NEWBORN

DISCIPLINE: Nursing

FOCUS ON SAFETY

Estimated Time: 30 minutes • Debriefing Time: 30 minutes



Scan to Begin



Patient Name: Noah Bailey

SCENARIO OVERVIEW

Level 2 provides videos to stimulate discussion about newborn safety and parent education, in addition to all of the newborn and assessment videos that are provided in Level 1. Students also have the opportunity to administer a Hepatitis B injection.

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. Safely administer IM medication to a newborn
- 4. Provide patient education to family members about common questions regarding newborn care

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
- Promote safety/accident prevention 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 Weight: 3.68 kg (8.1 lbs)

DOB: XX/XX/20XX Allergies: NKDA

Age: 1 day Code Status: Full code

MR#: 170511 Ethnicity: Caucasian

Gender: Male Parents: John and Sara Bailey

Height: 50 cm (20 in)

EQUIPMENT/SUPPLIES/SETTINGS

Patient

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

Monitor Settings

No monitor

Supplies

- General
 - o If available: car seat
 - Variety of syringe and needle selections for students to select correct size for IM injection for a newborn. (In a low-fidelity environment, QR codes for syringes and needles have been provided.)
- Medications
 - Hepatitis B vaccine
 - Acetaminophen drops

QR CODES

START	REPORT	PARENT	FACILITATOR
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PARENT VIDEO A	PARENT VIDEO B	PARENT VIDEO C	PARENT VIDEO D
PARENT VIDEO E	PARENT VIDEO F	CORRECT CRIB	CORRECT CAR SEAT
CORRECT SLEEP	CORRECT TRANSPORTATION	PATIENT ID	HEART SOUNDS ◀
LUNG SOUNDS ◀	BOWEL SOUNDS ◀	RESPIRATORY	UMBILICUS WITH
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SECURITY BAND	NEWBORN	ANTERIOR HEAD	POSTERIOR HEAD
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	SCREENING CARD	回菜回	
<u> </u>		亚克科	<u> </u>
		回省代表	
STEPPING	BABINSKI	LOCATION FOR BLOOD SAMPLE A	LOCATION FOR BLOOD SAMPLE B
	回货回		画客画
2548	527024	1500 PZ	1 No. 1
■36 6	■838 5		回讚祭
PARENT/BABY SECURITY BAND	HOT PACK ON FOOT	INJECTION SITE (ACCURATE)	INJECTION SITE
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POSITIONING FOR INJECTION	BLOOD GLUCOSE LOCATION	SYRINGE INSULIN	SYRINGE 1 ML
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	퉳췠띛	360	
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SYRINGE 3 ML	SYRINGE 10 ML	SYRINGE 20 ML	NEEDLE 18G 1.5IN
国公国			
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■無■			
建筑	25	≥€23	무였다
■74%			
VITAMIN K	ERYTHROMYCIN OINTMENT	HEPATITIS B	ACETAMINOPHEN DROPS
回货回		回货回	
	単語		트립트 500:300
(m) A:442		TELESCO.	

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 included in the State of Wisconsin newborn screening?

- Describe the hearing screen procedure on a newborn. (May scan
 QR code: Hearing Screen to view a newborn hearing screen)
- How is transcutaneous bilirubin obtained and interpreted? (may tap on Protocol tab and Bilitool button to review Bilitool)
- Why is information about infant voiding communicated in report?
- Why are O2 saturations obtained in the right arm and either right or left leg?
- Is it necessary to administer Hepatitis B before discharge? Why or why not? Describe the Hepatitis B vaccination series.
- Is infant weight decreasing by 6% concerning? Why or why not?
- Describe the car seat check.
- View Parent video
 - How will you respond to the dad's question about the Hepatitis B immunization?
- 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

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 is a link to the online bilirubin calculator at www.bilitool.org
- **Car Seat Tolerance Test**: This is a link to an article describing how to perform this test, what is considered a "fail," and potential interventions
- **Congenital Heart Disease Screening**: This is a link 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 Question:

• What information is clinical relevant 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 Maturational Assessment of Gestational Age.

