NEWBORN

NEWBORN ASSESSMENT

Estimated Time: 30 minutes • Debriefing Time: 30 minutes

Scan to Begin

Patient Name: Noah Bailey

SCENARIO OVERVIEW

Baby Noah was delivered via a normal spontaneous vaginal birth 2 hours ago. Videos, images and sounds of various newborn assessments are provided for student discussion of: newborn reflexes; head to toe assessment; measurement of head and chest circumference; and administration of screening tests and medications based on facilitator discretion.

This scenario can be used in high-fidelity simulation to augment the reality of what a student sees and hears on a simulator or the media can be used in a low-fidelity environment to stimulate discussion and critical thinking.

LEARNING OBJECTIVES

1. Maintain a safe and effective care environment for a newborn patient
2. Integrate evidence-based practice while using the nursing process to care for a newborn
3. Demonstrate components of a head to toe newborn assessment, including anticipated newborn reflexes
4. Participate in procedures used in newborn assessment
5. Safely administer medications to a newborn
6. Provide patient education to family members

CURRICULUM MAPPING

WTCS NURSING PROGRAM OUTCOMES

- Implement one's role as a nurse in ways that reflect integrity, responsibility, ethical practices, and an evolving professional identity as a nurse committed to evidence-based practice, caring, advocacy and quality care
- Demonstrate appropriate written, verbal, and nonverbal communication in a variety of clinical contexts
- Integrate social, mathematical, and physical sciences, pharmacology, and pathophysiology in clinical decision making
- Provide patient centered care by utilizing the nursing process across diverse populations and health care settings
- Minimize risk of harm to patients, members of the healthcare team and self through safe individual performance and participation in system effectiveness
- Use information and technology to communicate, manage data, mitigate error, and support decision-making

NURSING FUNDAMENTALS

- Maintain a safe, effective care environment
- Use appropriate communication techniques
- Use the nursing process

- Adapt nursing practice to meet the needs of diverse patients in a variety of settings

NURSING HEALTH PROMOTIONS

- Use principles of teaching/learning when reinforcing teaching plans
- Apply principles of family dynamics to nursing care
- Plan nursing care for a healthy newborn
- Examine adaptations of nursing care for patients from infancy through adolescence

SIMULATION LEARNING ENVIRONMENT & SET-UP

ENVIRONMENT

Inside room: Tape measure

Inside or outside room: Hand sanitizer or sink for hand hygiene

PATIENT PROFILE

Name: Noah Bailey

DOB: XX/XX/20XX

Age: 2 hours

MR#: 170511

Gender: Male

Height: 50 cm (20 in)

Weight: 3.68 kg (8.1 lbs)

Allergies: NKDA

Code Status: Full code

Ethnicity: Caucasian

Parents: John and Sara Bailey

EQUIPMENT/SUPPLIES/SETTINGS

Patient

- Wearing a diaper; swaddled in a blanket; security band on leg

Monitor Settings

- No monitor

- Vital signs are: HR 120, RR 40, Temp 37.1

Supplies

- General
    - A variety of syringe and needle sizes for students to choose from if an injection will be given during the scenario. QR codes for various syringe sizes and needles have also been provided for use in a low fidelity environment.
- Medications
    - Vitamin K injection
    - Erythromycin ointment
    - Hepatitis B vaccine
    - Acetaminophen drops

QR CODES

START	REPORT	PARENT	FACILITATOR
PATIENT ID	HEART SOUNDS	LUNG SOUNDS	BOWEL SOUNDS
RESPIRATORY COUNT	UMBILICUS WITH CLAMP	SECURITY BAND	NEWBORN SCREENING CARD
ANTERIOR HEAD TO TOE	POSTERIOR HEAD TO TOE	CHEST CIRCUMFERENCE VIDEO	HEAD CIRCUMFERENCE VIDEO

AXILLARY TEMP A	AXILLARY TEMP B	HEARING SCREEN	COMPLETED NEWBORN SCREENING CARD
HAND GRASP	TONIC NECK	STEPPING	BABINSKI
FOOT ANATOMICAL LOCATION FOR BLOOD DRAW A	FOOT ANATOMICAL LOCATION FOR BLOOD DRAW B	PARENT/BABY SECURITY BAND	HOT PACK
INJECTION SITE (ACCURATE)	INJECTION SITE (INACCURATE)	BLOOD GLUCOSE LOCATION	SYRINGE INSULIN
SYRINGE 1 ML	SYRINGE 3 ML	SYRINGE 10 ML	SYRINGE 20 ML

NEEDLE 18G 1.5IN	NEEDLE 22G 1.5 IN	NEEDLE 23G 1IN	NEEDLE 25G 5/8 IN
MED PREP CANNULA	VITAMIN K	ERYTHROMYCIN OINTMENT	HEPATITIS B
ACETAMINOPHEN DROPS			

TEACHING PLAN

PREBRIEF

The facilitator should lead this portion of the simulation. The following steps will guide you through Prebrief.

- Scan the **QR Code: "Scan to Begin"** while students are in Prebrief.
- "Meet Your Patient" (on iPad) and explain how the iPad works in the simulated learning environment including:
    - Explain how to use the iPad scanner and QR codes. Remind students that there are multiple QR codes in the simulation, but they should only scan them if they think it will provide data necessary for their assessment and evaluation of the patient.
    - For some scenarios, it may be helpful to tell students where the QR Code are located. For others, you may want students to "find" the QR Codes during their assessments. This is your choice.
    - Describe how a QR Code sound will work in the scenario. Show them how to use the ARISE "stethoscope" and the symbol on the QR Code that signifies when a QR Code is audio 🔈. Example: **QR Code: Heart** 🔈
    - As the facilitator, you should be aware that throughout the simulation some QR codes are necessary to the programming of the iPad content. Directions for which QR codes are required (to be scanned) in each state are listed under each state of the documentation below. The QR codes are also in **BOLD** type.
    - Level tab – This tab "tells" the content in the iPad to change to what is needed for the next state of a simulation. It is used a few times in this scenario after the provider is notified to display new orders (those just given over the phone) and lab results, etc…
- Discuss the simulation "Learning Objective(s)" (on iPad) as well as any other Prebrief materials
- Get "Report" on iPad
    - Possible Facilitator Questions
        - What is a NSVD?

        - What is the impact of Mom being Rh negative and this baby Rh positive?
        - What is the potential impact of mom having Group B strep on the baby, if not treated with antibiotics appropriately?
        - Interpret the meaning of "Apgars 9 and 9."
        - Why is Vitamin K administered at birth?
        - Why is Erythromycin ointment administered at birth?
        - Why are voids and stools monitoring closely by nursing?
        - Interpret reported vital signs in terms of expected vital signs for newborns
- View Parent video
    - How will you respond to the dad's questions about breastfeeding?
        - Facilitator note: A Breastfeeding handout is provided under the Patient Education tab.
    - How will you respond to the dad's question about circumcision? What type(s) of pain management is used during circumcision?
        - Facilitator Note: A Circumcision handout is provided under the Patient Education tab.
- The facilitator should allow time for students to look through the information provided on the iPad tabs, which are also described below. Potential guided discussion questions are provided underneath the tabbed data.

PATIENT PROFILE

Displays Profile information as described above.

