N432 Newborn Worksheet

Name:

This assignment is due at 2359 CST Tuesday before you are assigned to the nursery.

Complete table (40 points) Include in-text citations in APA format. Attach Reference page.

Area	Normal Findings	Expected Variations
Skin	Skin is pink and warm; cyanosis of the hands and feet present (Durham et al., 2023). Milia is present on the bridge of the nose and the chin (Durham et al., 2023). Lanugo is present on the back, shoulders, and forehead (that decreases with advancing gestation) (Durham et al., 2023). Peeling or cracking is often noted on infants (Durham et al., 2023). Slate gray patches are noted (Durham et al., 2023). Hemangiomas (stork bites), nevus flammeus (purple to red colored flat areas that do not disappear), and strawberry hemangiomas (raised bright red lesions that naturally resolve during childhood) are developmental vascular abnormalities (Durham et al., 2023). Stork bites are found at the nape of the neck, in the eyelid, between the eyes, or on the upper lip (these deepen in color when the neonate cries and disappear within the first month postpartum (Durham et al., 2023). Erythema toxicum (newborn rash) may be noted (Durham et al., 2023).	Central cyanosis after the first ten minutes of life is caused by reduced oxygen saturation and hypoxia; circumoral cyanosis with pink mucus membranes may be benign (Durham et al., 2023). Jaundice within the first 24 hours is pathological (Durham et al., 2023). Pallor occurs with anemia, hypothermia, shock or sepsis (Durham et al., 2023). Greenish or yellow vernix (biofilm covering the skin of the fetus) indicates passage of meconium during pregnancy or labor (Durham et al., 2023). Persistent ecchymosis (bruising) or petechiae (small spots of bleeding under the skin) occurs with thrombocytopenia, sepsis, or congenital infection (Durham et al., 2023). Abundant lanugo is often present in preterm neonates (Durham et al., 2023). Thin, translucent skin and increased amounts of vernix caseosa are common in preterm neonates (Durham et al., 2023). Nails are longer in neonates greater than forty weeks gestation (Durham et al., 2023). Pilonidal dimple can cause the sinus in the sacral area to become infected later in life (Durham et al., 2023).
Head	Molding is present (Durham et al., 2023). May be difficult to palpate due to excessive molding (Durham et al., 2023). There are overriding sutures when there is increased molding (Durham et al., 2023). The head circumference should be 32-36 cm (Durham et al.,2023).	Bruising and lacerations are observed at the site of the fetal scalp electrode or vacuum extractor (Durham et al., 2023). Presence of caput succedaneum (edema of the infant's scalp) or cephalohematoma (ruptured blood vessel in the infant's scalp) is observed (Durham et al., 2023).
Fontanels	Fontanels are open, soft, intact,	Fontanels that are firm and bulging

	and slightly depressed (may bulge with crying) (Durham et al., 2023). The anterior fontanel is diamond shaped and approximately 2.4-4 cm and closes by 18 months of age (Durham et al., 2023). The posterior fontanel is a triangle shape that is approximately 0.5-1 cm long and closes between 2-4 months (Durham et al., 2023). May be difficult to palpate due to excessive molding (Durham et al., 2023).	and not related to crying are a possible indication of increased cranial pressure (Durham et al., 2023). Depressed fontanels are a possible indication of dehydration (Durham et al., 2023).

