N433 Care Plan #1

Lakeview College of Nursing

Camryn Studer

Demographics (3 points)

Date of Admission 9/30/22	**Client Initials** M.S.	**Age (in years & months)** 18 days	**Gender** Female
Code Status Full code	**Weight (in kg)** 2.637 kg	**BMI** 12.61	**Allergies/Sensitivities (include reactions)** None

Medical History (5 Points)

Past Medical History: N/A

Illnesses: N/A

Hospitalizations: N/A

Past Surgical History: N/A

Immunizations: Hepatitis B vaccine on 9/17/22

Birth History: Born at 37 weeks via cesarean section

Complications (if any): Hepatitis C exposure perinatal

Assistive Devices: N/A

Living Situation: Removed from home by DCFS due to poor living conditions. After the hospital, the grandmother will have temporary custody.

Admission Assessment

Chief Complaint (2 points): Respiratory distress

Other Co-Existing Conditions (if any): Rhinovirus

Pertinent Events during this admission/hospitalization (1 points): Transferred from Sarah Bush Lincoln Hospital emergency department to Carle pediatric unit.

History of present Illness (OLD CARTS) (10 points): Maxine is an eighteen-day old female born at thirty-seven weeks via cesarean section at Sarah Bush Lincoln Hospital. Maxine was brought to the emergency department by DCFS on 9/30/22 due to respiratory stress and poor living conditions. In the emergency room it was noted that the patient was saturating at 89% on room air, experiencing hypoxemia, and episodes of apnea. Chest x-ray was negative, and patient was transferred to Carle pediatric unit for management of Rhinovirus.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Rhinovirus

Secondary Diagnosis (if applicable): N/A

Pathophysiology of the Disease, APA format (20 points):

Rhinovirus is an upper respiratory tract infection characterized by relatively mild symptoms (Hinkle et al., 2022). However, complications such as super-infections or asthma exacerbations are not uncommon. Common signs and symptoms of these complications are jaundice, dark urine, fever, emesis, rapid worsening of shortness of breath or wheezing, and no improvement after quick relief inhaler (Hinkle et al., 2022). Rhinovirus can lead to mortality in infants under three months if not treated appropriately. During rhinovirus infection, nasal congestion caused by inflammation creates an excellent environment for bacterial growth. Bacterial organisms account for more than 60% of the cases of acute rhinosinusitis. The most common pathogens causing rhino are *Streptococcus pneumoniae, Haemophilus influenzae,* and less commonly *Staphylococcus aureus,* and *Moraxella catarrhalis* (Hinkle et al., 2022). Rhinovirus causes the body to send out cytokines and T lymphocytes to create an environment

withing the effected tissues, thus eradicating the infection (Van Kempen et al., 2020). These observations confirm the crucial role that cytokines and mediators play in the pathogenesis of a rhinovirus infection by mediating chemotaxis, transmigration and activation of inflammatory- and immunocompetent cells (Van Kempen et al., 2020).

Signs and symptoms of rhinovirus may include low-grade fever, nasal congestion, rhinorrhea, sneezing, coughing, general malaise, sore throat chills, headaches, and muscle aches (Hinkle et al., 2022). Rhinovirus is a viral infection which is treated by fluids, rest, NSAIDS, and expectorants. Because it is a virus, the main treatment is management of symptoms and may last up to 2 weeks. At eighteen days old, this patient experienced untreated rhinovirus which lead to respiratory distress. The environmental factors of living in a polluted and uncleanly environment also could have contributed to their complications. Vitals signs may be increased during time of sickness while the body tries to fight off the infection. The patient went without proper care during illness, so they experienced an increase in all vital signs and a significant decrease in oxygen saturation.

