N303 Care Plan # 1

Lakeview College of Nursing

Brittney A. Hessee

Demographics (3 points)

Date of Admission 02/02/2019	**Patient Initials** PB	**Age** 63 years old	**Gender** Female
Race/Ethnicity Caucasian	**Occupation** Unemployed	**Marital Status** Married	**Allergies** Cephalexin Penicillin Shellfish Spironolactone Sulfa Antibiotics Tetracycline
Code Status Does not have a recorded code status on file	**Height** 165.1 centimeters	**Weight** 90.7 kilograms	

Medical History (5 Points)

Past Medical History:

- Allergic rhinitis
- Arthropathy
- Atrial Fibrillation
- Diabetes mellitus
- Gallstone
- GERD (gastroesophageal reflux disease)
- Hyperlipidemia
- Hypertension
- Kidney stone
- Obstructive sleep apnea
- Pseudophakia
- Umbilical hernia
- Vocal cord anomaly

Past Surgical History:

- 12/11/2018 Upper gastrointestinal endoscopy
- 12/11/2018 Colonoscopy with polypectomy
- 2016 Hysteroscopy
- 2015 Cataract removal with implant
- 2013 Dilation and curettage
- 1998, 1994, and 1982 Vocal cord surgery

Social History (tobacco/alcohol/drugs, pertinent social factors):

- Marital status: Married
- Number of children: None
- Smoking status: Never Smoker
- Smokeless tobacco: Never Used
- Alcohol use No
- Drug use: No
- Sexual activity: Not on file

Family History

- Father (deceased)
  - Cerebral Aneurysm
  - Heart Attack
- Mother (deceased)
  - Uterine Cancer
- Brother (deceased)
  - Colon Cancer
- Sister (deceased)
  - Breast Cancer

Assistive devices

- None

Marital status/Relationship status

- Married

Living Situation

- Lives with husband
- No children

Occupation

- Unemployed

Education level

- High School

Admission Assessment

Chief Complaint (2 points): Chest Pain

History of present Illness (10 points):

P.B. is a 63-year old Caucasian female who presents with sudden onset of palpitations that began about 1:00 p.m. on February 1st. She continued with her day but started to feel some chest discomfort with dyspnea after dinner and decided to come to the emergency room. She was found to be in atrial fibrillation with a rapid ventricular rate. On further questioning, the patient reported a history of atrial fibrillation back in 2009. However, this spontaneously resolved after 5 hours. She was prescribed metoprolol and states she is taking it regularly. This patient has a history of diabetes, hypertension, and sleep apnea. P.B. reports that her diabetes is well-managed and her A1c was 6.9% on the last check. She usually drinks about 2 cups of coffee and two cans of diet soda a day. She also reports a respiratory tract infection about a month ago from which she has fully recovered.

Patient afebrile upon admission with a pulse rate of 164 beats per minute, blood pressure of 141/82, pulse ox of 98% on room air, and respirations of 20 a minute. A 12-lead EKG confirmed atrial fibrillation with a rapid ventricular rate. Lab tests revealed an elevated d-dimer, but PT and INR, troponins, and BNP were within normal limits. The patient was immediately started on a Cardizem drip and converted back to normal sinus rhythm. A blood draw indicated a low magnesium level of 1.1 and I.V. magnesium sulfate initiated until patient normalized. The patient also started on Eliquis as a stroke preventative and Multaq to maintain rhythm control. Doctor’s plan of care includes to administer digoxin, continue with metoprolol but hold amlodipine, recheck magnesium levels, continue with telemetry, and repeat troponin levels.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Atrial Fibrillation with rapid ventricular rate

Secondary Diagnosis (if applicable): Hypomagnesium

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

In a healthy heart, an electrical impulse signals the chambers to beat in an organized rhythm. A breakdown in communication of the electrical impulses in the upper chambers of the heart results in an arrhythmia that is rapid and irregular with no discernible pattern. Atrial fibrillation alters the atrial tissue causing an absence of coordinated rhythmic contractions. "The disrupted rhythm occurs because of the unpredictable conduction of disordered impulses across the electrical bridge, called the atrioventricular (AV) node, to the lower cardiac chambers (ventricles)" (Cantillon & Amuthan, 2018, para. 1).

According to Hinkle and Cheever (2018), "a rapid and irregular ventricular response reduces the time for ventricular filling, resulting in a smaller stroke volume." The result is a reduction in cardiac output and ineffectual atrial contractions that place the patient at risk for thrombus formation and stroke. "A clot can form in the left atrium, travel into the left ventricle, then move into the aorta and up the subclavian artery to the internal carotid and middle cerebral artery to the brain" (Capriotti & Frizzell, 2016, p. 356).