Face	One nose, two eyes, one moth, two ears are present (Durham et al., 2023). Facial features are in proportion (Durham et al., 2023). Facial features remain symmetrical when crying and when at rest (Durham et al., 2023).	Facial asymmetry can be indicative of facial nerve palsy (Durham et al., 2023). Cleft lip/palate is a congenital anomaly, may affect feeding or speech (Durham et al., 2023). Flat midface or underdeveloped cheekbones may may be associated with genetic syndromes (Durham et al., 2023).
Eyes	Eyes are equal and symmetrical in size and placement (Durham et al., 2023). The neonate is able to follow objects within 12 inches of the visual field (Durham et al., 2023). Edema may be present due to pressure during labor and birth or reaction to eye prophylaxis (Durham et al., 2023). The iris is blue-gray or brown; the sclera is white or bluish white (Durham et al., 2023). Subconjunctival hemorrhage may be present due to pressure during labor and birth (Durham et al., 2023). Pupils are equally reactive to light (Durham et al., 2023). Positive red-light and blink reflexes are observed (Durham et al., 2023). No tear production (Durham et al., 2023). Transient strabismus and nystagmus are related to immature muscular control (Durham et al., 2023).	Absent red-light reflex indicates cataracts (Durham et al., 2023). Unequal pupil reactions indicate neurological trauma (Durham et al., 2023). Blue sclera is a possible indication of osteogenesis imperfecta (Durham et al., 2023).
Nose	The nose may be flattened or bruised related to the birth process (Durham et al., 2023). Nares should be present (Durham et al., 2023). A small amount of mucous is present (Durham et al., 2023). Neonates should be primarily breathing through their noses (Durham et al., 2023).	Large amounts of draining mucous can lead to respiratory distress (Durham et al., 2023). A flat nasal passage is seen in cases of down syndrome (Durham et al., 2023). Nasal flaring is an indication of respiratory distress (Durham et al., 2023).

Mouth	Lips, gums, tongue, palate, and mucous membranes are pink, moist, and intact (Durham et al., 2023). Reflexes are positive (Durham et al., 2023). Dry lips are common after birth (Durham et al., 2023). Epstein's pearls are present (Durham et al., 2023).	Cyanotic or bluish mucous membranes are a sign of hypoxia (Durham et al., 2023). Dry mucous membranes are a sign of dehydration (Durham et al., 2023). Natal teeth can benign or related to congenital abnormality (Durham et al., 2023). Thin philtrum can be indicative of fetal alcohol syndrome (Durham et al., 2023). Cleft lip or palate may be present (Durham et al., 2023).
Ears	Top of the pinna is aligned with the external canthus of the eye (Durham et al., 2023). Pinna is without deformities, well formed, and flexible (Durham et al., 2023). The neonate responds to noises with positive startle signs (Durham et al., 2023). Hearing becomes more acute as Eustachian tubes clear (Durham et al., 2023). Neonates respond more readily to high-pitched vocal sounds (Durham et al., 2023).	Low-set ears are associated with genetic disorders such as Down Syndrome (Durham et al., 2023). Absent startle reflex is associated with possible hearing loss (Durham et al., 2023). Skin tags, dimpling, or other lesions may be associated with kidney or other abnormalities (Durham et al., 2023).
Neck	The neck is short with skin folds (Durham et al., 2023). Positive tonic neck reflex may be present (Durham et al., 2023).	Webbing or large thick skin folds at the back of the neck is a possible indication of genetic disorders (Durham et al., 2023). Absent tonic neck reflex is an indication of nerve injury (Durham et al., 2023).
Chest	The chest is barrel shaped and symmetrical (Durham et al., 2023). Breast engorgement may be present in both male and female neonates related to maternal hormones (resolves within a few weeks) (Durham et al., 2023). Clear or milky fluid coming from nipples related to maternal hormones (Durham et al., 2023).	Pectus excavatum (funnel chest) is a congenital abnormality (Durham et al., 2023). Pectus carinatum (pigeon chest) can obstruct respirations (Durham et al., 2023). Chest retractions are a sign of respiratory distress (Durham et al., 2023).
Breath Sounds	Lung sounds are clear and equal	Persistent crackles, wheezes, stridor,

	(Durham et al., 2023). Scattered crackles may be detected during the first few hours after birth due to retained lung fluid (Durham et al., 2023).	grunting, paradoxical breathing, decreased breath sounds or prolonged periods of apnea are signs of respiratory distress (Durham et al., 2023). Decreased or absent breath sounds are often related to meconium aspiration or pneumothorax (Durham et al., 2023).