Suggested Facilitator Questions:

Review the Ballard Maturational Assessment Scale

• What are the components of neuromuscular and physical maturity?

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)
		-Weight infant daily
		- Monitor intake and output
		-Lactation consultation for all breastfeeding mothers
		-Provide oxygen via mask, hood, cannula or blow by for 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 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.
pain. Maximum of 4 dosesSucrose 24%: Dose according to gestational age, administered
pain. Maximum of 4 doses. -Sucrose 24%: Dose according to gestational age, administered orally, every 90 minutes as needed for procedural pain

-If baby is less than 36 weeks, contact physician for feeding orders
Labs:
-ABO/Rh and DAT 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; reapply with every diaper change x 48 hours
-Acetaminophen 15 mg/kg PO every 6 hours PRN for discomfort x 24 hours
D Dataisian MD
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	Due	Last Given
birth		Yesterday
Erythromycin 0.5% ophthalmic ointment. Apply 1 cm	Due	Last Given
ribbon to both eyes within one hour of birth		Yesterday
Vitamin D 400 international units PO to begin after	Due	Last Given
24 hours of age	Due now	
Hepatitis B vaccine 0.5 ml IM before discharge a	Due	Last Given
	Due before discharge	
PRN		
		Last Given

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

GROWTH RECORD

Growth records are available here for Head-Chest and Age-Weight. Printable versions are available in Appendix D

VITALS

An enterable form is available here for student input.

FLACC SCALE

	Scoring				
Categories	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 infants?

DAILY RECORD

Vitals	Yesterday	Today - 2 hours ago		
Pulse	148	132		
Resp. Rate	56	48		
Temp (°C)	37 axillary	37.1		

Assessments	
FLACC Scale	2
Weight	Decreased 6% 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 questions:

- What are the parameters for normal vital signs in infants?
- Describe important focused newborn assessments.

LABS

Newborn Panel					
	On birth	20 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		mg/dl	Low risk See http://www.bilitool.org for reference ranges

Suggested Facilitator Question:

Interpret the meaning of the newborn lab results.

PATIENT EDUCATION

Handouts on breastfeeding, car seat safety, and sleep safety are available here. Printable versions are located in Appendix E, F, and G.

INFORMED CONSENT

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

PARENT SIMULATIONS

The facilitator may choose to select one or more parent videos under this tab to stimulate discussion and patient education on the following topics. Please note that these are also

available as QR codes for scanning. Each video is associated with a QR code image of the "correct result" which can be displayed to students after correct parent education is provided.

Suggested facilitator questions are provided under each simulation video below.

- Crib Safety
 - "Identify potential safety hazards in crib."
 - Correct image: QR code: Correct Crib
- Car Seat
 - "What teaching should be provided to the parents regarding the safety of this car seat?"
 - o Correct image: QR code: Correct Car Seat
 - Patient education handout also available on car seats
- Safe Sleep
 - o "Review safe sleep guidelines."
 - Correct image: QR code: Correct Sleep
 - o Patient education handout also available on Safe Sleep
- Hallway Transportation
 - "How should babies be transported in hallways? Why?"
- Postpartum Depression
 - "How does postpartum depression and bonding affect maternal-newborn interactions and cares?

LEVEL

Level 1 is displayed.

SCANNER

Use this to scan available QR Codes.



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

STATE 1

ASSESSMENT AND EDUCATION

Patient Overview

 Students may perform newborn assessments incorporating associated QR codes of newborn assessments and reflexes, or the facilitator may proceed directly to administering a Hepatitis B injection and/or patient education about various infant safety topics.

