N432 Newborn Care Plan

Lakeview College of Nursing

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Demographics (10 points)

Date & Time of Clinical Assessment 1500	**Patient Initials** D.N.	**Date & Time of Birth** 9/21/2020 0542	**Age (in hours at the time of assessment)** 11 hours
Gender Female	**Weight at Birth** 2615 grams 5 lb. 12.2 oz.	**Weight at Time of Assessment** 2615 grams 5 lb. 12.2 oz.	**Age (in hours) at the Time of Last Weight** 11 hours
Race/Ethnicity Caucasian	**Length at Birth** 47 cm 18.5 inches	**Head Circumference at Birth** 31.5 cm 12.4 inches	**Chest Circumference at Birth** 30.5 cm 12.0 inches

There are times when the weight at the time of your assessment will be the same as birth

Mother/Family Medical History (15 Points)

Prenatal History of the Mother: Inconsistent prenatal appointments and limited prenatal care, drug use during pregnancy, cigarette smoking during pregnancy

When prenatal care started: 4/17/20

Abnormal prenatal labs/diagnostics: Abnormal urinalysis was positive for bacteria, blood, and leukocyte esterase with a hazy appearance. CBC had elevated WBC on 7/8.

Prenatal complications: Limited prenatal care, history of prior cesarean, history of mood disorders, tobacco and drug use during pregnancy, vitamin B12 deficiency, history of orthostatic hypotensive episodes

Smoking/alcohol/drug use in pregnancy: Mother reports history of methamphetamine use early in pregnancy, but reports she stopped using shortly after realizing she was pregnant. Mother reported she had a “sip of wine” in August and cut down her cigarette use from 2ppd early in pregnancy to 1ppd.

Labor History of Mother: G2P1A0L1; previous child was delivered via cesarean

Gestation at onset of labor: Mother reported she was 38 weeks 4 days gestation. Physician suspects length of gestation more likely 35-36 weeks.

Length of labor: Mother labored at home for an unknown amount of time. She arrived at the hospital fully dilated at 0525 and delivered at 0541. This elapses 16 minutes.

ROM: Mother is unsure when membranes ruptured, but reports leaking for several days. She said she was leaking while driving into the clinic, but was unsure if it was pee.

Medications in labor: none

Complications of labor and delivery: Uncomplicated VBAC delivery

Family History: Infant's mother had a child in 2012 that she no longer has custody of due to drug use. She lives alone. The mother has history of hypertension, endometriosis, depression, asthma, anemia, and thyroid disease. Maternal father and brother both have history of throat cancer. Father's history unknown.

Pertinent to infant: The mother's drug use and medical history, including family medical history is pertinent to this infant.

Social History (tobacco/alcohol/drugs): Mother reports history of methamphetamine use early in pregnancy, but reports she stopped using shortly after realizing she was pregnant. Mother reported she had a "sip of wine" in August and cut down her cigarette use from 2ppd early in pregnancy to 1ppd.

Pertinent to infant: This mother's history of meth use during pregnancy, reported drinking during the pregnancy, and cigarette abuse are all pertinent to this infant.

Father/Co-Parent of Baby Involvement: Mother is in abusive relationship with father and they are attending counseling. He was present following the birth. They do not live together.

Living Situation: Mother lives alone in a trailer. She has one other child, but doesn't have custody or visitation rights.

Education Level of Parents (If applicable to parents' learning barriers or care of infant): Mother reports she has her high school diploma and has taken some college classes.

Birth History (10 points)

Length of Second Stage of Labor: 16 minutes

Type of Delivery: Spontaneous vaginal delivery

Complications of Birth: Uncomplicated birth, mild tachypnea was seen, but resolved 10 minutes after delivery.