There are no lab tests to diagnose a cold but a physical exam and ruling out other illnesses can lead to a diagnosis. The infant did not test positive for things like COVID-19, RSV, or pneumonia which all may present with similar manifestations. The infant received a chest x-ray which showed increased perihilar opacities bilaterally, no visualized pneumothorax, and no peripheral effusion. This indicated that the infant has increased density inside the lungs which indicates infection. Due to the infant having a viral infection, the only treatment noted was oxygen therapy due to the saturation being 89%. The infant was on 0.1 L nasal canula and she was saturating at 97%-100%. During my clinical rotation the infant was taken off oxygen and remained with a saturation above 97%.

Pathophysiology References (2) (APA):

Hinkle, J. L., Cheever, K. H., & Overbaugh, K. (2022). *Brunner & Suddarth's textbook of medical-surgical nursing* (15th ed.). Wolters Kluwer.

Van Kempen, M., Bachert, C., & Van Cauwenberge, P. (2020). *An update on the pathophysiology of rhinovirus upper respiratory tract infections*. Rhinology. Retrieved from https://pubmed.ncbi.nlm.nih.gov/10567986/#:~:text=The%20viral%20capsid%20has%20an,receptor%20on%20the%20nasal%20epithelium.

Active Orders (2 points)

Order(s)	Comments/Results/Completion
Activity: Increase activity as tolerated.	N/A
Diet/Nutrition: Similac advanced, PO, Q3H, ad lib.	The orders stand at Q3H but the infant must be fed as needed.
Frequent Assessments: Q4 vitals, continuous pulse oximeter, blood pressure Q8 hours only while awake.	Vitals are only to be done when the infant is awake and minimally invasive hence the blood pressure only being Q8H.
Labs/Diagnostic Tests: Chest X-ray	Chest X-ray performed to make sure the patient isn't showing signs of pneumonia.
Treatments: Suctioning as needed with BBG.	Suction was readily available due to the increased mucus production caused by rhinovirus.
Other: N/A	N/A
New Order(s) for Clinical Day	

Order(s)	Comments/Results/Completion
N/A	N/A
N/A	N/A
N/A	N/A

Laboratory Data (15 points)

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

Lab	Normal Range (specific to the age of the child)	Admission or Prior Value	Today's Value	Reason for Abnormal Value
RBC	3.5-5.2 x 10^6 micro/L	N/A	N/A	N/A
Hgb	9.5-14 g/dL	N/A	N/A	N/A
Hct	29-43%	N/A	N/A	N/A
Platelets	200,000-475,000 mm^3	N/A	N/A	N/A
WBC	6,200-17,000 mm^3	N/A	N/A	N/A
Neutrophils	55-70%	N/A	N/A	N/A
Lymphocytes	20-40%	N/A	N/A	N/A
Monocytes	2-8%	N/A	N/A	N/A
Eosinophils	1-4%	N/A	N/A	N/A

Basophils	0.5-1.0%	N/A	N/A	N/A
Bands	0-1%	N/A	N/A	N/A

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

Lab	Normal Range	Admission or Prior Value	Today's Value	Reason For Abnormal
Na-	134-150 mEq/L	N/A	N/A	N/A
K+	4.1-5.3 mEq/L	N/A	N/A	N/A
Cl-	96-106 mEq/L	N/A	N/A	N/A
Glucose	60-100 mg/dL	N/A	N/A	N/A
BUN	5-18 mg/dL	N/A	N/A	N/A
Creatinine	0.2-0.4 mg/dL	N/A	N/A	N/A
Albumin	4.4-5.4 g/dL	N/A	N/A	N/A
Total Protein	6-6.7 g/dL	N/A	N/A	N/A
Calcium	9.0-10.6 mg/dL	N/A	N/A	N/A
Bilirubin	1.0-12.0 mg/dL	N/A	N/A	N/A
Alk Phos	85-235 units/L	N/A	N/A	N/A
AST	15-60 units/L	N/A	N/A	N/A
ALT	8-64 units/L	N/A	N/A	N/A
Amylase	6-65 units/L	N/A	N/A	N/A
Lipase	0-160 units/L	N/A	N/A	N/A

