# N431 Care Plan #1

Lakeview College of Nursing

Cecilia Duong

## Demographics (3 points)

| **Date of Admission** | **Client Initials** | **Age** | **Gender** |
|---|---|---|---|
| 09/25/2022 | C.C. | 82 | Male |
| **Race/Ethnicity** | **Occupation** | **Marital Status** | **Allergies** |
| Caucasian | Retired | Widow | No Known Allergies |
| **Code Status** | **Height** | **Weight** | |
| DNR | 167.5 cm | 96.6 kg | |

## Medical History (5 Points)

**Past Medical History:** Nonalcoholic steatohepatitis, cirrhosis, esophageal varices, atrial fibrillation, anemia, depression, arthritis, coronary artery bypass graft, coronary heart failure, chronic kidney disease, diabetes mellitus type two, gastroesophageal reflux disease, hypertension, high cholesterol, myocardial infarction, hypothyroid, hepatocellular carcinoma cancer

**Past Surgical History:** Hernia repair (2020), right total knee arthroplasty (2020)

**Family History:** C.C.'s mother had a history of cardiovascular disease, heart failure, hyperlipidemia, and hypertension. No family history was reported for his father, grandfather, or grandmother on either the paternal or maternal side.

**Social History (tobacco/alcohol/drugs including frequency, quantity and duration of use):** The patient is a former smoker who smoked one pack of cigarettes a day for the past thirty years. The patient denies past use of alcohol and recreational drugs.

**Assistive Devices:** The client uses a walker to help assist him when he walks.

**Living Situation:** The patient lives at home by himself in Mattoon, Illinois.

**Education Level:** The patient's highest level of education is some college.

## Admission Assessment

**Chief Complaint (2 points):** Weakness, nausea, and vomiting.

**History of Present Illness – OLD CARTS (10 points):** The 82-year-old Caucasian male presented to the emergency room on 09/25/2022 with complaints of weakness, nausea, and vomiting. The patient states, “I feel weak all over and have slight pain that radiates to my back when I walk.” The patient mentions feeling nauseous and vomiting at home for the past three days. The patient states his whole body feels weak and describes his pain as aching and throbbing when he walks. The patient states that moving and turning in bed aggravates his pain and makes him feel out of energy. The patient mentioned sitting up in a recliner, and Aspirin helps relieve his pain and discomfort.

## Primary Diagnosis

**Primary Diagnosis on Admission (2 points):** Endocarditis

**Secondary Diagnosis (if applicable):** Chronic heart failure exacerbation, pneumonia, and chronic kidney disease

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

The patient's primary diagnosis is endocarditis. His secondary diagnosis of chronic heart failure exacerbation, pneumonia, and chronic kidney disease. Endocarditis is a potentially fatal inflammation of the inner lining of the heart's chambers and valves (Hinkle et al., 2022). This lining is known as the endocardium. Endocarditis causes an infection in which bacteria, fungus, or other germs enter the bloodstream and attach to injured heart tissue (Hinkle et al., 2022).

The pathophysiology of this condition consists of at least three essential components: preparing the heart valve for bacterial adherence, circulating bacteria adhering to the surface of the prepared valvular, and adhering bacteria surviving on the surface and spreading the infected growth (Hinkle et al., 2022). Typical endothelial surfaces do not readily accept adhesion by

circulating microorganisms (Hinkle et al., 2022). However, injury to the valve results in a change in the endothelial cells, which either disrupts the surface and causes the deposition of platelets and fibrin or causes other phenomena that make the surface vulnerable to colonization by circulating microorganisms (Hinkle et al., 2022). Clean surfaces cause some bacterial strains to stick to the fibrin-platelet matrix more strongly than others (Hinkle et al., 2022). One of the many bacterial virulence factors that aid in adhesion is a single extracellular polysaccharide (dextran) (Hinkle et al., 2022). Antibodies that target specific surface features can help to prevent sticking (Hinkle et al., 2022). The survival of bacteria attached to the surface of plants necessitates in-situ resistance to the bacterial effects of white cell phagocytosis (Hinkle et al., 2022). Furthermore, the clotting cascade promotes the growth of vegetation (Hinkle et al., 2022). Some streptococci disrupt the valvular cells, causing tissue factors to deposit and a fibrin-platelet clot to form over the rapidly expanding bacteria colonies (Hinkle et al., 2022).

The leading cause of endocarditis is an overgrowth of bacteria. Endothelial damage allows for either direct pathogenic organism infection or the formation of an uninfected platelet-fibrin thrombus, which causes temporary bacteremia (Hinkle et al., 2022). These microorganisms can enter the bloodstream through wounds, mucosal surfaces, or previously infected areas (Hinkle et al., 2022). They then adhere to nonbacterial thrombus caused by valvular injury or turbulent blood flow. In the absence of host defenses, the organism is allowed to multiply, forming minute colonies and shedding in the bloodstream and into the heart (Hinkle et al., 2022).

Patients often experience a fever (Hinkle et al., 2022). The symptoms of this condition include chills, night sweats, anorexia, weight loss, appetite loss, malaise, headache, myalgias, arthralgias, stomach discomfort, dyspnea, cough, and pleuritic pain (Hinkle et al., 2022). An increase in valve dysfunction causes congestive heart failure to develop in 30% to 40% of individuals

(Hinkle et al., 2022). The presence of petechiae or splinter hemorrhages on the skin is different symptoms (non-blanching linear reddish-brown lesions under the nail bed) (Hinkle et al., 2022).

Diagnostic tests for endocarditis are blood culture test, transthoracic echocardiogram, transesophageal echocardiogram, electrocardiogram, and a chest X-ray (Ting et al., 2022). A blood culture test can determine certain bacteria, fungi, or other microorganisms in the bloodstream (Ting et al., 2022). Blood tests can also reveal whether another condition, such as anemia, causes the symptoms (Ting et al., 2022). A transthoracic echocardiogram examines the heart and its valves in a non-invasive procedure (Ting et al., 2022). This test uses ultrasound waves to create an image of the heart, with the imaging probe placed on the front of the chest (Ting et al., 2022).

A transesophageal echocardiogram views the heart through the esophagus (Ting et al., 2022). The provider can utilize this imaging test to look for signs of damage or abnormal heart movements (Ting et al., 2022). An electrocardiogram will help providers see the heart's electrical activity and detect an abnormal heart rhythm or rate (Ting et al., 2022). The provider will order a chest X-ray to look at the lungs and see if they have collapsed or if pulmonary edema has developed (Ting et al., 2022). The chest X-ray will help the prover diagnose endocarditis and other lung conditions (Ting et al., 2022).

Endocarditis expected symptoms typically begin abruptly with a high temperature, rapid heart rate, fatigue, weight loss, sweating, and rapid and extensive heart valve damage (Ting et al., 2022). Some vital signs of a person with endocarditis include blood pressure is expected to be 126/71 mmHg, a heart rate of 110 beats per minute (bpm), a respiratory rate of 28 breaths per minute (bpm), a body temperature of 38.6 Celsius, and oxygen saturation 97% (Ting et al., 2022). Elevated C-reactive protein, decreased levels of red blood cells, elevated lactate

dehydrogenase (LDH), decreased hemoglobin, and positive blood culture results were all expected lab results in endocarditis patients (Ting et al., 2022). During the first assessment at 1300, the patient's blood pressure was 120/68 mmHg, the temperature was 36.5 degrees Celsius, and the pulse was 63 beats per minute. During the student's second assessment, the patient's temperature was 36.2 degrees Celsius, and pulse was 67 beats per minute. The patient's systolic and diastolic blood pressure increased from 120/69 mmHg to 130/64 mmHg during this clinical shift, indicating he was hypertensive.