APGAR Scores:

1 minute: 6

5 minutes: 8

Resuscitation methods beyond the normal needed: None needed

Feeding Techniques (10 points)

Feeding Technique Type: N/A

If breastfeeding: N/A

LATCH score:

If bottle feeding: N/A

Positioning of bottle:

Suck strength:

Amount:

Percentage of weight loss at time of assessment: 0%

****Show your calculations; if today's weight is not available, please show how you would calculate weight loss (i.e. show the formula)****

Example:

Birth weight: 3000 grams

Weight at assessment: 2850 grams

3000-2850=150

150/3000 x 100 = 5 => **5%**

What is normal weight loss for an infant of this age? <7%

Is this neonate's weight loss within normal limits? Yes, this neonate has yet to lose weight.

Intake and Output (8 points)

Intake

If breastfeeding: N/A

Feeding frequency: N/A

Length of feeding session: N/A

One or both breasts: N/A

If bottle feeding:

Frequency: One time feeding

Volume of formula per session: 16mL of Similac Advance

If NG or OG feeding:

Frequency: Every 3 hours

Volume: 10 mL

If IV:

Rate of flow: 7 mL/hr

Volume in 24 hours: 168 mL provided rate does not change

Output

Age (in hours) of first void: 11 hours

Voiding patterns:

Number of times in 24 hours: 1

Age (in hours) of first stool: 11 hours

Stool patterns: 1

Type: Meconium

Color: Dark brown, green

Consistency: Soft, mucoid, sticky

Number of times in 24 hours: 1

Laboratory Data and Diagnostic Tests (15 points)

Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Name of Test	Why was this test ordered for THIS client? *Complete this even if these labs have not been completed*	Expected Results	Client's Results	Interpretation of Results
Blood Glucose Levels	Blood glucose is checked to ensure the infant's blood sugar is within normal range. Low	54-72 is expected for a neonate born to a mother without	54	54 is within normal range for this infant.

	blood sugars can interfere with thermoregulation. Prolonged low blood sugar can cause brain damage.	gestational diabetes		
Blood Type and Rh Factor	This is done to determine the infant's blood type and can be checked for Rh incompatibility with the mother. Certain blood types also carry more risk for different diseases.	N/A	O positive	This infant only has antigens for the Rh factor. As the mother is also Rh+, this should have no impact on the baby.
Coombs Test	This assesses the infant's blood for foreign antibodies that could potentially cause	Negative test results indicate that the infant has no foreign antibodies.	N/A	No labs drawn.

	hemolysis.			
Bilirubin Level (All babies at 24 hours) ***Utilize bilitool.org for bilirubin levels***	Bilirubin levels vary based on gestational age. At an estimated 35-36 weeks, this infant's bilirubin should be <8 mg/dL according to bilitool.org. This child is premature and at greater risk for hyperbilirubinemia due to ineffective thermoregulation.	Preterm infants typically have bilirubin levels between 5-10 mg/dL.	N/A	Results were not available yet
Newborn Screen (At 24 hours)	Newborn screens are done at 24 hours and at the time of discharge in order to detect any abnormal conditions or	A negative result indicates that no abnormalities were detected.	(If available—these may be not available until after discharge for some clients) N/A	Results were not available yet

	disorders. These are mandatory in Illinois.			
Newborn Hearing Screen	This screening is routinely done on all infants to detect deafness.	A pass in both ears indicates the infant can hear bilaterally.	N/A	Results were not available yet
Newborn Cardiac Screen (At 24 hours)	This is performed with a pulse oximeter to detect a heart condition.	An infant passes the screen if the oxygen saturation is greater than 95% in the right hand or foot with a difference of no more than 3% between the extremities.	N/A	Results were not available yet

Lab Data and Diagnostics Reference (APA):

Pagana, K. D. P., Pagana, J. T. P., & Pagana, T. N. P. (2018). *Mosby's Diagnostic and Laboratory Test Reference (14th ed.). Mosby.*

Blood type and direct antiglobulin test. https://www.labtestsonline.org.au/learning/list-of-screening-recommendations/a-newborn-1/a-newborn-7

Newborn Screening. (n.d.). https://dph.illinois.gov/topics-services/life-stages-populations/newborn-screening

Turner, S. L. I. (2004). *BiliTool*. https://bilitool.org

Newborn Medications (7 points)