PRENATAL RECORD

Date	8 wk	16 wk	20 wk	24 wk	28 wk	32 wk	36 wk	38 wk	40 wk
Weeks Gestation	8w3d	16w5d	20w2d	24w5d	281d	32w6d	36w1d	38w	40w
Weight	156 lb	158 lb	161 lb	166 lb	169	173	178	180	182
BP	110/	112/	118/	114/	116/	120/	122/	124/	126/

	64	68	72	70	76	72	74	76	76
Fundal height	---	16 cm	20 cm	24 cm	28 cm	33	37	39	41
Position/ Presentation	---	---	---	vtx	vtx	vtx	vtx	vtx	vtx
Station	---	---	---	---	---	---	-3	-3	-2
FHT	---	150	168	132	150	156	132	144	156
Edema	neg	neg	neg	neg	1+	1+	2+	2+	2+
Urine glucose and protein	---	neg	neg	neg	neg	neg	neg	neg	Neg
Contractions	---	---	---	---	---	---	---	---	+
Fetal Activity	---	---	---	Pos	Pos	Pos	Pos	Pos	Pos
Non-stress test	---	---	---	---	---	---	---	---	---
Provider	BB	BB	BB	BB	BB	BB	BB	BB	BB

Progress Notes

Date/Time	Note
8 wks	First prenatal visit; no complaints, excited regarding pregnancy. --- BB
12 wks	Missed appointment; called and stated had mandatory call at work. --- BB
16 wks	Doing well, denies any complaints. Reviewed 2nd semester changes and to schedule 20 week ultrasound. --- BB
20 wks	Ultrasound prior to appointment confirmed due date. Has backache, will try occasional Tylenol and stretching exercises. --- BB
24 wks	Backache improving, feeling quickening. Discussed prep for GCT at next appointment. --- BB
28 wks	1+ edema, worse after shift standing at work. Discussed L&D prep classes. GCT and Rhogam today. --- BB
32 wks	Edema same, trying to keep legs elevated after work. Discussed pain management option for L&D, prefers IM, IV meds. Possible epidural OK. Group B strep culture at next appointment. No herpes breakouts during pregnancy. --- BB
36 wks	Discussed signs of preterm labor and when to go to L&D. --- BB

38 wks	Discussed need for IV antibiotics in labor due to positive Group B strep culture. --- BB
40 wks	Reports some occasional Braxton Hicks contractions. Feels baby moving frequently. Discussed birth plan and desire for epidural. ----BB

Suggested Facilitator Question:

- Review Prenatal Record and identify and risk factors for the newborn.

PROTOCOLS

Students may view 4 different protocols:

- **Glucose Screening**: A glucose screening protocol is provided here. It is also available for printing in Appendix A.
- **Bilitool**: This links to the online bilirubin calculator at www.bilitool.org
- **Car Seat Tolerance Test**: This links to an article describing how to perform this test, what is considered a "fail," and potential interventions.
- **Congenital Heart Disease Screening**: This links to the WiSHINE Protocol.

Suggested Facilitator Questions:

- Does this newborn qualify for glucose screening according to the information you received in report?
- Are any clinical signs present that indicate hypoglycemia at this time?
- Describe how transcutaneous bilirubin results are entered in the Bilitool to establish risk of jaundice
- When is a car seat tolerance test required before discharge?
- What parameters should be monitored during car seat tolerance testing?
- Describe how a car seat tolerance test is performed and what constitutes a "fail" meaning additional interventions are required.
- What follow-up is required for a baby that fails the car seat tolerance test?
- Describe how oxygen saturations are used to screen for congenital heart disease
- When should screening for congenital heart disease be administered to newborns?

- What criteria indicate failing the critical congenital heart disease (CCHD) algorithm?
- What follow-up is required if the infant fails the CCHD screening?

L&D RECORD

A copy of the L&D record is provided here. It is also available for printing in Appendix B.

Suggested Facilitator Questions:

- What important information should be noted from the labor and delivery record that might impact the care of the newborn?
- What is important regarding Group B strep and antibiotic dosing for the newborn?
- What are your nursing concerns if Fentanyl was given one hour before delivery?
- If membranes have ruptured for greater than 24 hours, what are your newborn concerns?
- What are your newborn concerns if polyhydramnios or oligohydramnios were present?
- Interpret the Apgar scores at 1 and 5 minutes.

GESTATIONAL AGE ASSESSMENT

Students may click on a button that links them to the MedCalc: Ballard Maturational Assessment of Gestational Age.

Suggested Facilitator Questions:

- Review the Ballard Maturational Assessment Scale and scoring.
- What are the components of neuromuscular and physical maturity?
- Facilitator Note: Students can tap on appropriate column and calculator will calculate maturity rating.

ORDERS

Provider Orders

Date	Time	Order
Today	Now	**Routine Newborn Order Set**
		Vital Signs, Monitoring and Nursing Orders: -Assess newborn and obtain temperature, heart rate and respiratory rate immediately after birth and every 30 minutes for 2 hours, then every 4 hours for 24 hours, then every shift -Maintain temperature between 36.5 and 37.5 degrees Celsius utilizing one or more of the following interventions: drying; skin to skin contact; overhead warmers; swaddling; holding newborn -If a newborn has a deviation in temperature, pulse or respiratory rate, reassess in 30 and 60 minutes. Notify physician if reassessment is outside normal limits. -After 24 hours of age, perform critical congenital heart disease screening located in Protocols -Document weight, length and head circumference -Document if baby is SGA (small for gestational age) or LGA (large for gestational age) using Growth Charts -Weight infant daily - Monitor intake and output -Lactation consultation for all breastfeeding mothers -Provide oxygen via mask, hood, cannula or blow by for oxygen saturations less than 90%, respiratory distress or cyanosis -Obtain glucose according to hypoglycemia protocol; notify pediatrician if glucose is less than 40
		Prior to Discharge: -Newborn screening after 24 hours; if done before 24 hours then make arrangement for repeat screen to be done at physician's office -Car seat monitoring test on infants born prior to 37 weeks gestation; infants less than 2500 grams at time of discharge, or as ordered by physician -Transcutaneous bilirubin level prior to discharge; serum bilirubin PRN -Ensure pulse oximetry/cardiac screening is documented prior to discharge -Hearing screen prior to discharge

		Notify provider for: -Infants less than 37 weeks gestation -Temperature less than 36.5 degrees Celsius after a trial of warming or greater than 38 degrees Celsius -Heart rate less than 80 beats per minute, or greater than 170 beats per minute, or abnormal cardiac rhythm -Respiratory rate less than 30/minute or greater than 60/minute; use of accessory muscles; unequal breath sounds; abnormal breathing patterns; abnormal oximetry; or changes in skin color requiring ongoing oxygen therapy -Lethargy or poor feeding -Jaundice before 24 hours or marked jaundice at any time -Apnea, cyanosis, jitteriness or sluggishness -Abdominal distention -No urine or stool by 24 hours -Feeding intolerance, especially first feeding, with vomiting or aspiration -Any unusual symptoms observed by nursing
		Medications -Phytonadione (Vitamin K) 1 mg IM within 1 hour of birth for prevention of bleeding; if infant is less than 36 weeks give 0.5 mg -Erythromycin 0.5% ophthalmic ointment. Apply 1 cm ribbon to both eyes within one hour of birth for eye infection prophylaxis - Vitamin D 400 international units PO once daily to begin after 24 hours of age - For Hepatitis B surface Antigen negative mothers: After parental permission, give Hepatitis B vaccine 0.5 ml IM any time before discharge -For Hepatitis B surface Antigen positive mothers: Give Hepatitis B vaccine 0.5ml IM and Hepatitis B Immune Globulin 0.5ml within 12 hours of birth -Acetaminophen 15mg per kg PO every 4 hours for procedural pain. Maximum of 4 doses. -Sucrose 24%: Dose according to gestational age, administered orally, every 90 minutes as needed for procedural pain
		Diet/Nutrition: -Breastfeeding on demand -Formula feed 20 cal formula with iron on demand -If baby is less than 36 weeks, contact physician for feeding orders

		Labs: -ABO/Rh and Direct Antiglobulin Test blood test (cord blood sample) for newborns of Rh negative mothers -Collect meconium and test for all infants who are at risk for fetal drug exposure -Obtain transcutaneous bilirubin or order fractionated serum bilirubin level on any jaundiced infant PRN
		Circumcision: Inquire regarding circumcision and notify MD if parent desires PRE-PROCEDURE: -Have available Lidocaine 1% without epinephrine or Bupivicaine 0.25% without epinephrine -60 minutes prior to procedure: Apply 1-2 grams of EMLA to the base and distal half of penis 30 to 60 minutes prior to procedure: administer Acetaminophen 15mg/kg PO DURING PROCEDURE: -Have Gel Foam Silver Nitrate Sticks available at bedside -Administer Sucrose 24% 1 ml PO immediately prior to or during procedure PRN for discomfort POST-PROCEDURE: -Check circumcision site for bleeding every 15 minutes x 2 then every 30 minutes x 2 -Apply Vaseline gauze 4x4 for Gomko circumcisions; reapply with every diaper change x 48 hours -Acetaminophen 15 mg/kg PO every 6 hours PRN for discomfort x 24 hours
		---- P. Datrician, MD

Suggested Facilitator Questions:

- What are some of the diseases included in the State of Wisconsin's newborn screening test?
- Facilitator Note: Student can scan **QR Code: Newborn Screening Card** to view the card and **QR Code: Newborn Screening Completed Card** to view it completed.