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

Lab Test	Normal Range	Admission or Prior Value	Today's Value	Reason for Abnormal
ESR	Up to 10 mm/hr	N/A	N/A	N/A
CRP	<1.0 mg/dL	N/A	N/A	N/A
Hgb A1c	1.8-4.0 %	N/A	N/A	N/A
TSH	3-18 microunits/L	N/A	N/A	N/A

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

Lab Test	Normal Range	Admission or Prior Value	Today's Value	Reason for Abnormal
Color & Clarity	Light yellow/clear	Light yellow	N/A	N/A
pH	5-8	6.0	N/A	N/A
Specific Gravity	1.005-1.034	1.006	N/A	N/A
Glucose	Negative	Negative	N/A	N/A
Protein	Negative	Negative	N/A	N/A
Ketones	Negative	Negative	N/A	N/A
WBC	<5	1	N/A	N/A
RBC	0-3	<1	N/A	N/A
Leukoesterase	Negative	Negative	N/A	N/A

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

Test	Normal Range	Admission or Prior Value	Today's Value	Explanation of Findings

Urine Culture	Negative	N/A	N/A	N/A
Blood Culture	Negative	N/A	N/A	N/A
Sputum Culture	Negative	N/A	N/A	N/A
Stool Culture	Negative	N/A	N/A	N/A
Respiratory ID Panel	Negative	Negative	N/A	N/A
COVID-19 Screen	Negative	Negative	N/A	N/A

Lab Correlations Reference (1) (APA):

Van, A. M., & Bladh, M. L.(2017). *Davis's comprehensive handbook of laboratory & diagnostic tests with nursing implications.* F.A. Davis Company.

Diagnostic Imaging

All Other Diagnostic Tests (5 points): Chest X-ray

Diagnostic Test Correlation (5 points): An x-ray sends electromagnetic waves into the body to create images of the patients internal organs (CAP). The patient had an x-ray taken to visualize if there are signs of pneumonia, pneumothorax, or peripheral effusion. The patients x-ray showed increased perihilar opacities bilaterally, no visualized pneumothorax, and no peripheral effusion.

Diagnostic Test Reference (1) (APA):

Van, A. M., & Bladh, M. L.(2017). *Davis's comprehensive handbook of laboratory & diagnostic tests with nursing implications.* F.A. Davis Company.

Current Medications (8 points)
****Complete ***ALL*** of your Client's medications****

Brand/Generic	Simethicone	Tylenol	N/A	N/A	N/A

Dose	20 mg/0.3 mL	10 mg/kg/dose	N/A	N/A	N/A
Frequency	Q4 hours PRN	Every 6-8 hours PRN	N/A	N/A	N/A
Route	PO	PO	N/A	N/A	N/A
Classification	T: Antiflatulent	T: Antipyretics nonopioid analgesics	N/A	N/A	N/A
Mechanism of Action	Causes the coalescence of gas bubbles. Does not prevent the formation of gas.	Inhibits synthesis of prostaglandins that may serve as mediators of pain and fever in the CNS.	N/A	N/A	N/A
Reason Client Taking	Given by professor	Given by professor	N/A	N/A	N/A
Concentration Available	20 mg/0.3 mL drops	160 mg/5 mL	N/A	N/A	N/A
Safe Dose Range Calculation	10-15 mg/kg/ dose	10-15 mg/kg/dose	N/A	N/A	N/A
Maximum 24-hour Dose	240 mg/day	240 mg/day	N/A	N/A	N/A
Contraindications (2)	-Colic -Abdominal pain with fever	-Acute liver failure -Malnutrition	N/A	N/A	N/A
Side Effects/Adverse Reactions (2)	None significant.	-Hepatotoxicity -Stevens-Johnson syndrome	N/A	N/A	N/A
Nursing Considerations (2)	-Mix drops with formula and shake well before using. -Ensure the infant does not have colic before	-Ensure the infant is properly weighed to get the correct dose. -Assess for rash periodically	N/A	N/A	N/A