Brand/ Generic	**Aquamephyton (Vitamin K)**	**Illotycin (Erythromycin Ointment)**	**Hepatitis B Vaccine**	**Ampicillin**	**Cidomycin (Gentamicin sulfate)**	**Dextrose 10%**	**Glucose 40% gel**	**Lidocaine 4% cream**
Dose	1 mg	1 ribbon in each eye	10 mcg	174 mg	10.4 mg	7 mL/ hour	0.4-1.2 g (1-2 mL)	Small dab
Frequency	One time	One time	One time	TID	Once daily	Continuous	PRN	PRN
Route	IM	ocular	IM	IV	IV	IV	PO	Topical
Classification	Vitamin	Antibiotic	Vaccine	Aminopenicillin	Aminoglycoside	Glucose elevating agent	Glucose elevating agent	Local anesthetic
Mechanism of Action	Increases the synthesis of	Inhibits RNA-dependent protein	Live vaccine that causes	Inhibits bacterial cell	Binds negatively charge	Increases blood glucos	Increases blood glucos	Blocks nerve impulses by

	prothrombin, a clotting factor, by the liver to prevent bleeding	synthesis in bacterial cells by binding RNA	immune system production of antibodies	wall synthesis	d sites on bacterial membrane disrupting integrity and causing cell death	e level directly	e level directly	decreasing permeability of neuronal membranes to sodium producing local anesthesia
Reason Client Taking	To prevent hemorrhagic disease in neonates	To prevent ophthalmia neonatorum	To prevent infection with hepatitis B	Being given prophylactically to reduce risk for infection related to meconium in the amniotic fluid and unknown time of ROM	Being given prophylactically to reduce risk for infection related to meconium in the amniotic fluid and unknown time of ROM	To replace calories	To treat hypoglycemia	PRN prior to procedure such as IV starts and blood draws
Contraindications (2)	Hypersensitivity to vitamin K;	Hypersensitivity to erythromycin; hepatic	Acute febrile illness; congenital	Hypersensitivity to ampicillin,	Hypersensitivity to gentamicin,	Hypersensitivity to corn or	Hypersensitivity to corn or	Hypersensitivity to lidocai

	hypersensitivity to benzyl alcohol or castor oil	impairment	immunodeficiency	other penicillins, or their components; infection caused by penicillinase-producing organism	other aminoglycosides, or their components; history of renal impairment	corn products; severe dehydration	corn products; severe dehydration	ne, amide anesthetics, or their components; severe heart block
Side Effects/ Adverse Reactions (2)	Facial flushing; redness and pain at injection site	Erythema; ocular discharge	Injection site soreness and redness; fever	Abdominal distension; urine retention	Anemia; fever; hypertension	Hypotension; electrolyte deficit	Hypotension; electrolyte deficit	Bradycardia; malignant hyperthermia
Nursing Considerations (2)	Monitor for severe hypersensitivity with IM and IV injections; have emergency resuscitation available when administering IM	Instill as soon as possible and within two hours of birth; inform parents about necessity prior to administration	Inject in vastus lateralis; administer oral sucrose prior to injection to reduce pain	Monitor renal and liver function; monitor closely for diarrhea and report to provider	Premature infants and neonates have an increased risk of nephrotoxicity; monitor serum concentration	Excessive or rapid delivery in low-birth-weight infant can increase serum osmolality and cause intracerebral hemorrhage; monit	Check blood sugar prior to administering; monitor for signs of hypersensitivity and report to provider	Apply lidocaine gel to gauze or bandage before applying to skin; monitor for signs of allergic reaction

