

# NEWBORN

## FOCUS ON SAFETY

---

Estimated Time: 30 minutes • Debriefing Time: 30 minutes

---



Scan to Begin



---

Patient Name: Noah Bailey

---

## SCENARIO OVERVIEW

Baby Noah was delivered by normal spontaneous vaginal delivery 30 hours ago. Students discover that Noah appears yellow during their assessment today. They may input the transcutaneous bilirubin result in the “bilitool” calculator to determine the baby’s risk for jaundice, as well as provide education to the parents about jaundice. In State 2, they safely implement new orders for phototherapy.

## LEARNING OBJECTIVES

1. Maintain a safe and effective care environment for a newborn patient with jaundice
2. Integrate evidence-based practice while using the nursing process to care for a newborn with jaundice
3. Safely administer phototherapy to a newborn with jaundice
4. Provide patient education to family members about jaundice

## 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
- 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

Birth Weight: 3.68 kg (8.1 lbs)

DOB: XX/XX/20XX

Today's Weight: 3.56 kg (7 lb 12 oz)

Age: 30 hours

Allergies: NKDA

MR#: 170511

Code Status: Full code

Gender: Male

Ethnicity: Caucasian

Height: 50 cm (20 in)

Parents: John and Sara Bailey

### EQUIPMENT/SUPPLIES/SETTINGS

#### Patient

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

#### Monitor Settings

- No monitor

#### Supplies

- General
  - If available: simulated phototherapy lights and safety supplies like an eye cover

## QR CODES

START 	REPORT 	PARENT 	FACILITATOR 
FAMILY MEMBER 	HEART SOUNDS 	LUNG SOUNDS 	BOWEL SOUNDS 
SECURITY BAND 	PHOTOTHERAPY 	PARENT/BABY SECURITY BANDS 	

# 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.
  - 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 bilirubin?
    - What adverse effect(s) may occur if a newborn’s bilirubin is too high?
    - Describe how to use the “Bilitool.”
      - Facilitator Note: The link for the Bilitool calculator is located under the Labs tab

- View Patient Video
  - Review assessments for jaundice in a newborn and cephalocaudal progression
  - Outline how to perform a transcutaneous bilirubin
- View Parent video
  - How will you respond to the dad's question about jaundice?
    - Facilitator Note: There is a patient education handout on jaundice available 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

Patient information is provided here

## PROTOCOL

A glucose screening protocol is provided here. It is also available for printing in Appendix A.

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?

## L&D RECORD

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

Suggested Facilitator Question

- What important information should be noted from the labor and delivery record that might impact the care of the newborn?

## GESTATIONAL AGE ASSESSMENT

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

## Suggested Facilitator Question

- Review the neuromuscular assessments and scoring
- Review the physical maturity assessments and scoring

## ORDERS

### Provider Orders

Date	Time	Order
Today	On Admit	<b>Routine Newborn Order Set</b>
		<p><b>Vital Signs, Monitoring and Nursing Orders:</b></p> <ul style="list-style-type: none"> <li>• 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</li> <li>• 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</li> <li>• 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.</li> <li>• After 24 hours of age, perform cardiac screening by obtaining and documenting pulse oximeter check in right arm and either foot</li> <li>• Document weight, length and head circumference</li> <li>• Document if baby is SGA (small for gestational age) or LGA (large for gestational age)</li> <li>• Weight infant daily</li> <li>• Monitor intake and output</li> <li>• Consult lactation for breastfeeding mothers</li> <li>• Provide oxygen via mask, hood, cannula or blow by for saturations less than 90%, respiratory distress or cyanosis</li> <li>• Obtain glucose according to hypoglycemia protocol; notify pediatrician if glucose is less than 40</li> </ul>