Heart Sounds	S1 and S2 are present (Durham et al., 2023). Regular rhythm with some variability related to activity and respiratory changes (Durham et al., 2023).	Persistent murmurs indicate persistent or return to fetal circulation (opening of shunts with blood flow through them) (Durham et al., 2023). Femoral pulses that feel weaker than brachial pulses may indicate a congenital heart disease (Durham et al., 2023).
Abdomen	The abdomen is soft, round, protuberant, and symmetrical (Durham et al., 2023). Passage of meconium stool within 48 hours post birth (Durham et al., 2023). The skin around the umbilicus should have no redness, swelling, drainage, or foul smell (Durham et al., 2023).	Asymmetrical abdomen indicates possible abdominal mass (Durham et al., 2023). Hernias or diastasis recti are more common in African American neonates and usually resolve on their own within the first year (Durham et al., 2023). One umbilical artery and vein is associated with heart or kidney malformation (Durham et al., 2023). Failure to pass meconium stool is often associated with imperforated anus or meconium ileus (Durham et al., 2023).
Bowel Sounds	Bowel sounds are present but may be hypoactive for the first few days (Durham et al., 2023). Bowel sounds should be heard in all four quadrants as high-pitched, intermittent, gurgling sounds (Durham et al., 2023).	Bowel sounds should not be delayed more than 2 hours post birth (Durham et al., 2023). The persistent absence of bowel sounds, abdominal distension, feeding intolerance, and signs of sepsis are cause for concern and should be brought to the provider's attention (Durham et al., 2023).
Umbilical Cord	The cord is opaque and whitish blue with two arteries and one vein, and covered in Wharton's jelly (Durham et al., 2023). The cord becomes dry and darker in color within 24 hours post-birth and detaches from the body within two weeks (Durham et al., 2023).	The presence of one artery and one vein instead of two arteries may be associated with renal, cardiac, or chromosomal deformities (Durham et al., 2023). A cord remaining attached for longer than twenty-one days may indicate immunodeficiency (Durham et al., 2023). Foul odor, redness, and swelling may indicate a bacterial infection (Durham et al., 2023). Exposed bowel contents through the umbilicus requires immediate

		surgical attention (Durham et al., 2023).

Genitals	Female: Labia majora covers the labia minora and clitoris (Durham et al., 2023). Labia majora and minora may be edematous (Durham et al., 2023). Blood-tinged vaginal discharge is related to the abrupt decrease of maternal hormones (Durham et al., 2023). Whitish vaginal discharge is observed in response to maternal hormones (Durham et al., 2023). Urine may appear dark with urate crystals that appear as a red or rust-colored stain on the diaper (Durham et al., 2023). The neonate urinates within 24 hours of birth (Durham et al., 2023). The urinary meatus is midline (Durham et al., 2023). Male: The urinary meatus is at the tip of the penis (Durham et al., 2023). The scrotum is large, pendulous, and edematous with rugae present (Durham et al., 2023). Both testes are palpated in the scrotum (Durham et al., 2023). The neonate urinates within 24 hours of birth with an uninterrupted stream (Durham et al., 2023). Urine may appear dark with urate crystals that appear as a red or rust-colored stain on the diaper (Durham et al., 2023).	Female: Prominent clitoris and small visible labia minora are often present in preterm neonates (Durham et al., 2023). Ambiguous genitalia; may require genetic testing to determine sex (Durham et al., 2023). No urination within 24 hours may indicate a possible urinary tract obstruction, polycystic disease, or renal failure (Durham et al., 2023). Male: Hypospadias, epispadias, undescended testes, inguinal hernia, and hydrocele (Durham et al., 2023). No urination in 24 hours may indicate possible urinary tract obstruction, polycystic disease, or renal failure (Durham et al., 2023). Ambiguous genitalia may require genetic testing to determine sex (Durham et al., 2023).
Anus	The anus is patent (Durham et al., 2023). Passage of stool within 24 hours (Durham et al., 2023).	Imperforated anus requires immediate surgery (Durham et al., 2023). Anal fissures or fistulas may be present (Durham et al., 2023).
Extremities	Arms are symmetrical in length and equal in strength (Durham et	Polydactyly (extra digits) may indicate a genetic disorder (Durham