- Why does the State of Wisconsin's newborn screening need to occur after 24 hours after birth?
- Describe how Transcutaneous bilirubin monitoring, Car Seat Tolerance and Congenital Heart Disease screening is performed. (Student can view associated protocols under the Protocol tab.)
- Describe how a hearing test is performed on a newborn. (Student may scan **QR code: Hearing Screen** to view a newborn experiencing a hearing test.)
- What is a Direct Antiglobulin Test and why is it performed?
- Describe the different types of circumcision procedures.
- Facilitator Note: Additional information is provided on the Circumcision handout under the Patient Education tab.
- When is a baby considered SGA? LGA? (Student may view to Growth Record tab to view growth charts.)
- When is newborn weight loss % concerning?
- What is normal output during the first week after birth?
- What stool changes are expected the first week of birth?

MAR

Medication Administration Record

Scheduled		
Phytonadione (Vitamin K) 1 mg IM within one hour of birth	**Due**	**Last Given**
		2 hours ago
Erythromycin 0.5% ophthalmic ointment. Apply 1 cm ribbon to both eyes within one hour of birth	**Due**	**Last Given**
		2 hours ago
Vitamin D 400 international units PO to begin after 24 hours of age	**Due**	**Last Given**
	Tomorrow	
Hepatitis B vaccine 0.5 ml IM before discharge	**Due**	**Last Given**
	Before discharge	
PRN		

Acetaminophen 15 mg/kg PO for post procedural pain	**Last Given**
Sucrose 24%: 1 ml PO every 90 minutes as needed for procedural pain	**Last Given**
Hepatitis B Immune Globulin 0.5 ml within 12 hours of birth if mother is Hepatitis B surface Antigen positive	**Last Given**
EMLA cream PRN for circumcision pre-procedure	**Last Given**

Suggested Facilitator Questions:

- Where is the proper anatomical location to administer an IM injection to a newborn?
- What syringe size and needle size should be used?
- Facilitator Note: Several **QR Codes** for injection sites, syringe sizes and needle sizes are available for student selection if desired in low fidelity simulation

GROWTH RECORD

Growth records are available here for Head-Weight and Length-Weight. Printable versions are available in Appendix C.

Suggested Facilitator Question:

- Plot the newborn's percentiles using the growth charts provided

VITALS

An enterable form is available here for student input.

Suggested Facilitator Questions:

- What are the normal ranges for newborn vital signs?
- When are blood pressures performed on an infant?

FLACC SCALE

Categories	Scoring		
	0	1	2
Face	No particular expression or smile	Occasional grimace or frown, withdrawal, disinterested	Frequent to constant quivering chin, clenched jaw
Legs	Normal position or relaxed	Uneasy, restless, tense	Kicking, or legs drawn up
Activity	Lying quietly, normal position, moves easily	Squirming, shifting back and forth, tense	Arched, rigid or jerking
Cry	No cry (awake or asleep)	Moans or whimpers, occasional complaint	Crying steadily, screams or sobs, frequent complaints
Consolability	Content, relaxed	Reassured by occasional touching, hugging or being talked to, distractable	Difficult to console or comfort
Each of 5 categories is scored from 0-2 which results in total score between 0-10			

Suggested Facilitator Question:

- How is pain assessed in an infant?

DAILY RECORD

Vitals	Today, 1 hr ago				
Pulse	148				
Resp. Rate	56				
Temp (°C)	37 axillary				

Assessments	
FLACC Scale	2
Weight	Decreased 1-2% from birth weight
Respiratory status	Lungs clear bilaterally
Cardiac status	Apical heart rate strong, slight acrocyanosis present
Musculoskeletal	No caput, no cephalohemtoma noted, clavicles intact, anterior, post fontanel present
Neuro	Awake and alert, palmar and plantar grasp noted
Urogenital	Voided, testes descended bilaterally
GI	Meconium stool noted, bowel sound present all 4 quadrants, abdomen soft
Skin assessment	Color pink, no rashes noted
Nutrition	Breastfed X20 minutes, with occasional swallow heard at breast
Safety assessment	ID bracelets, safety secure band on, on back in crib
Bonding	Mother holding infant

Suggested Facilitator Question:

- Interpret the meaning of assessment documentation.

LABS

No reports available.

PATIENT EDUCATION

Handouts on breastfeeding and circumcision are available here. Printable versions are located in Appendix E and F.

INFORMED CONSENT

An unsigned informed consent form for circumcision is located here. A printable version in available in Appendix G.

SIMULATIONS

Several videos/images demonstrating newborn assessments are available under this tab. QR codes are also available for these assessments. Suggested facilitator questions are provided under each.

- **Head to Toe Anterior**
  - "What other reflexes could be elicited during this assessment?"
- **Head to Toe Posterior**
  - "What assessments are done posteriorly?"
- **Head Circumference**
  - "What other assessments of the head are important to obtain?"
  - "What is the difference between caput and cephalohematoma?"
- **Chest Circumference**
  - "What observational assessments of the chest are important to obtain?"
- **Respiratory Rate**
  - "What are normal and abnormal parameters of respiratory assessments of the newborn?"
- **Axillary Temperature**
  - "How should an axillary temperature be obtained on a newborn?"
  - "If the temperature reading is lower than expected, what are your next actions?"
  - "How can the nurse reduce the effects of cold stress?"
  - What are the four types of heat loss?
- **Heart Sounds**
  - What are the normal parameters for heart sounds in an infant?"

- **Lung Sounds**
    - "What are the normal parameters for lung sounds in an infant?"
- **Bowel Sounds**
    - "What are the normal parameters for bowel sounds in an infant?"
- **Umbilicus**
    - "How many vessels are in the umbilical cord?"
    - "What skin care is required for the newborn, including the umbilicus?"
- **Security Bands**
    - "What safety checks are required using security bands?"
- **Hand Grasp**
    - "When do the various newborn reflexes disappear?"
- **Babinski**
- **Tonic Neck**
- **Stepping**

LEVEL

Level 1 is displayed here.

SCANNER

Use this to scan available QR Codes.

EXIT

The message, "Are you sure you want to exit? All data will be lost? Yes/No" is displayed until the **QR Code: Facilitator** is scanned.