		<p><b>Prior to Discharge:</b></p> <ul style="list-style-type: none"> <li>• Newborn screening after 24 hours; if done before 24 hours then make arrangement for repeat screen to be done at physician's office</li> <li>• 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</li> <li>• Transcutaneous bilirubin level PRN and prior to discharge; enter bilirubin value into bilitool to determine risk; serum bilirubin PRN</li> <li>• Ensure cardiac screening is documented prior to discharge</li> <li>• Hearing screen prior to discharge</li> </ul>
		<p><b>Notify provider for:</b></p> <ul style="list-style-type: none"> <li>• Infants less than 37 weeks gestation</li> <li>• Temperature less than 36.5 degrees Celsius after a trial of warming or greater than 38 degrees Celsius</li> <li>• Heart rate less than 80 beats per minute, or greater than 170 beats per minute, or abnormal cardiac rhythm</li> <li>• 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</li> <li>• Lethargy or poor feeding</li> <li>• Jaundice before 24 hours; marked jaundice at any time; or bilitool risk level above "low risk"</li> <li>• Apnea, cyanosis, jitteriness or sluggishness</li> <li>• Abdominal distention</li> <li>• No urine or stool by 24 hours</li> <li>• Feeding intolerance, especially first feeding, with vomiting or aspiration</li> <li>• Any unusual symptoms observed by nursing</li> </ul>
		<b>Medications</b>

		<ul style="list-style-type: none"> <li>• 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</li> <li>• Erythromycin 0.5% ophthalmic ointment. Apply 1 cm ribbon to both eyes within one hour of birth for eye infection prophylaxis</li> <li>• Vitamin D 400 international units PO once daily to begin after 24 hours of age</li> <li>• For Hepatitis B surface Antigen negative mothers: After parental permission, give Hepatitis B vaccine 0.5 ml IM anytime before discharge</li> <li>• 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</li> <li>• Acetaminophen 15mg per kg PO every 4 hours for procedural pain. Maximum of 4 doses.</li> <li>• Sucrose 24%: Dose according to gestational age, administered orally, every 90 minutes as needed for procedural pain</li> </ul>
		<p><b>Diet/Nutrition:</b></p> <ul style="list-style-type: none"> <li>• Breastfeeding on demand</li> <li>• Formula feed 20 cal formula with iron on demand</li> <li>• If baby is less than 36 weeks, contact physician for feeding orders</li> </ul>
		<p><b>Labs:</b></p> <ul style="list-style-type: none"> <li>• ABO/Rh and Direct Antiglobulin Test (cord blood sample) for newborns of Rh negative mothers</li> <li>• Collect meconium and test for all infants who are at risk for fetal drug exposure</li> <li>• Obtain transcutaneous bilirubin or order fractionated serum bilirubin level on any jaundiced infant PRN</li> </ul>
		<p><b>Circumcision:</b></p> <p>Inquire regarding circumcision and notify MD if parent desires</p> <ul style="list-style-type: none"> <li>• PRE-PROCEDURE: <ul style="list-style-type: none"> <li>○ Have available Lidocaine 1% without epinephrine or Bupivacaine 0.25% without epinephrine</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>○ 60 minutes prior to procedure: Apply 1-2 grams of EMLA to the base and distal half of penis</li> <li>○ 30 to 60 minutes prior to procedure: administer Acetaminophen 15mg/kg PO</li> <li>● DURING PROCEDURE:             <ul style="list-style-type: none"> <li>○ Have Gel Foam Silver Nitrate Sticks available at bedside</li> <li>○ Administer Sucrose 24% 1 ml PO immediately prior to or during procedure PRN for discomfort</li> </ul> </li> <li>● POST-PROCEDURE:             <ul style="list-style-type: none"> <li>○ Check circumcision site for bleeding every 15 minutes x 2 then every 30 minutes x 2</li> <li>○ Apply Vaseline gauze 4x4; reapply with every diaper change x 48 hours</li> <li>○ Acetaminophen 15 mg/kg PO every 6 hours PRN for discomfort x 24 hours</li> </ul> </li> </ul>
		---- P. Datrician, MD

**MAR**

## Medication Administration Record

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

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

## GROWTH RECORD

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

## VITALS

An enterable form is available here for student input.

