# N431 Care Plan # 1

Lakeview College of Nursing

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N431 Care Plan

## Demographics (3 points)

| Date of Admission | Patient Initials | Age | Gender |
|---|---|---|---|
| 2-27-2020 | PP | 58 | Female |
| **Race/Ethnicity** | **Occupation** | **Marital Status** | **Allergies** |
| White | Employed - CCAR | Single | NKDA |
| **Code Status** | **Height** | **Weight** | |
| Full Code | 152 cm | 36.6 kg | |

## Medical History (5 Points)

**Past Medical History:** Anxiety, Depression, Osteoporosis, Rheumatoid Osteoperiostitis, Chronic Respiratory Failure with Hypoxia

**Past Surgical History:** Abdominal Hernia Repair

**Family History:** COPD (Brother, Father, and Mother), Dental Disease (Mother)

**Social History (tobacco/alcohol/drugs):** Tobacco – Former smoker. 2 packs/day (40 pack-years)

Alcohol – Current use. Beer 1-2 bottles per week.

Drugs – The patient denies use.

**Assistive Devices:** Gait belt

**Living Situation:** Home alone

**Education Level:** High school diploma

## Admission Assessment

**Chief Complaint (2 points):** Shortness of breath and fever

**History of present Illness (10 points):** The patient is a 58-year-old female with a past medical history of advanced (end-stage) COPD, chronic respiratory failure with hypoxia, anxiety, depression, and osteoporosis. The patient was brought to the emergency department by EMS on 2-27-2020 after she started reporting shortness of breath with a cough. The patient reported being

febrile without any chest pain or other aggravating factors. In the emergency room, the patient's white blood cell count was 13.5 per microliter, and she was in respiratory distress. She was placed on BiPap. A chest x-ray was performed and did not show any acute findings. However, the patient was tachypneic and tachycardic with a heart rate of 112 beats per minute and a T-Max of 41.0. The patient was started on IV ceftriaxone and azithromycin.

## Primary Diagnosis

**Primary Diagnosis on Admission (2 points):** COPD Exacerbation

**Secondary Diagnosis (if applicable):** Chronic respiratory failure with hypoxia

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

Chronic obstructive pulmonary disorder (COPD) is a combination of chronic bronchitis, emphysema, and hyperactive airway disease. The features of these three disorders characterize it. The characteristic features of chronic bronchitis are hypersecretion of mucus in the large and small airways, hypoxia, and cyanosis. Excessive mucus creates an obstruction to inspiratory airflow that inhibits optimal oxygenation. To be diagnosed with chronic bronchitis, the individual has to have had a cough for three months out of the year for two consecutive years (Gulanick & Myers, 2017).

In emphysema, the characteristic findings are overdistention of the alveoli, which obstructs expiratory airflow, loss of elastic recoil of the alveoli, and high residual volume of carbon dioxide in the lungs. Inflammatory changes in chronic bronchitis cause permanent remodeling of the pulmonary structure. Inflammation causes stimulation of macrophages followed by the accumulation of neutrophils, T lymphocytes, and cytokines. There is a proteolytic-anti proteolytic enzyme imbalance in the lungs of patients with COPD that leads to

changes consistent with emphysema. Smoking activates proteolytic enzymes, which are released from neutrophils and macrophages. Cigarette smoke also contains free radicals that damage respiratory cell membranes and arterial endothelial cells.

Patient age and smoking history are essential features in establishing a pattern of obstructive disease. The patient is 58 years old, with a smoking history of 2 packs per day totaling 40 pack years. The mean age of patients with COPD is 65 and older. However, COPD caused by AAT deficiency is usually younger adults aged 40 to 50 years. My patient falls into this category. Commonly, the patient with COPD complains of dyspnea and cough. Shortness of breath is the reason that brought the patient to the emergency room.

Signs and symptoms of COPD include those of chronic bronchitis, emphysema, and asthma. Dyspnea is usually the first symptom, initially occurring with heavy exertion. For this particular patient, the COPD is so advanced that dyspnea occurs with mild exertion such as eating, ambulating, or getting dressed. Cough or wheezing may be a chief complaint. This patient has a productive cough during this visit. Productive cough, hypoxia, and cyanosis are classic signs of chronic bronchitis.

Concerning vital signs, mainly focus on respiratory rate, rhythm, and depth. Patients with COPD often have prolonged exhalation and purse the lips when exhaling. All of which are common symptoms my patient displays.

Pulmonary function tests (PFTs) are a key part of the diagnosis of COPD. Airflow limitations of COPD are identified by an FEV1/FVC ratio of lower than 70%. FEV1 significantly diminishes in COPD because of the patient's exhalation phase is slow and prolonged. A complete blood count (CBC), blood chemistry panel, chest x-ray, EKG, and ABGs should be analyzed. In severe COPD, the chest x-ray may have characteristics consistent with

emphysema.: flattened, low diaphragm borders, and hyperinflation of both lung fields caused by retained air.