STATE 1

NEWBORN ASSESSMENT

- Patient Overview
    - Students assess the infant and implement the Routine Newborn Order Set. Simulated assessments of reflexes and other newborn assessments are provided under the Simulation tab and also as QR codes.
- Expected Student Behaviors
    - Provide appropriate hand hygiene throughout scenario
    - Introduce themselves to the parent(s)
    - Verify patient identity by scanning **QR code: Security band**
    - Verify parent and baby security bands match by scanning **QR code: Parent baby security bands**
    - Accurately prioritize and implement Newborn Orders
    - Educate parent about breastfeeding and what to monitor in baby. May refer to Patient education handout.
    - Verify informed consent for circumcision and provide education to parent. May refer to the Patient education handout.
    - Obtain vital signs accurately and interpret according to expected newborn vital signs
        - May scan **QR code: Axillary Temp A** (correct) or **Axillary Temp B** (incorrect) to demonstrate the procedure b
    - Provide parent education about breastfeeding and expected output
    - Perform assessments or discuss simulated assessment videos
- Technician Prompts
    - While role playing the father, continue to ask questions about breastfeeding and circumcision such as:
        - “How do we know if he’s getting enough milk?”
        - “We’re not sure about a circumcision. Isn’t that painful for him?”
- Suggested Facilitator Questions

- What is the correct method of obtaining an axillary temperature in a newborn?
    - Note: **QR Codes: Axillary Temp** are provided to view a correct and an incorrect method of obtaining an axillary temp
    - When are you concerned about a temperature in a newborn?
- How can an accurate respiratory rate be obtained in a newborn?
    - Note: **A QR Code: Respiratory Rate** is provided to practice counting irregular respirations over 60 seconds.
    - What is anticipated about the rhythm of respirations?
    - What is the anticipated range of respirations?
    - What types of lung sounds are concerning in an infant that require follow-up?
- Listen to heart and lung sounds.
    - Note: **QR Code: Heart sounds and QR code: Lung Sounds** are provided. It is recommended to use earbuds for maximum sound quality.
    - What type of heart sounds are concerning in an infant that require follow-up?
    - What is the anticipated heart rate in a newborn?
- Listen to bowel sounds
    - Note: **QR Codes: Bowel Sounds** are provided. What sounds do you anticipate in a newborn?
    - What sounds would be concerning and require follow-up
- Tap Simulation Tab (or scan associated QR Codes):
    - View the Head to Toe Anterior assessment video by tapping Simulations tab
        - What should be noted while observing an infant from head to toe anteriorly?
        - Tap the Gestational Age Assessment tab and perform physical maturity scoring
    - View the Head to Toe Posterior assessment video

        - What should be noted while observing an infant from head to toe posteriorly?
    - View the Head and Chest Circumference videos
        - How is an infant's head accurately measured?
        - How is an infant's chest accurately measured?
        - Tap the Growth Record tab and plot the newborn's findings on the graphs provided
    - View the various newborn reflex videos
        - Evaluate the newborn's reflex: is it within normal limits?
        - When do the newborn reflexes disappear?
        - Concerning sleep/wake states, when would be a good time to assess reflexes on a newborn?
    - View the security bands picture
        - How is infant safety managed using the security bands?
- Other Optional QR codes that can be used during the scenario according to Facilitator discretion:
    - Scan the **QR Code: Newborn Screening Card**
        - What tests are performed during newborn screening? (Note: see references for link to Wisconsin Newborn Screening information.)
        - How is the blood sample obtained and placed on the card?
    - Scan the **QR Code: Hot Pack**
        - Explain why hot packs are often used before blood draws on infants
    - Scan the **QR Codes: Injection Site A (accurate), Injection Site B (inaccurate)** and **Blood Glucose Location**. Explain proper location sites for injections and blood draws for infants for glucose readings and newborn screenings.
    - If Hepatitis B immunization will be administered, ask student to select the correct size syringe and needles. **QR codes** for various

syringe sizes and **needle** sizes are available for use in a low fidelity environment.

- **QR codes** for various medications on the Order set are available, or more medication information can be obtained by tapping on the hyperlinks within the MAR.

- Tabbed iPad content and changes:
  - When student has performed expected behaviors, scan the **QR Code: Facilitator**. A message will appear "You have been approved to proceed. You have completed the learning objectives for this scenario and may exit."

EXIT

- Students may then tap on Exit and view the message, "Scenario objectives have been met. Are you sure you want to exit the game? Yes/No."

DEBRIEF

Nothing needed from the iPad.

QUESTIONS

1. How did you feel this scenario went?
2. Review learning objective: Maintain a safe and effective care environment for a newborn patient
    a. How did you maintain a safe, effective environment today?
3. Review learning objective: Integrate evidence-based practice while using the nursing process to care for a newborn
    a. Discuss what assessments and interventions are based on evidence-based practices.
4. Review learning objective: Demonstrate components of a head to toe newborn assessment, including anticipated newborn reflexes.
    a. Outline the basic head to toe assessment for a newborn
    b. Review the newborn reflexes expected on assessment
5. Review learning objective: Participate in procedures used in newborn assessment
    a. Describe Apgar scores and what they mean
    b. Describe Ballard's Gestational Assessment and how the results are used
    c. Describe Newborn Screening and what is tested
6. Review learning objective: Safely administer medications to a newborn
    a. What medications were immediately administered at birth and why?
    b. When is the Hepatitis B Immune Globulin administered and why?
    c. Calculate the safe dose of Acetaminophen for this infant (see the MAR for information)
    d. How does sucrose help with procedural pain in newborns?
    e. Why is Vitamin D administered to newborns?
    f. What is EMLA cream and how is it administered pre-circumcision?
7. Review learning objective: Provide patient education to family members

   a. What information about infant monitoring is important to provide when the mother is breastfeeding?

8. Tie this scenario to the nursing process:
   a. a. Identify 3 priority nursing problems you identified.
   b. b. Create a patient centered goal for each nursing problem you identified.
   c. c. Describe focused assessments for each nursing problem.
   d. d. Discuss nursing interventions for each nursing diagnosis.
   e. e. Re-evaluate the simulation in terms of the nursing process; what was actually accomplished? What could be improved in the future?
9. Summarize/Take Away Points: "In this scenario you completed routine assessments on a newborn patient. What is one thing you learned from participating in this scenario that you will take into your nursing practice?" (Ask each student to share something unique from what the other students share.)

NOTE: Debriefing technique is based on INASCL Standards for Debriefing and NLN Theory-Based Debriefing by Dreifuerst.

SURVEY

Print this page and provide to students.

Students, please complete a brief (2-3 minute) survey regarding your experience with this ARISE simulation. There are two options:

1. Use QR Code: Survey
    a. Note: You will need to download a QR Code reader/scanner onto your own device (smartphone or tablet). There are multiple free scanner apps available for both Android and Apple devices from the app store.
    b. This QR Code will not work in the ARIS app.

SURVEY

2. Copy and paste the following survey link into your browser.
    a. https://ircvtc.co1.qualtrics.com/SE/?SID=SV_6Mwfv98ShBfRnBX

APPENDIX A: GLUCOSE SCREENING PROTOCOL

GLUCOSE SCREENING PROTOCOL

Glucose screening is to be completed for infants in the following categories who are at **increased risk** for hypoglycemia:

- Born to mothers with gestational diabetes or diabetes mellitus
- Large for gestational age (LGA) (>8 pounds 12 ounces or >3969g)
- Small for gestational age (SGA) (<5 pounds 12 ounces or <2608g)
- Premature (<37 weeks gestation)
- Low birth weight (<2500g)
- Smaller twin when sizes are discordant
- Polycythemia (hct >70%)
- Hypothermia
- Low Apgar scores (<5 at one minute, <6 at five minutes)
- Stress (sepsis, respiratory distress, etc.)

Glucose screening is to be completed for infants with **clinical signs** consistent with hypoglycemia:

- Tremors, jitteriness, irritability
- Exaggerated Moro reflex
- High pitched cry
- Lethargy, listlessness, hypotonia
- Cyanosis, apnea, tachypnea
- Hypothermia, temperature instability
- Poor suck, refusal to feed

For an at risk or symptomatic infant:

☐ Obtain blood sugar within 30-60 minutes of birth

- If bedside blood sugar is less than 40: order serum blood glucose

    - If bedside blood sugar is 26 to 40 mg/dL and the infant is asymptomatic: give 20cc expressed breastmilk or formula via nipple or gavage.

    - If the bedside blood sugar is less than 25 mg/dL, administer intravenous glucose minibolus 200 mg/kg (dextrose 10% at 2 mL/kg) and/or intravenous infusion at 5 to 8 mg/kg per minute (80 - 100 mL/kg/day) as needed to reach the target of 45 mg/dl.

    - Repeat bedside blood sugar 30 minutes after feeding.

        - If the level is 35 to 45 mg/dL: refeed and check again in 1 hour.

    - Feeds should be continued every 2 to 3 hours, with glucose screening taking place before each feed. The target glucose level is 45 mg/dL or higher before routine feeds.