	administering.	throughout therapy.			
Client Teaching needs (2)	-Teach caregiver interventions on how get infant to naturally release gas. -Teach caregiver proper feeding mechanics to avoid an increase in gas production (head elevated, tip of the bottle down, and nipple full of wilk and not air).	-Ensure caregivers check concentration of liquid preparations to avoid medication errors. -Teach caregiver on signs and symptoms of adverse reactions and when to seek medical attention.	N/A	N/A	N/A

Medication Reference (1) (APA):

Vallerand, A. H., & Sanoski, C. A. (2021). Davis's drug guide for Nurses. F.A. Davis Company

Assessment

Physical Exam (18 points) Highlight Abnormal Pertinent Assessment Findings

GENERAL: **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	Alert and oriented to stimuli and nurses in the room. No signs of distress due to oxygen administration.
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:**	Skin color appropriate for ethnicity; skin noted as warm and dry. Slight mottling noted, turgor of normal elasticity, no tenting present. No rashes, bruises, or wounds present. The patient did not have a Braden score charted and did not have an IV.

Wounds: . **Braden Score:** **Drains present: Y☐ N ☒** **Type:** N/A **IV Assessment (If applicable to child):** N/A **Size of IV:** N/A **Location of IV:** N/A **Date on IV:** N/A **Patency of IV:** N/A **Signs of erythema, drainage, etc.:** N/A **IV dressing assessment:** N/A **IV Fluid Rate or Saline Lock:** N/A	
HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:** **Thyroid:**	Head normocephalic. Ears showing no signs of drainage. Eyes equal, round, and reactive to light. Nose within midline showing no signs of drainage. The patient does not have teeth, gums pink, intact, and moist. The patient does not have a thyroid problem.
CARDIOVASCULAR: **Heart sounds:** **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** **Peripheral Pulses:** **Capillary refill:** **Neck Vein Distention: Y ☐ N ☒** **Edema Y ☐ N ☒** **Location of Edema:**	Heart sounds auscultated. S1 and S2 heard with no murmurs present. Peripheral pulses at 3+. Capillary refill is less than 3 seconds. No signs of edema present.
RESPIRATORY: **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character**	Breath sounds auscultates with no adventitious lung sounds heard. Lungs sounds are clear and equal bilaterally.
GASTROINTESTINAL: **Diet at home:** Similac advanced. **Current diet:** Similac advanced. **Height (in cm):** 49 cm. **Auscultation Bowel sounds:** **Last BM:** 1100 **Palpation: Pain, Mass etc.:** N/A **Inspection:** N/A **Distention:** N/A **Incisions:** N/A **Scars:** N/A	The patient is on a regular formula diet of Similac advanced at home and at the hospital. The patient's length is 49 cm. Bowel sounds heard in all four quadrants. Last bowel movement was today at 1100. No signs of pain. No distention, incisions, scars, drains, or wounds present.

Drains: N/A **Wounds:** N/A **Ostomy: Y ☐ N ☒** **Nasogastric: Y ☐ N ☒** **Size:** N/A **Feeding tubes/PEG tube Y ☐ N ☒** **Type:** N/A	
GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☐ N ☒** **Type:** **Size:**	The patient's urine was clear/yellow. The patient voided 4 times within the clinical rotation. Genitals were normal for gender and age.
MUSCULOSKELETAL: **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☐ N ☒** **Fall Risk: Y ☒ N☐** **Fall Score:** **Activity/Mobility Status:** **Independent (up ad lib) ☐** **Needs assistance with equipment ☒** **Needs support to stand and walk ☒**	The patient can perform active range of motion exercises with assistance. The patient is not using any supportive devices. No fall score was charted for this patient. The patient needs help with ADLs due to the age of 18 days old.
NEUROLOGICAL: **MAEW: Y ☒ N☐** **PERLA: Y ☒ N☐** **Strength Equal: Y ☒ N ☐ if no -** **Legs ☐ Arms ☐ Both ☐** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	The patient can move all extremities well. Pupils are equal, round, reactive, and accommodating to light. The patient does not speak due to age but does make grunting and cooing noises.
PSYCHOSOCIAL/CULTURAL: **Coping method(s) of caregiver(s):** **Social needs (transportation, food, medication assistance, home equipment/care):** **Personal/Family Data (Think about home**	The patient was removed from their home due to poor living conditions. The mother's house was deemed unlivable which prompted DCFS removing all the children from the home. The patient's grandmother will have temporary custody when released from the hospital.

