DISCIPLINE: Respiratory Therapy LEVEL: 1

NEWBORN

Estimated Time: 30 minutes • Debriefing Time: 30 minutes



Patient Name: Nova Brooks

SCENARIO OVERVIEW

Nova was born via vaginal birth without incident at 37 5/7 weeks. Mom was Group B Strep (GBS) positive and treated with IV antibiotics during labor. However, she had PROM sometime after her 36-week appointment and prior to this appointment at just over 37 weeks. Mom states she felt a little wet down there from time to time but thought she was leaking urine. Thus, the baby was exposed to GBS for an unknown time. Nova developed pneumonia 36 hours after birth. Student have orders to administer O2 via head hood. They should also perform a focused respiratory assessment of a neonate as well as evaluate neonatal labs and a chest x-ray.

LEARNING OBJECTIVES

- 1. Demonstrate proper infection control
- 2. Obtain accurate vital signs for a neonate
- 3. Evaluate oxygenation status and apply oxygen as necessary
- 4. Perform a focused respiratory assessment for a neonate
- 5. Evaluate neonatal patient data
- 6. Effectively communicate with the patient and interprofessional team
- 7. Document accurately

CURRICULUM MAPPING

WTCS RESPIRATORY THERAPY PROGRAM OUTCOMES

- Apply respiratory therapy concepts to patient care situations
- Demonstrate technical proficiency required to fulfill the role of a respiratory therapist
- Practice respiratory therapy according to established professional and ethical standards

RESPIRATORY SURVEY

- Perform pulse oximetry
- Review the medical record utilizing medical record keeping and charting methods consistent with hospital policy and procedures
- Utilize infection control principles
- Evaluate patient data
- Perform a basic cardiovascular assessment
- Perform a respiratory assessment
- Obtain vital signs

RESPIRATORY THERAPEUTICS I

• Perform procedures to assess oxygenation

- Evaluate oxygenation
- Demonstrate the use of medical gas equipment
- Assess the need for medical gas therapy

RESPIRATORY DISEASE

• Analyze signs, symptoms, etiology, pathogenesis and treatment for cardiovascular diseases/disorders

RESPIRATORY NEO/PEDS CARE

- Differentiate cardiopulmonary diseases/disorders of the neonatal/pediatric patient
- Evaluate cardiopulmonary status of the neonatal/pediatric patient
- Evaluate radiologic images of neck and chest

CLINICAL PRACTICE

- Apply standard precautions
- Assess vital signs
- Perform pulse oximetry
- Perform chart review
- Perform a pulmonary exam
- Administer oxygen therapy

SIMULATION LEARNING ENVIRONMENT & SET-UP

ENVIRONMENT

Inside room: Patient in bed, as close to fowlers position as possible Inside or outside room: Hand sanitizer and/or sink Outside room: Computer or form(s) for documentation

PATIENT PROFILE

Name: Nova Brooks	Allergies: NKDA
DOB: Yesterday	Admitting Diagnosis: Liveborn infant
Age: 36 hours	(Z38.00), Newborn affected by maternal GBS (Poo.2)
MR#: 105115	Code Status: Full
Gender: Female	Ethnicity: Caucasian
Height: 43.8 cm (19 in)	Maternal History: PROM at 37 5/7 weeks;
Weight: 3.3 kg (7 lbs 5 ounces)	GBS positive; G1, P1, Ao

EQUIPMENT/SUPPLIES/SETTINGS

Patient

- Swaddled with diaper
- No moulage
- ID band present with QR code

Monitor Settings

- No monitor
- Simulator vitals: HR 152, RR 56, Temp 37.1, Sat = 94 % on 10 lpm blow-by O2 (neonatal pulse oximetry probe attached to right foot)

Supplies

- General
 - Respiratory Equipment

- Blow-by O2 for beginning of scenario
- Neonatal pulse oximeter probe, attached to patient
- Oxygen hood and equipment with blender
- Various other neonatal O2 supplies
- Medications
 - None needed

QR CODES

RETRACTIONS	PULSE OX	FACILITATOR

CHEST QR CODES

Cut along the dotted lines. Fold along the solid line to create a bi-fold of the diagram and QR code.