During an episode of atrial fibrillation, patients may exhibit a high ventricular rate of response that "can eventually lead to mitral valve dysfunction, mitral regurgitation, intraventricular conduction delays, and dilated ventricular cardiomyopathy" (Hinkle & Cheever, 2018, p. 722). Symptoms of a high ventricular response include rapid or fluttering heart rate with dyspnea on exertion or fatigue. The patient presented to the emergency room complaining of

sudden onset of palpitations, chest discomfort, and difficulty breathing. Admitting vital signs indicated a pulse rate of 164, blood pressure of 141/82, pulse ox of 98% on room air, and respirations of 20 a minute. A 12-lead EKG confirmed atrial fibrillation with a rapid ventricular rate.

Diagnostic tests used to diagnose atrial fibrillation include a 12-lead EKG that is used to verify and identify an abnormal rhythm and ventricular involvement. Blood tests (CBC, CMP, PT, INR, aPPT, BnP, and d-dimer) screen for risk of thrombus embolism and myocardial infarction. Additional tests include “chest x-ray (to evaluate pulmonary vasculature in a patient suspected of having pulmonary hypertension), exercise stress test (to exclude myocardial ischemia or reproduce exercise-induced atrial fibrillation), Holter or event monitoring, and an electrophysiology study” (Hinkle & Cheever, 2018, p. 723).

The patient’s lab tests revealed an elevated d-dimer of 1,090, but normal PT and INR, troponins, and BNP. The was patient immediately started on a Cardizem drip and converted back to normal sinus rhythm. A blood draw showed an abnormal magnesium level of 1.1 that attributes to the disruption of the electrical pattern in the heart. Low magnesium levels cause cardiac dysrhythmias including premature ventricular contractions, supraventricular tachycardia, torsades de pointes, and ventricular fibrillation (Hinkle & Cheever, 2018). The patient was started on I.V. magnesium sulfate until levels normalized.

A ventilation/perfusion lung scan performed placed that patient at a low probability for a pulmonary embolism. A portable chest x-ray corroborated the findings indicating no acute infiltrates or signs of edema. It is interesting to note that the patient’s medical history of hypertension, diabetes, obesity, and obstructive sleep apnea increase the risk of atrial fibrillation (Hinkle & Cheever, 2018, p. 723).

In addition to the Cardizem drip and magnesium sulfate, patient also started on Eliquis as a stroke preventative and Multaq to maintain rhythm control. The doctor's plan of care includes digoxin and metoprolol but hold amlodipine, recheck magnesium levels, continue with telemetry, and repeat troponin levels.

References

Cantillon, D. J., MD, & Amuthan, R., MD. (2018). Atrial Fibrillation. Retrieved February 6, 2019, from http://www.clevelandclinicmeded.com/medicalpubs/diseasemanagement/cardiology/atrial-fibrillation/

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

Hinkle, J. L., PhD, RN, CNRN, & Cheever, K. H., PhD, RN. (2018). *Brunner & Suddarth's Textbook of Medical-Surgical Nursing*(14th ed.). Philadelphia, PA: Wolters Kluwer.

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 - 5.30	4.49	4.77	Within normal limits
Hgb	12.0 -15.8g/dL	**11.7**	12.5	Hemoglobin is decreased in situations involving chronic disease. Patient presents with a past medical history of diabetes that if left uncontrolled can lead to chronic kidney disease. Anemia is often associated with chronic disease. (Van Leeuwen & Bladh, 2017, p. 480)
Hct	36.0 - 47.0%	36.0%	38.9%	Within normal limits
Platelets	140,000 - 440,000	236,000	290,000	Within normal limits

WBC	4.00 - 12.00	9.80	12.00	Within normal limits
Neutrophils	47.0 - 73.0 %	61.2%	61.1%	Within normal limits
Lymphocytes	18.0 - 42.0 %	30.0%	29.7%	Within normal limits
Monocytes	4.0 - 12.0 %	6.0%	7.1%	Within normal limits
Eosinophils	0.0 - 5.0 %	1.9%	1.5%	Within normal limits
Bands	N/A	N/A	N/A	N/A

Chemistry: Highlight Abnormal—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+	133 - 144 mmol/L	136	137	Within normal limits
K+	3.5 - 5.1 mmol/L	4.7	4.2	Within normal limits
Cl-	98 - 107 mmol/L	103	103	Within normal limits
CO2	21 - 31 mmol/L	26	26	Within normal limits
Glucose	70 - 99 mg/dL	**255**	**128**	Elevated glucose levels can be seen in those with diabetes. Patient has a past medical history of type 2 diabetes. Glucose levels are known to increase when the body is under stress. Patient presented to ER with a-fib with a rapid ventricular rate. (Van Leeuwen & Bladh, 2017, p. 857)
BUN	7 - 25 mg/dL	**31**	16	An increased BUN level can be seen in patients with diabetes. Patient has a past medical history of type 2 diabetes that attributes to poor renal excretion. (Van Leeuwen & Bladh, 2017, p. 1564)
57Creatinine	0.50 - 1.20 mg/dL	1.01	1.06	Within normal limits