Treatment of COPD involves a stepwise approach that begins with short-acting bronchodilator agents for patients with mild disease and incorporates long-acting agents into the treatment plan. Beta-2 adrenergic agonists inhalers stimulate bronchiole smooth muscle, leading to dilation, whereas anticholinergic inhaler agents counteract bronchoconstriction (Capriotti & Frizzell, 2016). The patient is on both a Beta-2 adrenergic agonist and anticholinergic inhaler. Nonpharmacological interventions include smoking cessation, pneumococcal and influenza vaccine, pulmonary rehabilitation, and oxygen therapy. The patient is on a Bipap machine to help reduce carbon dioxide retention.

**Pathophysiology References (2) (APA):**

Capriotti, T., & Frizzell, J. P. (2016). *Pathophysiology: Introductory Concepts and Clinical Perspectives*: F.A. Davis Company.

Gulanick, M., & Myers, J. L. (2017). *Nursing Care Plans: Diagnoses, Interventions, & Outcomes*. Elsevier.

**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 | Admission Value | Today's Value | Reason for Abnormal Value |
|---|---|---|---|---|
| **RBC** | 3.8-5.41 | 4.51 | 3.69 Low | The patient's RBC count could be low due to anemia present during exacerbation in patients with chronic lung disease (Kee, 2018). |
| **Hgb** | 11.3-15.2 | 13.7 | 11.4 | |
| **Hct** | 33.2-45.3 | 41.9 | 34.4 | |
| **Platelets** | 149-393 | 312 | 231 | |
| **WBC** | 4-11.7 | 13.5 | 11.4 | The patient's WBC count could be |

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|---|---|---|---|---|
| | | High | | high due to her past medical history of rheumatoid osteoperiostitis (Kee, 2018). |
| **Neutrophils** | 2.4-8.4 | 89.5 High | 92.0 High | The patient's neutrophil count could be high due to her past medical history of rheumatoid osteoperiostitis (Kee, 2018). |
| **Lymphocytes** | 11.8-45.9 | 5.0 Low | 1.8 Low | The patient's lymphocytes could be low due to inflammatory changes associated with chronic bronchitis (Kee, 2018). |
| **Monocytes** | 4.4-12 | 4.8 | 6.1 | |
| **Eosinophils** | 0-6.3 | 0.3 | n/a | |
| **Bands** | 0.1.0 | 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 Value | Today's Value | Reason For Abnormal |
|---|---|---|---|---|
| **Na-** | 136-145 | 136 | 140 | |
| **K+** | 3.5-5.1 | 4.0 | 4.5 | |
| **Cl-** | 98-107 | 98 | 104 | |
| **CO2** | 21-31 | 31 | 34 High | The patient's CO2 is increased due to emphysema (hypoventilation) (Kee, 2018). |
| **Glucose** | 74-109 | 119 High | 132 High | The patient's glucose is increased due to excessive stress on the body to work harder to breathe and exchange oxygen and carbon dioxide (Kee, 2018). |
| **BUN** | 7-25 | 7 | 7 | |
| **Creatinine** | 0.5-0.9 | 0.46 Low | 0.44 Low | The patient's creatinine is slightly low due to lower body mass index and muscle atrophy and weakness (Kee, 2018). |

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|---|---|---|---|---|
| **Albumin** | 3.5-5.2 | n/a | n/a | |
| **Calcium** | 8.6-10.3 | 9.2 | 7.8 Low | The patient's calcium is low due to a lack of calcium and vitamin D intake (Kee, 2018). |
| **Mag** | 1.5-2.5 | n/a | n/a | |
| **Phosphate** | 35-105 | n/a | n/a | |
| **Bilirubin** | 0.3-1.0 | n/a | n/a | |
| **Alk Phos** | 20-140 | n/a | n/a | |
| **AST** | 0-32 | n/a | n/a | |
| **ALT** | 0-33 | n/a | n/a | |
| **Amylase** | 23-85 | n/a | n/a | |
| **Lipase** | 0-160 | n/a | n/a | |
| **Lactic Acid** | 0.5-1.0 | 0.5 | n/a | |
| **Troponin** | 0-.0.4 | n/a | n/a | |
| **CK-MB** | 3-5% | n/a | n/a | |
| **Total CK** | 22-198 | 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 | Value on Admission | Today's Value | Reason for Abnormal |
|---|---|---|---|---|
| **INR** | 0.86-1.14 | n/a | n/a | |
| **PT** | 11.9-15.0 | n/a | n/a | |
| **PTT** | 22.6-35.3 | n/a | n/a | |