	al., 2023). Legs are symmetrical in length and equal in strength (Durham et al., 2023). Ten fingers and ten toes are present (Durham et al., 2023). No clicks at joints (Durham et al., 2023). No gluteal folds (Durham et al., 2023). Full range of motion is noted at all extremities (Durham et al., 2023).	et al., 2023). Syndactyly (webbed digits) may indicate a genetic disorder (Durham et al., 2023). Unequal gluteal folds or positive Barlow or Ortolani maneuvers are associated with congenital hip dislocation (Durham et al., 2023). Decreased range of motion or muscle tone indicates possible birth injury, neurological disorders, or prematurity (Durham et al., 2023). Swelling, crepitus, or neck tenderness indicates possible broken clavicle (Durham et al., 2023). Simian creases, short fingers, wide space between big and second toe are common with down syndrome (Durham et al., 2023).
Spine	C-shaped spine with no openings is felt or observed in vertebrae (Durham et al., 2023). No dimpling or sinuses are observed (Durham et al., 2023).	Vertebrae openings may indicate spina bifida. Dimpling or sinuses may indicate pilonidal cyst or a more serious neurological disorder (Durham et al., 2023)

For the following questions and tables, include in-text citations in APA format. Attach Reference page.

1. What safety and security measures are in place for newborns? **(5 points)**

   Infant identification bands and electronic ankle tags (HUGS tags) are used immediately after delivery to prevent misidentification, ensuring that each newborn remains safely matched with their mother and care team (Durham et al., 2023). Newborns are also assessed regularly to check for any abnormalities (Durham et al., 2023*).* Safe sleep practices, such as placing newborns on their backs in a crib without blankets and using a sleeper blanket to keep them warm reduce the risk of sudden infant death syndrome (SIDS). Infection control practices like thorough hand washing and isolating the newborn from sick friends and family members will help to keep the newborn healthy (Durham et al., 2023). Proper handling techniques such as supporting the head and neck and ensuring safe transfer and positioning are critical to preventing injury. Finally, medication safety involves strict labeling, double-checking dosages, and using barcoding systems to ensure that infants receive the correct medications (Durham et al., 2023).

2. What are normal ranges for an infant's heart rate and respiratory rate? **(2 points)**

The normal heart rate for an infant is between 120-160 beats per minute (Durham, 2023).
The normal respiratory rate for an infant is between 30-60 breaths per minute (Durham, 2023).

3. What is the normal range and method for acquiring an infant's temperature? Why is this? **(2 points)**

The normal range for an infant's temperature is 97.7°F to 99.5°F (36.5°C to 37.5°C) (Durham, 2023).
The most common method for obtaining an infant's temperature is the axillary method (Durham, 2023).
The axillary method is preferred because it is non-invasive, reduces the risk of infection and injury compared to the rectal and tympanic methods, provides accurate results, and because it is an easy method to complete (Durham, 2023).

Complete Table (10 points)

Medication	**Dosage**	**Administration Site**	**Possible side effects**	**Why is this administered?**
Vitamin K	0.5-1.0 mg (Durham et al., 2023).	Intramuscular (IM) injection into the anterolateral aspect of the thigh (Durham et al., 2023).	Pain, bruising, swelling, or purulent discharge at the injection site (Durham et al., 2023).	To prevent hemorrhage caused by Vitamin K deficiency (Durham et al., 2023).
Erythromycin	A 1cm ribbon of 0.5% erythromycin is administered to each eye (Durham et al., 2023).	Eyes (Durham et al., 2023).	Eye irritation, temporary blurred vision, watery discharge (Durham et al., 2023). Allergic reactions are rare but it does happen (Durham et al., 2023).	Erythromycin is given prophylactically to prevent gonococcal and chlamydia infections (Durham et al., 2023).
Hepatitis B	0.5 ml given within 12-24 hours after birth, as the first dose of three (Durham et	Intramuscular (IM) injection into the anterolateral aspect of the thigh (Durham et al., 2023).	Redness, swelling, or tenderness at the injection site (Durham et al., 2023). Mild fever	The hepatitis B vaccine is given to newborns to prevent the perinatal transmission of the virus from

	al., 2023).		(Durham et al., 2023). Rare allergic reactions (Durham et al., 2023).	mother to baby and to provide early protection and prevent the newborn from contracting the virus any other way (Durham et al., 2023).