-

APPENDIX B: L&D RECORD

Patient Name: Olivia Brooks
DOB: 1/29/19xx
MR#: 12919

MNRS Maternal/Newborn Record System™

Labor and Delivery Summary

Page 1 of 2

To order call: 1.800.245.4080 Re-order No. 5712N

Labor Summary

G	T	Pt	A	L	Type and Rh	EDD
2	0	0	1	0	A neg	xx/xx/20xx

Prenatal Events

None

No Prenatal Care Late Prenatal Care
Preterm Labor (less than or equal to 37 Weeks)
Postterm Labor (greater than or equal to 42 Weeks)
Previous Cesarean
Prenatal Complications ■ Refer to Prenatal Records

Intrapartal Events

Maternal

Febrile (greater than or equal to 100.4˚F/38˚C)
Bleeding—Site Undetermined
Preeclampsia (mild) (severe)
Seizure Activity See Labor Progress Chart
■ Medications **None**

Date	Time	Medication	Dose	Route
Yesterd	0830	Penicillin	5 mil	IV
Yesterd	1230	Penicillin	2.5 mil	IV
Yesterd	1630	Penicillin	2.5 mil	IV
Yesterd	2030	Penicillin	2.5 mil	IV
Yesterd	1930	Fentanyl	100 mcg	IV

Transfusion _____ units
Blood Component _____

Amniotic Fluid

■ SROM AROM Date yesterda
Time 0900
Premature ROM Prolonged ROM
■ Clear
Meconium-Stained (describe) _____
Bloody
Foul Odor
Cultures Sent _____ Time _____
Polyhydramnios
Oligohydramnios

Placenta

Placenta Previa
Abruptio Placenta

Labor

Precipitous Labor (less than 3 hrs)
■ Prolonged Labor (greater than or equal to 20 hrs)
Prolonged Latent Phase
Prolonged Active Phase
Prolonged 2nd Stage (greater than 2.5 hrs)
Secondary Arrest of Dilatation
Induction **None** Cervical Ripening
AROM Oxytocin
Augmentation **None**
AROM Oxytocin

Labor Summary (Cont'd.)

Fetus

Gestational Age (Wks) 40 By Dates
40 By Ultrasound

Presentation **Position**

R	O	A

■ Vertex
Face/Brow
Breech Frank Complete
Single Footling
Double Footling
Transverse Lie Back-up Back-Down
Compound
Unknown
Cephalopelvic Disproportion (CPD)
Cord Prolapse
Dystocia _____

Monitor **None** FHR UC
External x x
Internal
Fetal Bradycardia
Fetal Tachycardia
Sinusoidal Pattern
■ Accelerations ■ Spont. Uniform
Decelerations ■ Early Late
Variable Prolonged
Scalp pH less than or equal to 7.2

FM Discontinued _____ Time _____
FHR Prior to Delivery ____ bpm Time _____

Delivery Data

Support Person Present ■ Yes ☐ No
Delivery Location
■ LDR ☐ LDRP ☐ DR ☐ OR
☐ Birthing Center ☐ _____

Method of Delivery

■ Vaginal ☐ VBAC
Number Previous Cesareans _____
■ Vertex
■ Spontaneous
☐ Assisted ☐☐☐ to ☐☐☐
☐ Manual Rotation
☐ Forceps (type _____)
☐ Outlet ☐ Low ☐ Mid
☐ Vacuum Extraction Duration 10 Min.
Degree of suction _____ kg/cm²
☐ Breech (type _____)
☐ Spontaneous
☐ Partial Extraction (assisted)
☐ Total Extraction
☐ Forceps Assist
☐ Piper ☐ _____

Method of Delivery (Cont'd.)

☐ Cesarean
☐ Scheduled ☐ Emergency
☐ Primary ☐ Repeat (x _____)
☐ Other
Operative Indication
☐ Previous Uterine Surgery
☐ Failure to Progress
☐ Placenta Previa
☐ Abruptio Placenta
☐ Fetal Malpresentation _____
☐ Non reassuring FHR Pattern _____
☐ Other _____
Uterine Incision
☐ Low Cervical, Transverse
☐ Low Cervical, Vertical
☐ Classical
Hysterectomy ☐ No ☐ Yes
Tubal Ligation ☐ No ☐ Yes
Skin Incision
☐ Vertical
☐ Pfannenstiel

Episiotomy

☐ None
☐ Midline
☐ Mediolateral L R
Laceration/Episiotomy Extension ☐ None
■ Periurethral
☐ Vaginal
☐ Cervical
☐ Uterine
☐ Perineal ☐ 1˚ ☐ 2˚ ☐ 3˚ ☐ 4˚
Repair Agent Used _____
☐ Vagina free of sponges

Placenta

Delivery Time _____
■ Spontaneous
☐ Expressed
☐ Manual Removal
☐ Adherent (type _____)
☐ Uterine Exploration
☐ Curettage
Configuration
☐ Normal
☐ Abnormal _____
Weight _____ gms
Disposition _____

Cord

■ Nuchal Cord (x 1)
☐ True Knot Length _____ cms
☐ 2 Vessels
■ 3 Vessels
Cord Blood ☐ To Lab ☐ Refrig ☐ Discard
Lab ☐ Type + Rh ☐ Cultures ☐ Coombs
☐ pH ☐ _____

Surgical Data

Sponge Counts Correct
☐ N/A ■ Yes ☐ No _____
Needle Counts Correct
☐ N/A ■ Yes ☐ No _____

Kathy Smith, RN (Signature) Date Completed xx /xx /xx

Form 5712N © BRIGGS, Des Moines, IA 50306 (800) 245-4080 www.BriggsCorp.com R1205 PRINTED IN U.S.A.

LABOR AND DELIVERY SUMMARY (Page 1 of 2)

2 of 2

Olivia Brooks
DOB: 1/29/19xx
MR#: 12919

MNRS Maternal/Newborn Record System™

Labor and Delivery Summary

Page 2 of 2

To order call: **1.800.245.4080** Re-order No. **5712N**

Delivery Data (Cont'd.)

Surgical Data (Cont'd.)

Vaginal Pack Count Correct
☐ N/A ☐ Yes ■ No _____
Estimated Blood Loss 300 mL

Delivery Anesthesia

☐ None
☐ Local ☐ Pudendal ☐ General
■ Epidural ☐ Spinal

Date	Time	Medication	Dose	Effect
Yesterd		per anesthesia		

Complications ☐ None

Delivery Medications ☐ None

Date	Time	Medication	Dose	Route Site	Init
Today	1015	pitocin	10	IV	KS

Chronology

	Date	Time	Total Time Hrs/Min	
EDD	xx/xx			
Admit to Hospital	yesterday	0800		
Membranes Ruptured	yesterday	0900		
Onset of Labor	yesterday	0800		
Complete Cervical Dilatation	today	0800	2 4	I
Delivery of Infant	today	1000	2	II
Delivery of Placenta	today	1010	10	III
			26 10	Total Labor

Infant Data ☐ Male ■ Female

ID/Band No. 90518
Condition ■ Alive ☐ Stable ☐ Fair ☐ Critical
☐ Stillbirth ☐ Antepartum ☐ Intrapartum
☐ Neonatal Death
Birth Order 1 of 1 2 3 4
Repeat Apgar every 5 min until score greater than or equal to 7

Apgar Score	1 min	5 min	10 min
Heart Rate	2	2	
Respiratory Effort	2	2	
Muscle Tone	2	2	
Reflex Irritability	2	2	
Color	1	1	
Total	9	9	

Scored by Kathy Smith, RN

Infant Data (Cont'd.)