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. For the most authentic sound experience, student should use ear buds or the ARISE "stethoscope" for all QR codes with the following symbol: D. Example: QR Code: Chest Anterior 1 D
 - 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.
 - Medication QR Codes The student(s) must scan QR Code: Patient ID prior to scanning any medication. That scan is valid for 2 minutes and then it "times out." The student(s) will need to scan QR Code: Patient ID again to give more medications.
 - MAR Hyperlinks On the MAR all medications are underlined and hyperlinked to DailyMed, which is a medication reference housed by the

National Library of Medicine. Students can click on these links during the simulation for up-to-date medication content, labels, and package insert information.

- Discuss the simulation "Learning Objective(s)" (on iPad) as well as any other Prebrief materials
- Get "Report" on iPad
 - Possible Facilitator Questions
 - What are your priorities for this patient?
 - How will your patient interaction differ with this newborn as opposed to an adult?
- View "Patient" video on iPad
 - Possible Facilitator Questions
 - How does your evaluation of this neonate differ from that of an adult?
- Advance to the "Patient Profile" screen (on iPad). This will act as a simulated patient chart.
- Students can view the tabbed content on the iPad (see below) prior to entering the patient's room and throughout the simulation as needed.
 - You should give student some time (5 minutes) to review this content now, prior to entering the patient's room.
 - Facilitator Note: There are a lot of medications in the MAR and all are linked to Dailymed. This may be a good opportunity to review general pharmacology.