environment, family structure, and available family support):	

Vital Signs, 2 sets – (2.5 points) Highlight All Abnormal Vital Signs

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0730	142 bpm	72/46 mmHG	32	36.6˚C axillary	97% 0.1 L nasal canula
1100	136 bpm	68/42 mmHG	48	36.6˚C axillary	98% room air

Vital Sign Trends:

Normal Vital Sign Ranges (2.5 points)
****Need to be specific to the age of the child****

Pulse Rate	110-160 bpm
Blood Pressure	50-75 mmHG systolic, 30-45 mmHG diastolic
Respiratory Rate	30-60 breaths per minute
Temperature	36.5˚C-37.5˚C
Oxygen Saturation	95% or greater

Normal Vital Sign Range Reference (1) (APA):

Ricci, S. S., Kyle, T., & Carman, S. (2021). *Maternity and pediatric nursing*. Wolters Kluwer.

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions

0730	FACES	N/A	0	N/A	N/A
Evaluation of pain status *after* intervention	N/A	N/A	N/A	N/A	N/A
Precipitating factors: N/A **Physiological/behavioral signs:** N/A					

Intake and Output (1 points)

Intake (in mL)	**Output (in mL)**
75 mL	83 mL

Developmental Assessment (6 points)

Be sure to highlight the achievements of any milestone if noted in your child. Be sure to highlight any use of diversional activity if utilized during clinical. There should be a minimum of 3 descriptors under each heading

Age Appropriate Growth & Development Milestones

1. Reflexes intact
2. Moves head from side to side
3. Hands are in tight fists

Age Appropriate Diversional Activities

1. Cuddling
2. Singing to the baby
3. Rattle

Psychosocial Development:

Which of Erikson's stages does this child fit? Trust vs. Mistrust

What behaviors would you expect? Comfort, feeding, carding needs, and stimulation.

Mistrust develops when needs are not met.

What did you observe? The patient is very calm and only cried when hungry or diaper was wet. After needs were met and comfort interventions such as cuddling were given, the patient went back to sleep.

Cognitive Development:

Which stage does this child fit, using Piaget as a reference? Sensorimotor

What behaviors would you expect? The infant is only aware of what is right infront of them. Infants at this age do not yet understand object permanence.

What did you observe? The patient would stare at things put withing 10 inches in front of their eyes.

Vocalization/Vocabulary:

Development expected for child's age and any concerns? Crying and cooing were observed. No concerns noted.

Any concerns regarding growth and development? There are no concerns regarding development.

Developmental Assessment Reference (1) (APA):

Ricci, S. S., Kyle, T., & Carman, S. (2021). *Maternity and pediatric nursing*. Wolters Kluwer.