Laboratory tests include a complete blood count (CBC), urine analysis, urine culture, and blood culture to assess the presence of bacteria and protein (Ting et al., 2022). C.C. had a CBC, urine analysis, urine culture, and blood culture performed during this hospital visit. A patient with endocarditis may need diagnostic tests to diagnose bacteria in the body (Ting et al., 2022). Healthcare providers may utilize diagnostic tests, including urine analysis, X-rays, computer tomography (C.T.) of the abdomen and chest, and echocardiogram (Ting et al., 2022). C.C.'s diagnostic tests during this hospital visit include C.T.'s abdomen and chest without contrast, two chest X-rays, and an echocardiogram complete without contrast.

Endocarditis treatment options are successfully treated with antibiotics (Hinkle et al., 2022). In some cases, surgery may be needed to fix or replace damaged heart valves and clean up any remaining signs of the infection (Hinkle et al., 2022). The type of medication administered depends on the underlying bacteria causing the endocarditis. High doses of intravenous antibiotics treat endocarditis caused by bacteria (Hinkle et al., 2022). Intravenous antibiotics are continued once a patient is discharged from the hospital by continuing visits to a provider's office or home with home care (Hinkle et al., 2022). Heart valve surgery may be needed to treat persistent endocarditis infections or a damaged valve (Hinkle et al., 2022). C.C has been given

antibiotics to treat this condition and is tolerating the medication well. The treatment plan for this patient includes dietary and lifestyle modifications like a heart-healthy diet and fluid restrictions adjunct to his secondary diagnoses.

**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.

Ting, S.-W., Chen, J.-J., Lee, T.-H., & Kuo, G. (2022). Surgical versus medical treatment for infective endocarditis in patients on dialysis. *Renal Failure*, *44*(1), 706–713. https://doi.org/10.1080/0886022X.2022.2064756

**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** | 3.80-5.41 | 2.86 | 2.83 | A decrease in red blood cells indicates kidneys are not functioning correctly to filter blood (Pagana et al., 2020). According to C.C., he has a history of chronic kidney disease, so his kidneys are not making enough erythropoietin causing the red blood cell count to decrease and anemia to develop (Pagana et al., 2020). |
| **Hgb** | 11.3-15.2 | 9.1 | 9.1 | A decrease in hemoglobin indicates a reduction in oxygen transportation throughout the body (Pagana et al., 2020). According to C.C.'s past medical history, he has a history of chronic kidney disease, causing the kidneys not to make enough |

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| | | | | erythropoietin and to have less oxygen delivered to the organs and tissues (Pagana et al., 2020). |
| **Hct** | 33.2-45.3 | 26.2 | 26.2 | A decrease in hematocrit indicates an insufficient supply of healthy red blood cells circulating in the body (Pagana et al., 2020). According to C.C.'s past medical history, he has a history of chronic kidney disease and anemia, so his kidneys are damaged, producing less erythropoietin, causing red blood cells to decrease and anemia to develop (Pagana et al., 2020). |
| **Platelets** | 149-393 | 101 | 108 | N/A |
| **WBC** | 4.0-11.7 | 7.6 | 5.9 | N/A |
| **Neutrophils** | 45.3-79.0 | 75.5 | 76.3 | N/A |
| **Lymphocytes** | 11.8-45.9 | 7.2 | 9.4 | A decrease in lymphocytes carries significant weight in the inflammatory reaction of infection (Pagana et al., 2020). According to C.C.'s primary diagnosis of endocarditis, low lymphocytes indicate a response to acute bacterial infections (Pagana et al., 2020). |
| **Monocytes** | 4.4-12.0 | 11.5 | 10.2 | N/A |
| **Eosinophils** | 0.0-6.3 | 2.9 | 3.6 | N/A |
| **Bands** | 0.0-6.0 | 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 Value | Today's Value | Reason For Abnormal |
|---|---|---|---|---|
| **Na-** | 136-145 | 141 | 143 | N/A |
| **K+** | 3.5-5.1 | 3.6 | 3.7 | N/A |
| **Cl-** | 98-107 | 105 | 106 | N/A |
| **CO2** | 21-31 | 25 | 27 | N/A |

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| **Glucose** | 74-109 | 51 | 134 | A decrease in glucose can occur when a patient with a history of diabetes does not have enough glucose in his blood (Pagana et al., 2020). Glucose is the primary fuel source for the body and brain, so low glucose levels could pertain to his chief complaint of weakness (Pagana et al., 2020). Increased glucose indicates excessive glucose in the blood and the body lacking enough insulin, which can cause vomiting, the patient's chief complaint (Pagana et al., 2020). |
| **BUN** | 7-25 | 24 | 25 | N/A |
| **Creatinine** | 0.70-1.30 | 1.18 | 1.30 | N/A |
| **Albumin** | 3.5-5.2 | 2.8 | 2.8 | A decreased albumin indicates poor liver function (Pagana et al., 2020). With the patient's cirrhosis history, there is a reduction in the hepatocyte mass and a decrease in body functions and circulation causing low albumin levels (Pagana et al., 2020). |
| **Calcium** | 8.6-10.3 | 7.4 | 7.6 | A decrease in calcium can indicate decreased renal production (Pagana et al., 2020). Since the patient has a history of chronic kidney disease, the kidney is less able to make active vitamin D (Pagana et al., 2020). Without enough active vitamin D, the body will absorb less calcium resulting in decreased calcium levels (Pagana et al., 2020). |
| **Mag** | 1.6-2.4 | 1.8 | 1.9 | N/A |
| **Phosphate** | 2.5-4.5 | 2.0 | 1.9 | Decreased phosphate levels indicate decreased energy production and nerve function (Pagana et al., 2020). Low phosphate levels can lead to ventricular arrhythmias, resulting in myocardial dysfunction and coronary heart failure as per the |

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| | | | | patient's history of coronary heart failure and myocardial infarction (Pagana et al., 2020). |
| **Bilirubin** | 0.3-1.0 | 1.0 | 0.8 | N/A |
| **Alk Phos** | 34-104 | 167 | 181 | Decreased levels of alkaline phosphatase may indicate that there is damage to the liver (Pagana et al., 2020). The patient has a history of chronic kidney disease, indicating his kidneys are failing and not functioning correctly (Pagana et al., 2020). |
| **AST** | 13-39 | 37 | 36 | N/A |
| **ALT** | 7-52 | 28 | 30 | N/A |
| **Amylase** | 30-110 | 45 | 47 | N/A |
| **Lipase** | 11-82 | 21 | 30 | N/A |
| **Lactic Acid** | 0.5-2.0 | 1.6 | 1.6 | N/A |
| **Troponin** | 0.000-0.030 | 0.016 | 0.016 | N/A |
| **CK-MB** | 0.60-6.30 | N/A | N/A | N/A |
| **Total CK** | 30-223 | 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 | Value on Admission | Today's Value | Reason for Abnormal |
|---|---|---|---|---|
| **INR** | 0.86-1.14 | N/A | N/A | N/A |
| **PT** | 11.9-15.0 | N/A | N/A | N/A |
| **PTT** | 22.6-35.3 | N/A | N/A | N/A |
| **D-Dimer** | 0.00-0.62 | N/A | N/A | N/A |
| **BNP** | 0-100 | 277 | 191 | Increased brain natriuretic peptide |