L&D RECORD

	(\bigcirc	Duplic		bis form to strictly probabilited by law @ Brisson Corporation, All	
\bigcirc	æ	Labor and	Dalii		Patient Name: Olivia B DOB: 1/29/19XX MR#: 12919	coks
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\bigcirc	Preterm Lab Postterm Lab Previous Co Prenatal Co Intraparta Maternal	or (less than or equal t oor (greater than or equ esarean omplications Ref I Events	io 37 Wee lal to 42 V er to Pre ords	eks) Veeks) natal	Face/Brow Breech Frank Complete Single Footling Double Footling Transverse Lie Back-up Back-Down	
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	Date Time Yesterday XXXX Yesterday XXXX Yesterday XXXX	Medication Penicillin Penicillin	Dose 5 ml 2.5 ml	Route IV IV	Monitor None FHR UC External × × Internal Fetal Bradycardia	□ Vertical □ Pfannenstiel Episiotomy □ None □ Midline
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	Placenta Placenta Pr Abruptio Pl	revia acenta			Vertex Spontaneous Assisted Manual Rotation Forceps (type)	Vuchal Cord (x 1) True Knot Lengthcms 2 Vessels 3 Vessels Cord Blood To Lab Refrig Discard
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æ								Pati DOI MR:	ent Name: 3: 1/29/19) #: 12919	Olivia E XX	Brooks
MNRS	Labor a	nd E)eli\	/ery	Sun	nma	ry Page 2	of 2			
Record System [™]	To order call: 1	.800.2	245.40	080		Re-or	der No. 571	2N			
Delivery Da	ata (Cont'o	1.)			Infa Airwa	nt Da ∾	ta (Cont	t'd.)			Initial Newborn Exam (Cont'd.)
Vaginal Pack Co	unt Correct				🔳 Bu	lb Sucti	ion		_		Meconium Staining Cephalhematoma
N/A Yes	■ No					Mouth	atheter S	pressure	_ +r 		Petechiae Other
Delivery Ane	esthesia	'N	one			Nose Pharvr	их Г	ا At Deliv	nillimeter ⁄erv	s Hg	
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Date Time	Medication	Dose	Eff	ect	Breat	hing	Ium Below (imes		Intake None Breast Fed Formula Glucose Water
Yesterday p	er anesthesia				I ■ Sp	ontane	ous Liters				Output I None
						Free F	low	Time Ini	t		Urine Stool (type)
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							Tube Size_ AP	Fr millimet	Time Init. ers		Transfer With Mother
Delivery Med	dications	🗌 Nor	ne Route			minute	s to First Ga	asp asp	rotion		
Date Time	Medication	Dose	Site	Init	Circu	lation	s to Sustain	ieu Kespi	ation		Mom's room
Today 1015	Pitocin	10u	IV	KS	I∎ Sp I⊓ Ex	ontane ternal C	ous Cardiac Mas	sage			Mode of Transport
					Tir	ne Initia	ated	Time Co	npleted_		Delivery Personnel
						Heart	Rate (bpm)		100		RN (1) Kathy Smith, RN
Chronology					Time Time				(2) Joe Olson, RN		
EDD	Date				Time						
Admit to									Physician—Attending <u>B. Barker, MD</u>		
Hospital 2 days ago AAA					Peripheral Line Person Managing Resuscitation:				Physician—Assist (1)		
Ruptured Onset of	Unknown	Tatal	Time						(2) Technician		
Labor	Unknown	Hrs/	/Min		Neona	atal Me	dications [None			Pediatric Provider
Complete Cervical Dilatation	Yesterday 38 hrs ag	12	5		Date	Time	Medicati	ion Do	se Route Site	Init	Notified Present at Birth
Delivery of . Infant	Yesterday 40 hrs ag	10 1	50	1	Today	XXXX	Vitamin	K 1m	g IM	KS	Remarks
Delivery of . Placenta	Yesterday 39.8 hrs as	90 O	15		Today		Eryunomy	icini 0.:	eyes	K3	
		14	10	Total							
Infant Data	🗆 Male 🔳	Female	'		Lab D	ata 🗆	None		Time		
ID/Band No. 105	115				Blood pH	Gases	Sent	Umb Art	Umb Veir	<u>'</u>	
Condition 🔳 Aliv	ve ∟Stable Ilbirth □Anti	⊢ Fai epartur	r ∟C n	Critical	pO ₂					1	
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Birth Order 1	of 1 2	3 4			Test		R	esult		-	
Repeat Apgar every 5 min until score greater than or equal to 7					Dextrostix						
Apgar Score 1 min 5 min 10 min				0 min	 						
Heart Rate	2	2			Initia	al Ne	wborn E	xam			
Respiratory Effort	2	2			Weigh Lengt	it <u>3302</u> h 48.3	gms <u>7</u> lb cms 19	os <u>5</u> oz ir	is ⊡De	eferred	
Muscle Tone	2	2			Head	33		ir	ns □De	eferred	
Reflex Irritability	2	2			Chest		cms	ir ir	is ⊡De	eferred	
Color	1	1			Temp	98.6	_ 🗌 Recta	ıl 🔳 Axill	ary	leneu	Data
Total	9	9			AP <u>12</u>	0	_ Resp_44	B	P <u>N/A</u>		Kathy Smith, RN Completed XX / XX / X
Scored by Kathy S	No Observed Abnormalities				(Signature)						

