Chapter 3

BIRTH AND THE NEWBORN CHILD
Birth and Its Cultural Context
Stages of the Birth Process
The First Stage: Labor

- Longest and most taxing stage
- Contractions in the uterus cause cervix to dilate
- Labor is painful, but there are some ways to ease discomfort
  - Rocking chair, warm shower or bath, massages or taking a walk
  - Emotional support is important

LO 3.1 Stages of birth
Figure 3.1  The Three Stages of the Birth Process  Which stage is longest and most difficult?
Stages of the Birth Process: The Second Stage

- Delivery can take up to an hour, but there is wide variation
- Crowning- baby’s head appears at outer opening of vagina.

LO 3.1 Stages of birth
Stages of the Birth Process: The Third Stage

- placenta and umbilical cord are expelled
- Complications can occur if placenta is not fully expelled

LO 3.1 Stages of birth
Stages of the Birth Process

Birth Complications

Two common birth complications:
- Failure to progress
- Breech Presentation

Cesarean delivery can be done to deal with birth complications
Map 3.1  Cesarean Section Rates, Selected Countries  Which countries have the highest rates of cesarean sections? What determines whether a country has high or low rates?
Stages of the Birth Process

Birth Complications

- Cesarean-surgical incision to remove baby from the uterus
- High rates of C-section may be due to extreme caution
- Vaginal birth after C-section (VBAC) is possible

LO 3.2 Birth Complications
Cultural and Historical Variations in Birth Beliefs

- Celebration of birth
  - ILA of Zimbabwe praise the woman and offer gifts
- Fear or wariness of birth
  - Arapesh of New Guinea allow birth only on outskirts of village in a place reserved for menstruation & excretion activities.

LO 3.3 Birth beliefs
Cultural and Historical Variations in Birth Beliefs

- Cultures may have purifying traditions for mothers after birth.
- Placenta also has meanings:
  - Some cultures bury in sacred place.
  - Some cultures believe it has value for hormones and nutrients.
Cultural Variations in Birth Beliefs
Midwives and Others

- Midwives maintain birth assistant in traditional cultures
- Variation in how one becomes a midwife
- Variation in how midwives are viewed

LO 3.4 Cultural practices in easing birth
Cultural Variations in Birth Practices

- Attempts to ease birth process include
  - Abdominal massage and herbal teas
  - Herbal medicines to cope with pain
  - Midwives give instruction and encouragement
  - Symbols placed in different areas

LO 3.4 Cultural practices in easing birth
Cultural Variations in Birth Beliefs

Easing the Birth

- Emotional and social support important
- Medical use of epidural seen in developed countries
- Birthing position also eases pain
  - Upright, semi-sitting, half reclining position
- Placenta delivered through various methods
- Umbilical cord may be cut and tied

LO 3.4 Cultural practices in easing birth
Historical Variations in Birth Beliefs
Peculiar History of Birth in the West

- Pre-15th Century - Midwives respected
- 15th Century - Midwives suspected of being witches
- 18th Century - Medical schools and physician delivery

LO 3.5 History of birth in the West
Historical Variations in Birth Beliefs
Peculiar History of Birth in the West

• 20th Century-Doctors not properly trained
  ▪ Led to misuse of drugs for delivery including morphine
  ▪ Late 20th century backlash led to advocating natural childbirth

LO 3.5 History of birth in the West
• Currently there are several improvements in birth process
  ▪ Collaboration during birth
  ▪ Fathers more likely involved
  ▪ Medications are safer
  ▪ Use of electronic fetal monitoring
Cultural Variations in Neonatal & Maternal Mortality

- Maternal mortality has decreased in developing countries due to:
  - Better nutrition
  - Greater access to health care

- Rates of infant and maternal mortality are still higher in developing countries than in developed countries.

LO 3.6 Maternal and neonatal mortality
Cultural Variations in Neonatal & Maternal Mortality

• Substantial variation in neonatal and maternal mortality within developed countries.
  ▪ Neonatal mortality is twice as high for African Americans as for Whites.
  ▪ Rates of infant mortality among Latinos and Asian American are similar to those of Whites.

• Maternal mortality is over 3X as high among African Americans as among Whites.
  ▪ What are possible explanations?

