N433 Care Plan #2

Lakeview College of Nursing

Kristine Johnson

Demographics (3 points)

Date of Admission	Patient Initials	Age (in years & months)	Gender
03/03/2020	J.D.	5 years old	Male
Code Status	**Weight (in kg)**	**BMI**	**Allergies/Sensitivities (include reactions)**
Full	23.5 kg	16.88	Egg(anaphylaxis), dog dander, mold, peanuts, red dye, and amoxicillin (rash)

Medical History (5 Points)

Past Medical History: acute respiratory failure w/ hypoxia (CMS-HCC), Bronchiolitis, reactive airway disease, Rhinovirus infection, status asthmaticus

Illnesses: RSV, MRSA-non respirator, Rhinovirus

Hospitalizations: Previously hospitalized for asthma

Past Surgical History: None

Immunizations: up to date per caregiver

Birth History: term without complications

Complications (if any): none

Assistive Devices: none

Living Situation: Lives in home with parents and older siblings. Also attends school.

Admission Assessment

Chief Complaint (2 points): Persistent cough unresolved from albuterol inhaler

Other Co-Existing Conditions (if any): Asthma, bronchiolitis

Pertinent Events during this admission/hospitalization (1 points): Transferred from SBLHC to Carle.

History of present Illness (10 points):.

PMH significant for asthma, referred to Carle for acute respiratory failure 2/2 asthma exacerbation. Symptoms started 3/2/20 with a cough that wouldn't go away. Mother gave albuterol q4hr but breathing labored 2-3 hours after treatment and a reaction at the neck and ribs, so she brought him to SBLHC. At the ED client found hypoxic 88% on RA, was in Respiratory distress with noted reactions. Client placed on high flow NC 15L 30% with saturations improved to 94%. Given oral steroids, magnesium, and breathing treatments and transferred to Carle. Arrival the client reports doing much better, seems comfortable on Opti flow. He was coughing a lot 3/2/20 but has improved. Mother reports 3-4 admissions for asthma exacerbation in the past, some required PICU stay but never intubated.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Asthma, mild persistent, and with acute exacerbation

Secondary Diagnosis (if applicable):acute respiratory failure with hypoxia, rhinovirus

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

The client was diagnosed primarily with asthma, mild persistent, with acute exacerbation. The pathophysiology of asthma is that it is "a chronic inflammatory disease that causes episodes of spastic reactivity in the bronchioles" (Capriotti, 2016, p.464). Cellularly, asthma involves allergens or microbes that stimulate t lymphocytes in particularly Th1 lymphocytes and "Th2 cells attract mast cells, eosinophils, and basophils, which promote inflammation" (Capriotti, 2016, p.464). Then histamines and leukotrienes are stimulated when "IgE binds s to mast cells" (Capriotti, 2016, p.464). Some signs and symptoms of asthma include "wheezing, cough,

dyspnea, and chest tightness" (Capriotti, 2016, p.464). The expected finding will consist of chest tightness, dyspnea, cough, mucus production, use of accessory muscles, and history regarding current and previous asthma exacerbation (Henry, 2016, p.99). The client was using accessory muscles slightly by pushing up the diaphragm with abdominal muscles, and upon arrival, he had a persistent cough. Diagnostic and lab tests for asthma include CBC, pulmonary function test, peak expiratory flow rates, bronchoprovocation testing, skin prick test, and chest x-ray (Henry, 2016, p.99-100). These tests contribute to determine the severity and triggers of asthma (Henry, 2016, p.99-100). A chest x-ray was performed on the client, and the finding was respiratory distress and reduced oxygenation. Treatments for asthma would include medication such as bronchodilators and anti-inflammatory agents, and with the client's medicine, he was being given albuterol, which is a short-acting beta2 agonist, prednisone which is a corticosteroid, and Montelukast which is a leukotriene modifier (Henry, 2016, p.100). Potential complications of asthma for children can include status asthmaticus due to "a life-threatening episode of airway obstruction that is often unresponsive to common treatment" (Henry, 2016, p.101). In this situation, the nurse would "monitor oxygen status and obtain an IV access, administer humidified oxygen, and administer three nebulizer treatments of a beta2-agonist 20-30 minutes apart" (Henry, 2016, p.101). The other complication is respiratory failure that occurs due to "persistent hypoxemia related to asthma," (Henry, 2016, p.101). The nursing actions involved are "monitoring oxygenation levels and acid-base balance and prepare for intubation and mechanical ventilation as indicated" (Henry, 2016, p.101).