## LABS

Newborn Panel					
	On birth	20 hours of age	30 hours of age	Units	Reference Range
ABO Group	A				A, B, AB, O
Rh Typing	Positive				Pos or Neg
Direct Antiglobulin Test (Coomb's test)	Negative				Negative
Transcutaneous bilirubin		4.3	9.0	mg/dl	See <a href="http://www.bilitool.org">http://www.bilitool.org</a> for reference ranges

## PATIENT EDUCATION

A handout on Jaundice is available here. A printable version is located in Appendix D.

## INFORMED CONSENT

A signed informed consent form for circumcision is located here. A printable version is available in Appendix E.

## SIMULATIONS

Students may view a Phototherapy video under this tab to stimulate discussion and patient education on the jaundice and phototherapy. Please note that there is also a **QR code: Phototherapy** video available.

Suggested Facilitator Questions:

- Describe nursing assessments and interventions during phototherapy
- Explain how mom can feed the baby under the lights
- Discuss the benefits of in-room phototherapy
- How can the baby be comforted when under the lights?

## LEVEL

Level 1 is displayed

## 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

# ASSESSMENT

- Patient Overview
  - Students perform initial assessments of the newborn and interpret the transcutaneous bilirubin result using the Bilitool calculator.
- Expected Student Behaviors
  - Provide appropriate hand hygiene throughout scenario
  - Introduce themselves to the parent(s)
  - Verify patient identity using by scanning **QR Code: Security Band**
  - May verify parent/baby security bands by scanning **QR Code: Parent/Baby Security Band**
  - (Optional) May perform newborn assessment and scan **QR codes for Heart Sounds, Lung Sounds and Bowel Sounds** for realistic sounds
  - Accurately prioritize and implement Newborn Orders based on information received in report and current status of newborn
  - Input transcutaneous bilirubin result into Bilitool accurately.
    - The link for the Bilitool is located under the Labs tab
      - Facilitator note: provide actual date of birth and birth time to correspond with baby being 30 hours old
      - The bilitool will display “High Intermediate Risk” with recommendations provided
  - Notify the provider of concerns in SBAR format
- Technician Prompts
  - As role play the father, continue to ask questions about jaundice:
    - “Why does he look so yellow today?”
    - “Is he OK?”
    - “Will the doctor give him medicine for this?”
    - If phototherapy is mentioned: “What is phototherapy?”
- Suggested Facilitator Questions

- What is bilirubin?
- What are common causes of elevated bilirubin in newborns
- 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,” followed by “New Orders received,” as the iPad progresses to State 2.

## STATE 2

## IMPLEMENTATION OF NEW ORDERS

- Patient Overview
  - Students initiate phototherapy and provide appropriate parent education to assure safe implementation.
- Expected Student Behaviors
  - Provide appropriate hand hygiene throughout scenario
  - Verify patient identity using security bands
  - Initiate phototherapy safely
    - Facilitator note: Can view video of newborn under phototherapy lights under the Simulation tab or may also scan the **QR Code: Phototherapy**
- Technician Prompts
  - As role play the father, continue to ask questions about jaundice:
    - “How long does he have to be under the lights?”
    - “What do I do if he starts crying?”
    - “What else can we do to bring down the bilirubin level?”
- Suggested Facilitator Questions
  - What safety measures are important to implement during phototherapy?
- Tabbed iPad content and changes:

## ORDERS

Date	Time	Order
Today	On Admit	<b>Routine Newborn Order Set</b>
		<b>Vital Signs, Monitoring and Nursing Orders:</b> <ul style="list-style-type: none"> <li>• 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</li> <li>• Maintain temperature between 36.5 and 37.5 degrees Celsius utilizing one or more of the</li> </ul>