LO 3.6 Maternal and neonatal mortality
Map 3.2  Neonatal and Maternal Mortality Worldwide  How do neonatal and maternal mortality rates compare? What factors might explain why mortality rates are higher in developing countries than in developed countries? (continued on next slide)
Map 3.2  Neonatal and Maternal Mortality Worldwide  How do neonatal and maternal mortality rates compare? What factors might explain why mortality rates are higher in developing countries than in developed countries? (continued from previous slide)
The Neonate
LO 3.7 Assessing neonatal health

• Neonate:
  ▪ Fuzzy hair called lanugo
  ▪ Misshapen head with soft spots called fontanels
  ▪ About 20 inches and 7.5 pounds
  ▪ About half have jaundice
• Neonatal assessment is critical in first few minutes

• Apgar Scale
  ▪ Assessed on Appearance, Pulse, Grimace, Activity and Respiration
  ▪ Rated on each category with a 0-2 score
  ▪ Gives total score of 0-10
  ▪ Measured twice, in first minute and after five minutes

LO 3.7 Scales to assess neonatal health
Table 3.1 The Apgar Scale

**Total Score:** 7–10 = Good to excellent condition; 4–6 = Requires assistance to breathe; 3 or below = Life-threatening danger

<table>
<thead>
<tr>
<th>Score</th>
<th>0</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance (Body color)</strong></td>
<td>Blue and pale</td>
<td>Body pink, but extremities blue</td>
<td>Entire body pink</td>
</tr>
<tr>
<td><strong>Pulse (Heart rate)</strong></td>
<td>Absent</td>
<td>Slow—less than 100 beats per minute</td>
<td>Fast—100–140 beats per minute</td>
</tr>
<tr>
<td><strong>Grimace (Reflex irritability)</strong></td>
<td>No response</td>
<td>Grimace</td>
<td>Coughing, sneezing, and crying</td>
</tr>
<tr>
<td><strong>Activity (Muscle tone)</strong></td>
<td>Limp and flaccid</td>
<td>Weak, inactive, but some flexion of extremities</td>
<td>Strong, active motion</td>
</tr>
<tr>
<td><strong>Respiration (Breathing)</strong></td>
<td>No breathing for more than 1 minute</td>
<td>Irregular and slow</td>
<td>Good breathing with normal crying</td>
</tr>
</tbody>
</table>

**Source:** Based on Apgar, 1953
The Neonate’s Health
Measuring Neonatal Health

- **Brazelton Neonatal Behavioral Assessment Scale (NBAS)**
  - Rates neonates on 27 items
  - Rated as worrisome, normal or superior
  - Most effective if given at one day and a week later
  - Can help parents interact with infants
  - Useful in research on cultural differences in parenting practices

LO 3.7 Assess neonatal health
The Neonate’s Health
LO 3.7 Assessing neonatal health

**Low Birth Weight**
- Low birth weight (LBW)-less than 2500 grams
- Very Low birth weight-less than 1500 grams
- Extremely Low birth weight-less than 1000 grams
Main Causes for LBW

- Developing countries - malnourished mothers and lack of prenatal care
- Developed countries - cigarette smoking
- Other factors - multiple births, maternal age, drug use
Map 3.3 Rates of Low Birth Weight Around the World Why are rates so high in developing countries?
The Neonate’s Health
LO 3.8 Low birth weight

Consequences of LBW
• High mortality rate
• LBW for small for date infants
  ▪ Poor maternal malnutrition, illness, teratogen exposure
• LBW for pre-term neonates
  ▪ Inadequately developed physical systems
  ▪ Immature lungs, immune system, and CNS
The Neonate’s Health
Low Birth Weight

• Treatment for LBW infants includes
  ▪ Kangaroo care: skin-to-skin contact for 2-3 hours a day
  ▪ Infant massage

• Even with assistance, LBW babies are at risk developmentally

LO 3.8 Low birth weight
Neonates’ sleep/wake cycle governed more by hunger than day/night cycle
• REM sleep dominates
• For neonates, REM sleep stimulates brain development
• Traditional cultures keep close physical contact
  ▪ May cause infants to spend more day hours sleeping than in industrialized cultures

LO 3.9 Neonates’ patterns of waking and sleeping
<table>
<thead>
<tr>
<th>Reflex</th>
<th>Stimulation</th>
<th>Response</th>
<th>Disappears by . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stepping</td>
<td>Hold baby under arms with feet touching floor</td>
<td>Makes stepping motions</td>
<td>2 months</td>
</tr>
<tr>
<td>Moro</td>
<td>Dip downward suddenly, or loud sound</td>
<td>Arch back, extend arms and legs outward, bring arms together swiftly</td>
<td>3 months</td>
</tr>
<tr>
<td>Babkin</td>
<td>Press and stroke both palms</td>
<td>Mouth opens, eyes close, head tilts forward</td>
<td>3 months</td>
</tr>
<tr>
<td>Sucking</td>
<td>Object or substance in mouth</td>
<td>Sucking</td>
<td>4 months</td>
</tr>
<tr>
<td>Rooting</td>
<td>Touch on cheek or mouth</td>
<td>Turn toward touch</td>
<td>4 months</td>
</tr>
<tr>
<td>Grasping</td>
<td>Object placed in palm</td>
<td>Hold tightly</td>
<td>4 months</td>
</tr>
<tr>
<td>Swimming</td>
<td>Baby is immersed in water</td>
<td>Holds breath, swims with arms and legs</td>
<td>4 months</td>
</tr>
<tr>
<td>Tonic neck</td>
<td>Baby laid on back</td>
<td>Head turns to side, legs and arms take “fencing position” with arms and legs extended on side head is turned, flexed on the other side</td>
<td>5 months</td>
</tr>
<tr>
<td>Babinski</td>
<td>Stroke sole of foot</td>
<td>Foot twists in, toes fan out</td>
<td>8 months</td>
</tr>
</tbody>
</table>
Physical Functioning of the Neonate
Neonatal Senses