Expected Student Behaviors

- Provide appropriate hand hygiene throughout scenario
- Introduce themselves to the parent(s)
- Verify patient identity using security band and compare to parent band by scanning QR code: Parent/Baby Security band
- Accurately prioritize and implement Newborn Orders based on information received in report
- (Optional): Perform assessments or discuss simulated assessment videos with associated QR Codes: Head to Toe Anterior, Head to Toe Posterior, Heart Sounds, Lung Sounds, Bowel Sounds, Respiratory Rate, Head Circumference, Chest Circumference, Axillary Temperature, Umbilicus, Hand Grasp, Babinski, Tonic Neck, Stepping reflexes
- Administer a Hepatitis B injection using appropriate size syringe and needle and correct anatomical location in an infant
 - Note: Optional QR codes are available with various syringe sizes and needle sizes for use in low fidelity simulation.
 - A **QR Code: Hepatitis B** is available to view an image of the vial
 - Students may scan QR Code: Positioning for Placement to select the correct anatomical placement of the injection
- Educate parent about various safety topics
 - Facilitator note: Several simulated parent videos are located under the "Parent Simulations" tab as well as accessible by QR code scanning. Students should recognize whatever is "unsafe" in the video and provide appropriate parent education. "Correct"

images can then be displayed by scanning the appropriate $\mathbf{Q}\mathbf{R}$ \mathbf{code} .

- Available safety topics:
 - Crib safety
 - Car Seat safety
 - Safe sleep
 - Safe hallway transportation in the hospital
 - Postpartum depression
- Technician Prompts
 - As role play the father, continue to ask questions about why Noah needs immunizations:
 - "Why does he need a Hepatitis B injection now? He's so young."
 - "I heard that immunizations can cause autism. Is that true?"
 - "Some of my friends didn't immunize their kids and they're fine."
 - "Can we wait until he's older to get the Hepatitis vaccine?"
- Suggested Facilitator Questions
 - Scan QR code: Parent/Baby Security band and view the image
 - How is infant safety managed using the security bands?
 - View Parent Video Crib Safety
 - What do you notice that is unsafe in the baby's bassinette?
 - What will you teach the parent about crib safety?
 - How will you do so in a therapeutic manner?
 - View the Parent Video: Car Seat
 - What do you notice is unsafe about the car seat?
 - What will you teach the parent about car seat safety?
 - Note: There is a patient education handout available on car seat safety
 - View the Parent Video: Safe Sleep

- What do you notice is unsafe about the sleeping arrangement?
- What will you teach the parent about safe sleep?
- Note: There is a patient education handout available on Safe Sleep
- View the Parent Video: Hallway Transportation
 - What do you notice is potentially unsafe in this video?
 - Why are bassinettes used to transport newborns in hospitals?
 - How will you teach the parent in a therapeutic manner?
- View Parent video: Postpartum Depression
 - Based on the husband's report, do you suspect postpartum depression?
 - How can postpartum depression affect the safety of the newborn?
- 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 which assessments and interventions you performed today are based on evidence-based practices.
- 4. Review learning objective: Safely administer IM medication to a newborn
 - a. Discuss correct anatomical placement, syringe size, and needle size for a Hepatitis B injection to a newborn
- 5. Review learning objective: Provide patient education to family members about common questions regarding newborn care
 - a. Review the parent safety videos viewed today and the safety interventions and education provided for each
- 6. Tie this scenario to the nursing process:
 - a. Identify 3 actual or risk nursing problems for the newborn.
 - b. Create a patient centered goal for each nursing problem you identified.
 - c. Describe focused assessments for each nursing problem.
 - d. Discuss 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?
- 7. Summarize/Take Away Points: "In this scenario you provided patient education about safety topics to parents of 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.



- 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: LABOR AND DELIVERY RECORD