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| | | | | levels (BNP) indicate that the heart is not pumping as it should (Pagana et al., 2020). Since the patient has a history of coronary heart failure, there could be indications of intrinsic cardiac dysfunction (Pagana et al., 2020). |
| **HDL** | <60 | N/A | N/A | N/A |
| **LDL** | <100 | N/A | N/A | N/A |
| **Cholesterol** | <200 | N/A | N/A | N/A |
| **Triglycerides** | <150 | N/A | N/A | N/A |
| **Hgb A1c** | 4-5.6% | N/A | N/A | N/A |
| **TSH** | 0.4-5.0 | 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 | Value on Admission | Today's Value | Reason for Abnormal |
|---|---|---|---|---|
| **Color & Clarity** | Yellow/ Clear | N/A | Yellow/Clear | N/A |
| **pH** | 5.0-8.0 | N/A | 5.0 | N/A |
| **Specific Gravity** | 1.005-1.034 | N/A | 1.016 | N/A |
| **Glucose** | Low-Normal | N/A | Normal | N/A |
| **Protein** | Low-Negative | N/A | Positive | A positive result of protein in the urine is a sign of kidney disease suggesting damage to the kidneys' filters (Pagana et al., 2020). Due to the patient's history of chronic kidney disease, proteinuria indicates the patient's kidneys are not functioning at their best (Pagana et al., 2020). |
| **Ketones** | Low-Negative | N/A | Negative | N/A |
| **WBC** | < or = 5 | N/A | 3 | N/A |

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|---|---|---|---|---|
| **RBC** | 0-3 | N/A | 1 | N/A |
| **Leukoesterase** | Low-Negative | N/A | 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 | 7.41 | N/A |
| **PaO2** | 80-100 | N/A | 88 | N/A |
| **PaCO2** | 33-45 | N/A | 35.3 | N/A |
| **HCO3** | 21-28 | N/A | 22.5 | N/A |
| **SaO2** | 95-100 | N/A | 97 | N/A |

**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** | Positive or Negative | N/A | Negative | N/A |
| **Blood Culture** | Positive or Negative | N/A | Positive | A positive result in the blood culture can indicate bacteria or yeast in the blood (Pagana et al., 2020). The patient has a diagnosis of endocarditis, indicating the presence of bacteria in the patient's circulation, causing an infection (Pagana et al., 2020). |
| **Sputum Culture** | Positive or Negative | N/A | N/A | N/A |
| **Stool Culture** | Positive or Negative | N/A | N/A | N/A |

**Lab Correlations Reference (1) (APA):**

Pagana, K. D., Pagana, T. J., & Pagana, T. N. (2020). *Mosby's diagnostic and laboratory test reference* (15th ed.). Mosby.

## Diagnostic Imaging

**All Other Diagnostic Tests (5 points):**

Computer Tomography (CT) Abdomen: 09/25/2022

The radiologist finalized the results of the CT of the abdomen on 09/25/2022. The patient was admitted to the emergency department, and per protocol, a CT was performed due to the patient's chief complaint of vomiting. The results indicated an increase in the size of the hepatic mass.

Echocardiogram: 09/27/2022

The results of the echocardiogram were finalized on 09/27/2022. The interpreting radiologist's impression stated that the patient had a 45%-50% ejection fraction and showed atrial fibrillation.

Computer Tomography (CT) Chest: 09/27/2022

The radiologist finalized the results on 09/27/2022 for the CT of the chest. The interpreting radiologist's impression indicated that the patient had mild fluid overload, a bilateral pleural effusion, and pneumonia.

Chest X-Ray #1: 09/29/2022

The results of the first chest X-ray were finalized on 09/29/2022. The interpreting radiologist's impression suggested the patient had cardiomegaly, increased pulmonary vascular congestion, interstitial edema, and slight right pleural effusion.

Chest X-Ray #2: 10/02/2022

The results of the second chest X-ray were finalized on 10/02/2022. The interpreting radiologist's impression stated persistent pulmonary vasculature and interstitial prominence,

**Diagnostic Test Correlation (5 points):**

Computer Tomography (CT) Abdomen: 09/25/2022

This diagnostic test is indicated by the chief complaint of nausea and vomiting. A CT scan of the abdomen may be performed to look for injuries, intra-abdominal bleeding, tumors, infections, obstructions, and unexplained abdominal pain (Hinkle et al., 2022). CT scans provide detailed images of any body part, including the muscles, bones, fat, blood vessels, and organs, making it easier to diagnose certain conditions (Hinkle et al., 2022).

Echocardiogram: 09/27/2022

This diagnostic test was indicated because of the patient’s history of coronary heart failure, coronary artery bypass graft, and myocardial infarction. For the diagnosis of acute myocardial infarction, an echocardiogram has high sensitivity and specificity (Hinkle et al., 2022). This diagnostic test uses sound waves to create images of the heart to identify angina-related problems, such as heart muscle damage caused by poor blood flow (Hinkle et al., 2022).

Computer Tomography (CT) Chest: 09/27/2022

A history of endocarditis indicated this diagnostic test. It can determine if endocarditis has caused heart swelling or infection to spread to the lungs (Hinkle et al., 2022). A chest CT scan can aid in detecting issues such as infection, lung cancer, and pulmonary embolism (Hinkle et al., 2022). It can also determine whether cancer or infection has spread from another body part to the chest (Hinkle et al., 2022).

Chest X-Ray #1: 09/29/2022

This diagnostic test was indicated due to the patient's history of myocardial infarction and coronary artery bypass graft. A chest X-ray examines the lung cavity's cardiac, respiratory, and skeletal structures for any signs of disease or infection (Hinkle et al., 2022). In addition, X-rays aid in diagnosing pulmonary infections and malignancy (Hinkle et al., 2022).

Chest X-Ray #2: 10/02/2022

The indications for a second X-ray include shortness of breath and chest pressure (Hinkle et al., 2022). X-rays assist in diagnosing tumors and bone injuries (Hinkle et al., 2022). In addition, chest X-rays can detect cancer, infection, and any air collecting in the space around a lung (Hinkle et al., 2022). They can also show chronic lung conditions and complications of cirrhosis, including pneumonia and ascites (Hinkle et al., 2022).

**Diagnostic Test Reference (1) (APA):**

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

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

**Home Medications (5 required)**

| **Generic/Brand** | acetylsalicylic acid/Aspirin | atorvastatin calcium/ Lipitor | bumetanide/ Bumex | levothyroxine sodium/Synthroid | lisinopril/ Zestril |
|---|---|---|---|---|---|
| **Dose** | 81 mg | 80 mg | 1 mg | 25 mcg | 20 mg |
| **Frequency** | Daily | Daily | BID | Daily | Daily |