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NEWBORN RECORD

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\bigcirc	Maternal/Newborn Record System [™] To order call:	Newborn Pro	file Re-order No. 5720	N			
\bigcirc	Admit Data Date <u>xx</u> / x ID/Band No. <u>105115</u> Nai Admitted By <u>Georae O'Rile</u> Medications None I se Date Time Medication Eye Prophylaxi Erythromycin	x /xx Time xxxx me Nova Brooks w. MD e Delivery Data Dose Route Inits s Site	Newborn Data Birthdate <u>XX</u> / XX / Place of Birth H Ho Vertex Breech Delivered By <u>Geora</u> Apgar <u>9</u> 1 Min <u>9</u> Cord Blood pH Intrapartum Problems 1. Prolonged RO 2.	Male Ø Female XX. Time XXXX pspital Vaginal Forceps e O'Rilev. MD 5 min ¥ Type/RhCc s IdentifiedN M with GBS	Breast N Bottle N ICesarean B Vacuum S 10 min U pombs_ned H one H	Internal Data ame Olivia Brooks, ecord No. 12919 lood Type/Rh A/necd ordens Neg rine Tox Image: Comparison of the point of	Age 25Age 25Age 25Antibody + - Comments
dicators	Measurements /Gest See Delivery Data ✓ Weight 7.31 Ibs 3302 ✓ Length 48.3 cms 19 ✓ Head Circ 34.3	Gest Age by Da Gest Age by Da gms Gest Age by Ex ins Pre 5ins ZTer	sment ates <u>37 5/7</u> Wks am <u>38 </u> Wks term m	Musculoskeletal 24. Tone 25. Extremities 26. Hips 27. Spine Neurologic 28. Reflexes		⊗ Detail Abno	rmal Findings
ge For Newborn Risk In	✓ Chest Circ <u>34</u> cms <u>13.4</u> ✓ Abd Circ <u>31</u> cms <u>12.7</u> Physical Assessmen Date_ <u>XX</u> / <u>XX</u> / <u>XX</u> Time <u>X0</u> Temp <u>36.6</u> Pulse Rate/Rh Head/Neck	4ins	A AGA LGA	29. Cry Skin 30. Condition 31. Color 32. Variations (i.e Elimination 33. Bowel Anus	Manana II	bry ☐ Peeling ☑ Ve dy ☐ Pale ☐ Mottle e noted rthmark)	mix Mec Stain d Cyanotic)
e Reverse Side This Pa	1. Fontanels Level Bu Anterior 2. Sutures ☐ Open □ Clc 3. Variations ☐ None □ 1 4. Laceration □ No ☑ Yes	Iging Depressed	ihalhematoma	First 34. Urine First Problems Identifie 1 2 3 Comments/Plan	Meconium (date Void (date, time) d I None	time)	
°	5. Face Image: Constraint of the second						
	12. Thorax I 12. Thorax I 13. Clavicles I Cardiovascular I 14. Heart Sounds I 15. Pulses I Abdomen I6. Structure						
\bigcirc	17. Bowel Sounds			Examined By_			
	Form 5720N © BRIGGS, Des Moines, IA 50	1 1306 (800) 245-4080 www.BriggsCorp.com RINTED IN U.S.A.	n			INITIAL NEW	BORN PROFILE

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INITIAL NEWBORN PROFILE

ORDERS

Patient Name	DOB	MR#
Nova Brooks	Yesterday	105115
Allergies	Height (cm)	Admission Weight (kg)
NKDA	48.3	3.3

Provider Orders

Date	Time	Order			
Yesterday	36 hours ago	Routine Newborn Order Set			
		Vital Signs, Monitoring and Nursing Orders:			
		• Assess newborn. Obtain temperature, heart rate, & 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 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 cardiac screening by obtaining and documenting SpO2 on right arm & either foot 			
		• 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			
		Consult lactation specialist for breastfeeding mothers			
		 Provide oxygen via mask, hood, or cannula for SpO2 < 90%, respiratory distress or cyanosis 			
		• Obtain glucose according to hypoglycemia protocol and notify pediatrician if glucose is < 40			

Notify provider for:
• Infants < 37 weeks gestation
 Temperature < 36.5 after a trial of warming or > 38
 Heart rate < 80, > 170, or abnormal cardiac rhythm
• Respiratory rate < 30 or > 60, use of accessory muscles, unequal breath sounds, abnormal breathing patterns, abnormal SpO2, or changes in skin color requiring oxygen
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
Diet/Nutrition:
• Mother's choice: Breastfeeding or Formula feeding (20 cal formula with iron) on demand
• If baby is< 36 weeks, contact physician for feeding orders

	Medications:
	• Phytonadione (Vitamin K) 1 mg IM within 1 hour of birth for prevention of bleeding; if infant is < 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 0.5 ml IM and Hepatitis B Immune Globulin 0.5 ml within 12 hours of birth
	• Acetaminophen 15 mg 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
	 Group B Strep (GBS): Call provider to get order for antibiotics STAT if maternal chorioamnionitis or maternal fever in labor