Pathophysiology References (2) (APA):

Capriotti, T., Frizzell, J., (2016), *Pathophysiology Introductory concepts and clinical perspectives*. Philadelphia, PA, F.A. Davis Company

Henry, N. E. (2016). Asthma. In M. McMicheal (Ed.), *RN Nursing Care of Children* (10.0 ed., p. 280). Assessment Technologies Institute, LLC.

Active Orders (2 points)

Order(s)	Comments/Results/Completion
Activity: increase as tolerated	**Until discontinued**
Diet/Nutrition: Regular	**Until discontinued, Egg allergy.**
Frequent Assessments: VS Q4hr, I & O Q4hr, Bronchiolitis respiratory assessment	**Continuous**
Labs/Diagnostic Tests: Pulse oximeter	**Continuous**
Treatments: High flow humidity nasal cannula	**Continuous**
Other: Isolation	**Contact and droplet due to rhino/enterovirus**
New Order(s) for Clinical Day	
Order(s)	**Comments/Results/Completion**
Vitals	**Q4Hrs**
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	Admission	Today's	Reason for Abnormal Value

	Range (specific to the age of the child)	or Prior Value	Value	
RBC	**3.80-5.20**	**N/A**	**N/A**	
Hgb	**10.9-14.9**	**N/A**	**N/A**	
Hct	**33-44**	**N/A**	**N/A**	
Platelets	**187-445**	**N/A**	**N/A**	
WBC	**5.5-15.5**	**N/A**	**N/A**	
Neutrophils	**25-57**	**N/A**	**N/A**	
Lymphocytes	**35-65**	**N/A**	**N/A**	
Monocytes	**0-0.8**	**N/A**	**N/A**	
Eosinophils	**0-0.50**	**N/A**	**N/A**	
Basophils	**0-0.10**	**N/A**	**N/A**	
Bands	**0-145**	**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-	**135-145**	**137**	**N/A**	
K+	**3.5-5.0**	**4.6**	**N/A**	
Cl-	**97-107**	**109**	**N/A**	**Slight increase can be due to some fluid imbalance due to ineffective airway clearing he may not have been taking in fluids**
Glucose	**65-99**	**115**	**N/A**	**The increase can be due to the asthma or the rhinovirus**

BUN	**7-20**	**13**	**N/A**	
Creatinine	**0.3-0.7**	**0.37**	**N/A**	
Albumin	**3.2-4.5**	**3.3**	**N/A**	
Total Protein	**5.7-8.0**	**N/A**	**N/A**	
Calcium	**8.8-10.6**	**9.2**	**N/A**	
Bilirubin	**0-0.1**	**N/A**	**N/A**	
Alk Phos	**93-309**	**N/A**	**N/A**	
AST	**15-40**	**N/A**	**N/A**	
ALT	**10-25**	**N/A**	**N/A**	
Amylase	**25-101**	**N/A**	**N/A**	
Lipase	**3-32**	**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	**0-10**	**N/A**	**N/A**	
CRP	**0-0.5**	**N/A**	**N/A**	
Hgb A1c	**4.5-5.6**	**N/A**	**N/A**	
TSH	**0.55-5.31**	**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	Today's Value	Reason for Abnormal