		\bigcirc			
	MNRS Labor and Delivery	-			
	Record System To order call: 1.800.245.4080	Re-order No. 5712N Labor Summary (Cont'd.)	Method of Delivery (Cont'd.)		
	G T Pt A L Type EDD	Fetus	☐ Cesarean		
	G T Pt A L Type EDD 2 0 1 0 A neg xx/xx/20xx	Gestational Age (Wks) 40 By Dates	☐ Scheduled ☐ Emergency ☐ Primary ☐ Repeat (x)		
	Prenatal Events None	40 By Ultrasound Presentation Position	☐ Other Operative Indication ☐ Previous Uterine Surgery		
	No Prenatal Care Late Prenatal Care Preterm Labor (less than or equal to 37 Weeks)	■ Vertex R O A			
\bigcirc	Postterm Labor (greater than or equal to 42 Weeks)	Face/Brow Breech Frank Complete	☐ Failure to Progress ☐ Placenta Previa		
\cup	Previous Cesarean Prenatal Complications ■ Refer to Prenatal	Single Footling	☐ Abruptio Placenta ☐ Fetal Malpresentation		
	Intrapartal Events Records	Double Footling Transverse Lie Back-up Back-Down	Non reassuring FHR Pattern		
	Maternal	Compound	☐ Other Uterine Incision ☐ Low Cervical, Transverse ☐ Low Cervical, Vertical		
\bigcirc	Febrile (greater than or equal to 100.4°F/38°C) Bleeding—Site Undetermined	Unknown			
	Preeclampsia (mild) (severe)	Cephalopelvic Disproportion (CPD) Cord Prolapse	☐ Classical		
	Seizure Activity See Labor Progress Chart Medications None	Dystocia	Tubal Ligation No Yes		
	Date Time Medication Dose Route	Monitor None FHR UC	Skin Incision Vertical		
	Yesterd 0830 Penicillin 5 mil IV	External ^x ^x Internal	☐ Pfannenstiel		
	Yesterd 1230 Penicillin 2.5 mil IV	Fetal Bradycardia	Episiotomy None Midline		
	Yesterd 1630 Penicillin 2.5 mil IV Yesterd 2030 Penicillin 2.5 mil IV	Fetal Tachycardia Sinusoidal Pattern	☐ Mediolateral L R Laceration/Episiotomy Extension ☐ None		
	Yesterd 1930 Fentanyl 100 mcg IV	■ Accelerations ■ Spont. Uniform	■ Periurethral □ Vaginal		
		Decelerations ■ Early Late Variable Prolonged	☐ Cervical		
		Variable Prolonged Scalp pH less than or equal to 7.2	Uterine Perineal 1 1 2 3 4		
	Transfusionunits Blood Componentunits		Repair Agent Used Vagina free of sponges		
		FM DiscontinuedTime	Placenta Delivery Time		
	Amniotic Fluid ■ SROM AROM Date yesterda	Delivery Data	■ Spontaneous □ Expressed		
	Time_0900	Support Person Present Yes No	☐ Manual Removal		
	Premature ROM Prolonged ROM Clear	Delivery Location	Adherent (type) Uterine Exploration		
	Meconium-Stained (describe)Bloody	■ LDR □ LDRP □ DR □ OR □ Birthing Center □ □	☐ Curettage Configuration		
	Foul Odor	Method of Delivery	☐ Normal ☐ Abnormal		
	Cultures Sent Time Polyhydramnios	■ Vaginal □ VBAC	Weight gms		
	Oligohydramnios	Number Previous Cesareans	Disposition		
	Placenta	■ Spontaneous	■ Nuchal Cord (x 1) True Knot Length cms		
	Placenta Previa	Assisted to Manual Rotation	2 Vessels		
	Abruptio Placenta	Forceps (type)	■ 3 Vessels Cord Blood □ To Lab □ Refrig □ Discard		
	Labor	☐ Outlet ☐ Low ☐ Mid	Lab Type + Rh Cultures Coombs		
	Precipitous Labor (less than 3 hrs) Prolonged Labor (greater than or equal to 20 hrs)	☐ Vacuum Extraction Duration 10 Min. Degree of suction kg/cm ²	Surgical Data		
	Prolonged Latent Phase Prolonged Active Phase	☐ Breech (type)	Sponge Counts Correct ☐ N/A ■ Yes ☐ No		
	Prolonged 2nd Stage (greater than 2.5 hrs)	☐ Spontaneous ☐ Partial Extraction (assisted)	Needle Counts Correct N/A ■ Yes No		
	Secondary Arrest of Dilatation Induction None Cervical	☐ Total Extraction	Date		
	AROM Oxytocin Ripening Augmentation None	☐ Forceps Assist ☐ Piper ☐	Kathy Smith, RN Completed xx /xx /xx		
	AROM Oxytocin		(Signature)		
	Form 5712N @ BRIGGS Des Moines IA 50306 (800) 245-4080 www.Brigg	Som com	AND DELIVERY SHMMARY (Page 1 of 2)		