		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
		• Group B Strep (GBS) / Sepsis Screening: If maternal chorioamnionitis or maternal fever in labor obtain one peripheral blood culture at birth and CBC with differential at 6 hours postnatal age AND for infants < 37 weeks gestation OR rupture
		 If mother GBS positive or mother has given birth to a previous infant with GBS disease AND mother did not receive at least one dose of appropriate intrapartum antibiotic (penicillin, ampicillin, or cefazolin) at least 4 hours prior to delivery AND infant < 37 weeks gestation OR rupture of membranes > or = to 18 hours obtain: 1) peripheral blood culture at birth and 2) CBC with differential at 6 hours postnatal age
		• If mother is GBS unknown at birth AND infant < 37 weeks OR rupture of membranes > or = to 18 hours obtain: 1) peripheral blood culture at birth and 2) CBC with differential at 6 hours postnatal age
		Prior to Discharge:
		Newborn screening after 24 hours
		• Car seat monitoring test on infants born prior to 37 weeks, infants < 2500 grams at discharge, or as ordered by physician
		• Transcutaneous bilirubin level prior to discharge and serum bilirubin PRN
		Ensure cardiac screening is documented prior to discharge
		Hearing screen prior to discharge
		George O'Reiley, MD
Yesterday	35 hours	Ampicillin IV, 100 mg/kg every 12 hours – NOW
	ago	Gentamicin IV, 4 mg/kg every 24 hours – NOW
		Add BUN and Creatinine to GBS Labs – NOW

		Call when all labs are resulted
		Paula Datrícían, MD
Today	15 minutes	Chest x-ray for respiratory distress – STAT
	ago	Respiratory Therapy to start O2 via Head Hood – STAT
		Titrate O2 to keep SpO2 > 89 and < 96
		CBC with differential, blood cultures, BUN & creatinine – STAT
		Prepare for lumber puncture – STAT
		Discontinue Ampicillin
		Pharmacy to start Vancomycin, dose per protocol
		Paula Datrícían, MD

MAR

Patient Name	DOB	MR#
Nova Brooks	Yesterday	105115
Allergies	Height (cm)	Admission Weight (kg)
NKDA	48.3	3.3

Medication Administration Record

Scheduled			
Gentamicin IV, 4 mg/kg, Q 24 hours	Due Today		Last Given
	14 hours from	now	10 hours ago
Ampicillin IV, 100 mg/kg, Q 12 hours	Due Today		Last Given
	2 hours from now	14 hours from now	10 hours ago
Hepatitis B vaccine, 0.5 ml IM, Administer	Due Today		Last Given
before discharge	Prior to discharge		
PRN			
Acetaminophen 15 mg/kg PO for post procedural	Last Given		
	•		
Sucrose 24%: 1 ml PO every 90 minutes as needed	Last Given		
	•	•	

Discontinued		
Phytonadione (Vitamin K), 1 mg IM, Administer within	Discontinued	Last Given
one hour of birth	35 hours ago	35 hours ago
Erythromycin, 0.5% ophthalmic ointment, Apply 1 cm	Discontinued	Last Given
ribbon to both eyes within one hour of birth	35 hours ago	35 hours ago
Vitamin D, 400 international units PO, Administer after	Discontinued	Last Given
24 hours of age	10 hours ago	10 hours ago

DAILY RECORD

Patient Name	DOB	MR#
Nova Brooks	Yesterday	105115
Allergies	Height (cm)	Admission Weight (kg)
NKDA	48.3	3.3

Daily Record

Vitals	26 hours ago	10 hours ago	15 minutes ago	10 minutes ago
Pulse	132	128	166	152
Resp. Rate	54	42	64	58
Temp (°C)	36.9	37.2	37.8	
O2 Saturation (%)	95	94	86	95
Applied Oxygen	RA	RA	RA	10 lpm Blow-by

Daily Weight (kg)	36 hours ago	10 hours ago		
	3.3	3,1		

VITALS

The iPad shows the "enterable" vitals screen.

PROGRESS NOTES

No reports available.