| | | | | |
|---|---|---|---|---|
| **D-Dimer** | <0.50 | n/a | n/a | |
| **BNP** | <100 | n/a | n/a | |
| **HDL** | 23-92 | n/a | n/a | |
| **LDL** | <100 | n/a | n/a | |
| **Cholesterol** | <130 | n/a | n/a | |
| **Triglycerides** | 0-149 | n/a | n/a | |
| **Hgb A1c** | < = 6.4 | n/a | n/a | |
| **TSH** | 0.45-5.33 | 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 | Value on Admission | Today's Value | Reason for Abnormal |
|---|---|---|---|---|
| **Color & Clarity** | Yellow/ Clear | Yellow and Clear | n/a | |
| **pH** | 4.5-8.0 | 5.0 | n/a | |
| **Specific Gravity** | 1.010-1.030 | 1.015 | n/a | |
| **Glucose** | 0 – 0.8 | 50(A) | n/a | |
| **Protein** | 0-20mg/dL | Negative | n/a | |
| **Ketones** | Negative | Negative | n/a | |
| **WBC** | Negative | Negative | n/a | |
| **RBC** | Negative | Negative | n/a | |
| **Leukoesterase** | Negative | Negative | n/a | |

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

| Test | Normal Range | Value on Admission | Today's Value | Explanation of Findings |
|---|---|---|---|---|
| **pH** | 7.35-7.45 | n/a | 7.36 | |
| **PaO2** | 80-100 | n/a | 88.3 | |
| **PaCO2** | 35-45 | n/a | 92<br><br>High | The patient's PaCO2 is extremely elevated due to alveolar hypoventilation causing respiratory acidosis (Kee, 2018). |
| **HCO3** | 22-28 | n/a | 29.2<br><br>High | The patient's HCO3 is elevated due to acute hypercapnia (Kee, 2018). |
| **SaO2** | 95-100 | n/a | 96.3 | |

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

| Test | Normal Range | Value on Admission | Today's Value | Explanation of Findings |
|---|---|---|---|---|
| **Urine Culture** | Negative | n/a | n/a | |
| **Blood Culture** | Negative | Negative | n/a | |
| **Sputum Culture** | Negative | Negative | n/a | |
| **Stool Culture** | Negative | n/a | n/a | |

**Lab Correlations Reference (APA):**

Kee, J. L. F. (2018). *Laboratory and Diagnostic Tests with Nursing Implications*. Pearson.

## Diagnostic Imaging

**All Other Diagnostic Tests (5 points):** CT Lung Cancer Screening Without Contrast

**Diagnostic Test Correlation (5 points):** Lung cancer annual screening. The patient is asymptomatic at the time of testing. This diagnostic test is indicated due to the patient's advanced COPD and lengthy smoking history. The analysis revealed the patient does not have lung cancer.

**Diagnostic Test Reference (APA):**

N431 Care Plan

Capriotti, T., & Frizzell, J. P. (2016). *Pathophysiology: Introductory Concepts and Clinical Perspectives*. F.A. Davis Company.

**Current Medications (10 points, 1 point per completed med)**
***10 <u>different</u> medications must be completed***

## Home Medications (5 required)

| **Brand/Generic** | Advil/Ibuprofen | Singulair/ Montelukast | Proventil/ Albuterol | Theochron/ Theophylline | Incruse Elipta/ umedidinium |
|---|---|---|---|---|---|
| **Dose** | 200 mg | 10mg | 90mcg | 300mg | 62.5mcg |
| **Frequency** | PRN | Daily | Q4hr, PRN | Daily | One puff Daily |
| **Route** | PO | PO | Inhaled via inhaler | PO | Inhaled via inhaler |
| **Classification** | NSAID | Leukotriene Receptor Antagonists | Beta2 Agonists | Xanthine Derivatives | Anticholinergics , Respiratory |
| **Mechanism of Action** | Inhibits synthesis of prostaglandins in body tissues by inhibiting at least two cyclo-oxygenases (COX) isoenzymes, COX-1 and COX-2. | Blocks binding of leukotriene D4 to its receptor; alter pathophysiology associated with an inflammatory process that contributes to signs and symptoms of asthma. | Beta2 receptor agonist with some beta1 activity; relaxes bronchial smooth muscle with little effect on heart rate. | Relaxes the smooth muscles of the respiratory tract and suppresses the response of the airway to stimuli. | Blocks action of acetylcholine at muscarinic receptors in the bronchial airways by preventing an increase in intracellular calcium concentration leading to relaxation of smooth muscles and improved lung function. |
| **Reason Client Taking** | The patient is taking for rheumatoid osteoperiostitis | The patient is taking for asthma-related symptoms related to COPD | The patient is taking to prevent or treat bronchospasm with obstructive airway disease | The patient is taking to treat acute exacerbations of symptoms and airflow obstruction associated with COPD | The patient is taking to provide long-term maintenance of airflow obstruction in COPD |
| **Contraindications (2)** | Hypersensitivity<br><br>Avoid using in patients with moderate or severe hepatic impairment | Not to be given for acute asthma attacks<br><br>Hypersensitivity | Hypersensitivity<br><br>Use cautiously in patients with coronary insufficiency and hypertension | Peptic ulcer disease<br><br>Uncontrolled seizure disorder | Demonstrates hypersensitivity to umeclidinium or any of the excipients<br><br>Anticholinergics can possibly cause additive effects. |