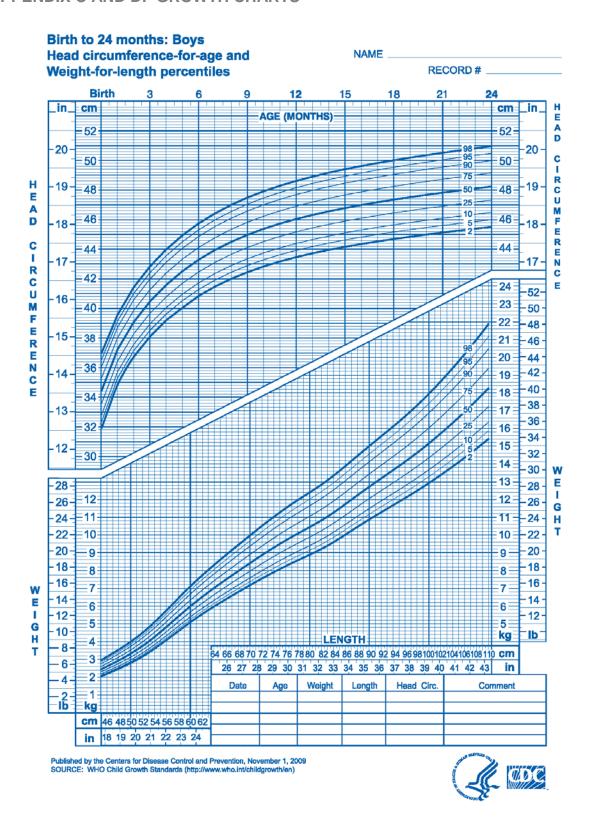
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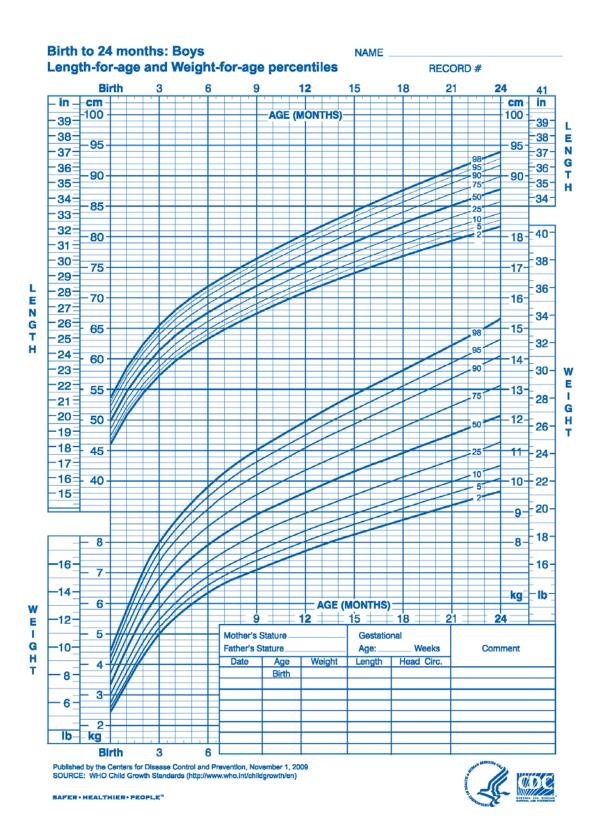
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	Maternal/Newborn Record System To order call: 1.800,245,4080 Re-order No. 5712N													
Deli	ivery I	Data (C	ont'o	d.)			Infa	nt Da	ta (Cont'	d.)			Initial Newborn Exam (Cont'd.)	
Surgical Data (Cont'd.)								Airway ■ Bulb Suction					☐ Abnormalities Noted	
Vaginal Pack Count Correct							Suction Catheter Size Fr							
N/A Yes No							☐ Mouth Pressure				illimotore	Describe United		
		nesthe			one		☐ Pharynx ☐ At Delivery							
☐ Lo	ical oidural	☐ Puder ☐ Spinal		G	ienera	ıl	☐ Endotracheal Tube Size Fr ☐ Meconium Below Cords Times				Indian District			
	Time	Medica		Dose	E	ffect	Breathing				11163	Intake ☐ None ■ Breast Fed ☐ Formula ☐ Glucose Water		
Yester	_	per anes					■ Spontaneous □ O₂ Liters					Output None		
							Free Flow Time Init.					Urine Stool (type)		
								PPV	n/Mack	Time Init			Gastric Aspirate mL per hour Examined By kathy Smith, RN	
Comp	olications	□ Non	е					☐ Bag/Mask Time Init ☐ ET Tube Size Fr Time Init				Transfer With Mother		
Deli	very N	ledication	ons	☐ Nor	ne		CPAP millimeters minutes to First Gasp				ers	☐ To Newborn Nursery		
Date	Date Time Medication Dose Route Init						minutes to First Gasp minutes to Sustained Respiration				☐ To NICU ▼ mom's room			
Today	Site				KS	Circulation ■ Spontaneous					Date//_Time			
							External Cardiac Massage					Mode of Transport		
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<u> </u>									Rate (bpm)				RN (1) Kathy Smith,RN	
							Time Time				_	(2) Joe Olson, RN		
Chronology Date								Time				Anesthesiologist/CRNA Mary Schneider CNM		