		<p>following interventions: drying; skin to skin contact; overhead warmers; swaddling; holding newborn</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• After 24 hours of age, perform cardiac screening by obtaining and documenting pulse oximeter check in right arm and either foot</li> <li>• Document weight, length and head circumference</li> <li>• Document if baby is SGA (small for gestational age) or LGA (large for gestational age)</li> <li>• Weight infant daily</li> <li>• Monitor intake and output</li> <li>• Consult lactation for breastfeeding mothers</li> <li>• Provide oxygen via mask, hood, cannula or blow by for saturations less than 90%, respiratory distress or cyanosis</li> <li>• Obtain glucose according to hypoglycemia protocol; notify pediatrician if glucose is less than 40</li> </ul>
		<p><b>Prior to Discharge:</b></p> <ul style="list-style-type: none"> <li>• Newborn screening after 24 hours; if done before 24 hours then make arrangement for repeat screen to be done at physician's office</li> <li>• 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</li> <li>• Transcutaneous bilirubin level PRN and prior to discharge; enter bilirubin value into bilitool to determine risk; serum bilirubin PRN</li> <li>• Ensure cardiac screening is documented prior to discharge</li> <li>• Hearing screen prior to discharge</li> </ul>
		<p><b>Notify provider for:</b></p> <ul style="list-style-type: none"> <li>• Infants less than 37 weeks gestation</li> </ul>

		<ul style="list-style-type: none"> <li>• Temperature less than 36.5 degrees Celsius after a trial of warming or greater than 38 degrees Celsius</li> <li>• Heart rate less than 80 beats per minute, or greater than 170 beats per minute, or abnormal cardiac rhythm</li> <li>• 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</li> <li>• Lethargy or poor feeding</li> <li>• Jaundice before 24 hours; marked jaundice at any time; or bilitool risk level above "low risk"</li> <li>• Apnea, cyanosis, jitteriness or sluggishness</li> <li>• Abdominal distention</li> <li>• No urine or stool by 24 hours</li> <li>• Feeding intolerance, especially first feeding, with vomiting or aspiration</li> <li>• Any unusual symptoms observed by nursing</li> </ul>
		<p><b>Medications</b></p> <ul style="list-style-type: none"> <li>• 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</li> <li>• Erythromycin 0.5% ophthalmic ointment. Apply 1 cm ribbon to both eyes within one hour of birth for eye infection prophylaxis</li> <li>• Vitamin D 400 international units PO once daily to begin after 24 hours of age</li> <li>• For Hepatitis B surface Antigen negative mothers: After parental permission, give Hepatitis B vaccine 0.5 ml IM any time before discharge</li> <li>• 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</li> <li>• Acetaminophen 15mg per kg PO every 4 hours for procedural pain. Maximum of 4 doses.</li> <li>• Sucrose 24%: Dose according to gestational age, administered orally, every 90 minutes as needed for procedural pain</li> </ul>

		<p><b>Diet/Nutrition:</b></p> <ul style="list-style-type: none"> <li>• Breastfeeding on demand</li> <li>• Formula feed 20 cal formula with iron on demand</li> <li>• If baby is less than 36 weeks, contact physician for feeding orders</li> </ul>
		<p><b>Labs:</b></p> <ul style="list-style-type: none"> <li>• ABO/Rh and Direct Antiglobulin Test (cord blood sample) for newborns of Rh negative mothers</li> <li>• Collect meconium and test for all infants who are at risk for fetal drug exposure</li> <li>• Obtain transcutaneous bilirubin or order fractionated serum bilirubin level on any jaundiced infant PRN</li> </ul>
		<p><b>Circumcision:</b></p> <p>Inquire regarding circumcision and notify MD if parent desires</p> <ul style="list-style-type: none"> <li>• PRE-PROCEDURE: <ul style="list-style-type: none"> <li>○ Have available Lidocaine 1% without epinephrine or Bupivacaine 0.25% without epinephrine</li> <li>○ 60 minutes prior to procedure: Apply 1-2 grams of EMLA to the base and distal half of penis</li> <li>○ 30 to 60 minutes prior to procedure: administer Acetaminophen 15mg/kg PO</li> </ul> </li> <li>• DURING PROCEDURE: <ul style="list-style-type: none"> <li>○ Have Gel Foam Silver Nitrate Sticks available at bedside</li> <li>○ Administer Sucrose 24% 1 ml PO immediately prior to or during procedure PRN for discomfort</li> </ul> </li> <li>• POST-PROCEDURE: <ul style="list-style-type: none"> <li>○ Check circumcision site for bleeding every 15 minutes x 2 then every 30 minutes x 2</li> <li>○ Apply Vaseline gauze 4x4; reapply with every diaper change x 48 hours</li> <li>○ Acetaminophen 15 mg/kg PO every 6 hours PRN for discomfort x 24 hours</li> </ul> </li> </ul>
		---- P. Datrician, MD
Today	Now	Initiate phototherapy