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|---|---|---|---|---|---|
| **Side Effects/Adverse Reactions (2)** | Epigastric Pain<br><br>Heartburn | Headache<br><br>Abdominal Pain | Tremor<br><br>Nausea | Central nervous system excitement such as headache and insomnia<br><br>Diarrhea, nausea, vomiting | Nasopharyngitis<br><br>Upper respiratory tract infection |
| **Nursing Considerations (2)** | Take with food<br><br>Take with 8-12 oz. of water to avoid GI effects | Don't abruptly substitute drug for inhaled or oral corticosteroids.<br><br>The drug may cause behavior and mood changes. Monitor patient and consider discontinuing if symptoms develop. | The drug may cause paradoxical bronchospasm. Monitor patient closely.<br><br>The drug may decrease sensitivity to spirometry. | Frequently assess heart rate and rhythm because this medication can exacerbate existing arrhythmias.<br><br>Be especially alert for signs of toxicity in a patient with acute pulmonary edema due to decreased drug clearance. | Know that this medication should not be initiated in patients who are experiencing a rapidly deteriorating or potentially life-threatening episode of COPD.<br><br>Do not administer for relief of acute symptoms. This is not a rescue inhaler. |
| **Key Nursing Assessment(s)/Lab(s) Prior to Administration** | Monitor the patient's blood count monthly, as indicated. | Assess the patient's underlying condition; monitor the patient for effectiveness. | Monitor patient for effectiveness. Using drug alone may not be adequate to control the disease process. | Monitor blood theophylline level, as ordered, to gauge the therapeutic level and detect toxicity. | Monitor the patient's respiratory status for paradoxical bronchospasm. |
| **Client Teaching needs (2)** | Caution patient to swallow capsule whole and not to open, break, or chem them.<br><br>Caution patient to immediately report signs of hypersensitivity such as fever, wheezes, or chest tightness. | Advise patient to take drug daily, even if asymptomatic.<br><br>Warn patient that drug may cause behavior or mood changes. | Sit in a comfortable, upright position when taking.<br><br>Hold breath for ≤ 10 seconds; before breathing out. | Instruct patients to swallow tablets whole and not to chew or crush them unless scored for breaking.<br><br>Instruct the client to take with a full glass of water on an empty stomach. | Tell patient to take this medication at about the same time every day and not to use more than once in 24 hour period.<br><br>Teach the patient how to use an inhaler if they do not already know. |

## Hospital Medications (5 required)

| **Brand/Generic** | Omnicef/cefdinir | Celexa/Citalopram | Vibramycin/ Doxycycline | Lovenox/ Enoxaparin | Pepcid/ famotidine |
|---|---|---|---|---|---|
| **Dose** | 300mg | 10mg | 100mg | 40mg | 20mg |
| **Frequency** | BID | Daily | BID | Daily | BID |
| **Route** | PO | PO | PO | SQ – Abdomen | PO |

