes**: 31%

Note: in this group, which included 93% of first-time mothers, the overall epidural rate was 71% and overall cesarean rate was 19%
How did we get to 32% C/S rate?

- 1970 – C/S rate was 5%, by 1988 was 24.7, by 2010 was 32% (that many women cannot have ‘broken’ systems/bodies)
- 1970’s – major shift in obstetrical care
  - Development of concept that the fetus is a patient
  - Electronic fetal monitoring
  - Regional anesthesia (70’s to 80’s) – proliferation that labor cannot (or should not) occur without – women are too weak??
  - Ultrasound
US Cesarean Section Rates 1989-2011

% Tot US

20 22 24 26 28 30 32 34

'89 '90 '91 '92 '93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11

% Tot US 23 22.7 22.6 22.3 21.8 21.6 20.8 20.7 21.2 22.0 23 24 26 28 29 30 31 32 32 33 33 33
Average Total Charges and Payments for Maternal and Newborn Care in the U.S. - 2010

- **Commercial - Vaginal**: $32,093
- **Commercial - Cesarean**: $51,125
- **Medicaid - Vaginal**: $29,800
- **Medicaid - Cesarean**: $50,373

Charges and Allowed Amount
Background/Influences

• Professional shifts
  – Midwifery led care converted to Medical managed care
  – Women driven care converted to control driven care
  – Support was foundation for care with woman as the center converted to technology as the foundation and the center of focus
Rule of 90

• 90% of women birthing vaginally will birth their next pregnancy vaginally
• 90% of women having a cesarean section will deliver their next pregnancy by cesarean
## Complications associated with Cesarean Section

### Short term harms
- Maternal death
- Emergency hysterectomy
- Blood clots/stroke
- Surgical injury
- Longer LOS
- More likely rehospitalization
- Poor birth experience
- Decreased early contact with baby
- Intense and prolonged postpartum pain
- Poor overall mental health and self-esteem
- Poor overall functioning

### Impact on future fertility
- Involuntary infertility
- Reduced fertility due to decreased desire to have more children
- Adhesions
- Ectopic pregnancy
- Placenta previa
- Placenta accreta*
- Placental abruption
- Uterine rupture
- Hemorrhage
- Low birth weight
- Preterm birth
- Stillbirth
- Maternal death

### Impact on babies
- Respiratory problems
- Surgical injuries
- Failure to establish breastfeeding
- Asthma in childhood and adulthood
Why is Birth Important?

• Women remember their births for their entire lifetime! What do you want them to remember?
Robson, et. al., 2013

- Studied overall caesarean section rate in the National Maternity Hospital for 2011
- 1977/9250 (21.4%) and developed a TGCS allowing for the critical assessment of perinatal care
- “Discussions about reducing caesarean section rates without taking other factors into account are at best inappropriate and at worst dangerous”
- ‘it is not that a caesarean section rate is high or low but rather whether it is appropriate or not, after considering all the relevant information’.
## TGCS and Contribution to Overall C/S Rate

<table>
<thead>
<tr>
<th>Category</th>
<th>Contribution</th>
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<tbody>
<tr>
<td>1. Nulliparous, single cephalic, 37 weeks, in spontaneous labour</td>
<td>1.9</td>
</tr>
<tr>
<td>2. Nulliparous, single cephalic, 37 weeks, induced or CS before labour</td>
<td>5.1</td>
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<tr>
<td>3. Multiparous (excluding prev. C/S), single cephalic, 37 weeks, in spontaneous labour</td>
<td>0.3</td>
</tr>
<tr>
<td>4. Multiparous (excluding prev. CS), single cephalic, 37 weeks, induced or CS before labour</td>
<td>1.2</td>
</tr>
<tr>
<td>5. Previous C/S, single cephalic, 37 weeks</td>
<td>6.2</td>
</tr>
<tr>
<td>6. All nulliparous breeches</td>
<td>2.2</td>
</tr>
<tr>
<td>7. All multiparous breeches (including previous c/s)</td>
<td>1.2</td>
</tr>
<tr>
<td>8. All multiple pregnancies (including previous c/s)</td>
<td>1.5</td>
</tr>
<tr>
<td>9. All abnormal lies (including previous c/s)</td>
<td>1.4</td>
</tr>
<tr>
<td>10. All single cephalic $\leq$ 36 weeks (including previous c/s)</td>
<td>1.4</td>
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Reducing C/S

• Of the categories above, 1, 2, and 5 contributed to two-thirds of the cesarean sections
  – Nulliparous, single cephalic, 37 weeks, in spontaneous labour (1.9)
  – Nulliparous, single cephalic, 37 weeks, induced or CS before labour (5.1)
  – Previous C/S, single cephalic, 37 weeks (6.2)
Most Important Factors

- Reduce the primary cesarean section rate!
- Term breeches – at this point a ‘sacred cow’
- Maternal request – what is maternal request today becomes medical indication in the future!
- Literature has not provided good evidence and indications remain opinion based
- Quality monitoring program to review individually and as group/institution
- VBAC’s
Factors that impact physiologic labor and vaginal birth

- Electronic fetal monitoring – impedes
- Water immersion – support
- Friedman curve – impedes
- Racial differences play a role (Hispanic and American Indian)
- Midwifery managed care – support
- Use of amniotomy and oxytocin – impedes (unless only option)
- Birth Center (non-hospital based) - support
Hospital Accreditation/State Priorities

• Hospital accreditation will be tied to reporting of maternity care performance, and physiologic birth practices can effectively improve performance.

• Beginning in January 2014, accredited hospitals with at least 1100 births per year will be required to report to the Joint Commission on perinatal core measures. Measures that are amenable to improvement by implementing physiologic care in labor and birth include
  – nulliparous, term, singleton, vertex cesarean rate
  – elective delivery before 39 weeks gestation
  – episiotomy
  – exclusive breast milk feeding during the hospital stay
Summary Comments

- Pregnancy, birth and postpartum/neonatal periods are a continuum and should not be reviewed separately.
- Intrapartum care has been a ‘sacred cow’ and needs to be dramatically overhauled.
- Promotion of physiologic approaches to care of the women during childbirth have been shown to increase safety, improve quality and promote optimal health outcomes for childbearing women and their families.
- Benchmarks and standards are coming and we should be ahead of the wave – reimbursements will be tied to these points.