Nursing Diagnosis (15 points)
Must be NANDA approved nursing diagnosis and listed in order of priority

Nursing Diagnosis	Rational	Interventions (2 per dx)	Outcomes	Evaluation
• Include full nursing diagnosis with "related to" and "as evidenced by" components • Listed in order	• Explain why the nursing diagnosis was chosen			• How did the Client/family respond to the nurse's actions? • Client response, status of goals and outcomes,

by priority – highest priority to lowest priority pertinent to this client.				modifications to plan.
1. Ineffective airway clearance related to increased secretions as evidence by hypoxemia.	The patient is having difficulty breathing on their own due to excess mucus.	**1.**Suctioning **2.**Oxygen therapy	**1.**The patient is able to breathe better and oxygen saturation is above 92%.	The patients airway remained clear due to suctioning of secretions and 0.1 L oxygen via nasal cannula was administered. The patient responded well to the nursing interventions and will continue to be monitored.
2. Ineffective breathing pattern related to respiratory muscle fatigue as evidence by decreased respirations.	The patient was having difficulty breathing due to muscle fatigue from excessive use of accessory muscles.	**1.** Oxygen therapy **2.**Head of bed above 30 degrees	**1.**The patient was able to breathe better, and oxygen saturation is above 92% without use of accessory muscles.	The patient was able to breathe better after initiation of oxygen. This lowered the infant's respiratory rate and they were able to stop using their accessory muscle to breathe. The patient responded well to the nursing interventions and will continue to be monitored.
3. Ineffective tissue perfusion related to respiratory disease process as evidence by skin mottling.	The patient experienced hypoxemia due to respiratory distress. The low oxygen saturation causes skin mottling.	**1.** Oxygen therapy **2.** Head of bed above 30 degrees	**1.**The patients tissue perfusion increased when oxygen saturation increased from use of oxygen therapy via nasal	The patient was given oxygen therapy which increased tissue perfusion and decreased symptoms from hypoxemia. The patient responded well to the nursing interventions and will continue to be monitored.

			canula.	
4. Impaired skin integrity related to moisture as evidence by incontinence.	Infants have an increased risk of skin breakdown due to constantly being in a diaper.	**1.** Regular diaper changes **2.** Use of skin protectant ointment or cream	**1.**The patient's diaper was changed as soon as it was wet to decrease the risk of skin breakdown.	The patient responds well by showing signs of comfort after being changed out of a wet diaper.

Other References (APA):

Concept Map (20 Points):

Subjective Data

DCFS stated that the house the infant was living in was deemed unlivable.
When the patient was in DCFS custody they stated the infant was struggling to breathe and having episodes of apnea.

Nursing Diagnosis/Outcomes

Ineffective airway clearance related to increased secretions as evidence by hypoxemia.
The patient is able to breathe better and oxygen saturation is above 92%.
Ineffective breathing pattern related to respiratory muscle fatigue as evidence by decreased respirations.
The patient was able to breathe better, and oxygen saturation is above 92% without use of accessory muscles.
Ineffective tissue perfusion related to respiratory disease process as evidence by skin mottling.
The patients tissue perfusion increased when oxygen saturation increased from use of oxygen therapy via nasal canula.
Impaired skin integrity related to moisture as evidence by incontinence.
The patient's diaper was changed as soon as it was wet to decrease the risk of skin breakdown.

Objective Data

Chest x-ray: increased perihilar opacities bilaterally, no visualized pneumothorax, no peripheral effusion.
Vitals pertinent to diagnosis: oxygen saturation 89% room air
Negative for COVID-19 and RSV

Client Information

Maxine is an eighteen-day old female born at thirty-seven weeks via cesarean section at Sarah Bush Lincoln Hospital. Maxine was brought to the emergency department by DCFS on 9/30/22 due to respiratory stress and poor living conditions. In the emergency room it was noted that the patient was saturating at 89% on room air, experiencing hypoxemia, and episodes of apnea. Chest x-ray was negative, and patient was transferred to Carle pediatric unit for management of Rhinovirus.

Nursing Interventions

Oxygen therapy
PRN suctioning using BBG
HOB above 30 degrees
Regular diaper changes
Use of skin protectants to reduce skin breakdown
Q4 vitals
Q8 blood pressure
Nonpharmacological techniques to reduce gas production
Comfort techniques (cuddling/swaddling)