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|---|---|---|---|---|---|
| **Classification** | Cephalosporins, 3rd Generation | Antidepressant, SSRIs | Tetracyclines | Antithrombic, Low-molecular-weight heparin | Histamine H2 Antagonists, Antiulcer agent |
| **Mechanism of Action** | Inhibits mucopeptide synthesis in the bacterial cell wall; typically, bactericidal, depending on organism susceptibility, dose, and serum or tissue concentrations | Inhibits the reuptake of serotonin in presynaptic neurons; little or no affinity for dopamine, alpha-adrenergic histamine, or cholinergic receptor | Inhibits protein synthesis and, thus, bacterial growth by binding to 30S and possibly 50S ribosomal subunits of susceptible bacteria | Antithrombotic that inhibits factor Xa by the increasing rate of clotting proteases that are activated by antithrombin III | Blocks H2 receptors of gastric parietal cells, leading to inhibition of gastric secretions |
| **Reason Client Taking** | The patient is taking to treat acute exacerbation of chronic bronchitis | The patient is taking to treat depression | The patient is taking to treat an acute exacerbation | The patient is taking to prevent DVT while hospitalized | The patient is taking to prevent heartburn and indigestion |
| **Contraindications (2)** | Hypersensitivity to cefdinir or other cephalosporins<br><br>While taking antacids that contain aluminum or magnesium because they decrease cefdinir's absorption | Coadministration with pimozide<br><br>Congenital long QT syndrome | Hypersensitivity to doxycycline, tetracyclines, or other components<br><br>Antacids that contain aluminum, calcium, magnesium or zinc as they decrease the effectiveness of the medication | Active major bleeding<br><br>History of heparin-induced thrombocytopenia (HIT) | Hypersensitivity to famotidine, other H2 receptor antagonists, or their components<br><br>Antacids will probably decrease famotidine's absorption |
| **Side Effects/Adverse Reactions (2)** | Diarrhea<br><br>Vaginal moniliasis | Dry mouth<br><br>Nausea | Anorexia<br><br>Dental discoloration | Hemorrhage<br><br>Bloody stools | Headache<br><br>Diarrhea |
| **Nursing Considerations (2)** | Iron salts will reduce cefdinir's absorption if given with 2 hours of antacid.<br><br>Use cautiously in patients with hypersensitivity to penicillin because of the possibility of cross-sensitivity with other beta-lactam antibiotics. | Use citalopram cautiously in patients with other cardiac conditions.<br><br>Assess elderly patients and those taking diuretics for signs suggesting syndrome of inappropriate secretion of antidiuretic hormone. | Monitor patient closely for diarrhea, which may indicate pseudomembranous colitis.<br><br>Monitor patient for adverse skin reactions because doxycycline has caused severe skin reactions that could be life-threatening. | Do not give the drug by the intramuscular injection route.<br><br>Keep protamine sulfate nearby in case of accidental overdose | Shake famotidine oral suspension vigorously or 5 to 10 seconds before administration<br><br>If giving the medication in IV form, dilute in 2ml with normal saline and injection over 2 minutes |
| **Key Nursing Assessment(s)/Lab(s) Prior to Administration** | Know that because all cephalosporins have the potential to cause bleeding, monitor elderly patients for pre-existing conditions such as vitamin K deficiency, for elevated PT or | ECG monitoring may be ordered to monitor the patient's QT interval and detect the development of serious arrhythmias | Monitor liver function test results as appropriate to detect hepatoxicity | Monitor serum potassium level for elevation, especially in patients with renal impairment | Monitor for other medications such as antacid that the patient may be taking to avoid interactions of medications |

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|---|---|---|---|---|---|
| | APTT | | | | |
| **Client Teaching needs (2)** | Inform the patient that the tablet coating may cause stools to become a reddish color.<br><br>Instruct the patient to complete the entire course of therapy, even if she feels better. | Inform patients that citalopram's full effects may take up to 4 weeks.<br><br>Caution patient's not to stop taking citalopram abruptly because doing so may lead to severe adverse reactions. | Do not take the medication with calcium.<br><br>Take on an empty stomach as food decreases absorption. | Instruct the patient to seek immediate help for evidence of thromboembolism, such as neurologic changes and severe shortness of breath.<br><br>Caution patients not to rub the site after injection to minimize bruising. | Instruct the patient to chew chewable tablets thoroughly before swallowing carefully.<br><br>Instruct the patient who also takes antacids to wait 30 to 60 minutes after taking famotidine, if possible, before taking an antacid. |

**Medications Reference (APA):**

Jones & Bartlett Learning. (2019). 2019 *Nurses drug handbook.*

## Assessment

**Physical Exam (18 points)**

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| **GENERAL (1 point):**<br>**Alertness:**<br>**Orientation:**<br>**Distress:**<br>**Overall appearance:** | The patient is A/O x4. She is oriented to person, place, time, and president. The patient appears to be in distress due to shortness of breath and difficulty breathing. The patient is cooperative and appears stated age. At 0730, the patient was nauseous and anxious. After symptoms were treated with medication, the patient returned to a non-distressed state. |
| **INTEGUMENTARY (2 points):**<br>**Skin color:**<br>**Character:** | Skin is pink, warm, and dry and appropriate for ethnicity. The patient's temperature ranged between 36.0 and 36.9˚C during shift. Skin turgor |

