

Hyperbilirubinemia SKINNY Reasoning

Sarah Daniels, newborn infant

Primary Concept		
Elimination		
Interrelated Concepts (In order of emphasis)		
Clinical Judgment Patient Education		
NCLEX Client Need Categories	Percentage of Items from Each Category/ /Subcategory	Covered in Case Study
Safe and Effective Care Environment		
• Management of Care	17-23%	X
• Safe and Infection Control	9-15%	X
Health Promotion and Maintenance	6-12%	X
Psychosocial Integrity	6-12%	X
Physiological Integrity		
• Basic Care and Comfort	6-12%	x
• Pharmacological and Parenteral Therapies	12-18%	X
• Reduction of Risk Potential	9-15%	X
Physiological Adaptation	11-17%	X

Part 1: Recognizing RELEVANT Clinical Data

History of Present Problem:

Sarah Daniels was born six hours ago by vaginal delivery after 22 hours of labor at 36 weeks gestation because of premature rupture of membranes. She weighed 9 lbs 0 ounces. (4090 g). Her Apgar was 8 at one minute and 9 at 5 minutes. Her newborn assessment revealed a cephalohematoma on the right-posterior aspect of her head. All other assessment data is within normal limits. Sarah has breastfed once since birth for seven minutes. She is noted to be sleepy when at the breast and not an aggressive feeder, consistent with her gestational age. She has voided once since birth, but has not yet stooled.

Sarah's mom Morgan was a diet-controlled gestational diabetic. Morgan's prenatal labs are as follows: Blood type is O +, GBS is negative, Hepatitis B is negative. Her prenatal course was unremarkable other than the premature rupture of membranes.

Sarah's blood type is A+. Blood sugars were obtained per protocol starting at two hours after birth and have been consistently > 50 mg/dL. Her hematocrit was tested per protocol of a baby of a diabetic mother born before 37 weeks and was 48% four hours after birth. Twelve hours after birth, her transcutaneous bilirubin level is 6.1 mg/dL.

Personal/Social History:

Current VS:	NIPS Pain Assessment:
T: 98.3 F/36.8 C (axillary)	Facial Expression: Relaxed
P: 138 (regular)	Cry: No cry
R: 54 (regular)	Breathing Pattern: Relaxed
	Legs: Relaxed
	State of Arousal: Sleeping
	NIPS Score: 0

Morgan Daniels is a 22-year-old single mom who attends a local community college. The father of the baby is not involved. Morgan lives with her parents, who are supportive and available.

What data from the histories are RELEVANT and must be interpreted as clinically significant by the nurse?

Reduction o Risk Potential

RELEVANT Data from Present Problem:	Clinical Significance:
Stable blood glucose – maternal Baby has not stooled Bilirubin was high @ 6.1 mg/dL	The mother has controlled blood sugars which will not have too much of an effect on the newborn besides her weight (4090 g). The newborn is almost 24 hours old and has not stooled and should have by the 24-hour mark. The newborn has a high level of bilirubin that will need attention to help control.
RELEVANT Data from Social History :	Clinical Significance:
Father of baby not involved Grandparent involvement Single mother	The mother has a great support system besides the lack of baby of the father involvement. Since the father of the baby is not involved, the mother will have all the responsibility of the parents with the help of her own parents. With the stress of caring for a baby on her own, she also has the stress of community college which couple possibly lead her

down the path of a post-partum complication.

Patient Care Begins:

What VS data are RELEVANT and must be interpreted as clinically significant by the nurse?

Reduction o Risk Potential/Health Promotion and Maintenance

RELEVANT VS Data:	Clinical Significance:
Stable VS Baby relaxed, not crying	The mother of the baby is stable and doing well. The newborn is relaxed and not crying.

Current Assessment:

GENERAL APPEARANCE:	Calm, body flexed, no grimacing, appears to be resting comfortably
RESP:	Breath sounds clear, nonlabored respiratory effort. No grunting, retraction or nasal flaring noted
CARDIAC:	Heart sounds regular with no abnormal beats, S1 S2, brisk cap refill, no edema. Moderate systolic murmur resented over a ex.
NEURO:	Sleeping • difficult to wake for feedings does not stay awake at breast. All reflexes intact
INTEG:	Facial jaundice noted, skin color pink with acrocyanosis. Cephalohematoma to right-posterior aspect of head. Swelling does not cross sutures lines.

RELEVANT Assessment Data:	Clinical Significance:
Jaundice Lethargic Non distressed	The newborn is non distressed but is showing signs of jaundice. The newborn is also hard to wake for feedings. Feeding is very important, especially in a newborn showing signs of jaundice. Feeding will help decrease the bilirubin levels.

Lab Results:

	Current:	Hi h/Low/WNL?
Bilirubin (m dL)	6.4	High
H b 15-24 dL	18	WNL
Hct 45-65%)	60	WNL
Glucose 40-60m dL)	55	WNL

What lab results are RELEVANT and must be interpreted as clinically significant by the nurse?