		Repeat serum bilirubin in 24 hours
		---- P. Datrician, MD

## LABS

Newborn Panel					
	On birth	20 hours of age	30 hours of age	Units	Reference Range
ABO Group	A				A,B, AB, O
Rh Typing	Positive				Pos or Neg
Direct Antiglobulin Test (Coomb's test)	Negative				Negative
Transcutaneous bilirubin		4.3	9.0	mg/dl	See <a href="http://www.bilitool.org">http://www.bilitool.org</a> for reference ranges
Serum bilirubin			13.5	mg/dl	See <a href="http://www.bilitool.org">http://www.bilitool.org</a> for reference ranges

## EXIT

- 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.”
- 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 with jaundice
  - a. How did you maintain a safe, effective environment today?
  - b. How can the baby be comforted and fed when receiving phototherapy?
  - c. What adverse effects can occur if jaundice is not treated appropriately in a newborn?
3. Review learning objective: Integrate evidence-based practice while using the nursing process to care for a newborn with jaundice
  - a. Identify 3 priority nursing problems you identified.
  - b. Create a patient centered goal for each nursing problem you identified.
  - c. Describe focused assessments for each nursing problem.
  - d. Discuss evidence-based nursing interventions for each nursing diagnosis.
  - e. Re-evaluate the simulation in terms of the nursing process; what was actually accomplished? What could be improved in the future?
4. Review learning objective: Safely administer phototherapy to a newborn with jaundice
  - a. Outline important safety interventions when implementing phototherapy
5. Review learning objective: Provide patient education about jaundice
  - a. Outline parent education topics about jaundice
6. Summarize/Take away Points: “In this scenario you cared for a newborn patient with jaundice. 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.



2. Copy and paste the following survey link into your browser.
  - a. [https://ircvtc.co1.qualtrics.com/SE/?SID=SV\\_6Mwfv98ShBfRnBX](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

- 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: LABOR AND DELIVERY RECORD

Duplication of this form is strictly prohibited by law. © Briggs Corporation. All rights reserved.



**MNRNS**  
Maternal/Newborn  
Record System™

## Labor and Delivery Summary

Page 1 of 2  
To order call: 1.800.245.4080  
Re-order No. 5712N

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

---

### 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 yesterd  
 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**

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/cm<sup>2</sup>

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

Periarethral  
 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

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

NURSING | LEVEL: 3



**MNRS**  
Maternal/Newborn  
Record System™

**Labor and Delivery Summary** Page 2 of 2

To order call: 1.800.245.4080

Re-order No. 5712N

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

**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
Yesterday		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**

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	
<b>Total</b>	<b>9</b>	<b>9</b>	

Scored by Kathy Smith, RN

**Infant Data (Cont'd.)**

**Airway**

Bulb Suction

Suction Catheter Size \_\_\_\_\_ Fr

Mouth Pressure \_\_\_\_\_ millimeters Hg

Nose  Pharynx  At Delivery

Endotracheal Tube Size \_\_\_\_\_ Fr

Meconium Below Cords \_\_\_\_\_ Times

**Breathing**

Spontaneous

O<sub>2</sub> \_\_\_\_\_ 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

Blood Gases	Sent	Umb Art	Umb Vein
pH			
pO <sub>2</sub>			
pCO <sub>2</sub>			
HCO <sub>3</sub>			