	or IV					or closely for hypersensitivity reaction		
Key Nursing Assessment(s)/Lab(s) Prior to Administration	N/A	Evaluate the eyes; listen to bowel sounds	Assess for signs of severe illness prior to administering	Obtain sample for culture and sensitivity	Obtain sample for culture and sensitivity	Obtain blood sugar and monitor regularly	Obtain blood sugar and monitor regularly	Examine skin for lesions prior to application
Client Teaching needs (2)	Discuss with parents the purpose of injection for infants; infants do not start producing adequate vitamin K until about 1 week	If mother is breastfeeding/pumping, she should avoid herbal products for 24-48 hours after application of the ointment; monitor infant's eyes for any drainage or discharge	Booster vaccine will be needed at 1 month; provide parents with VIS	Monitor for signs of allergic reaction and report to provider if seen; monitor for severe diarrhea and report to provider if seen	Monitor for signs of allergic reaction and report to provider if seen; monitor for ototoxicity and report to provider if seen	Monitor for adverse effects and report to provider; do not adjust IV drip settings	Do not give to infant if unconscious; can repeat in 10 minutes if blood sugar is low	This medication is used before procedures to provide a numbing effect; the effect will wear off within 3 hours

Medications Reference (APA):

Cunha, J.P. (Ed.). (n.d.). Dextrose. *RxList*. https://www.rxlist.com/consumer_dextrose/drugs-condition.htm#what_are_warnings_and_precautions_for_dextrose

Drugs.com. (2020, April 8). Dextrose gel and liquid. https://www.drugs.com/cdi/dextrose-gel-and-liquid.html

Frandsen, G., & Pennington, S.S. (2018). *Abrams' Clinical Drug Therapy: Rationales for Nursing Practice*. (11th ed.). Wolters Kluwer.

Jones & Bartlett Learning. (2020). *2020 Nurse's Drug Handbook* (19th ed.). Jones & Bartlett Learning.

Ricci, S.S., Kyle, T., & Carman, S. (2017). *Maternity and Pediatric Nursing* (3rd ed.). Wolters Kluwer.

Newborn Assessment (20 points)

Area	Your Assessment	Expected Variations and Findings *This can be found in your book on page 645*	If assessment finding different from expectation, what is the clinical significance?
Skin	Pink, warm, and dry	Smooth, flexible, warm, well-hydrated, good skin turgor	N/A
Head	Symmetrical, sutures approximated	Varies with age, gender, and ethnicity	N/A
Fontanels	Soft and flat	Soft, flat, not overly large or small	N/A
Face	Symmetrical features	Full cheeks, symmetric facial features	N/A
Eyes	Symmetrical, open, slightly swollen bilaterally, open spontaneously	Clear and symmetrically placed on face (online with ears)	This infant's eyes are likely slightly swollen due to vaginal birth.
Nose	Symmetrical, no drainage	Small, placement in the midline and narrow, able to smell	N/A
Mouth	Symmetrical, midline	Aligned in midline, symmetric, intact soft and hard palate	N/A
Ears	Symmetrical, respond to stimuli, no drainage	Soft and pliable with quick recoil when folded and released	N/A
Neck	Symmetrical	Short, creased, moves freely, baby holds head midline	N/A
Chest	Mild subcostal and intercostal retractions	Round, symmetric, smaller than head	This infant has retractions due to breathing difficulty

			related to an underdeveloped respiratory system.
Breath Sounds	Clear, equal, bilateral	Inspiration is longer and louder than expiration. Soft swishing sounds are heard over most of the lungs.	N/A

Heart Sounds	Clear S1 and S2 with murmur	Clear and crisp S1 and S2	A murmur is not uncommon in newborns and can be seen in up to 75%
Abdomen	Soft, slightly rounded	Protuberant contour, soft, three vessels in umbilical cord	N/A
Bowel Sounds	Hypoactive	Normoactive bowel sounds in all four quadrants	This infant has been primarily NPO since birth contributing to hypoactive bowel sounds.
Umbilical Cord	Dry, intact, cord clamp intact, 3 vessels	Three vessels in umbilical cord	N/A
Genitals	Red, irritated, labia majora covers labia minora and clitoris	Swollen female genitals as a result of maternal estrogen	Genitals were irritated due to urine specimen bag.
Anus	Patent, midline, anal wink present	Midline and patent	N/A
Extremities	Flexed arms, relaxed legs, able to move freely	Extremities symmetric with free movement	Though infant's arms were flexed at assessment, she moved them freely.
Spine	Intact, no dimple, no hair tuft	Midline with an overall C-shaped lateral curve, without dimples or hair tufts.	N/A
Safety • **Matching bands with parents** • **Hugs tag** • **Sleep position**	Hugs tag, matching bands with parent, left-side/back lying in snuggly	Hugs tag, matching bands with parent, "back" to sleep	N/A

Complete the Ballard Scale grid at the end to determine if this infant is SGA, AGA, or LGA—be sure to show your work

What was your determination? AGA Score: 30 Estimated 36 weeks

Are there any complications expected for a baby in this classification? A baby in this class is at risk for respiratory distress, sepsis, jaundice, low birth weight, and thermoregulation issues.