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| **Route** | PO | PO | PO | PO | PO |
| **Classification** | Pharmacologic class: Salicylate Therapeutic class: NSAID | Pharmacologic class: HMG-CoA reductase inhibitor Therapeutic class: Antihyperlipidemic | Pharmacologic class: Loop diuretic as sulfonamide derivative Therapeutic class: Diuretic | Pharmacologic class: Synthetic thyroxine (T4) Therapeutic class: Thyroid hormone replacement | Pharmacologic class: Angiotensin-converting enzyme (ACE) inhibitor Therapeutic class: Antihypertensive |
| **Mechanism of Action** | Aspirin blocks the activity of cyclooxygenase, the enzyme needed for prostaglandin synthesis (Jones & Bartlett Learning, 2021). Prostaglandins, essential mediators in the inflammatory response, cause local vasodilation with swelling and pain (Jones & Bartlett Learning, 2021). | Reduces plasma cholesterol and lipoprotein levels by inhibiting HMG-CoA reductase and cholesterol synthesis in the liver and by increasing the number of LDL receptors on liver cells to enhance LDL uptake and breakdown (Jones & Bartlett Learning, 2021). | It inhibits sodium, chloride, and water reabsorption in the ascending limb of the loop of Henle, which promotes excretion and reduces fluid volume (Jones & Bartlett Learning, 2021). | Replaces endogenous thyroid hormone, which may exert its physiologic effects by controlling DNA transcription and protein synthesis (Jones & Bartlett Learning, 2021) | It may reduce blood pressure by inhibiting the conversion of angiotensin I to angiotensin II (Jones & Bartlett Learning, 2021). Angiotensin II is a potent vasoconstrictor that stimulates the adrenal cortex to secrete aldosterone (Jones & Bartlett Learning, 2021). |
| **Reason Client Taking** | It is adjunct therapy with a coronary artery bypass graft. | To treat high cholesterol. | Treat edema caused by heart failure, hepatic disease, and | To treat hypothyroidism. | To treat hypertension. |

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| | | | renal disease. | | |
| **Contraindications (2)** | - Active bleeding or coagulation disorders (Jones & Bartlett Learning, 2021).<br>- Hypersensitivity to aspirin, aspirin products, and other NSAIDs (Jones & Bartlett Learning, 2021). | - Active hepatic disease (Jones & Bartlett Learning, 2021).<br>- Hypersensitivity to atorvastatin or its components (Jones & Bartlett Learning, 2021). | - Severe electrolyte depletion (Jones & Bartlett Learning, 2021).<br>- Marked increase in BUN or creatinine levels or development of oliguria if progressive renal disease is present (Jones & Bartlett Learning, 2021). | - Hypersensitivity to levothyroxine or its components (Jones & Bartlett Learning, 2021).<br>- Uncorrected adrenal insufficiency (Jones & Bartlett Learning, 2021). | - Hypersensitivity to lisinopril, other ACE inhibitors, or their components (Jones & Bartlett Learning, 2021).<br>- Concurrent aliskiren use in patients with diabetes (Jones & Bartlett Learning, 2021). |
| **Side Effects/Adverse Reactions (2)** | Hepatotoxicity and thrombocytopenia (Jones & Bartlett Learning, 2021). | Arrhythmias, hypoglycemia, and thrombocytopenia (Jones & Bartlett Learning, 2021). | Hyperglycemia and azotemia (Jones & Bartlett Learning, 2021). | Myocardial infarction, arrhythmias, and heart failure (Jones & Bartlett Learning, 2021). | Depression, peripheral edema, and myocardial infarction (Jones & Bartlett Learning, 2021). |
| **Nursing Considerations (2)** | - Ask the patient about tinnitus (Jones & Bartlett Learning, 2021). This reaction usually occurs when blood aspirin level reaches or exceeds the maximum | - Use atorvastatin cautiously in patients who consume substantial quantities of alcohol or have a history of liver disease because atorvastatin use increases the risk of | - Monitor fluid intake and output once every eight hours, evaluate serum electrolyte levels when ordered, and assess for imbalances (Jones & Bartlett Learning, | - Use levothyroxine cautiously in the elderly and patients with underlying cardiovascular disease because overtreatment can increase cardiac contractility, | - Be aware that lisinopril should not be given to a patent which is hemodynamically unstable after an acute MI (Jones & Bartlett Learning, |

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| | dosage for therapeutic effect (Jones & Bartlett Learning, 2021).<br>- Use caution with co-administration with other anticoagulant medications because it can increase the risk of bleeding. | liver dysfunction (Jones & Bartlett Learning, 2021).<br>- Monitor diabetic patients' blood glucose levels because atorvastatin therapy can affect blood glucose control (Jones & Bartlett Learning, 2021). | 2021).<br>- Monitor serum potassium level regularly to check for hypokalemia and if the patient has a history of ventricular arrhythmias (Jones & Bartlett Learning, 2021). | cardiac wall thickness, and heart rate, precipitating angina or arrhythmias (Jones & Bartlett Learning, 2021).<br>- Monitor the blood glucose level of the diabetic patient because the drug may worsen glycemic control and increase antidiabetic agents or insulin requirement (Jones & Bartlett Learning, 2021). | 2021).<br>- Use lisinopril cautiously in patients with fluid volume deficit, heart failure, impaired renal function, or sodium depletion (Jones & Bartlett Learning, 2021). |
| **Key Nursing Assessment(s)/ Lab(s) Prior to Administration** | - Assess blood pressure periodically and compare it to average values (Jones & Bartlett Learning, 2021).<br>- Also, check INR and PT lab values with | - Before administration, liver function tests, serum cholesterol, and triglycerides must be performed (Jones & Bartlett Learning, 2021). | - Assess weight, intake, output, and serum electrolyte levels (Jones & Bartlett Learning, 2021).<br>- Assess blood glucose levels and follow BUN and creatinine | - Assess thyroid function tests and monitor PT of patient who is also receiving anticoagulants because they may require a dosage adjustment (Jones & | - Assess blood pressure before administration and notify the prescriber if the patient has a persistent, nonproduction cough (Jones & Bartlett |

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| | concurrent anticoagulant therapy (Jones & Bartlett Learning, 2021). | | levels (Jones & Bartlett Learning, 2021). | Bartlett Learning, 2021). | Learning, 2021).<br>- Monitor the patient's serum creatinine, potassium, and blood glucose levels (Jones & Bartlett Learning, 2021). |
| **Client Teaching Needs (2)** | - Instruct patient to take aspirin with food or after meals because it may cause GI to upset if taken on an empty stomach (Jones & Bartlett Learning, 2021).<br>- Instruct patient to stop taking aspirin and notify prescriber if any symptoms of a stomach or intestinal bleeding occur, such as the passage of bloody or tarry stools or if the patient is | - Advise patient to notify prescriber immediately if he develops unexplained muscle pain, tenderness, or weakness, especially if accompanied by fatigue or fever (Jones & Bartlett Learning, 2021).<br>- Instruct the patient to take the drug simultaneously daily to maintain its effects (Jones & Bartlett Learning, 2021). | - Stress the importance of monitoring fluid intake and output and watching for evidence of electrolyte imbalance, such as dizziness, headache, and muscle spasms (Jones & Bartlett Learning, 2021).<br>- Instruct diabetic patients to monitor blood glucose levels regularly and to notify prescribers about persistent hyperglycemia (Jones & Bartlett Learning, | - Inform the patient that levothyroxine replaces a hormone typically produced by the thyroid gland and that they will probably need to take the drug for life (Jones & Bartlett Learning, 2021).<br>- Instruct the patient to take the drug at least 30 minutes before breakfast because drug absorption is increased on an empty stomach, and evening doses may | - Explain that lisinopril helps to control, but does not cure, hypertension and that patient may need lifelong therapy (Jones & Bartlett Learning, 2021).<br>- Advise the patient to take lisinopril at the same time every day and not stop the drug without consulting the prescriber (Jones & Bartlett Learning, 2021). |

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| | coughing up blood or vomit that looks like coffee grounds (Jones & Bartlett Learning, 2021). | | 2021). | cause insomnia (Jones & Bartlett Learning, 2021). | |