LABS-DIAGNOSTICS

Patient Name	DOB	MR#
Nova Brooks	Yesterday	105115
Allergies	Height (cm)	Admission Weight (kg)
NKDA	48.3	3.3

Laboratory Results

CBC with Di	ifferentia	al			
	35 hours ago	[time]	[time]	Units	Reference Range
WBC	21.2			x10 ³ uL	9.0-30.0
RBC	4.8			x10 ⁶ uL	3.9-5.5
Hgb	16.7			g/dL	13.5-22.0
НСТ	52.4			%	42.0-60.0
MCV	100.2			fL	98.0-120.0
Platelet	298			x109uL	150-350
Neutro	24.2				6.0-26.0
Lymph	10.2				2.0-11.0
Mono	0.8				0.4-1.8
Eos	0.46				0.02-0.85
Baso	0.49				0-0.60

BUN & Crea	tinine				
	35 hours ago	[time]	[time]	Units	Reference Range
BUN	6			mg/dL	4-12
Creatinine	0.7			mg/dL	0.3-1.0

Blood Cultu	Ire				
	35 hours ago	[time]	[time]	Units	Reference Range
Bacterial Growth	No Growth				No Growth

IMAGING

No reports available.

LEVEL 1

The iPad reads, "The iPad is at Level 1."

SCANNER

Use this to scan available QR Codes.

EXIT

The iPad reads, "Are you sure you want to exit? All data will be lost."

- If "No" is selected, the iPad will return to the tabbed content.
- If "Yes" is selected, the iPad will let the student(s) exit and prompt them to complete an embedded 3-5 minute survey.

STATE 1 PATIENT ASSESSMENT

- Patient Overview
 - Patient is on a blow-by O2 at 10 lpm when students enter the room. Mom is not there as she is still an inpatient. Optional: Someone could role play the Dad or to add more diversity, someone could role play the other Mom as could be a same-sex couple.
- Expected Student Behaviors
 - Perform appropriate hand hygiene and infection control
 - Introduce themselves and verify the patient (can scan QR Code: Patient ID)
 - Obtain vital signs and perform a chest exam on a newborn as well as interpret the findings
 - Students may enter correct vitals in the iPad, but it is not tied to any programming.
 - Auscultation Scan **QR Code: Chest** ◀
 - There are ten QR codes to apply to the chest see above Chest QR Code chart for locations
 - Students will hear the following breath sounds throughout all lung fields:
 - A faint inspiratory crackles with a low-pitched expiratory wheeze
 - Set up and apply O2 head hood
 - Make sure O2 is applied at all times during the set up. If not, patient should desaturate.
 - Students should titrate O2 percentage to achieve adequate saturation.
 - Facilitator Note: This would be a good time to discuss neonatal nasal cannulas, etc. Discuss the options needed to assure the infant maintains adequate oxygenation status while feeding, etc.
 - Demonstrate appropriate communication with the patient and family

- Technician Prompts
 - Nothing required, but the baby should cry vocationally.
 - If someone play the role of Dad or other Mom. Response can include:
 - "What are you doing? Will she be OK?"
 - "She's' really cold, cover her back up."
 - "How sick is she? Will she be able to go home with us?"
 - "How will we feed her and hold her if she's in that thing?"
 - When students wean the O2, gradually change SpO2 to 95%.
- Facilitator Questions
 - Analyze the vital signs: are they within normal limits for a newborn?
 - Analyze the findings from the chest exam: do you have any concerns?
 - Based on your findings, what would you like to do now and why?
 - What are the pros and cons of an Oxygen Head Hood?
 - Do you feel an Oxygen Head Hood is the best option for this patient? Why or why not? How will you address you concerns?
- Tabbed iPad Prompts and Content

LEVEL 1/2

- When the Level 1 tab is tapped, the iPad reads, "The iPad is at Level 1."
- The Level 1 tab will automatically change to a Level 2 tab when **QR Code: Facilitator** is scanned.