Airway

■ Bulb Suction
☐ Suction Catheter Size _____ Fr
☐ Mouth Pressure _____
☐ Nose millimeters Hg
☐ Pharynx ☐ At Delivery
☐ Endotracheal Tube Size _____ Fr
☐ Meconium Below Cords Times _____

Breathing

■ Spontaneous
☐ O_2 _____ Liters
☐ Free Flow Time Init. _____
☐ PPV
☐ Bag/Mask Time Init. _____
☐ ET Tube Size _____ Fr Time Init. _____
☐ CPAP _____ millimeters
_____ minutes to First Gasp
_____ minutes to Sustained Respiration

Circulation

■ Spontaneous
☐ External Cardiac Massage
Time Initiated _____ Time Completed _____
_____ minutes for HR greater than 100
Heart Rate (bpm)
_____ Time _____
_____ Time _____
_____ Time _____

IV Access

☐ Umbilical Catheter
☐ Peripheral Line
Person Managing Resuscitation:

Neonatal Medications ☐ None

Date	Time	Medication	Dose	Route Site	Init
Today	1030	Vitamin K	1mg	IM	KS
Today	1030	Erythromycin	0.5	eyes	KS

Lab Data ☐ None Time _____

Blood Gases	Sent	Umb Art	Umb Vein
pH			
pO_2			
pCO_2			
HCO_3			

Test	Result
Dextrostix	

Initial Newborn Exam

Weight 3742 gms 8 lbs 4 ozs ☐ Deferred
Length 50.8 cms 20 ins ☐ Deferred
Head 33 cms 13 ins ☐ Deferred
Chest _____ cms _____ ins ☐ Deferred
Abdomen _____ cms _____ ins ☐ Deferred
Temp 98.6 ☐ Rectal ■ Axillary
AP 120 Resp 44 BP n/a
■ No Observed Abnormalities

Initial Newborn Exam (Cont'd.)

☐ Abnormalities Noted
☐ Meconium Staining ☐ Cephalhematoma
☐ Petechiae ☐ Other
Describe _____

Intake ☐ None
■ Breast Fed ☐ Formula ☐ Glucose Water
Output ■ None
☐ Urine ☐ Stool (type _____)
☐ Gastric Aspirate _____ mL per hour
Examined By kathy Smith, RN
Transfer ■ With Mother
☐ To Newborn Nursery
☐ To NICU
☒ mom's room
Date ____/____/____ Time _____
Mode of Transport _____

Delivery Personnel

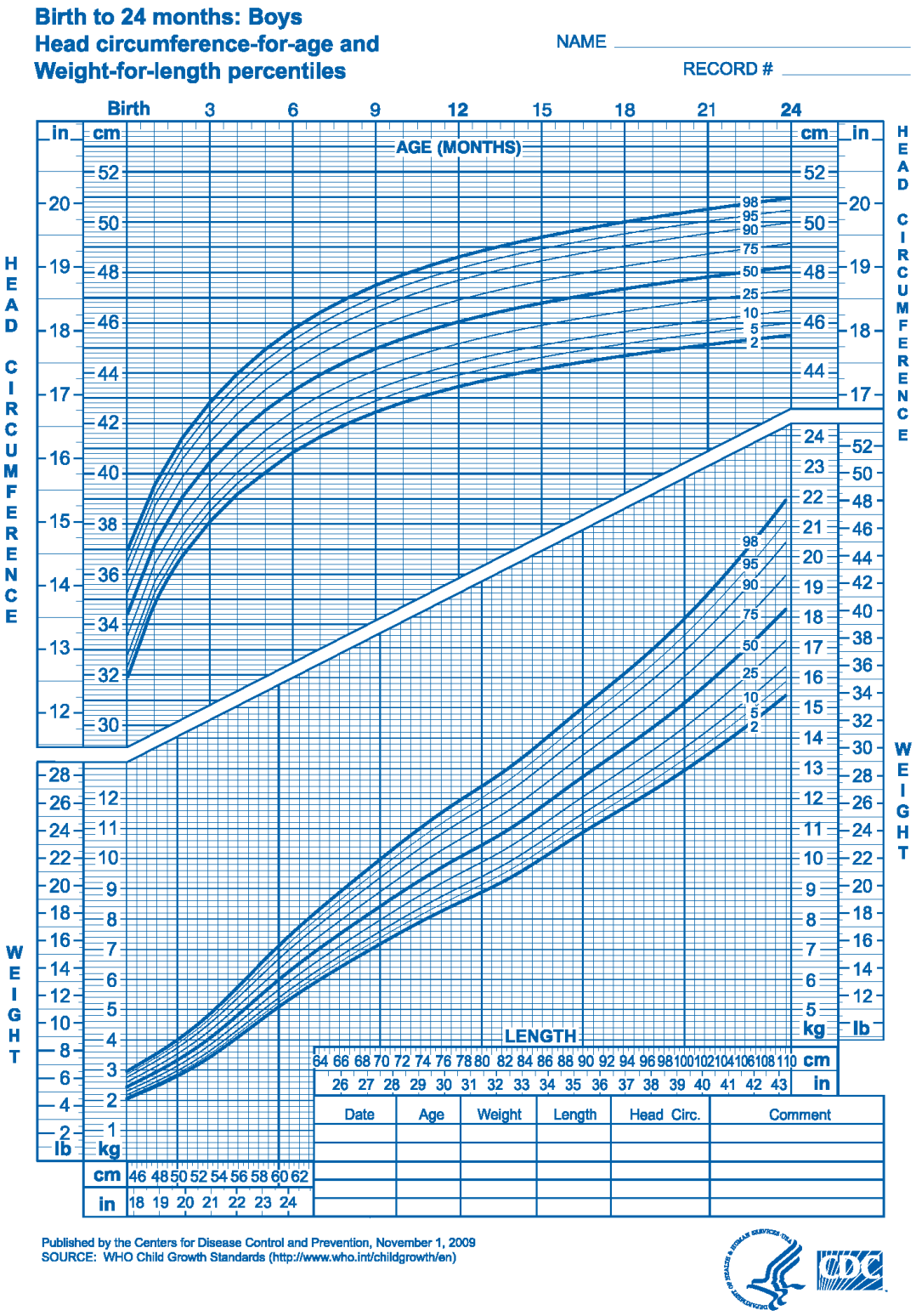
RN (1) Kathy Smith,RN
(2) Joe Olson, RN
Anesthesiologist/CRNA Mary Schneider
CNM _____
Physician—Attending B. Barker, MD
Physician—Assist (1) _____
(2) _____
Technician _____
Pediatric Provider _____
■ Notified ☐ Present at Birth
Others Present _____
Remarks