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|---|---|
| **Temperature:**<br>**Turgor:**<br>**Rashes:**<br>**Bruises:**<br>**Wounds:** .<br>**Braden Score:**<br>**Drains present: Y☐ N ☒**<br>**Type:** | was assessed on arms bilaterally and were both less than 3 seconds. No rashes, bruises, or wounds are present. The Braden score is 17, which makes the patient a mild skin risk. No drains are present. |
| **HEENT (1 point):**<br>**Head/Neck:**<br>**Ears:**<br>**Eyes:**<br>**Nose:**<br>**Teeth:** | The head is normocephalic, with no visible deformities or abnormalities. Ears are normal and symmetric to face. PERLA is present with no visual disturbances. The nose is normal and symmetric to face. The patient has a BiPAP machine that is irritating her face. Teeth are normal. Lips, mucosa, and tongue all normal.<br>. |
| **CARDIOVASCULAR (2 points):**<br>**Heart sounds:**<br>**S1, S2, S3, S4, murmur etc.**<br>**Cardiac rhythm (if applicable):**<br>**Peripheral Pulses:**<br>**Capillary refill:**<br>**Neck Vein Distention: Y ☐ N ☒**<br>**Edema Y ☐ N ☒**<br>**Location of Edema:** | Regular rate and rhythm with S1 and S2 present. No murmurs, gallops, or rubs present upon auscultation at aortic, pulmonary, tricuspid, and mitral valve. Peripheral pedal pulses are 2+ bilaterally. Radial pulses are 3+ bilaterally. Capillary refill is less than 3 seconds on both hands. No chest tenderness or deformities. No neck vein distention or edema. |
| **RESPIRATORY (2 points):**<br>**Accessory muscle use: Y☒ N ☐**<br>**Breath Sounds: Location, character** | The patient had accessory muscle use when short of breath. Right, and left lungs are diminished upon auscultation anterior only. The patient has shortness of breath at rest and with mild exertion. Posterior assessment not completed due to the patient receiving Bipap therapy. The patient received chest physiotherapy with respiratory therapy. This is indicated because the patient's COPD is so advanced, and this will help improve breathing by indirectly removing mucus. The patient has a productive cough. |
| **GASTROINTESTINAL (2 points):**<br>**Diet at home:**<br>**Current Diet**<br>**Height:**<br>**Weight:**<br>**Auscultation Bowel sounds:**<br>**Last BM:**<br>**Palpation: Pain, Mass etc.:**<br>**Inspection:** | The patient is on a regular diet at home and inpatient. Height is 152 cm, and weight is 36.6 kg. Bowel sounds are present and active in all four quadrants. The abdomen is soft and non-tender upon palpitation in all four quadrants. No masses, distention, incisions, scars, drains, or wounds. The patient has no risk for aspiration. For breakfast, the patient ordered eggs and ham, and she ate a few bites. The patient's last bowel |

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| **Distention:**<br>**Incisions:**<br>**Scars:**<br>**Drains:**<br>**Wounds:**<br>**Ostomy: Y ☐ N ☒**<br>**Nasogastric: Y ☐ N ☒**<br>**Size:**<br>**Feeding tubes/PEG tube Y ☐ N ☒**<br>**Type:** | movement was 3-1-2020. |
| **GENITOURINARY (2 Points):**<br>**Color:**<br>**Character:**<br>**Quantity of urine:**<br>**Pain with urination: Y ☐ N ☒**<br>**Dialysis: Y ☐ N ☒**<br>**Inspection of genitals:**<br>**Catheter: Y ☐ N ☒**<br>**Type:**<br>**Size:** | Urine is clear and yellow. The patient is voiding in a bedpan to reduce shortness of breath when ambulating to the bathroom. The patient urinated twice during shift. Genitals look normal with no abnormalities. |
| **MUSCULOSKELETAL (2 points):**<br>**Neurovascular status:**<br>**ROM:**<br>**Supportive devices:**<br>**Strength:**<br>**ADL Assistance: Y☐ N ☒**<br>**Fall Risk: Y ☒ N☐**<br>**Fall Score:**<br>**Activity/Mobility Status:**<br>**Independent (up ad lib) ☐**<br>**Needs assistance with equipment ☐**<br>**Needs support to stand and walk☐** | Neurovascular status is normal. The patient has bilateral, equal range of motion in all four extremities. The patient is a fall risk and uses a gait belt with personnel anytime ambulating or transferring. The patient is independent and up ad-lib; however, shortness of breath does occur, so she is receiving assistance while admitted. The fall score is 45 indicating high fall risk. Fall risk interventions initiated.<br>No joint abnormalities, cyanosis, or edema. |
| **NEUROLOGICAL (2 points):**<br>**MAEW: Y ☒ N☐**<br>**PERLA: Y ☒ N☐**<br>**Strength Equal: Y ☒ N ☐ if no -**<br>**Legs ☐ Arms ☐ Both ☐**<br>**Orientation:**<br>**Mental Status:**<br>**Speech:**<br>**Sensory:**<br>**LOC:** | The patient has a mild intellectual disability. She is A/O x4; however, her responses are slower because she is short of breath the majority of the time. This is a symptom of COPD. Patient speech is described as shuffled.<br>No sensory deficits. No hearing-aid or glasses. |
| **PSYCHOSOCIAL/CULTURAL (2 points):** | The patient lives at home alone and stated that she enjoys spending time with her daughter. A |