**Hospital Medications (5 required)**

| **Generic/ Brand** | cefepime hydrochloride/ Maxipime | pantoprazole sodium/Protonix | vancomycin hydrochloride/ Vancocin | ondansetron /Zofran | insulin determir/Levemir |
|---|---|---|---|---|---|
| **Dose** | 2,000 mg | 40 mg | 750 mg | 4 mg | 0.2 mL |
| **Frequency** | Q12H | BID | Q12H | PRN | Daily, HS |
| **Route** | IV Piggyback | PO | IV Piggyback | IV Push | SC |
| **Classification** | Pharmacologic class: Fourth-generation cephalosporin Therapeutic class: Antibiotic | Pharmacologic class: Proton pump inhibitor Therapeutic class: Antiulcer. | Pharmacologic class: Glycopeptide Therapeutic class: Antibiotic | Pharmacologic class: Selective serotonin receptor antagonist Therapeutic class: Antiemetic | Pharmacologic class: Insulin Therapeutic class: Antidiabetic |
| **Mechanism of Action** | Interferes with bacterial cell wall synthesis by inhibiting the final step in cross-linking peptidoglycan strands (Jones & Bartlett Learning, 2021). | Interferes with gastric acid secretion by inhibiting the hydrogen-potassium-adenosine triphosphatase enzyme | Inhibits bacterial RNA and cell wall synthesis; alters the permeability of bacterial membranes, causing cell wall lysis and cell death | Blocks serotonin receptors centrally in the chemoreceptor trigger zone and peripherally at vagal nerve | Lowers blood glucose levels by stimulating peripheral glucose uptake by fat and skeletal muscle and |

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| | Peptidoglycan makes cell membranes rigid and protective. Without it, bacterial cells rupture and die (Jones & Bartlett Learning, 2021). | system, or proton pump, in gastric parietal cells (Jones & Bartlett Learning, 2021). | (Jones & Bartlett Learning, 2021). | terminals in the intestine (Jones & Bartlett Learning, 2021). This action reduces nausea and vomiting by preventing serotonin release in the small intestine and by blocking signals to the central nervous system (Jones & Bartlett Learning, 2021). | by inhibiting hepatic glucose production (Jones & Bartlett Learning, 2021). |
| **Reason Client Taking** | To treat moderate to severe pneumonia. | To reduce relapse of daytime and nighttime symptoms in patients with GERD. | To treat bacterial endocarditis. | To treat nausea and vomiting related to radiation. | To treat diabetes mellitus. |
| **Contraindications (2)** | - Hypersensitivity to cefepime, other beta-lactam antibiotics, cephalosporins, penicillin, or their components (Jones & Bartlett Learning, 2021).<br>- Previous | - Concurrent therapy with rilpivirine-containing products (Jones & Bartlett Learning, 2021).<br>- Hypersensitivity to pantoprazole, substituted | - Hypersensitivity to corn or corn products when given with dextrose solutions (Jones & Bartlett Learning, 2021).<br>- Hypersensitivity to vancomycin or | - Concomitant use of apomorphine (Jones & Bartlett Learning, 2021).<br>- Hypersensitive to ondansetron or its components (Jones & | - Chronic lung diseases such as asthma and chronic obstructive pulmonary disease (Jones & Bartlett Learning, 2021).<br>- Hypersensi |

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| | anaphylactic reaction to penicillin (Jones & Bartlett Learning, 2021). | benzimidazoles, or their components (Jones & Bartlett Learning, 2021). | its components (Jones & Bartlett Learning, 2021). | Bartlett Learning, 2021). | tivity to regular human insulin or any of its components (Jones & Bartlett Learning, 2021). |
| **Side Effects/ Adverse Reactions (2)** | - Elevated BUN level, nephrotoxicity, and renal failure (Jones & Bartlett Learning, 2021). | - Thrombocytopenia, nausea, and vomiting (Jones & Bartlett Learning, 2021). | - Anemia, nausea, vomiting, and thrombocytopenia (Jones & Bartlett Learning, 2021). | - Pulmonary embolism, shortness of breath, and arrhythmias (Jones & Bartlett Learning, 2021). | - Hypoglycemia, fatigue, the decline in pulmonary function, and shortness of breath (Jones & Bartlett Learning, 2021). |
| **Nursing Considerations (2)** | - Be aware that in renal-impaired patients, neurotoxicity may occur significantly if the dosage has not been adjusted for their degree of renal impairment (Jones & Bartlett Learning, 2021).<br>- Monitor patients closely for hypersensitivity | - Monitor the patient's urine output because pantoprazole may cause acute interstitial nephritis (Jones & Bartlett Learning, 2021).<br>- Monitor the patient for diarrhea from C. difficile, which can occur with or without | - Ensure a slow infusion of vancomycin because rapid delivery may cause hypotension or transient "red man syndrome" characterized by chills, fainting, flushing of the face, hypotension, and tachycardia (Jones & Bartlett Learning, 2021). | - Monitor the patient closely for serotonin syndrome, which may include agitation, chills, confusion, fever, restlessness, tremor, and twitching (Jones & Bartlett Learning, 2021).<br>- Monitor patients with hepatic | - Monitor the patient closely for signs and symptoms of hypoglycemia, which could become severe, causing seizures or even death (Jones & Bartlett Learning, 2021).<br>- Monitor the patient's |

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| | reactions because an allergic reaction may occur even up to a few days after therapy starts (Jones & Bartlett Learning, 2021). | antibiotics. Drugs should not be given longer than medically necessary (Jones & Bartlett Learning, 2021). | - Assess hearing during therapy because ototoxicity may occur if the patient receives an excessive amount of drug or has an underlying hearing loss (Jones & Bartlett Learning, 2021). | impairment because it can increase the risk of adverse effects (Jones & Bartlett Learning, 2021). | blood glucose level to detect the need for dosage adjustment (Jones & Bartlett Learning, 2021). Expect dosage adjustments with changes in the patient's hepatic or renal function, meal patterns, and physical activity (Jones & Bartlett Learning, 2021). |
| **Key Nursing Assessment(s)/Lab(s) Prior to Administration** | - Obtain culture and sensitivity test results before administration (Jones & Bartlett Learning, 2021).<br>- Monitor BUN, serum creatinine levels, fluid intake, and output for early signs of | - Monitor PT and INR prior to and during therapy if the patient takes an oral anticoagulant (Jones & Bartlett Learning, 2021). | - Check CBC results, BUN, serum creatinine levels, and serum vancomycin concentration if the patient has renal impairment (Jones & Bartlett Learning, 2021). | - Assess potassium and magnesium levels prior to administering (Jones & Bartlett Learning, 2021).<br>- Monitor electrocardiograms in patients with bradyarrhyt | - Assess the patient's blood glucose and serum potassium levels (Jones & Bartlett Learning, 2021). |