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 \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

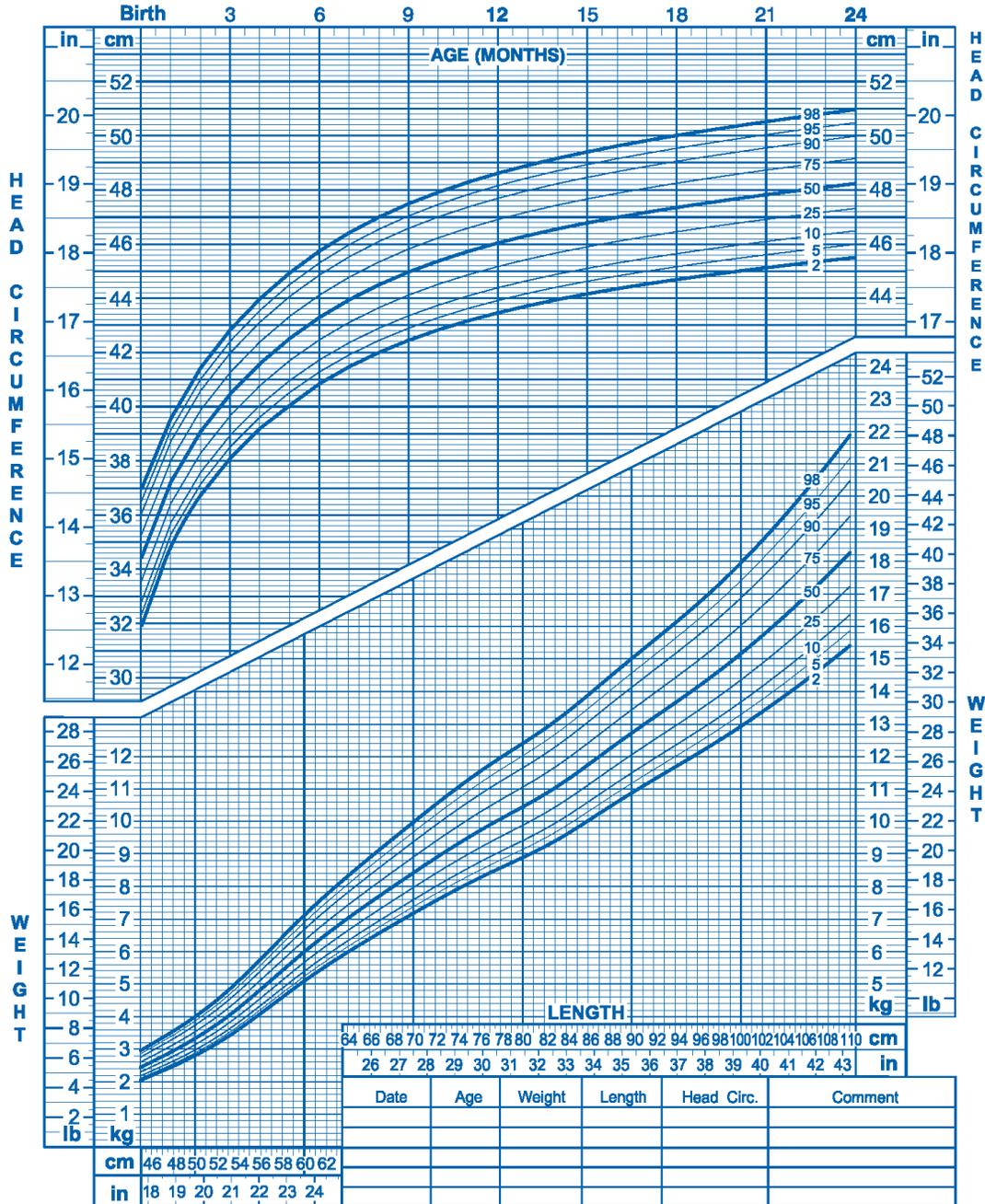
\_\_\_\_\_

APPENDIX C: GROWTH RECORD

Birth to 24 months: Boys  
 Head circumference-for-age and  
 Weight-for-length percentiles