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| **Coping method(s):**<br>**Developmental level:**<br>**Religion & what it means to pt.:**<br>**Personal/Family Data (Think about home environment, family structure, and available family support):** | mild intellectual deficit is present. I did not ask the patient about her religious preferences or what it means to her. |

**Vital Signs, 2 sets (5 points)**

| Time | Pulse | B/P | Resp Rate | Temp | Oxygen |
|---|---|---|---|---|---|
| 0700 | 75 bpm | 138/93 mm/ Hg | 19/min | 36.9˚C Tympanic | 98% On 3L nasal cannula |
| 1100 | 84 bpm | 112/73 mm/ Hg | 20/min | 36.0˚ C Tympanic | 94% On 4L nasal cannula |

**Vital Sign Trends:** The patient's blood pressure was a little elevated this morning because she was nauseous, accompanied by some anxiety. The patient was given Zofran for her nausea and Citalopram for her anxiety. By the afternoon, her blood pressure decreased to a normal range. The rest of her vital signs have been stable and within her normal ranges.

**Pain Assessment, 2 sets (2 points)**

| Time | Scale | Location | Severity | Characteristics | Interventions |
|---|---|---|---|---|---|
| 0700 | Numeric | n/a | 0/10 | n/a | n/a |
| 1100 | Numeric | n/a | 0/10 | n/a | n/a |

## IV Assessment (2 Points)

| IV Assessment | Fluid Type/Rate or Saline Lock |
|---|---|
| **Size of IV:**<br>**Location of IV:**<br>**Date on IV:**<br>**Patency of IV:**<br>**Signs of erythema, drainage, etc.:**<br>**IV dressing assessment:** | IV Saline Lock<br>18 gauge<br>Right wrist<br>2-27-2020<br>Patent<br>No phlebitis, infiltration, erythema, or drainage present<br>Transparent dressing – Dry, intact, and flushes easily |

## Intake and Output (2 points)

| Intake (in mL) | Output (in mL) |
|---|---|
| 533.33 mL<br><br>IV medication, water, coffee | 1550 mL<br><br>Urine output<br><br>Bowel movement 3-1-2020 |

## Nursing Care

### Summary of Care (2 points)

**Overview of care:** Today, I took 0700 and 1100 vital signs on the patient. I also administered the patients scheduled morning medications and a PRN Zofran for her nausea. Around 0730, the patient was anxious, and I administered Citalopram. The patient was on 3 liters of oxygen via nasal cannula. After we discovered that her PaCO2 was increasing from 58.2 to 92, the patient was put on Bipap by the respiratory therapist. The remainder of my shift, I monitored the patient's PaCO2 levels.

**Procedures/testing done:** CT lung cancer screening without contrast was performed on 2-27-2020 to rule out lung cancer due to the patient’s advanced COPD and smoking history. The results were negative.

**Complaints/Issues:** The patient's extremely elevated PaCO2 was concerning during my shift. The patient did not want the BiPap machine on because it was irritating to her face. The nurse was consulting with the provider for the next plan of care.

**Vital signs (stable/unstable):** The patient's blood pressure was a little elevated this morning because she was nauseous, accompanied by some anxiety. The patient was given Zofran for her nausea and Citalopram for her anxiety. By the afternoon, her blood pressure decreased to a normal range. The rest of her vital signs have been stable and within her normal ranges.

**Tolerating diet, activity, etc.:** The patient is on a regular diet and expressed hunger. However, the amount of energy expended during eating resulted in shortness of breath. The patient did try to eat some eggs and ham, which she ate a few bites.

**Physician notifications:** The physician was notified of PaCO2 levels. The provider ordered that the level be rechecked at 1300 and notified of results.