Vital Signs, 3 sets (6 points)

Time	Temperature	Pulse	Respirations
Birth	97.6 F axillary	170	70
4 Hours After Birth	99.1 F axillary	156	62
At the Time of Your Assessment	98.2 F axillary	144	80

Vital Sign Trends: The infant's temperature remains stable. Her pulse is trending down. Her respirations are variable and higher than expected.

Pain Assessment, 1 set (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
1515	NIPS	General	1	Whimpers, relaxed, and awake	None, but gave oral sucrose prior to IM injection given in right gluteus lateralis.
1520	NIPS	General	1	Whimpers, relaxed, and awake	None, infant tolerated procedure well and settled back down very quickly following the injection.

Summary of Assessment (4 points)

Discuss the clinical significance of the findings from your physical assessment:
****See the example below****

This neonate was delivered on 9.21.20 at 0541 by normal spontaneous vaginal delivery (NSVD). No nuchal cord. EDD: 10.1.20 according to mother's reported history. Based on Ballard score, suspected age at birth is 35 weeks. Prenatal history complicated by methamphetamine use, alcohol use, and cigarette use. Apgar scores: 6/8. Birth weight: 5 lbs 12.2 oz (2615 g). Birth length: 18.5 in (47 cm). Due to tachypnea following delivery, infant was admitted to NICU. Unable to started feeding by mouth due to tachypnea. BS was low after delivery at 18. She is receiving dextrose via IV, but her BS remains lower than desired. Upon assessment, all systems are WNL with the exception of hypoactive bowel sound and tachypneic breathing. She was given an NG tube to receive additional nutrition to maintain BS. Pending a drug screen, neonate is expected to be discharged to her mother once stable and able to feed. Last set of vitals: 98.2/144/80. See pediatrician within 24 hours of discharge.

Nursing Interventions and Medical Treatments for the Newborn (6 points)

Nursing Interventions and Medical Treatments (Identify nursing interventions with "N" after you list them, identify medical treatments with "T" after you list them.)	**Frequency**	**Why was this intervention/ treatment provided to this patient? Please give a short rationale.**
10% dextrose IV fluids at 7 mL/ hr **(T)**	Continuous	This infant's BS was 18 following delivery and she is unable to feed due to tachypnea. This provides nutrition and helps maintain BS levels.
Feeding tube placement and nutrition started **(T)**	10 mL of Neosure over 30 minutes every 3 hours	This infant was still showing low BS despite dextrose therapy. Feeding will help maintain a stable BS.
Lying left side during lavage	During feedings	Left side lying helps to reduce aspiration

feeding, second feeding will be lying on right side **(N)**	(every 3 hours)	risk. Right side lying promotes gastric emptying.
Thermoregulation **(N)**	Continuous	Isolette uses ISC probe and adjusts warming to help regulate infant's temperature
Cluster/Cue based care **(N)**	Based on infant's cues	Using slow gentle handling and changing infant's position when providing other cares. Sleep helps promote hormonal growth, so infant should be disturbed as little as possible.

Discharge Planning (2 points)

Discharge location: Discharge to home

Equipment needs (if applicable): No equipment needs

Follow up plan (include plan for newborn ONLY): Follow-up appointment with preferred pediatrician 24 hours after discharge.

Education needs: Infection prevention (hand hygiene, limit visitors during Covid pandemic), home safety information, infant skin care information, infant feeding information, immunization schedule, and warning signs to call the provider.

Nursing Diagnosis (30 points)
Must be NANDA approved nursing diagnosis and listed in order of priority
Two of them must be education related i.e. the interventions must be education for the client."