STATE 2 INTERPROFESSIONAL COMMUNICATION

- Patient Overview
 - At the beginning of this State, the iPad displays a plaque that reads,
 "Chest x-ray and labs have resulted." Students should review the results and assure the patient is reassessed and oxygenating adequately. Then, they should discuss interventions with the RN. They may discuss the option of applying CPAP if the patient deteriorates.
- Expected Student Behaviors
 - Review chest x-ray and labs
 - Reassess the patient to assure oxygenation status improved
 - o Discuss interventions with the patient's RN
 - Document accurately
- Technician Prompts
 - Nothing is needed from the patient, but the baby could still cry occasionally.
 - Someone needs to play the role of the RN
 - Students should discuss required O2%, review how the Head Hood works, discuss options for maintaining O2 Sats when feeding, etc...
 - Students could discuss options such as CPAP if the patient's oxygenation status deteriorates further.
- Facilitator Questions
 - Interpret that chest x-ray and lab results.
 - Why is it necessary to reassess your patient?
 - Are there any other interventions you would recommend at this time or in the future?
 - Describe how SBAR communication improves the interprofessional communication process.

MAR

Patient Name	DOB	MR#
Nova Brooks	Yesterday	105115
Allergies	Height (cm)	Admission Weight (kg)
NKDA	48.3	3.3

Medication Administration Record

Scheduled		
Gentamicin IV, 4 mg/kg, Q 24 hours	Due Today	Last Given
	13.5 hours from now	10.5 hours ago
Vancomycin IV, 20 mg/kg, Q 24 hours	Due Today	Last Given
Pharmacy Dosing Protocol	Now	
Hepatitis B vaccine, 0.5 ml IM, Administer	Due Today	Last Given
before discharge	Prior to 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
Sucrose 24%: 1 ml PO every 90 minutes as needed	for procedural pain	Last Given
Sucrose 24%: 1 ml PO every 90 minutes as needed	for procedural pain	Last Given
Sucrose 24%: 1 ml PO every 90 minutes as needed Discontinued	for procedural pain	Last Given
Sucrose 24%: 1 ml PO every 90 minutes as needed Discontinued Phytonadione (Vitamin K), 1 mg IM, Administer w	for procedural pain	Last Given Last Given
Sucrose 24%: 1 ml PO every 90 minutes as needed Discontinued Phytonadione (Vitamin K), 1 mg IM, Administer w one hour of birth	vithin Discontinued 35.5 hours ago	Last Given Last Given 35.5 hours ago
Sucrose 24%: 1 ml PO every 90 minutes as needed Discontinued Phytonadione (Vitamin K), 1 mg IM, Administer w one hour of birth Erythromycin, 0.5% ophthalmic ointment, Apply 3	t for procedural pain vithin Discontinued 35.5 hours ago 1 cm Discontinued	Last Given Last Given 35.5 hours ago Last Given
Sucrose 24%: 1 ml PO every 90 minutes as needed Discontinued Phytonadione (Vitamin K), 1 mg IM, Administer w one hour of birth Erythromycin, 0.5% ophthalmic ointment, Apply 3 ribbon to both eyes within one hour of birth	t for procedural pain vithin Discontinued 35.5 hours ago 1 cm Discontinued 35.5 hours ago	Last Given Last Given 35.5 hours ago Last Given 35.5 hours ago
Sucrose 24%: 1 ml PO every 90 minutes as needed Discontinued Phytonadione (Vitamin K), 1 mg IM, Administer works one hour of birth Erythromycin, 0.5% ophthalmic ointment, Apply 1 ribbon to both eyes within one hour of birth Vitamin D, 400 international units PO, Administer	t for procedural pain vithin Discontinued 35.5 hours ago 1 cm Discontinued 35.5 hours ago r after Discontinued	Last GivenLast Given35.5 hours agoLast Given35.5 hours agoLast Given35.5 hours agoLast Given
Sucrose 24%: 1 ml PO every 90 minutes as needed Discontinued Phytonadione (Vitamin K), 1 mg IM, Administer wo one hour of birth Erythromycin, 0.5% ophthalmic ointment, Apply 1 ribbon to both eyes within one hour of birth Vitamin D, 400 international units PO, Administer 24 hours of age	t for procedural pain vithin Discontinued 35.5 hours ago 1 cm Discontinued 35.5 hours ago vr after Discontinued 10.5 hours ago	Last GivenLast Given35.5 hours agoLast Given35.5 hours agoLast Given10.5 hours ago
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LABS/DIAGNOSTICS