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| | nephrotoxicity (Jones & Bartlett Learning, 2021). | | | hmia and congestive heart failure (Jones & Bartlett Learning, 2021). | |
| **Client Teaching Needs (2)** | - Instruct patient and caregiver to immediately seek emergency care for any change in mental status, development of seizure activity, difficulty speaking or understanding spoken or written words, or sudden jerking movements (Jones & Bartlett Learning, 2021).<br>- Alert patients with diabetes that cefepime therapy may produce a false-positive reaction for glucose in the urine (Jones & Bartlett Learning, 2021). | - Advise patient in expecting relief of symptoms within two weeks of starting therapy and in notifying prescriber if they have a suboptimal response to the drug or early symptomatic relapse (Jones & Bartlett Learning, 2021).<br>- Advise patient to notify prescriber if the patient notices they are experiencing a decrease in the amount of urine voided or blood in their urine (Jones & Bartlett Learning, | - Instruct the patient to complete the entire course of vancomycin as prescribed (Jones & Bartlett Learning, 2021).<br>- Instruct patient to keep follow-up appointments during and after treatment and to notify prescriber if they develop persistent or severe diarrhea (Jones & Bartlett Learning, 2021). | - Advise patients to seek immediate medical attention if the patient experiences persistent, severe, unusual, or worsening symptoms (Jones & Bartlett Learning, 2021).<br>- Instruct clients to use caution when driving and tasks that require alertness because this drug can impair thinking (Jones & Bartlett Learning, 2021). | - Review signs and symptoms of hypoglycemia and how to treat them. If frequent or severe, tell the patient to notify the prescriber, as the dosage may need to be adjusted (Jones & Bartlett Learning, 2021).<br>- Instruct patient not to inject this medicine into skin that is damaged, tender, bruised, pitted, thickened, scaly, or has a scar or hard lump |

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| | | 2021). | | | (Jones & Bartlett Learning, 2021).<br>- Advise patient to rotate injection sites (Jones & Bartlett Learning, 2021). |

**Medications Reference (1) (APA):**

Jones & Bartlett Learning. (2021). *2021 Nurse's drug handbook* (20th ed.). Jones & Bartlett Learning.

**Assessment**

**Physical Exam (18 points) – HIGHLIGHT ALL PERTINENT ABNORMAL FINDINGS**

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|---|---|
| **GENERAL:**<br>**Alertness:**<br>**Orientation:**<br>**Distress:**<br>**Overall appearance:** | **Alertness:** The patient was A&O x 4<br>**Orientation:** The patient was alert and oriented and was able to verify name, DOB, and location (hospital)<br>**Distress:** The patient is not visibly distressed; he was calm and cooperative.<br>**Overall appearance:** The patient was well-groomed and had a clean look. |
| **INTEGUMENTARY:**<br>**Skin color:**<br>**Character:**<br>**Temperature:**<br>**Turgor:**<br>**Rashes:**<br>**Bruises:**<br>**Wounds:** .<br>**Braden Score:**<br>**Drains present: Y☐ N ☒**<br>**Type:** | **Skin color:** Color was usual for ethnicity<br>**Character:** The patient's skin was intact<br>**Temperature:** Warm to the touch<br>**Turgor:** Loose and elastic<br>**Rashes:** None present<br>**Bruises:** None present<br>**Wounds:** Skin tear at the left forearm.<br>**Braden Score:** 19, No risk for pressure ulcers |

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| **HEENT:**<br>**Head/Neck:**<br>**Ears:**<br>**Eyes:**<br>**Nose:**<br>**Teeth:** | **Head/Neck:** Trachea is midline, oral mucosa is moist and intact. Uvula is midline, no tonsil enlargement noted. Tongue is pink with no lesions.<br>**Ears:** Symmetrical, tympanic membrane is pink and grey bilaterally<br>**Eyes:** PERRLA patient's pupils constricted normally, EOM was normal. Sclera appears white with no inflammation or drainage bilaterally.<br>**Nose:** Septum is midline, no sign of bleeding or mucus.<br>**Teeth:** No cavity present. Teeth was intact and had a yellow tint |
| **CARDIOVASCULAR:**<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:** | **Heart sounds:** Strong. Regular S1, S2 sounds present<br>**Cardiac rhythm:** Atrial fibrillation<br>**Peripheral Pulses:** Radial and pedal pulses are 3+ bilaterally and were noted at 63 and 67 beats per minute.<br>**Capillary Refill:** Normal, fingertips blanched white in less than 3 seconds |
| **RESPIRATORY:**<br>**Accessory muscle use: Y☐ N ☒**<br>**Breath Sounds: Location, character** | **Accessory Muscle:** Accessory muscle was not used during respiration<br>**Breath Sounds:** All lobes posteriorly and anteriorly were clear bilaterally<br>**Location:** Lung sounds were normal for age; high-pitched breath sounds in all lobes bilaterally anteriorly and posteriorly.<br>**Character:** Loud, high-pitched bronchial breath sounds<br>**Respiratory Rate:** 18 and 18 per minute. Respirations are regular in rhythm, even, and appeared unlabored, the patient was on 99% and 97% room air. |
| **GASTROINTESTINAL:**<br>**Diet at home:**<br>**Current Diet**<br>**Height:**<br>**Weight:**<br>**Auscultation Bowel sounds:**<br>**Last BM:**<br>**Palpation: Pain, Mass etc.:** | **Diet at home:** Regular diet<br>**Current Diet:** Healthy heart diet, 1500-1700 calorie consistent carbohydrate diet, 2 g sodium restriction, 2000 mL fluid restriction.<br>**Height:** 167.5 cm<br>**Weight:** 96.6 kg |

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| **Inspection:**<br>**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:** | **Auscultation Bowel sounds:** Active bowel sounds in all 4 quadrants<br>**Last BM:** 10/01/2022<br>**Palpation: Pain, Mass etc.:** Abdomen is soft to touch, tender to palpitation<br><br>**Inspection:**<br>**Distention:** Non-distended<br>**Incisions**: N/A<br>**Scars:** N/A<br>**Drains:** N/A<br>**Wounds:** N/A<br>**Feeding Tubes/PEG Tube:** N/A |
| **GENITOURINARY:**<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:** | **Color:** Straw, Yellow<br>**Character:** Clear<br>**Quantity of urine:** 400 mL<br><br>**Inspection of genitals:** Clean and intact, no lesions present |
| **MUSCULOSKELETAL:**<br>**Neurovascular status:**<br>**ROM:**<br>**Supportive devices:**<br>**Strength:**<br>**ADL Assistance: Y☒ N ☐**<br>**Fall Risk: Y ☒ N☐**<br>**Fall Score:** 60; High Risk<br>**Activity/Mobility Status:**<br>**Independent (up ad lib) ☐**<br>**Needs assistance with equipment ☐**<br>**Needs support to stand and walk ☒** | **Neurovascular status:** Radial and pedal pulse are 3+ bilaterally. Skin is warm to touch in upper and lower extremities. The patient's skin color is normal for ethnicity.<br>**ROM:** Upper extremities are equal in strength; lower extremities are equally weak. The patient complained of weakness in the legs when ambulating.<br>**Supportive devices:** Walker for mobility.<br>**Strength:** Lower extremities are equally weak bilaterally, upper extremities are equal in strength bilaterally<br>**ADL Assistance:** One assist to mobilize |
| **NEUROLOGICAL:**<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:** | **MAEW:** Upper extremities are equal in strength bilaterally; lower extremities are equally weak bilaterally. The patient complained of weakness when ambulating.<br>**PERRLA:** Pupils constrict normally<br>**Strength Equal:** No, upper extremities are equal strong bilaterally, lower extremities are equally |

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| **Sensory:**<br>**LOC:** | weak bilaterally. The patient complained of weakness when ambulating.<br>**Orientation:** A & O x 4<br>Patient was alert and orientated. Patient was able to verify his name, DOB, and location (hospital).<br>**Mental Status:** Alert and Oriented<br>**Speech:** Clear<br>**Sensory:** Intact<br>**LOC:** Patient was alert and oriented |
| **PSYCHOSOCIAL/CULTURAL:**<br>**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):** | **Coping methods:** The patient identifies his daughter as his primary support. The patient watches TV and sleep as coping mechanisms.<br>**Developmental level:** The patient has an appropriate developmental level for his age.<br>**Religion and what it means to pt:** The patient did not report having a religion preference.<br>**Personal/Family Data:** The patient lives at home and says his daughter is his main support system. She helps him with his activities of daily living and supports him around the house when she comes to visit. |

