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

SKINNY Reasoning

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: O

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:
- Born at 36 weeks gestation due to premature rupture of membranes - weighs 9 lbs - apgar 8 (1 min) and 9 (5 min) - assessment revealed a cephalohematoma - breastfed only once for 7 minutes and it has been 6 hours since delivery - sleepy at the breast, nonaggressive feeder - voided once since birth, not stooled yet - mom was a diet-controlled gestational diabetic	- this is a pregnancy complication that can result in an infection to the mom and baby - the baby was big which can indicate maternal diabetes, obesity, or weight - Apgar is considered normal - baby has damaged blood vessels, blood pools, into a mass under the skin of the scalp - baby should breastfeed no less than 8-10 times a day, need more skin-to-skin - this is an indication that baby should be placed differently to try to latch onto the breast better

- GBS and hep B were negative	- it is normal for newborns to not pass stool right away – ABO incompatibility
RELEVANT Data from Social History :	Clinical Significance:
- mom is 22 years old, single mom, attending community college - father is no involved	- she is a young mom without the biological dad so she may like to seek outside support groups. - this indicates a strong support system from her parents who provide her with a home for her and her baby and would most likely help her with the baby.

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:
Temp: 98.3 P: 138 R: 54	Temperature is normal (no febrile infection present) Normal pulse Respirations are normal but at the higher end of the range

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, Sl S2, brisk cap refill, no edema. Moderate systolic murmur resent over an ex.
NEURO:	Sleeping and difficult to wake for feedings does not stay awake at the breast. All reflexes intact
INTEG:	Facial jaundice noted, skin color pink with acrocyanosis. Cephalohematoma to the right-posterior aspect of head. Swelling does not cross sutures lines.

RELEVANT Assessment Data:	Clinical Significance:
- Moderate systolic murmur present over apex - sleepy, difficult to wake for feedings, does not stay awake at breast - facial jaundice noted, cephalohematoma	- This is normal in newborns - The baby is very sleepy due to high bilirubin levels and making it difficult to feed which is a problem because the baby may not be getting adequate nutrition - these are all symptoms of hyperbilirubinemia.

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: 1m rove/Worsening /Stable:
Bilirubin 6.4	This is an indication of jaundice and is common in babies born before 38 weeks gestation.	Worsening

Part 11: Put it All Together to THINK Like a Nurse!

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

Management of Care/Physiologic Adaptation

Problem:	Pathophysiology in OWN Words:
Pathologic Jaundice	Increased bilirubin production in pathologic jaundice are hemolysis immune-related factors such as ABO incompatibility and cephalhematoma. Bilirubin is produced from the breakdown of hemoglobin.

Collaborative Care: Medical Management

2. State the rationale and expected outcomes or the medical Ian o care. (Pham. and Parenteral Therapies

Medical Management:	Rationale:	Expected Outcome:

Obtain parental consent. Check body temp hourly. Place eye mask over Sarah's eyes. Remove all clothing except for her diaper. Place Sarah on the Bilibed and under the bili lights. Accurate and strict I and O Repeat serum bilirubin level in 6 hours after phototherapy is initiated.	- To get permission from the mom that the procedure may be done on her baby with her permission - To protect the baby from bright bilirubin lights - To ensure all parts of the baby's body is receiving bili light therapy - High bilirubin levels often decrease when put under special blue lights - Hydration is important to maintain fluid with the absorption of bilirubin once it passes through the liver - To monitor if any changes in bilirubin level occurred.	- The patient will sign a consent form - The baby's eyes will be protected - The baby will receive full light therapy - Bilirubin levels will decrease

Collaborative Care: Nursing

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

Nursing PRIORITY:	Reducing and maintaining newborn bilirubin levels.	
PRIORITY Nursing Interventions:	Rationale:	Expected Outcome:
- The nurse will assess the skin for yellow tone - The nurse will put the baby in phototherapy - The nurse will monitor bilirubin levels - Assess the baby when breastfeeding	- To check and monitor if the baby is improving or worsening - To help decrease bilirubin levels - To monitor for improvement - To make sure baby is getting adequate nutrition since the baby is sleepy due to hyperbilirubinemia	- The baby will have normal pink skin - Baby bilirubin levels will decrease - baby will get adequate nutrition

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

Psychosocial Integrity [Basic Care and Comfort]		
Psychosocial PRIORITIES:	Speak with mom and ensure she has all the resources she needs. Educate her on how to care for the newborns and what signs to look for.	
PRIORITY Nursing Interventions:	Rationale:	Expected Outcome:
CARE/COMFORT: Ask the mother if there is anything she would like to talk about, ask how she is doing, and let the patient know that we are there for her Physical comfort measures: Provide the patient with pillows for comfort and medications as needed.	As the healthcare team, we want to ensure the best outcome for mom and baby by providing support and optimal care and keeping mom happy after giving birth and all the time.	The patient will feel cared for and important and will communicate any concerns she has.
EMOTIONAL (How to develop a therapeutic relationship): Through rapport, trust, genuineness, respect, and empathy.	By building a strong, healthy relationship, rapport with the mother will gain her trust and confidence in us. We show her respect by letting her decide any options on her own and supporting them, by showing empathy and kindness, the nurse can show genuineness.	The mother will be honest with the nurse, ask questions, and express concerns.
SPIRITUAL: Address faith and beliefs.	As a nurse, the patient's spiritual beliefs are an important part of the care plan. Incorporating the nurse's beliefs and wishes will provide optimal care to the patient.	The nurse will take the patient's spiritual beliefs into consideration.

5. What educational/discharge priorities need to be addressed to promote health and wellness for this patient and/or family? (Health Promotion and Maintenance)
    - Teaching on newborn care, breastfeeding teaching, warning signs to call the provider, how often the baby should be bathed, and providing resources on breastfeeding care, what signs to look for infections.