Patient Name	DOB	MR#
Nova Brooks	Yesterday	105115
Allergies	Height (cm)	Admission Weight (kg)
NKDA	48.3	3.3

Laboratory Results

CBC with Differential					
	35 hours ago	10 minutes ago	[time]	Units	Reference Range
WBC	21.2	36.8		x10 ³ uL	9.0-30.0
RBC	4.8	4.1		x10 ⁶ uL	3.9-5.5
Hgb	16.7	14.3		g/dL	13.5-22.0
НСТ	52.4	48.6		%	42.0-60.0
MCV	100.2	101.2		fL	98.0-120.0
Platelet	298	202		x109uL	150-350
Neutro	24.2	32.1			6.0-26.0
Lymph	10.2	8.2			2.0-11.0
Mono	0.8	0.7			0.4-1.8
Eos	0.46	0.06			0.02-0.85
Baso	0.49	0.32			0-0.60

BUN & Creatinine					
	35 hours ago	10 minutes ago	[time]	Units	Reference Range
BUN	6	7		mg/dL	4-12
Creatinine	0.7	0.8		mg/dL	0.3-1.0

Blood Culture

	24 hours	48 hours	72 hours	Reference Range
35 hours ago	No Growth			No Growth
10 minutes ago	Pending			

IMAGING



L

LEVEL 2/EXIT

- When the Level 2 tab is tapped, the iPad displays a plaque the reads, "Have you updated the provider?"
 - If "No," the iPad reads, "You must update the provider before exiting."
 - If "Yes," the iPad reads, "Scenario objectives have been met. Are you sure you want to exit the game?"
 - If "No" is selected, the iPad will return to the tabbed content.
 - If "Yes" is selected, the iPad will let the student(s) exit and prompt them to complete an embedded 3-5 minute survey.

DEBRIEF

Nothing needed from the iPad.

QUESTIONS

- 1. How did you feel this scenario went?
- 2. What were the main issues you had to deal with when caring for Nova?
- 3. Review understanding of learning objective: Demonstrate proper infection control.
 - a. What infection control issues did you encounter with Nova?
 - b. How will you protect Nova from other infections while she is admitted? What about when she goes home?
- 4. Review understanding of learning objective: Obtain accurate vital signs for a neonate.
 - a. What, if any, challenges did you encounter in obtaining Nova's vitals?
 - b. How do vitals differ in the newborn population?
- 5. Review understanding of learning objective: Evaluate oxygenation status and adjust oxygen as necessary.
 - a. Is Nova's oxygenation status normal or abnormal and why?
 - b. If her oxygenation status continued to deteriorate, what intervention(s) would you recommend next and why?
- 6. Review understanding of learning objective: Perform a focused respiratory assessment for a neonate.
 - a. What concerns did you find during your physical assessment and evaluation?
 - b. Is this what you would expect in this patient? Why or why not?
- 7. Review understanding of learning objective: Evaluate neonatal patient data.
 - a. What pieces of data were significant in Nova's history?
 - b. Why is the Mom's history included in the chart? How does her history affect Nova?
 - c. Describe the chest x-ray and labs results. Where they what you expected? Why or why not?
- 8. Review understanding of learning objective: Effectively communicate with interprofessional team.

- a. Were the communication techniques you used with the RN effective? Why or Why not?
- b. If you could "do over," how would you change your communication with the RN?
- 9. Review understanding of learning objective: Document accurately.
 - a. What is important to document in your assessments and interventions?
- 10. Summary/Take Away Points
 - a. "Today you cared for a newborn patient who needed increased O2 secondary to GBS exposure. What is one thing you learned from participating in this scenario that you will take with you into your respiratory therapy practice?" (Each student must share something different from what the others' share.)

Note: Debriefing technique is based on INASCL Standard 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

CREDITS

- Neonatal Pneumonia Chest X-ray has been adapted from Case 2 by Dr Aneta Kecler-Pietrzyk at <u>https://radiopaedia.org/articles/neonatal-pneumonia</u>
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Retractions, IV and Pulse Oximetry images purchased from shutterstock

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