Admit	to	-	Time				IV Access ☐ Umbilical Catheter					Physician—Attending B. Barker, MD		
Hospit	al	yesterda	0800	<u>'</u>			Peripheral Line Person Managing Resuscitation:					Physician—Assist (1)		
Memb Ruptu		yesterda	0900)			Person Managing Resuscitation:					(2)		
Onset Labor		yesterda	0800		Time Min		Neonatal Medications None				Technician Pediatric Provider			
Compl	Complete Cervical Dilatation		0800	24			Date	Time	Medicatio	n Dos	e Route	Init	■ Notified □ Present at Birth	
Delive		today	1000) 2	Н		Today	1030	Vitamin K	1mg	Site	KS	Others Present	
Infant Delive	rv of	+ -			10	II	Today	1030	Erythromyci	in 0.5	eyes	KS	Remarks	
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ID/Band No. 90518 Condition ■ Alive □ Stable □ Fair □ Critica						Critical	pH	-4000	50.11		0.110 10111	1		
Cond			Ilbirth Antepartum											
☐ Intrapartum							pCO ₂ HCO ₃					-		
☐ Neonatal Death Birth Order 1 of 1 2 3 4							Test Result							
Repeat Apgar every 5 min until score greater							Dextrostix							
than or equal to 7 Apgar Score 1 min 5 min 10 min														
Heart			2	2			Initial Newborn Exam					1		
Respiratory Effor		fort	2	2			Weight 3742 gms 8 lbs 4 ozs Deferred							
Muscle Tone			2	2			Length 50.8 cms 20 ins Deferred							
Reflex Irritability		ty	2	2			Head 33 cms 13 ins □ Deferred Chest cms ins □ Deferred							
Color			1	1			Abdor	Abdomencmsins Deferred						
Total			9	9			Temp_98.6 ☐ Rectal ■ Axillary					Date		
	d by Kath	ny Smith, Ri						AP_120 Resp 44 BP n/a ■ No Observed Abnormalities			IVA	Kathy Smith, RN Completed xx / xx / xx (Signature)		
Scored by Kathy Smith, RN No Observed Form 5712N © BRIGGS, Des Moines, IA 50306 (800) 245-4080 www.BriggsCorp.com												A D O	AND DELIVEDY CHMMADY (David o at o	