		Value		
Color & Clarity	**Yellow**	**N/A**	**N/A**	
pH	**4.5-8.0**	**N/A**	**N/A**	
Specific Gravity	**1.010-1.030**	**N/A**	**N/A**	
Glucose	**Negative**	**N/A**	**N/A**	
Protein	**Negative**	**N/A**	**N/A**	
Ketones	**Negative**	**N/A**	**N/A**	
WBC	**Negative**	**N/A**	**N/A**	
RBC	**Negative**	**N/A**	**N/A**	
Leukoesterase	**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**	
Blood Culture	**NEGATIVE**	**N/A**	**N/A**	
Sputum Culture	**NEGATIVE**	**N/A**	**N/A**	
Stool Culture	**NEGATIVE**	**N/A**	**N/A**	
Respiratory ID Panel	**NEGATIVE**	**N/A**	**N/A**	

Lab Correlations Reference (APA):

Capriotti, T., Frizzell, J., (2016), *Pathophysiology Introductory concepts and clinical perspectives*. Philadelphia, PA, F.A. Davis Company

Diagnostic Imaging

All Other Diagnostic Tests (5 points): XR Chest APORPA only

Diagnostic Test Correlation (5 points): Respiratory distress, poor oxygenation

Diagnostic Test Reference (APA): Henry, N. E. (2016). Asthma. In M. McMicheal (Ed.), *RN Nursing Care of Children* (10.0 ed., p. 280). Assessment Technologies Institute, LLC.

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

Brand/ Generic	Albuterol sulfate (VoSpire ER)	Prednisone (Rayos)	Acetaminophen (Tylenol)	Montelukast (singular)	Ibuprofen oral suspension
Dose	2.5mg	20 mg	320 mg	4 mg	236mg
Frequency	Q4 hr	2x daily	Q 4 hrs	Every evening	Q 6hrs PRN
Route	Nebulization	oral	oral	oral	Oral
Classification	Beta-adrenergic agent	glucocorticoid	analgesic	Leukotriene receptor antagonist	NSAID cyclooxygenase Inhibitor
Mechanism of Action	Selectively stimulates beta 2 adrenergic receptors, relaxing airway smooth muscle	Inhibits multiple inflammatory action cytokines, produces multiple glucocorticoid and mineralocorticoid effects	Directly effects heat regulating center and used as analgesic	Selectively binds to cysteinyl leukotriene receptors	Inhibits cyclooxygenase, reducing prostaglandin and thromboxane synthesis
Reason Client Taking	Dilate the bronchi to ease breathing	Reduce inflammation	Pain relief	Used to inhibit leukotriene	Reduce inflammation
Concentration Available	0.1-0.2 mg/kg	1-2 mg/kg/day	10-15mg/kg	4 mg	5-10 mg/kg
Safe Dose Range Calculation	2.35-4.7mg	23.5-47mg	235mg-352.5mg	4mg	117.5-235
Maximum 24-hour Dose	12 mg	60mg	1,645mg	4mg	705mg

Contraindications (2)	Hypersensitivity Caution in HTN	Hypersensitivity Systemic fungal infection	Hypersensitivity Caution in hepatic impairment	Hypersensitivity Caution if severe asthma	Aspirin triad Caution in recent MI
Side Effects/Adverse Reactions (2)	Nervousness Tremor	Cushingoid appearance Hirsutism	Nausea Rash	Headache Fever	GI bleeding Nausea
Nursing Considerations (3)	No routine tests, May cause increase HR, Monitor BP when taken with Ibuprofen	Monitor electrolytes, BP, and chest x-ray if prolonged use	Don't exceed 1,645 mg Monitor temp and pain Do not give with liver damage	Monitor s/s of depression, Monitor behavior changes, Ask about suicidality	Cr if severe renal disease, Check BP, Dose >30 mg/kg/day
Client Teaching needs (2)	Max dose is 12 mg a day, If renal impaired take caution in high dose treatment	Take with food Do not crush, cut, or chew tablets	Do not give is liver impaired, Will not give GI upset like aspirin	4mg (30 ea) without insurance can cost $271.99, If experiencing severe asthma seek medical attention	Do not exceed 705mg in a day, Monitor BP when taking with albuterol

Medication Reference (APA):

Jones & Bartlett Learning. (2019) *2019 Nurse's Drug Handbook, eighth edition.* Burlington, MA, Jones & Bartlett Learning.