**Vital Signs, 2 sets (5 points) – HIGHLIGHT ALL ABNORMAL VITAL SIGNS**

| Time | Pulse | B/P | Resp Rate | Temp | Oxygen |
|---|---|---|---|---|---|
| 1300 | 63 beats per minute | 120/68 mmHg | 18 respirations per minute | 36.5 degrees Celsius (Oral) | 99% on room air |
| 1500 | 67 beats per minute | 130/64 mmHg | 18 respirations per minute | 36.2 degrees Celsius (Oral) | 97% on room air |

**Vital Sign Trends:**

According to the patient's vital sign trends, minimal changes occurred between the vital signs taken at 1300 and 1500. During the first vital signs assessment, the patient's vital signs were within normal ranges; his pulse (63 beats per minute), blood pressure (120/68 mmHg), respiration rate (18 respirations per minute), temperature (36.5 degrees Celsius), and oxygen (99% on room air). During the patient's second assessment at 1500, his heart rate was 67 beats per minute, his respiration rate was 18 respirations per minute, the temperature was 36.2 degrees Celsius, and oxygen was 97% on room air. The patient had an abnormal systolic blood pressure of 130 and diastolic blood pressure of 64 mmHg; these values increased during this student's second assessment indicating the patient was hypertensive at the time of his assessment.

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

| Time | Scale | Location | Severity | Characteristics | Interventions |
|---|---|---|---|---|---|
| 1300 | Numeric | None reported | None reported | None reported | None reported |
| 1500 | Numeric | None reported | None reported | None reported | None reported |

**IV Assessment (2 Points)**

| IV Assessment | Fluid Type/Rate or Saline Lock |
|---|---|
| **Size of IV:** 5 French catheter gauge<br>**Location of IV:** Right upper arm<br>**Date on IV:** 09/29/2022<br>**Patency of IV:** Flushed with no difficulty<br>**Signs of erythema, drainage, etc.:** No signs of erythema and drainage.<br>**IV dressing assessment:** No phlebitis or infiltration present. PICC line dressing was clean, dry and intact, flushed with no | The patient's PICC line is saline lock. |

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| difficulty, and there were no signs of redness or drainage around the site. | |

**Intake and Output (2 points)**

| **Intake (in mL)** | **Output (in mL)** |
|---|---|
| Water – 120 mL<br><br>Ice chips – 60 mL<br><br>**Total: 180 mL** | Urine - 400 mL<br><br><br><br>**Total: 400 mL** |

## Nursing Care

### Summary of Care (2 points)

**Overview of care:**

This student conducted and documented the physical examination for this client. During the clinical shift, this student also took his vital signs and pain level twice, administered his daily afternoon medications, encouraged bed rest, changed his soiled gown, and assisted him in ambulating to the restroom.

**Procedures/testing done:**

The patient did not leave the floor, and no procedures or tests were done during this clinical shift.

**Complaints/Issues:**

C.C. complained that ambulating for long periods made him tired and extremely weak, so he requested bed rest. The patient was alert and oriented, and the student checked on him frequently throughout the clinical shift.

**Vital signs (stable/unstable):**

C.C's vital signs remained stable during this clinical shift. Except for the changes in his blood pressure. The patient's systolic and diastolic blood pressures were 120/68 mmHg at 1300 and 130/64 mmHg at 1500. During this clinical shift, the patient's pulse, respiratory rate, temperature, and oxygen levels remained normal. During both pain assessments at 1300 and 1500, the patient reported a pain level of 0/10.

**Tolerating diet, activity, etc.:**

The patient is on a heart-healthy 1500-1700 calorie consistent carbohydrate diet, a 2 g sodium restriction, and a fluid restriction of 2000 mL, and he had no difficulty eating his lunch. C.C tolerated activities well and ambulated to the restroom with weakness in both lower extremities. During this clinical shift, the patient could ambulate to the bathroom with one assistance and complained of lower extremity weakness during his physical examination.

**Physician notifications:**

The physician was notified of the patient’s blood pressure changes at 1300 (120/68 mmHg) and 1500 (130/64 mmHg).

**Future plans for client:**

The patient will continue to be monitored in the hospital until he feels strong enough to be on his own. The goal for the patient is to ambulate for extended periods without feeling weak and show no signs of endocarditis. Plans for this patient include dietary and lifestyle modifications and continued compliance with diabetes mellitus.

**Discharge Planning (2 points)**

**Discharge location:**

The patient is to be discharged to go home to his home in Charleston, Illinois.

**Home health needs (if applicable):**

The patient does not require home health needs.

**Equipment needs (if applicable):**

The patient requires a walker to assist with ambulation. During the physical assessment, the patient showed bilaterally weakness in both lower extremities.

**Follow up plan:**

The patient did not have a follow-up plan during this clinical shift.

**Education needs:**

The patient requires additional information regarding consuming a nutritionally balanced diet and incorporating an adequate fluid and sodium intake daily. Educate the patient about the importance of nutrition and how changing his lifestyle habits can prevent further health complications. Also, include information regarding how the patient can prevent endocarditis and better manage his diabetes mellitus.

**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<br>• Listed in order by priority – highest | **Rationale**<br>• Explain why the nursing diagnosis was chosen | **Interventions (2 per dx)** | **Outcome Goal (1 per dx)** | **Evaluation**<br>• How did the client/family respond to the nurse's actions?<br>• Client response, status of goals and outcomes, modifications to plan. |
|---|---|---|---|---|

| priority to lowest priority pertinent to this client | | | | |
|---|---|---|---|---|
| 1. Impaired gas exchange related to pulmonary insufficiency secondary to infective endocarditis as evidenced by fatigue during activity, shortness of breath upon exertion, and generalized body weakness (Vera, 2019). | The nursing diagnosis was chosen because the patient developed shortness of breath as indicated during diagnostic imaging and bilaterally weak lower extremities during the physical assessment. | 1. Assess and monitor the patient's cardiopulmonary status by checking the vital signs before and after an activity. Include monitoring of orthostatic blood pressure (Vera, 2019).<br><br>2. Encourage the patient to perform deep breathing exercises at least three times daily (Vera, 2019). | 1. The patient will demonstrate active participation in necessary and desired activities and increase activity levels (Vera, 2019).<br><br>2. The patient will maintain adequate oxygen saturation during all activities (Vera, 2019). | - The patient responded well to the nurse's actions because he reported no feelings of weakness after ambulating or shortness of breath.<br>- Goal met: The patient reported no generalized weakness and maintained oxygen saturation at 97%-99% by the end of the clinical shift. |
| 2. Ineffective breathing pattern related to exudative pleural effusion with pleural edema, as evidenced by shortness of breath and increased pain upon inhalation (Vera, 2019). | The nursing diagnosis was chosen because the patient had irregular respirations, as indicated by diagnostic imaging and findings of a slight right pleural effusion. | 1. Administer the prescribed antibiotic medications if the underlying cause is a bacterial infection (Vera, 2019).<br><br>2. Assess the patient's vital signs and characteristics of respirations at least every four hours (Vera, 2019). | 1. The patient will tolerate the antibiotics well, recover from the infection, and return to standard breathing patterns (Vera, 2019).<br><br>2. The patient will maintain within normal ranges and show improvement from the effectiveness | - The patient responded well to the nurse's actions because he tolerated the antibiotics well and improved his breathing.<br>- Goal met: The patient reported being able to breathe normally and having little to no chest pressure by the end of the clinical shift. |