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APPENDIX C AND D: GROWTH CHARTS





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. <u>Positioning</u>. 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:



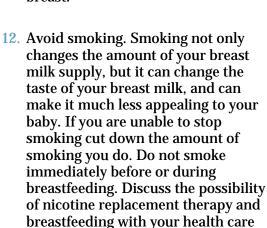
- a. Lift your baby toward your shoulder, with your hand on his head and neck for support. He should be facing the area behind you. Rub your baby's back with a firm and open hand to release the trapped air.
- b. Sit your baby on your lap and lean him forward, supporting his chest with the base of your 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.











provider.

14. <u>Consult a lactation consultant,</u> 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

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APPENDIX F: CAR SEAT SAFETY HANDOUT

CAR SEAT TIPS

The birth of a new child brings many new things to learn, one of which is ensuring your baby stays safe. Incorrect installation of a car seat is often overlooked, resulting in putting your newborn's life in danger. By following the steps set forth in this article, you can travel while knowing that each trip your baby goes on is a safe one.

Road injuries are the leading cause of unintentional deaths to children in the United States. Correctly used child safety seats greatly reduce the risk of injury.

RIGHT SEAT

Check the label on your car seat to make sure it's appropriate for your child's age, weight and height. Check your car seat has an expiration date. Just double check the label on your car seat to make sure it is still safe. Do not buy a used car seat. If it has been in an accident you do not want to use the car seat. Register the car seat so you are updated on any recalls.





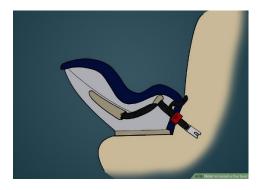
RIGHT PLACE

Kids are Very Important Persons, just ask them. And all VIPs ride in a back seat, so keep all children in a back seat until they are 13.



RIGHT DIRECTION

Keep your child in a rear-facing car seat until at least age 2. When he or she outgrows the seat, move your child to a forward-facing car seat and make sure to attach the top tether after you tighten and lock the seat belt or lower attachments (LATCH).



INCH TEST

Once your car seat is installed, give it a good shake at the base. Can you move it more than an inch side-to-side or front-to-back? A properly installed seat will not move more than an inch.

PINCH TEST

Make sure the harness is tightly buckled and coming from the correct slots (check car seat manual). Now, with the chest clip placed at armpit level, pinch the strap at your child's shoulder. If you are unable to pinch any excess webbing, you're good to go.

Source: National Institute of Health: https://www.nichd.nih.gov/sts/about/environment/Pages/look.aspx

APPENDIX G: SAFE SLEEP HANDOUT

NEWBORN SAFE SLEEP



- Put your baby to sleep on his back on a flat, firm surface, like a crib or bassinet.
- Don't bed-share. Put your baby to sleep in his own crib or bassinet.
- Safe sleep can help protect your baby from sudden infant death syndrome (also called SIDS) and other dangers
- The American Academy of Pediatrics recommends that you and your baby sleep in the same room, but not in the same bed, for the first year of your baby's life but at least for the first 6 months.
- Use a bassinet, crib or play yard that meets current safety standards. Don't use cribs with drop-side rails.
- Keep crib bumpers, loose bedding, toys and other soft objects out of your baby's crib. They put your baby in danger of getting trapped, strangled or of suffocating.
- Put your baby to sleep on his back every time until he's 1 year old. It's not safe for
 a baby to sleep on his side or tummy. If your baby can roll over from his back to
 his side or tummy and over to her back again, don't worry if he changes positions
 while sleeping. Give your baby tummy time every day. Tummy time helps your
 baby develop his neck, shoulder and arm muscles.
- Dress your baby in light sleep clothes. Remove any strings or ties from his
 pajamas and don't cover his head. A blanket sleeper (a kind of infant clothing
 used for sleeping) can help keep your baby warm without covering his head or

face. Keep the room at a temperature that's comfortable for you. If your baby is sweating or his chest feels hot, he may be overheated.



Image courtesy of the Safe to Sleep® campaign, for educational purposes only; Eunice Kennedy Shriver National Institute of Child Health and Human Development, http://safetosleep.nichd.nih.gov; Safe to Sleep® is a registered trademark of the U.S. Department of Health and Human Services.

APPENDIX H: INFORMED CONSENT FOR CIRCUMCISION



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

mother

Sue Smith, R

Date/Time

CREDITS

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