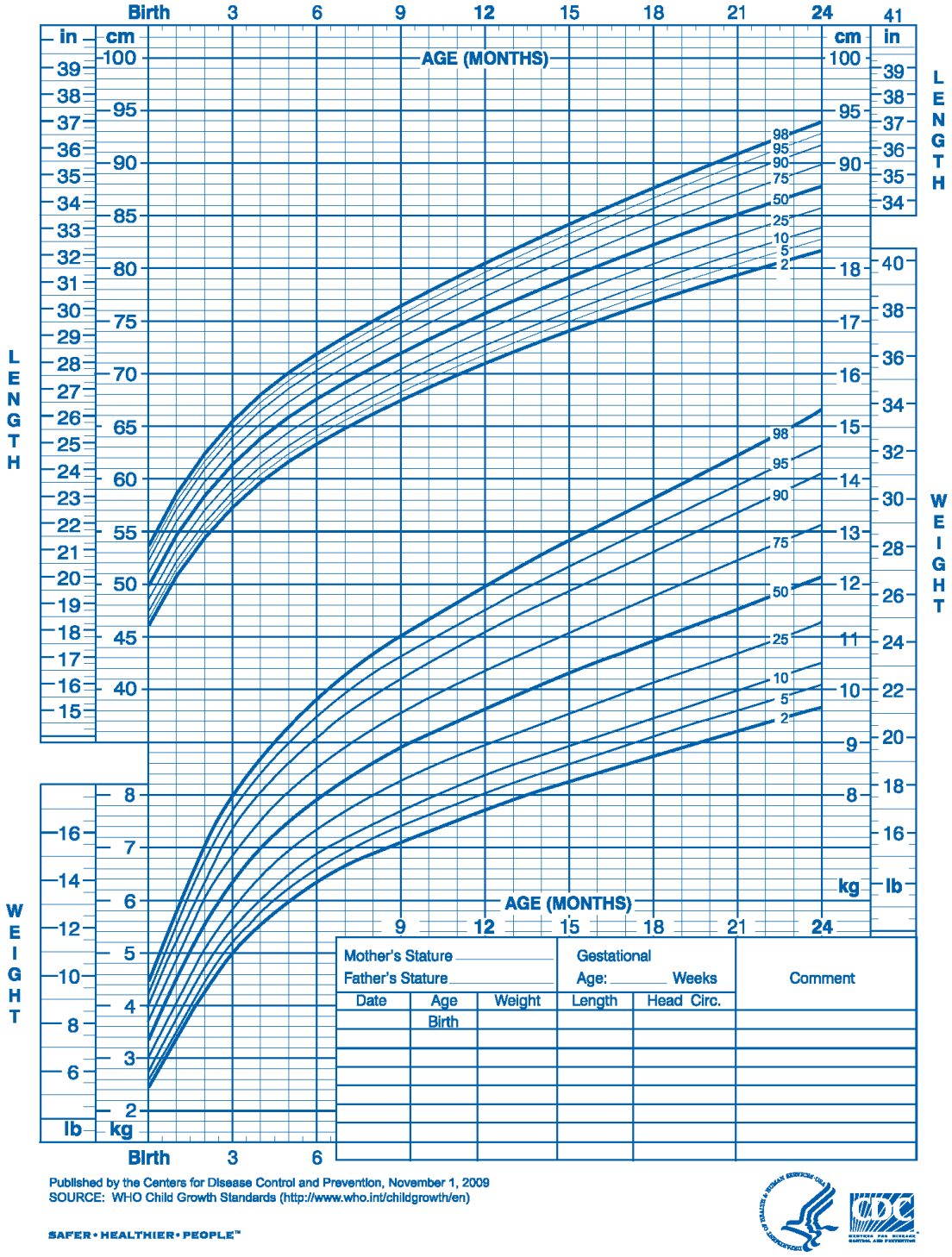
Kathy Smith, RN (Signature)
Date Completed xx / xx / xx

Form 5712N R1205 © BRIGGS, Des Moines, IA 50306 (800) 245-4080 www.BriggsCorp.com PRINTED IN U.S.A.

LABOR AND DELIVERY SUMMARY (Page 2 of 2)

APPENDIX C AND D: GROWTH CHARTS




Birth to 24 months: Boys
Length-for-age and Weight-for-age percentiles
NAME
RECORD #
AGE (MONTHS)
LENGTH
WEIGHT
Mother's Stature
Father's Stature
Gestational Age: Weeks
Comment
Date
Age
Weight
Length
Head Circ.
Birth
Published by the Centers for Disease Control and Prevention, November 1, 2009
SOURCE: WHO Child Growth Standards (http://www.who.int/childgrowth/en)
SAFER • HEALTHIER • PEOPLE™

APPENDIX E: BREASTFEEDING HANDOUT

SUCCESSFUL BREASTFEEDING FOR YOU AND YOUR BABY

START WITH A CALM BABY AND MOTHER

1. Feed Regularly. Feed your newborn regularly and often. Start with a feeding in the first hour of birth. All newborn babies need to eat frequently, watch the baby not the clock. Watch for feeding cues like sucking and rooting. Bring the baby to the breast frequently. Babies vary for time they take to nurse at each feeding.

2. Positioning. Allow your baby to take the lead. Support your baby's body with your arms. Allow your breast to fall naturally and help the baby line up under your breast with your nipple toward the baby's nose.

3. Skin to Skin, Hold your baby skin to skin for the first hour after birth and have the baby in your room during the hospital stay. Skin to skin has many benefits including bonding for mothers and babies, breastfeeding success, keeping the baby warm, stabilizing blood sugar levels. Nursing and medical procedures can be completed while the infant is skin to skin. Support people can assist with skin to skin too.

4. Breast Compression is a technique that can increase milk supply and get milk to a baby that is not latching as well. Please your hand behind the nipple and areola and compress you breast in a rhythmic fashion. This technique takes practice and a

lactation consultant can assist you with this. You can do it before, during and after infant feedings.

5. Aim your nipple toward the baby's nose. The baby will then reach for the nipple. Make sure your baby's moth is open wide. The baby's upper lip should barely brush past the top of the nipple. Support the baby's upper back and shoulders with your palm. Do not put pressure on the back of the baby's head.

6. Latching on. Let your baby feed as long as he wants to on the first breast. Some babies are more "efficient" than others, some like to nurse longer. Depending on how much milk a mother makes, a baby may not take the second side. Just make sure to switch between breasts when you start a new feeding. Listen for rhythmic, regular suck/swallow pattern that will let you know the baby has latched properly and milk is being exchanged between mother and infant.

    a. When your baby feeds from your breast, it should feel like a gentle pull, not a pinch or a bite. Look at your nipple after the feeding if your nipple changes shape when in the baby's mouth your infant may be pinching the nipple. Help your baby achieve a deeper latch.
    b. Baby's need to latch onto the underside of the breast, not the nipple.
    c. When your baby is done feeding on a breast, you shouldn't pull or even yank him away. Instead, insert your finger in his mouth so that his mouth releases your breast.

7. Burp your baby (optional). This isn't always necessary. Depending on how much air the baby takes in through the nose while it is nursing, you may or may not need to burp baby. If your baby is arching his back, squirming around, and looking uncomfortable, then he may be ready to get burped. Try to burp him in one of these ways:

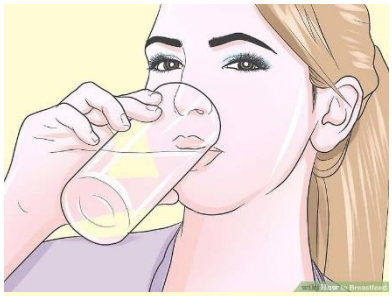
    a. Lift your baby toward your shoulder, with your hand on his head and neck for support. He should be facing the area behind you. Rub your baby's back with a firm and open hand to release the trapped air.
    b. Sit your baby on your lap and lean him forward, supporting his chest with the base of your hand and his chin and neck with your fingers. Massage his stomach with your front hand and gently pat his back with the hand on his back.
    c. Lie your baby on your lap with his head raised higher than his stomach. Gently pat his back until he burps.

8. Getting enough milk. A newborn baby will mostly nurse and sleep. You know when the baby is "getting enough" when there are 8-10 wet and or dirty diapers by the end of the week.

9. Maintain a healthy diet. Eat a wide variety of foods that are low in sugar, caffeine, fat and salt and be active. Foods high in iron like beans, leafy greens, and broccoli. Include high fiber foods and whole grains. Many mothers also continue to take prenatal vitamins or should take daily multivitamins to stay healthy. Eat foods with nutritional value. A

handful of veggies and dip, a bran muffin or whole wheat grains are quick healthy snacks.

10. Stay hydrated. If you want to be healthy and produce enough milk for your baby and to remain healthy, then you have to stay hydrated. Drink at least 8 oz. of water eight times a day, and add some juice, milk, or other healthy drinks into your routine



11. Avoid alcohol at least two hours before you breastfeed. The American Academy of Pediatrics view is while you are nursing; avoid drinking alcohol because it can pass through your milk to your baby. Levels of alcohol peak at approximately 30-60 minutes following ingestion then decline rapidly thereafter. Alcohol can inhibit the release of milk from the breast.

12. Avoid smoking. Smoking not only changes the amount of your breast milk supply, but it can change the taste of your breast milk, and can make it much less appealing to your baby. If you are unable to stop smoking cut down the amount of smoking you do. Do not smoke immediately before or during breastfeeding. Discuss the possibility of nicotine replacement therapy and breastfeeding with your health care provider.