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| | | | of the medical treatment (Vera, 2019). | |
| 3. Activity intolerance related to decreased cardiac output secondary to endocarditis, as evidenced by a lack of energy, tiredness, and overwhelming body weakness (Vera, 2019). | The nursing diagnosis was chosen because the patient had a chief complaint of weakness, followed by a primary diagnosis of endocarditis. | 1. Determine the patient's capacity to carry out activities of daily living and demands of daily living (Vera, 2019).<br><br>2. Determine the patient's dietary intake to ensure that the patient gets enough energy to meet the required metabolic needs (Vera, 2019). | 1. The patient will be able to perform routine daily activities with minimal to no help from significant others (Vera, 2019).<br><br>2. The patient will be able to restore strength and bodily function and maintain an acceptable cardiac output to decrease fatigue (Vera, 2019). | - The patient responded well to the nurse's actions because he reported feeling less tired after ambulating.<br>- Goal met: The patient reported no signs of fatigue or weakness by the end of the clinical shift. |
| 4. Knowledge deficit related to a lack of understanding and misconceptions about the disease secondary to endocarditis, as evidenced by repetitive questioning, statements of misunderstanding, and recurrence of the disease when preventable (Vera, 2019). | This nursing diagnosis was chosen because the patient was concerned about avoiding endocarditis's reoccurrence in the future. | 1. Discuss with the patient the significance of being active without developing fatigue and taking breaks between exercise and daily activities (Vera, 2019).<br><br>2. Educate the patient about the importance of consuming all the prescribed | 1. The patient will be able to determine individual stressors and risk factors and demonstrate appropriate coping strategies (Vera, 2019).<br><br>2. The patient will be able to determine the association between the | - The patient responded well to the nurse's actions because he verbalized an understanding of compliance with the treatment process and preventable strategies.<br>- Goal met: The patient could identify necessary lifestyle changes and correlate symptoms with causative factors by the end of the |

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| | | medications because stopping prescribed medications can lead to bacterial resistance and may delay healing (Vera, 2019). | ongoing treatment program and the prevention of repeated episodes and problems (Vera, 2019). | clinical shift. |

**Other References (APA):**

Vera, M. (2019). *Heart failure nursing care plans: 15 Nursing diagnosis.* Nurseslabs. https://nurseslabs.com/heart-failure-nursing-care-plans/

**Concept Map (20 Points**

## Subjective Data

Patient states, "I feel weak all over and have slight pain that radiates to my back when I walk."

## Objective Data

**Vital Signs:**
1300: P:63bpm, B/P: 120/68mmHg R:18 per minute, T: 36.5 C (Oral), O: 99% room air, Pain: 0/10
1500: P:67bpm, B/P: 130/648mmHg R:18 per minute, T: 36.2 C (Oral), O: 97% room air, Pain: 0/10

**Lab Results on Admission:** RBC: 2.89, Hgb: 9.1, Hct: 26.2, Platelets: 101, WBC: 7.6, Neutrophils: 75.5, Lymphocytes: 7.2, Monocytes: 11.5, Eosinophils: 5.6, Glucose: 105, CO2: 27, Sodium: 141, K: 3.6, Cl: 102, BUN: 24, Creatinine: 1.18, Calcium: 7.4, Mag: 1.8, Phosphate: 2.0, Bilirubin: 1.0, Alk Phos: 167, AST: 37, ALT: 28, Troponin: < 0.016

**Urinalysis:** Color and clarity: Yellow/Clear, pH: 5.0, Specific Gravity: 1.016, Glucose: Normal, Protein: Positive, Ketones: Negative, WBC: 3, RBC: 1, Leukoesterase (Negative)

**Blood Culture:** Positive

**Diagnostic Test:** Computer Tomography (CT) Abdomen: 09/25/2022 (increase hepatic mass), Echocardiogram: 09/27/2022 (45%-50% ejection fraction and showed atrial fibrillation), Computer Tomography (CT) Chest: 09/27/2022 (mild fluid overload, a bilateral pleural effusion, and pneumonia), Chest X-Ray #1: 09/29/2022 (cardiomegaly, increased pulmonary vascular congestion, interstitial edema, and signs of consolidation), Chest X-Ray #2: 10/02/2022 (cardiomegaly, bilateral pleural effusion).

## Client Information

The 82-year-old Caucasian male presented to the emergency room on 09/27/2022 with complaints of weakness, nausea, and vomiting. The patient has a history of nonalcoholic steatohepatitis, cirrhosis, esophageal varices, atrial fibrillation, anemia, depression, arthritis, coronary artery bypass graft, coronary heart failure, chronic kidney disease, diabetes mellitus type two, gastroesophageal reflux disease, hypertension, high cholesterol, myocardial infarction, hypothyroid, hepatocellular carcinoma cancer. C.C.'s surgical history includes hernia repair (2020) and right total knee arthroplasty (2020). The patient is a former smoker who smoked one pack of cigarettes a day for the past thirty years. The patient denies past use of alcohol and recreational drugs.

## Nursing Diagnosis/Outcomes

1. Impaired gas exchange related to pulmonary insufficiency secondary to infective endocarditis as evidenced by fatigue during activity, shortness of breath upon exertion, and generalized body weakness (Vera, 2019).
Goal met: The patient reported being able to breathe normally and having little to no chest pressure by the end of the clinical shift.

2. Ineffective breathing pattern related to exudative pleural effusion with pleural edema, as evidenced by shortness of breath and increased pain upon inhalation (Vera, 2019).
Goal met: The patient reported no signs of fatigue or weakness by the end of the clinical shift.

3. Activity intolerance related to decreased cardiac output secondary to endocarditis, as evidenced by a lack of energy, tiredness, and overwhelming body weakness (Vera, 2019).
Goal met: The patient reported no generalized weakness and maintained oxygen saturation at 97%-99% by the end of the clinical shift.

4. Knowledge deficit related to a lack of understanding and misconceptions about the disease secondary to endocarditis as evidenced by repetitive questioning, statements of misunderstanding, and recurrence of the disease when preventable (Vera, 2019).
Goal met: The patient could identify necessary lifestyle changes and correlate symptoms with causative factors by the end of the clinical shift.

## Nursing Interventions

Diagnosis 1:
1. Assess and monitor the patient's cardiopulmonary status by checking the vital signs before and after an activity. Include monitoring of orthostatic blood pressure (Vera, 2019).
2. Encourage the patient to perform deep breathing exercises at least three times daily (Vera, 2019).

Diagnosis 2:
1. Administer the prescribed antibiotic and discuss if the underlying cause is a bacterial infection (Vera, 2019).
2. Assess the patient's vital signs and characteristics of respiration, at least every four hours (Vera, 2019).

Diagnosis 3:
1. Determine the patient's capacity to carry out activities of daily living and demands of daily living (Vera, 2019).
2. Determine the patient's dietary intake to ensure that the patient gets enough energy to meet the required metabolic needs (Vera, 2019).

Diagnosis 4:
1. Discuss with the patient the significance of being active without developing fatigue and taking breaks between exercise and daily activities (Vera, 2019).
2. Educate the patient about the importance of consuming all the prescribed medications because stopping prescribed medications can lead to bacterial resistance and may delay healing (Vera, 2019).