Assessment

Physical Exam (18 points)

GENERAL (1 point): **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	Alert and oriented x4 Wearing PJ shorts Hair lightly brushed
INTEGUMENTARY (2 points): **Skin color:**	Moist and pink Good skin turgor

Character: **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** **Drains present: Y☐ N ☐** **Type:**	No rash, bruises, wounds, drains Braden score: 7 Peripheral IV 03/03/2020 right antecubital, 22G No signs of erythema or drainage IV dressing clean and dry IV fluids currently clamped so no rate going
HEENT (1 point): **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:** **Thyroid:**	 Head and neck midline Ears are moist and pink Eyes PERLA no glasses Teeth dentin good Thyroid non protruding and non-palpable
CARDIOVASCULAR (2 points): **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:**	Clear S1 and S2, no murmurs, Cap refill < 3 seconds, no neck vein distention, no edema, Pulses +3
RESPIRATORY (2 points): **Accessory muscle use: Y☐ N ☐** **Breath Sounds: Location, character**	Minimal use of accessory muscles (Stomach to push up diaphragm) RUL, RML, RLL wheezing, expiration LUL and LLL wheezes, expiration
GASTROINTESTINAL (2 points): **Diet at home:** **Current diet:** **Height (in cm):** **Auscultation Bowel sounds:** **Last BM:** **Palpation: Pain, Mass etc.:** **Inspection:** **Distention:** **Incisions:** **Scars:** **Drains:** **Wounds:** **Ostomy: Y ☐ N ☐** **Nasogastric: Y ☐ N ☐**	Last BM 3/6/2020; soft, formed, brown, and moderate No distention, incisions, scars, drains, or wounds No ostomy, no NG tube, no feeding tube, no pain on palpations, ALL quadrants normoactive Diet at home and current is regular

Size: **Feeding tubes/PEG tube Y ☐ N ☐** **Type:**	
GENITOURINARY (2 Points): **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☐** **Dialysis: Y ☐ N ☐** **Inspection of genitals:** **Catheter: Y ☐ N ☐** **Type:** **Size:**	No pain in urinating No dialysis No catheter Yellow and clear About 200 mL
MUSCULOSKELETAL (2 points): **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** ☐	Fall score: 2 Full ROM Mom assisted with cutting food, but client ate independently Strength equal bilaterally Client is independent No supportive devices
NEUROLOGICAL (2 points): **MAEW: Y ☐ N☐** **PERLA: Y ☐ N☐** **Strength Equal: Y ☐ N ☐ if no -** **Legs ☐ Arms ☐ Both ☐** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	Alert x4 Speech minimal but clear Full sensation No loss of consciousness Full MAEW and PERLA
PSYCHOSOCIAL/CULTURAL (2 points): **Coping method(s) of caregiver(s):** **Social needs (transportation, food, medication assistance, home equipment/care):** **Personal/Family Data (Think about home environment, family structure, and available family support):**	Caucasian Lives with parents and older siblings Plays video games with cousin via facetime on a tablet Attends school Speaks English

Vital Signs, 1 set (2.5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0830	**102**	**110/63**	**16**	**98.3** **axillary**	**97** **Opti flow**
1200	**121**	**123/59**	**22**	**98.2** **axillary**	**98** **Opti flow**

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

Pulse Rate	**70-110**
Blood Pressure	**100-120/60-75**
Respiratory Rate	**17-21**
Temperature	**36.7 degrees C**
Oxygen Saturation	**100%**

Normal Vital Sign Range Reference (APA):

Henry, N.E. (2016) Physical Assessment Findings. RN Nursing Care of Children (10.0 ed., p. 7).

Assessment Technologies Institute, LLC.

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0800	**Numeric**	**none**	**Denies pain** **0**	**none**	**Cluster care**
Evaluation of pain status *after* intervention	**Numeric**	None	**Denies pain** **0**	**none**	**Cluster care**
Precipitating factors: none **Physiological/behavioral signs: no grimacing or verbal cues of pain.**					

Intake and Output (1 points)

Intake (in mL)	Output (in mL)
100%	**200 mL**

Developmental Assessment (6 points)

Be sure to highlight the achievements of any milestone if noted in y our 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. jump rope
2. walks backwards with heel to toe
3. throws and catches a ball with ease

Age Appropriate Diversional Activities

1. musical toys
2. sand box
3. electronic games

Psychosocial Development:

Which of Erikson's stages does this child fit?