NAME \_\_\_\_\_

RECORD # \_\_\_\_\_



Published by the Centers for Disease Control and Prevention, November 1, 2009  
 SOURCE: WHO Child Growth Standards (<http://www.who.int/childgrowth/en>)

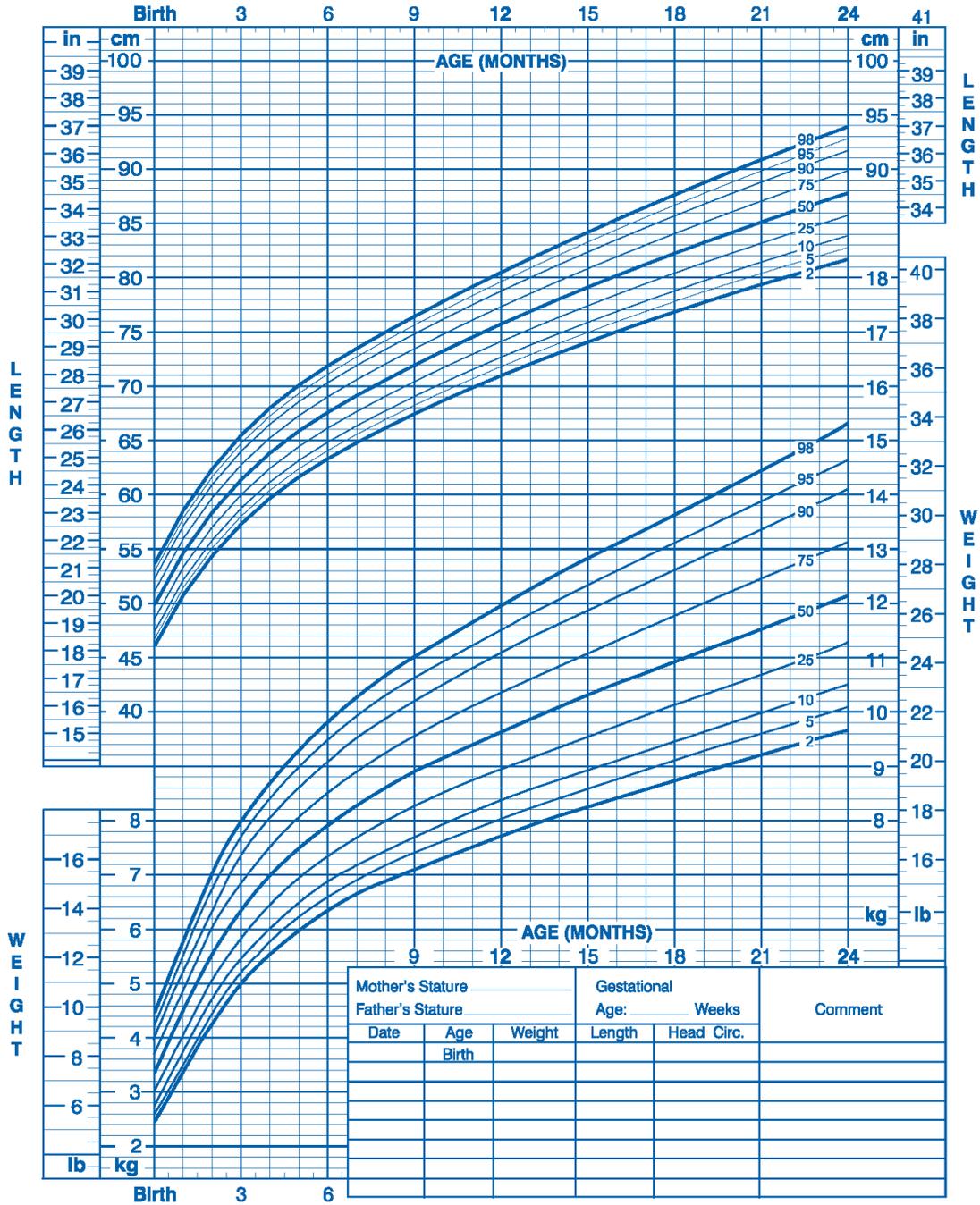


Birth to 24 months: Boys

Length-for-age and Weight-for-age percentiles

NAME \_\_\_\_\_

RECORD # \_\_\_\_\_



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™



NURSING | LEVEL: 3

## APPENDIX D: JAUNDICE HANDOUT

## WHAT IS JAUNDICE?



Infant jaundice appears when a baby's skin and is first noticed on the face and then may progress to the chest, abdomen and finally legs. Jaundice is common in about 50-60% of newborns after 24hrs of age. The yellow color is caused by bilirubin.

Bilirubin is made when the body breaks down old red blood cells. This is a normal process that happens all through life. Usually, the liver filters bilirubin from the bloodstream, but an infant's liver might not yet be developed enough to filter out the bilirubin. If bilirubin builds up in your baby's body, it can give your baby jaundice.

Jaundice is common in babies and is usually not serious.

### HOW CAN I TELL IF MY BABY HAS JAUNDICE?



To check for jaundice in your baby look for color changes in your baby's skin. If you notice your baby's face and or chest turning yellowish, you will want to contact your baby's doctor.

You can check for jaundice by pressing one finger on your baby's forehead or nose. If the skin is jaundiced, it will appear yellow when you release pressure from the skin.

Your baby will be checked for jaundice before your baby leaves the hospital.

**There is a test for jaundice.** Your health care provider can do a skin test exam and a blood test to check for jaundice.



### CALL YOUR INFANT'S HEALTHCARE PROVIDER IF YOU NOTICE ANY OF THE FOLLOWING:

- If the yellow coloring is below the chest, if the yellow color is more intense (lemon yellow to orange yellow), or if the "whites" of the eyes appear yellow
- If the baby has any difficulty in feeding