Nursing Diagnosis (2 pt each)	**Rational (1 pt each)**	**Intervention/Rational (2 per dx) (1 pt each)**	**Evaluation (1 pt each)**
Identify problems that are specific to this patient. Include full	Explain why the nursing diagnosis was	Interventions should be specific and individualized for his patient. Be sure to	• How did the patient/ family respond to the nurse's actions?

nursing diagnosis with "related to" and "as evidenced by" components	chosen	include a time interval such as Assess vital signs q 12 hours." List a rationale for each intervention and using APA format, cite the source for your rationale.	• Client response, status of goals and outcomes, modifications to plan.
1. Ineffective breathing pattern related to underdeveloped respiratory system as evidenced by respirations of 80, use of accessory muscles, and retracted abdomen on inspiration (Nurseslabs, 2020).	This infant was admitted to the NICU because of her elevated respirations, which is common for a premature baby. This diagnosis is a priority because the baby can die from poor gas exchange if she continues to breathe too fast.	1. Provide continuous oxygen via nasal cannula at 1L. Rationale: The supplemental oxygen will ensure she gets enough for her bodily demands. 2. Place the neonate on a continuous pulse oximeter. Rationale: This will ensure the nurse knows immediately if the neonate starts to desat.	1. Goal Met: The client did not seem to be bothered by the nasal cannula. It may have helped her to sleep better as she was able to breathe. The family did not state any concerns with the oxygen. The neonate's oxygen levels remained above 95% on the supplemental oxygen. 2. Goal Met: The neonate was continuously monitored, and her oxygen levels did not desat. This seemed to provide some relief to the parents because they could see she was getting adequate oxygen.
2. Ineffective thermoregulation relate d to superficial veins and lack of body fat as evidenced by baby's temperature dropping whenever the warmer was not on and the mottled appearance of the skin (Nurseslabs, 2020).	Newborns have issues regulating their body temperature, especially premature babies. If the temperature drops too low the baby will become hypothermic.	1. Keep the ISC probe on the infant to continuously monitor her temperature, and keep the bed set at an appropriate temperature to maintain the baby's temperature. Rationale: This ensures the baby's temperature will remain stable when the nurse is examining the baby and when she is not being held. 2. Ensure assessments are done in a timely manner and	1. Goal met: The probe was left on and the bed maintained the neonate's temperature. The neonate seemed very content and calm. 2. Goal Met: All assessments were done quickly, and as soon as the nurse finished, she re-swaddled the neonate. The neonate cried whenever taken out of her blanket,

		keep the neonate swaddled. Rationale: It is important to not leave the infant exposed for too long because they will quickly lose heat. Also, swaddling the baby will help keep their temperature elevated.	but quickly calmed when wrapped back up.
3. Knowledge deficit related to lack of education of proper pumping and managing break milk supply as evidenced by numerous questions from the mother and mother stating she was unsure on what to do (Nurseslabs, 2020).	This diagnosis was chosen because breast milk is the best source of nutrients for a baby, and it is important to know how to pump and stimulate breast milk production on your own when the neonate is unable to come to the breast.	1. Educate the mother on how to manually massage the glands every two hours for 10 minutes per breast. Educate by demonstration. Rationale: This will help the thick colostrum work its way to the areola and will help stimulate milk production. 2. Show the mother via teach-back demonstration how to manually pump every two hours for 10-15 minutes per breast. Rationale: Manually pumping will stimulate milk production and will act as the demand to increase the mothers supply. Also, this allows the mother to collect the colostrum while educating on the importance of breastmilk and its benefits.	1. Goal Partially Met: The education was provided to the mother and she appeared to be receptive to the information, but we left before the next 2 hour mark to see if the mother followed the instructions. 2. Goal Partially Met: The education was provided to the mother and she demonstrated appropriate pumping and appeared to be receptive to the information. Howver, we left before the next 2 hour mark to see if the mother followed the instructions. The mother also was mixing up the information and appeared to be struggling to use the equipment.
4. Ineffective coping related to the demands of parenthood and the stress of having a child in the NICU as evidenced by pacing, rapid speech, unwillingness to spend time with baby, and nicotine addiction (Nurseslabs, 2020).	This diagnosis was chosen because the mother has a history of drug use and heavy smoking as a way to deal with stress. These methods are not healthy for the mother nor the baby. The	1. Educate the client on ways to recognize stress and healthy ways to cope. A discussion to explore stressors and coping mechanisms as well as a handout on different coping methods would be helpful. Rationale: Many people cannot even identify what their stressors are, so it is important to take that initial step. Once she identifies her stressors, she can come up	1. Goal Not Met: There was not an opportunity to do this education while we were there, but it would still be greatly beneficial. 2. Goal Partially Met: The mother was praised for participating in this group, and for taking steps towards getting and remaining drug-free. I do not believe any steps were made while we were there