At 5 years old they are still in the Initiative versus guilt stage.

What behaviors would you expect?

I would expect the kids to be confident in tasks they are already able to do such as coloring and being able to tell someone when they are hungry.

What did you observe?

The client was able to use a tablet with no assistance and he used to play a game with his cousin while simultaneously talking to him.

Cognitive Development:

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

At 5 years old they would still be in the preoperational phase until 6 years old.

What behaviors would you expect?

I would expect them to be focused on one aspect of play rather than multiple things such as focusing on a red truck rather than playing with a yellow and blue truck. Another example would be is still thinking that their feeling and thoughts have impact on the world like someone else being happy because they are happy.

What did you observe?

When preforming assessments, the nurse and I would work around the child playing on the tablet as to not interrupt and the child moved some, but most of the focus was solely on the game.

Vocalization/Vocabulary:

Development expected for child's age and any concerns?

At 5 years old they should be able to use four or five words use talking as a primary form of communication. No concerns present because the child had a large vocabulary and was able to express emotion and thoughts.

Any concerns regarding growth and development?

Only concerns are accessory muscle use while breathing and possible underdeveloped musculature due to frequent hospital stays.

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

Nursing Diagnosis • Include full nursing diagnosis with "related to" and "as evidenced by" components	**Rational** • Explain why the nursing diagnosis was chosen	**Intervention (2 per dx)**	**Evaluation** • How did the patient/family respond to the nurse's actions? • Client response, status of goals and outcomes, modifications to plan.
1. Fatigue related to accessory	The child seemed to lack energy	1.Assess for signs of hypoxia, fatigue,	Client exhibits no signs of hypoxia, some

muscle use as evidence by lack of energy by staying in bed for hours.	possibly due to having to use so much focusing on breathing.	irritability, tachycardia, dyspnea, LOC 2.Encourage the parent's presence, especially with younger children	fatigue, very little irritability, no tachycardia, no dyspnea, and is alert and oriented x4 The client's mom was more than happy to stay in the room.
2. Potential for insufficient airway clearance related to Bronchiolitis as evidence by frequent events difficulty to breath.	I chose this nursing diagnosis because of the history of uncontrolled asthma exacerbation.	1. Assess respiratory status with the initial assessment, with each vital sign check, and as needed. 2.Use a spacer or holding chamber when administering MDI.	Some noted wheezing and accessory muscle use however comparted to initial its decreased. Talked to mother about if they used a spacer before and going through the teaching and having her demonstrate it back.
3. Risk for infection related to impaired immune system as evidence by isolation precautions of contact and droplet.	Client was diagnosed with Rhinovirus and since they already have a history of asthma their gas exchange is impaired so minimizing possible exacerbation is critical.	1. Monitor for signs of pneumonia every 4 hours 2Use standard PPE as facility requires (gloves, mask, and gown).	No crackles while monitoring and every personnel entering has used a gown, gloves, and mask to reduce entrance and spread of bacteria or viruses
4. Decreased ability to cope related to chronic illness as evidence by multiple hospital visits.	I chose this diagnosis because the client seemed desensitized and reliant on a tablet to escape the situation not exactly using it as a coping mechanism.	1. Assess for and use every opportunity to reinforce the family's understandin g of asthma and its therapies 2. Teach the parents to have realistic expectations about	The nurse reassesses mothers understanding of asthma during treatment and upon discharge. The parents said they understand the expectations and are going to further look into possible triggers to prevent future exacerbations.

		the child’s asthma	

Other References (APA):

Swearingen, P., (2019) *All-in-One Nursing Care Planning Resource*. Fifth edition. St. Louis, MI, Elsevier

Concept Map (20 Points):

N433 Care Plan