- If it is hard to wake up your infant
- If your infant is irritable and is difficult to console
- If your infant arches his/her neck or body backwards

Credits:

Images adapted from [www.wikihow.com](http://www.wikihow.com)

Content adapted from Wong, RJ and Bhutani, VK. (2017) Patient Education: Jaundice in Newborn Infants (Beyond the Basics). In Abrams, SA (ed.), UptoDate, Waltham, MA. (Accessed on July 19, 2017)

## APPENDIX E: INFORMED CONSENT



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 procedure(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 that may be 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).

Sara Bailey  
Signature of patient or authorized person

mother  
Relationship

Sue Smith, RN  
Witness

1/11/2014  
Date/Time

## CREDITS

---

Bilitool. Available at: <http://bilitool.org>

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

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

Phototherapy video from Shutterstock.com

Pictures in Patient Education handouts from [www.wikihow.com](http://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>
- Wong, R. and Bhutani, V. (2017). Evaluation of unconjugated hyperbilirubinemia in term and late preterm infants. In: *UptoDate*, Abrahms, S (Ed), UptoDate, Waltham, MA. (Accessed on August 8, 2017)



This work by the Wisconsin Technical College System TAACCCT IV Consortium is licensed under a Creative Commons Attribution 4.0 International license.

Third party marks and brands are the property of their respective holders. Please respect the copyright and terms of use on any webpage links that may be included in this document.

This workforce product was funded by a grant awarded by the U.S. Department of Labor's Employment and Training Administration. The product was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The U.S. Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership. This is an equal opportunity program. Assistive technologies are available upon request and include Voice/TTY (771 or 800-947-6644).