**Future plans for patient:** If the PaCO2 is not decreased by 1300, the patient will be moved to CCU and intubated.

**Discharge Planning (2 points)**

**Discharge location:** Home

**Home health needs (if applicable):** None. The patient already has Bipap and nasal cannula oxygen at home.

**Equipment needs (if applicable):** None

**Follow up plan:** Not determined at the time of my care because the patient would be staying at least another night.

**Education needs:** The importance of the BiPap machine and getting PaC02 levels decreased.

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

| **Nursing Diagnosis**<br>• Include full nursing diagnosis with "related to" and "as evidenced by" components | **Rational**<br>• Explain why the nursing diagnosis was chosen | **Intervention (2 per dx)** | **Evaluation**<br>• How did the patient/family respond to the nurse's actions?<br>• Client response, status of goals and outcomes, modifications to plan. |
|---|---|---|---|
| **1.** Ineffective Airway Clearance related to altered arterial blood gases (hypercapnia) as evidence by decreased energy levels and fatigue | The patient has severe hypercapnia, which is compromising her energy levels. Coughing is the mechanism of action to clear the airway. But her decreased energy levels make this difficult to do. | **1.**Note any color changes in lips, buccal mucosa, or nail beds.<br><br>**2.**Assess the patient's hydration status: skin turgor, mucous membranes, and tongue | The patient did not have any changes in the color of lips, buccal mucosa, or nail beds. This lets me know that she is not exhibiting any signs of cyanosis. The client did take sips of water throughout the morning. Airway clearance is impaired with inadequate hydration. This was avoided during shift. |
| **2.** Impaired Gas Exchange related to bronchoconstrictio n as evidence by shortness of breath and PaCO2 greater than 55 mm Hg | The patient has a PaCO2 level of 92 mm Hg. This is causing a deficit in carbon dioxide elimination. | **1.** Assess the patient's level of anxiety.<br><br>**2.** Assess for restlessness and changes in the level of consciousness. | The patient did have some anxiety early in the morning, which lead to nausea. I continued to watch the client closely because restlessness could be a sign of hypoxia and lead to changes in level on consciousness. The patient remained A/O x4 the entire time I was there. |
| **3.** Imbalanced Nutrition: Less than Body Requirements related to increased metabolic need | The patient has not been eating as much as she should because it is too difficult to breathe and eat | **1.**Monitor laboratory values that indicate nutritional status: serum albumin, total protein, | The patient's serum albumin, total protein, ferritin, and transferrin were not obtained during this hospitalization. |

| | | | |
|---|---|---|---|
| caused by increase work of breathing as evidence by food intake less than recommended daily allowance | simultaneously. When I went to give the patient an SQ injection, there was barely any subcutaneous tissue to grip. | ferritin, and transferrin.<br><br>**2**Assess the patient's weight weekly. | However, the patient is 58 years old and only weighs 80 lbs. She expressed verbal understanding that this leads to nutritional deficits. |
| **4.** Risk for infection related to poor nutrition as evidence by the patient not eating meals | The patient is not getting a balanced diet, which is essential to fighting off potential infection. | **1.**Auscultate the lungs to monitor for significant changes in breath sounds.<br><br>**2.** Assess for any of the following significant changes in sputum: Sudden increase in production, changes in color (yellow or green), or change in consistency (thick). | The patient is cooperative in allowing me to auscultate as often as I need to. She understands that she needs to eat, and she makes an effort as much as she can. The patient has not acquired any infection since being hospitalized. |

**Other References (APA):**

Gulanick, M., & Myers, J. L. (2017). *Nursing Care Plans: Diagnoses, Interventions, & Outcomes*. Elsevier.

**Concept Map (20 Points):**

## Subjective Data

The patient reported feeling nauseous and anxious at 0730.
The patient rated pain as 0/10 at 0700 and 1100.

## Nursing Diagnosis/Outcomes

Ineffective Airway Clearance related to altered arterial blood gases (Hypercapnia) as evidence by decreased energy levels and fatigue
By discharge, the client will maintain a clear open airway, as evidence by normal breath sounds, normal rate and depth of respirations, and productive cough.

Impaired Gas Exchange related to bronchoconstriction as evidence by shortness of breath and PaCO2 greater than 55 mm Hg
By discharge, the patient maintains optimal gas exchange, as evidence by arterial blood gases within the patient's usual range.

Imbalanced Nutrition: Less than Body Requirements related to increased metabolic need caused by increase work of breathing as evidence by food intake less than recommended
By discharge, the patient will achieve adequate caloric intake.

Risk for infection related to poor nutrition as evidence by the patient not eating meals
By discharge, the patient remains free of infection as evidence by normal vital signs, negative sputum cultures, and normal white blood cell count.

## Objective Data

0700 vital signs:
BP: 138/93 mmHg
HR: 75 bpm
R: 19/minT: 36.9˚C
O2: 98%
1100 vital signs:
BP: 112/73 mmHg
HR: 84 bpm
R: 20/min
T: 36.0˚ C
02: 94%
CT Lung Cancer Screening: Negative
Abnormal Lab Values: RBC, WBC, Neutrophils, Lymphocytes, Cl-, CO2, Glucose, BUN, Creatinine, Calcium, Lactic Acid, PaCO2, and HCO3

## Patient Information

Patient initials: PP
58-year-old white female
Admitted: 2-27-20
Full code
NKDA
Height: 152cm
Weight: 36.6kg

## Nursing Interventions

Note any color changes in lips, buccal mucosa, or nail beds.
Assess the patient's hydration status: skin turgor, mucous membranes, and tongue
Assess the patient's level of anxiety.
Assess for restlessness and changes in the level of consciousness.

Monitor laboratory values that indicate nutritional status: serum albumin, total protein, ferritin, and transferrin.
Auscultate the lungs to monitor for significant changes in breath sounds.

Assess for any of the following significant changes in sputum: Sudden increase in production, changes in color (yellow or green), or change in consistency (thick).

N431 Care Plan

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