• Touch—earliest sense to develop
  ▪ Neonates do experience pain
• Taste and Smell—well developed
  ▪ Show smell preferences for mother’s diet
  ▪ Prefer sweet taste
  ▪ Prefer mother’s breast smell to another’s

LO 3.11 Neonates’ sensory abilities
Physical Functioning of the Neonate

Neonatal Senses

• Hearing—well developed
  ▪ Sensitive to speech
  ▪ Prefer mother’s voice
  ▪ Difficulty locating sound

• Vision—least developed
  ▪ Sees 8-14 inches
  ▪ Binocular and color vision limited
  ▪ Prefer patterns to random designs
  ▪ Prefer faces to other patterns
Caring for the Neonate
Breastfeeding

LO 3.12 Breastfeeding across cultures and history

- Mother and infant reflex actions at birth
- Historical evidence suggests breastfeeding was the primary/sole food for 2-3 yrs.
- Substitute milk, wet nurse, formula became alternatives
- Breastfeeding back on the rise
  - Maternal age, education and SES increase likelihood of breast feeding
Breastfeeding
LO 3.13 Advantages of breast feeding

• Benefits include
  ▪ Colostrum
  ▪ Disease protection
  ▪ Cognitive development
  ▪ Reduced obesity
  ▪ Better health in childhood and adulthood

• Mothers benefit by reduced bleeding, strengthening bones, and suppressed ovulation
Breastfeeding

LO 3.13 Advantages of breast feeding

• Benefits of breastfeeding extremely important in developing countries
• Issues with breastfeeding in developing countries
  ▪ Infectious disease of mothers
  ▪ Using formula mixed with nonpurified water could contribute to death rates
• Three distinct crying signals
  ▪ Fussing-soft volume, unsteady whimper
  ▪ Anger-large volume of air
  ▪ Pain-Sudden onset
• Crying can also be classified as basic if no distinctive cry is noted
• Crying curve relates to crying frequency
In their first months of life, infants often cry for no apparent reason. Source: Barr, 2009
Crying and Soothing

• Duration and intensity of crying differ between cultures
  ▪ Swaddling babies has been shown to reduce crying
  ▪ 10% of Western babies are colicky with no known cause
**TABLE 3.3** Period of PURPLE Crying in the Early Months

A crying baby is difficult for others to bear, especially when the crying is frequent and does not appear to take place for an evident reason. Here is a way to remind parents and others of the normal features of crying in the early months of life.

<table>
<thead>
<tr>
<th>P</th>
<th>Peak pattern</th>
<th>Crying peaks around age 2 months and then declines</th>
</tr>
</thead>
<tbody>
<tr>
<td>U</td>
<td>Unpredictable</td>
<td>Crying in the early months often comes and goes unpredictably, for no apparent reason</td>
</tr>
<tr>
<td>R</td>
<td>Resistant to soothing</td>
<td>Crying may continue despite parents’ best soothing efforts</td>
</tr>
<tr>
<td>P</td>
<td>Pain-like face</td>
<td>Crying babies may look like they are in pain even though they are not</td>
</tr>
<tr>
<td>L</td>
<td>Long lasting</td>
<td>Babies cry for longer in the early months, sometimes 30–40 minutes or more</td>
</tr>
<tr>
<td>E</td>
<td>Evening crying</td>
<td>Babies usually cry most in the afternoon and evening</td>
</tr>
</tbody>
</table>

The word *Period* means that the crying has a beginning and an end.

**Source:** Barr, 2009 [see http://www.purpurelecrying.info/sections/index.php?sct=1&].
Social and Emotional Aspects of Neonatal Care
Bonding and Postpartum Depression

• No support that first hour is critical for bonding in mother and infant
• Hospitals still encourage close contact immediately after birth

LO 3.15 Mother-infant bonding
Social and Emotional Aspects of Neonatal Care
Bonding and Postpartum Depression

• Possible causes of postpartum depression:
  ▪ Rapid hormonal changes
  ▪ May have a genetic basis

• Possible impact on child development

LO 3.16 Causes and consequences of postpartum depression