RELEVANT Lab(s):	Clinical Significance:	TREND: Im rove/Worsening /Stable:
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Increased bilirubin of 6.4 mg/dL	The newborns' bilirubin level has increased from the 12 hr draw. This puts the newborn at risk for liver problems. The mother should monitor and feed the newborn more frequently to try to help the levels decrease to normal limits.	Worsening
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Part 11: Put it All Together to THINK Like a Nurse!

1. After interpreting relevant clinical data, what is the primary problem?

Management Care/Physiologic Adaptation

Problem:	Pathophysiology in OWN Words:
Hyperbilirubinemia	Hyperbilirubinemia occurs when there is a collection of bilirubin in the bloodstream. Yellow discoloration of the skin and eyes is an indication of hyperbilirubinemia. The yellowish tint is referred to as jaundice. Sometimes it is common in babies from their limited ability to excrete bilirubin.

Collaborative Care: Medical Management

2. State the rationale and expected outcomes or the medical management care. (Pharm. and Parenteral Therapies)

Medical Management:	Rationale:	Expected Outcome:
Obtain parental consent.	Parental consent is required for newborn treatments.	The mother will sign consent forms.
Check body temp hourly.	Bili lights can become very hot to a baby and could burn them.	The temperature will be monitored to prevent burns.
Place eye mask over Sarah's eyes.	An eye mask is necessary to help prevent eye damage.	The newborns eyes will remain undamaged.
Remove all clothing except for her diaper.	By removing all clothing on the baby, it will help the baby absorb the bili lights all over her body.	The newborn will absorb the bili lights decreasing her bilirubin levels.
Place Sarah on the Bilibed and under the bili lights.	The purpose of the bilibed and lights is to help improve her bilirubin levels.	The newborn will be placed in a bilibed that will help decrease her bilirubin levels.
Accurate and strict I and O	The I&O will help measure the amount of bilirubin that is being excreted.	The newborn will show bilirubin excretions in her output.
Repeat serum bilirubin level in 6 hours after phototherapy is initiated.	Repeating bilirubin levels will show if the therapy is working for the newborn.	The newborns bilirubin levels will improve from the use of bilirubin therapy.

Collaborative Care: Nursing

3. What nursing priorities will guide our plan of care? (Management of Care)

Nursing PRIORITY:		
PRIORITY Nursing Interventions:	Rationale:	Expected Outcome:
Reposition newborn Q2h. Maintain the newborns temperature. Begin frequent feedings. Measure the amount of photo energy. Use sterile water when removing eye mask.	This will decrease the risk of skin burns under the bili lights. If the newborn becomes cold, it can lead to cold stress increasing the bilirubin. If the newborn is fed frequently, it will help decrease bilirubin levels. Measuring the photo energy will show proper placement. Sterile water will decrease the number of bacteria.	The newborn will receive the same amount of light exposure. The newborn will remain around the same temperature. The newborn should feed every 2-3 hours. The proper placement of the light bulbs will remain during treatment. The newborn will not have any eye infections.

4. What psychosocial/holistic care **PRIORITIES** need to be addressed for this patient?

Psychosocial Integrity [Basic Care and Comfort]		
Psychosocial PRIORITIES :		
PRIORITY Nursing Interventions:	Rationale:	Expected Outcome:
CARE/COMFORT: Offer assistance with breastfeeding, Carry out any needs the mother may need, Frequent visits to mother and babe, Help mother ambulate around the room.	After labor, the mother is most likely exhausted and needs to have her needs attended to. The mother has no experience with breastfeeding. By carrying out any needs of the mother, it may help her relax some.	The mother will have any of her needs met. She will also try to position herself to be comfortable and relax. She will demonstrate understanding of breastfeeding.
Physical comfort measures: Administer pain medication/medication as ordered, Help the mother with any repositioning.	By administering any medications, it may give the mother any extra relief. The mother is sore from labor and needs assistance with repositioning to be comfortable.	By administering medication, the mother will get a little extra help to relax. The mother will have assistance with comfortable repositioning.
EMOTIONAL (How to develop a therapeutic relationship): The mother will speak her concerns and the nursing staff will listen.	The mother is a new, single mother who could not have understood what her body just endured and had no time to ask questions. The mother could also have concerns about her newborns cephalohematoma but was not sure how to ask.	The nursing staff will listen to the mother and respond back with therapeutic communication.
SPIRITUAL: Assess the mother's religion before proceeding with care.	The mother may feel very strongly about religion and follows a strict ritual. The religion assessment is very important as she is a single mother who may use religion as a coping mechanism.	Once the mother is evaluated, the certain religion measures will be followed if there are any.

5. What educational/discharge priorities need to be addressed to promote health and wellness for this patient and/or family? (Health Promotion and Maintenance)

Ensure the newborn feeds every 2-3 hours.

Assess the newborns skin color and integrity.

Report to the provider if the newborn wets less than 6 diapers in a day.

Report if the newborn is still hard to wake for feedings.