	mother and neonate could greatly benefit from the mother learning healthy ways to cope with stress.	with coping methods to help. 2. Provide verbal support for the client to continue with her NA groups. Rationale: These groups allow drug users the support and structure needed to remain drug free.	to set up a plan for her to continue with this program with a newborn at home.

Other References (APA):

Nurseslabs. (2020). *Nursing Diagnosis.* https://nurseslabs.com/category/nursing-care-plans/nursing-diagnosis/

Ballard Gestational Age Scale

Neuromuscular Maturity

Score	−1	0	1	2	3	4	5
Posture							
Square window (wrist)	 > 90°	 90°	 60°	 45°	 30°	 0°	
Arm recoil		 180°	 140–180°	 110–140°	 90–110°	 < 90°	
Popliteal angle	 180°	 160°	 140°	 120°	 100°	 90°	 < 90°
Scarf sign							
Heel to ear							

Physical Maturity

Skin	Sticky, friable, transparent	Gelatinous, red, translucent	Smooth, pink; visible veins	Superficial peeling and/or rash; few veins	Cracking, pale areas; rare veins	Parchment, deep cracking; no vessels	Leathery, cracked, wrinkled
Lanugo	None	Sparse	Abundant	Thinning	Bald areas	Mostly bald	
Plantar surface	Heel-toe 40–50 mm: −1 < 40 mm: −2	> 50 mm, no crease	Faint red marks	Anterior transverse crease only	Creases anterior 2/3	Creases over entire sole	
Breast	Imperceptible	Barely perceptible	Flat areola, no bud	Stippled areola, 1–2 mm bud	Raised areola, 3–4 mm bud	Full areola, 5–10 mm bud	
Eye/Ear	Lids fused loosely: −1 tightly: −2	Lids open; pinna flat; stays folded	Slightly curved pinna; soft; slow recoil	Well curved pinna; soft but ready recoil	Formed and firm, instant recoil	Thick cartilage, ear stiff	
Genitals (male)	Scrotum flat, smooth	Scrotum empty, faint rugae	Testes in upper canal, rare rugae	Testes descending, few rugae	Testes down, good rugae	Testes pendulous, deep rugae	
Genitals (female)	Clitoris prominent, labia flat	Clitoris prominent, small labia minora	Clitoris prominent, enlarging minora	Majora and minora equally prominent	Majora large, minora small	Majora cover clitoris and minora	

Maturity Rating

Score	Weeks
−10	20
−5	22
0	24
5	26
10	28
15	30
20	32
25	34
30	36
35	38
40	40
45	42
50	44

Posture	3
Square window (wrist)	0
Arm recoil	3
Popliteal angle	3
Scarf sign	2
Head to ear	3
Skin	1
Lanugo	2
Plantar surface	4
Breast	3
Eye/ear	3
Genitals (female)	3
Total	**30**

CLASSIFICATION OF NEWBORNS (BOTH SEXES) BY INTRAUTERINE GROWTH AND GESTATIONAL AGE [1,2]