Complete Table (20 points)

Name of Test	**Why is this test ordered?**
Blood Glucose	Newborns (especially those born prematurely or to diabetic mothers) are at high risk for unstable blood sugars (Durham et al., 2023). A blood glucose test is given to monitor and detect hypoglycemia so it can be caught and treated as quickly as possible (Durham et al., 2023).
Blood type and Rh Factor	This test is given to determine a newborn's blood type and Rh factor (Durham et al., 2023). It is important to know the newborn's blood type in case a blood transfusion is needed, and is it important to know the newborn's Rh factor so that Rhogam can be given to the mother within 72 hours of birth (if needed) to protect their second baby from antibodies their body may have created against the Rh factor present in their first pregnancy (Durham et al., 2023).
Coombs Test	A Coombs test is given to newborns to screen for maternal Rh antibodies attached to the newborn's red blood cells (Durham et al., 2023). If Rh incompatibility is detected between the mother and the newborn, the mother will need to receive a Rhogam shot within 72 hours of giving birth (Durham et al., 2023).
Bilirubin levels	A newborn's liver may still be immature, which can lead to an inability to process bilirubin effectively (Durham et al., 2023). When high levels of bilirubin are left untreated in a newborn it can cause hyperbilirubinemia, jaundice, and kernicterus (Durham et al., 2023). Administering this test to newborns gives the healthcare team the best chance at catching hyperbilirubinemia and preventing further complications early (Durham et al., 2023).
Newborn Screen	A newborn screen is given to check for certain genetic, metabolic, hormonal, and infectious

	conditions (Durham et al., 2023). The early detection and treatment of these conditions will lead to better outcomes for the newborn (Durham et al., 2023).
Hearing Screen	A hearing screen is given to newborns to detect a hearing deficit as soon as possible (Durham et al., 2023). The early detection of a hearing deficit increases the options available to the parents for treatment as well as their options for speech, language, and cognitive development therapies (Durham et al., 2023).
Newborn Cardiac Screen	The newborn cardiac screen is given to newborns to detect congenial heart deformities that may be presenting asymptomatically (Durham et al., 2023).

1. Identify 3 educational topics that should be discussed with caregivers of the infant. **(6 points)**

Recognizing signs of illness:

Medical attention should be sought by caregivers if the infant is experiencing a temperature of over 100.4 ℉, difficulty breathing, refusing to eat, lethargy, vomiting and diarrhea, seizures, dry mucous membranes, a sunken soft spot on the head, or not producing any urine or stool (Durham et al., 2023).

Safe sleep practices:

Infants should be placed on their backs in a crib with a firm mattress that contains no blankets, pillows or soft toys (Durham et al., 2023). The crib should be placed in a room that is a safe, comfortable temperature, and is also shared with at least one of the newborn's caregivers (Durham et al., 2023).

Infant hygiene and care:

The newborn should only be cleansed with sponge baths until the umbilical cord has fallen off to keep the stump of the umbilical cord dry (Durham et al., 2023). The newborn should be washed with gentle fragrance-free soap in warm water for no longer than 15 minutes (Durham et al., 2023). Diapers should be changed frequently to avoid the development of a rash, and the perineal area should be cleansed with water or gentle wipes during these changes (Durham et al., 2023). The newborn should be dressed in soft, breathable fabrics to avoid skin irritation (Durham et al., 2023). A bulb syringe should be used to gently clean the newborn's nose, and the newborn's gums can be cleaned with a soft, damp cloth (Durham et al., 2023).

2. Identify 2 potential nursing diagnoses for a newborn patient. **(10 points**)

   Imbalanced nutritional loss related to inadequate intake or excessive loss (vomiting/diarrhea) as evidenced by weight loss or signs of dehydration (Phelps, 2023). Newborns are fragile and inadequate nutrition can quickly have disastrous effects.

   Risk for ineffective thermoregulation related to immature temperature control mechanisms as evidenced by the newborn's temperature (Phelps, 2023). A newborn's nervous system has not fully developed the ability to control their body temperature (Durham et al., 2023). This, paired with thin skin and low fat stores puts newborns at a high risk for hypothermia (Durham et al., 2023).

Attach Reference page:

Durham, R. F., Chapman, L. & Miller, C. (2023). Davis Advantage for Maternal-Newborn Nursing: Critical Components of Nursing Care (4th ed., p. 481-573). F. A. Davis Company.

Phelps, L.L., (2023). Nursing diagnosis reference manual. (12th ed.). Wolters Kluwer.