13. Medications. Be careful with the medication you take. You should always check with your doctor or a lactation consultant to make sure it's okay to take any of your medications, or a new medication, while you're breastfeeding. Call the Infant Risk Center if you need more information www.infantrisk.com/

14. Consult a lactation consultant, midwife or health care provider if:

- Baby is still fussy after nursing.
- Baby is not urinating or having regular bowel movements.
- Breasts are sore, or cracked and nipples are bleeding, this may be sign that baby is not latching correctly or could indicate a more serious problem, such as mastitis.
- Baby is not gaining weight.
- Baby's skin and/or fingernail and/or toenail beds appear to have a yellowish tinge.

Images adapted from: http://www.wikihow.com/Breastfeed

References:

International Lactation Consultant Association, *ILCA's Inside Track* (2013); *a resource for breastfeeding mothers*.

National Library of Medicine (2017), Drugs and Lactation Database. Downloaded from: https://toxnet.nlm.nih.gov/newtoxnet/lactmed.htm

Texas Tech University Health Sciences Center (2017). Infant Risk Center: Alcohol and Breastfeeding. Downloaded from: http://www.infantrisk.com/content/alcohol-and-breastfeeding

APPENDIX F: CIRCUMCISION HANDOUT

NEWBORN CIRCUMCISION

Circumcising your son is a big decision. You should do some research on the issue and weigh all the possible risks and benefits — before your child is born, if possible, so that it can be included in your birth plan. In the United States, circumcision is often performed prior to leaving the hospital after the baby is born. Certain religious customs may require the circumcision to be done in the days following the baby's birth. Talk to your health care provider about this procedure.

DISCUSS THE NEED FOR ADEQUATE PAIN RELIEF

Talk to your doctor about what she recommends for pain relief for your son during and after the circumcision. Local anesthesia is usually all that is considered necessary — general anesthesia should not be used on infants.

There is debate as to pain relief options when performing a circumcision. Injectable anesthesia is most often used for circumcision — the dorsal penile nerve block, which is delivered via two injections, is used in 85% of cases in the US. Topical creams, such as EMLA cream, may also be an option. Infant acetaminophen orally and 20% glucose solution orally can assist with pain during and after the procedure.

Newborns *do* experience pain, and research has proven that local anesthesia is safe and effective, so make sure your doctor is using adequate pain relief measures during the procedure.

FAMILIARIZE YOURSELF WITH THE PROCESS

The physician should talk you through the procedure and techniques, as well as the sanitary precautions taken. You should feel comfortable with every step of the procedure and confident that you fully understand the entire process. Make sure this is part of the birth plan and education prior to delivering, and that you do plenty of research beforehand so you are prepared. Discuss these details with your doctor so you can be aware of what to expect, both for yourself and for your son. There are three different methods typically used for circumcision:

- *The Gomco Clamp* – With this method, the doctor uses a probe to separate the foreskin from the head of the penis. After that, a bell-shaped device is fitted over the head of the penis and under the foreskin, which may require an incision in the foreskin. The foreskin is pulled up over

the bell and a clamp is tightened around it to reduce blood flow to the area. Finally, a scalpel is used to cut and remove the foreskin.

- *The Mogen Clamp* – With this method, the doctor also uses a probe to separate the foreskin from the head of the penis. Then the foreskin is pulled out away from the head and inserted into a metal clamp. The doctor will hold the clamp in place while the foreskin is cut with a scalpel. The clamp will remain in place for a few minutes to ensure all of the bleeding has stopped.

- *The Plastibell Technique* – With this method (similarly to the Gomco Clamp method), the doctor uses a probe to separate the foreskin from the head of the penis. Then the bell-shaped device is fitted over the head of the penis and under the foreskin. Next, a piece of suture is tied around the foreskin to cut off the blood circulation to the foreskin. The doctor will then use a scalpel to cut off the extra foreskin, but the suture is left on. It will fall off on its own approximately three to seven days later.

POST-PROCEDURE CARE

Though it is a routine procedure, a circumcision requires proper care and cleaning to heal properly. When caring for a newly circumcised newborn, clean the area after every diaper change, keep the area dry, wash the wound gently, let it air dry, dress the wound with gauze and petroleum jelly, and do frequent diaper changes.

Watch for possible signs of infection like persistent redness, swelling, bleeding, and yellow discharge, as well as sores or difficulty urinating.

Watch for signs of bleeding at the site and monitor for urination after the procedure.

Credits:

Content adapted from: Campbell, B. (2017). Techniques for Neonatal Circumcision. In: UptoDate, Lockwood, C and Baskin, L (Eds), UptoDate, Waltham, MA (Accessed on August 10, 2017.)

Images from www.wikihow.com

APPENDIX G: CIRCUMCISION INFORMED CONSENT

Consent Form

AUGMENTED REALITY INTEGRATED SIMULATION EDUCATION

1. I consent to, authorize and direct Dr. Barker (my physician) and his/her chosen associates or assistants to perform the following procedures(s) circumcision on my son and to do such other procedures as are in their professional judgment, necessary and desirable. I understand that it is or may be foreseeable that during the course of the surgical or other procedure, unanticipated conditions may be revealed that require an extension of the original procedure and therefore, I consent to and authorize my physician and his/her associates to remedy conditions that are not known at the time the procedure is commenced, but are necessary in his/her professional judgment to remedy.
2. The procedure discussed above, and its risks and benefits have been fully explained to me and I understand its nature and consequences. I understand the risk of complications, including failure, and that serious injury or even death may result from both known and unknown causes during the procedure(s). My physician has explained to me and discussed available alternate viable modes of treatment, their benefits and risks, and possible effectiveness. No guarantee or assurance has been given to me by anyone as to the results hat maybe obtained, but the likely result of no treatment have been explained to me.
3. I consent to, authorize and request the administration of such anesthetic or anesthesia that is deemed suitable by my physician/surgeon/anesthesiologists, for the procedure(s) described above.
4. I have had sufficient opportunity to discuss my condition and treatment with my physician, and his/her associates, and all of my questions have been answered to my satisfaction. I believe I have adequate information on which to base an informed consent to the procedure(s).

_____ _____

Signature of patient or authorized person | Relationship

_____ _____

Witness | Date/Time

CREDITS

BiliTool. Available at http://bilitool.org

MedCalc: Ballard Maturational Assessment of Gestational Age at http://www.medcalc.com/ballard.html

Merkel, S., Voepel-Lewis, T., Shayevitz, J., Malveya, S. (1997), The FLACC Scale: A Behavioral Scale for Scoring Post-Operative Pain in Young Children. Pediatric Nursing, 23(3): 293-297.

Medication information from National Library of Medicine: Daily Med at http://dailymed.nlm.nih.gov/dailymed/

National Library of Medicine (2000). Assessment of babies for car seat safety before hospital discharge. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2810665/

The Board of Regents of the University of Wisconsin System (2016). Wisconsin SHINE: Screening Hearts in Newborns. Congenital Heart Disease Screening Protocol available at: http://wisconsinshine.org/handouts/Wisconsin-SHINE-Screening-Protocol.pdf

Pictures in handouts from www.shutterstock.com and www.wikihow.com

REFERENCES

Dreifuerst, Kristina Thomas (2012). Using debriefing for meaningful learning to foster development of clinical reasoning in simulation. Journal of Nursing Education, 51(6), 326-333. doi:http://dx.doi.org/10.3928/01484834-20120409-02

International Nursing Association for Clinical Simulation and Learning. (2016). INACSL Standards of Best Practice: Simulation SM. Retrieved from: https://www.inacsl.org/i4a/pages/index.cfm?pageid=3407

McKee-Garrett, TM (2017). Overview of routine management of a healthy newborn infant. In: UptoDate, Weisman, L (Ed), UptoDate, Waltham, MA. (Accessed on August 3, 2017)

Merkel, S., Voepel-Lewis, T., Shayevitz, J., Malveya, S. (1997), The FLACC Scale: A Behavioral Scale for Scoring Post-Operative Pain in Young Children. Pediatric Nursing, 23(3): 293-297.

Wisconsin Newborn Screening Laboratory. Available at: www.slh.wisc.edu/clinical/newborn