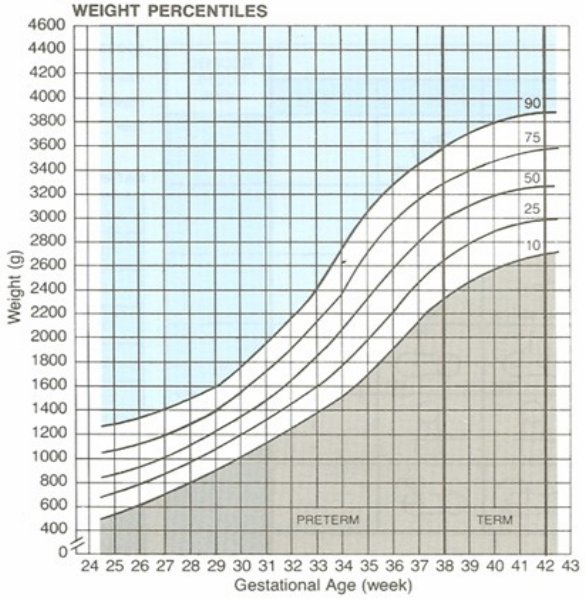
NAME _____ DATE OF EXAM _____ LENGTH _____

HOSPITAL NO. _____ SEX _____ HEAD CIRC. _____

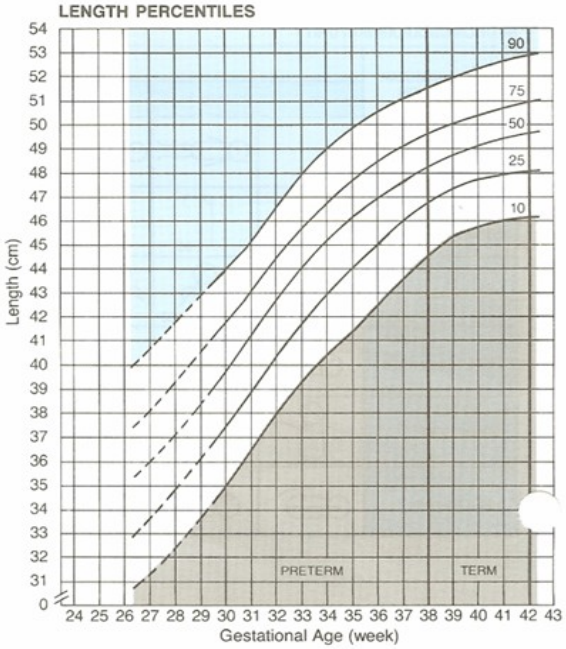
RACE _____ BIRTH WEIGHT _____ GESTATIONAL AGE _____

DATE OF BIRTH _____

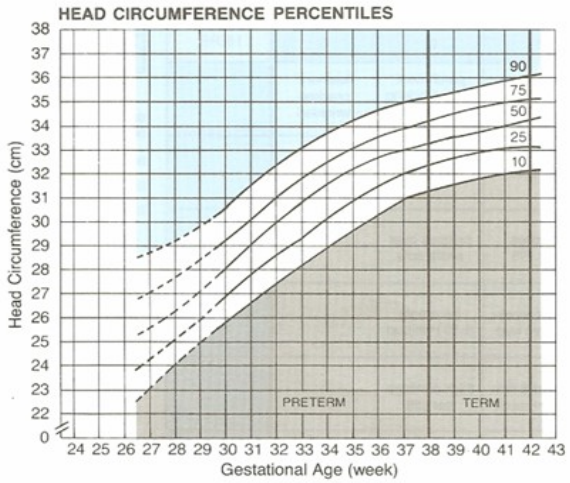
WEIGHT PERCENTILES



LENGTH PERCENTILES



HEAD CIRCUMFERENCE PERCENTILES



CLASSIFICATION OF INFANT*	Weight	Length	Head Circ.
Large for Gestational Age (LGA) (>90th percentile)			
Appropriate for Gestational Age (AGA) (10th to 90th percentile)			
Small for Gestational Age (SGA) (<10th percentile)			

*Place an "X" in the appropriate box (LGA, AGA or SGA) for weight, for length and for head circumference.

References
1. Battaglia FC, Lubchenco LO: A practical classification of newborn infants by weight and gestational age. J Pediatr 1967; 71:159-163