Albumin	3.5 - 5.7 g/dL	3.7	N/A	Within normal limits
Calcium	8.6 - 10.3 mg/dL	9.3	9.2	Within normal limits
Mag	1.6 - 2.6 mg/dL	**1.1**	**Pending**	Low serum magnesium could be linked to the chronic condition diabetes. Patient has a past medical history of type 2 diabetes. Insulin treatment lowers blood glucose and appears to increase intracellular transport of magnesium resulting in low serum levels. (Van Leeuwen & Bladh, 2017, p. 1075)
Phosphate	N/A	N/A	N/A	N/A
Bilirubin	0.2 - 0.8 mg/dL	0.3	N/A	Within normal limits
Alk Phos	34 - 104 U/L	88	N/A	Within normal limits
AST	13 - 39 U/L	13	N/A	Within normal limits
ALT	7 - 52 U/L	10	N/A	Within normal limits
Amylase	N/A	N/A	N/A	N/A
Lipase	N/A	N/A	N/A	N/A
Cholesterol	N/A	N/A	N/A	N/A
Triglycerides	N/A	N/A	N/A	N/A
Lactic Acid	N/A	N/A	N/A	N/A
Troponin	0.000 - 0.040 ng/mL	<0.030	<0.030	Within normal limits
CK-MB	N/A	N/A	N/A	N/A
Total CK	N/A	N/A	N/A	N/A

Other Tests Highlight Abnormal—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	0.9 - 1.1	1.0	N/A	Within normal limits
PT	10.1 - 13.1 sec	11.8	N/A	Within normal limits
PTT	N/A	N/A	N/A	N/A
D-Dimer	0 - 622 ng/mL	**1,090**	N/A	An elevated d-dimer indicates hypercoagulation of blood in conditions such as disseminated intravascular coagulation (DIC), acute myocardial infarction (MI), deep venous thrombosis (DVT), and pulmonary embolism (PE). Patient presented to emergency room in atrial fibrillation with a rapid ventricular rate. Atrial fibrillation increases the risk of thrombus formation and stroke. (Van Leeuwen & Bladh, 2017, p. 708)
BNP	0 - 100 pg/mL	96	N/A	Within normal limits

Urinalysis Highlight Abnormal—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	N/A	N/A	N/A	N/A
pH	N/A	N/A	N/A	N/A
Specific Gravity	N/A	N/A	N/A	N/A
Glucose	N/A	N/A	N/A	N/A
Protein	N/A	N/A	N/A	N/A
Ketones	N/A	N/A	N/A	N/A

WBC	N/A	N/A	N/A	N/A
RBC	N/A	N/A	N/A	N/A
Leukoesterase	N/A	N/A	N/A	N/A

Arterial Blood Gas Highlight Abnormal—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	N/A	N/A	N/A	N/A
PaO2	N/A	N/A	N/A	N/A
PaCO2	N/A	N/A	N/A	N/A
HCO3	N/A	N/A	N/A	N/A
SaO2	N/A	N/A	N/A	N/A

Cultures Highlight Abnormal—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	N/A	N/A	N/A	N/A
Blood Culture	N/A	N/A	N/A	N/A
Sputum Culture	N/A	N/A	N/A	N/A
Stool Culture	N/A	N/A	N/A	N/A

A complete blood count on 2/2 showed no evidence of infection but did indicate a low hemoglobin level and elevated BUN. The low hemoglobin level can place a strain on the cardiopulmonary system making it difficult to maintain an excellent oxygen-carrying capacity. When hemoglobin level becomes too low it places the patient at risk for angina, heart attack,

congestive heart failure, and stroke (Van Leeuwen & Bladh, 2017). When the cardiac function is reduced, renal blood flow can become diminished accounting for the increased BUN level. Improving cardiac output includes the administration of fluids, digoxin, Multaq, Cardizem, and Eliquis. A more recent CBC (2/4) showed marked improvement in hemoglobin and BUN.

Glucose levels rise when the body is placed under stress and can account for the spike in glucose. Poor perfusion from the diminished oxygen-carrying capacity of the red blood cells and lack of cardiac output raises glucose levels. Also, the patient has type 2 diabetes who administers exogenous insulin to maintain glucose levels. There is a downward trend in the admitting glucose number of 255 to 128. This is attributed to the change in cardiac output and conversion to normal sinus rhythm.

Low magnesium levels increase cardiac irritability and can cause arrhythmias. Conditions such as diabetes are linked to moderate hypomagnesia. Symptoms of low magnesium include weakness, irritability, tetany EKG changes, delirium, and convulsions. The patient presented to the ER and was alert and oriented. She was administered I.V. magnesium sulfate and labs were still pending regarding new level.

Cardiac intervention to minimize formation of thrombus formation from an elevated d-dimer was the administration of Eliquis. Eliquis is an anticoagulant for patients with atrial fibrillation given in prevention of a thrombolytic event. It is not known if an additional d-dimer was drawn once atrial fibrillation converted back to normal sinus rhythm. The patient’s chart only indicated the abnormal admission value of 1,090.

Lab Correlations Reference (APA):

Van Leeuwen, A. M., & Bladh, M. L. (2017). *Davis's comprehensive handbook of laboratory & diagnostic tests with nursing implications*(7th ed.). Philadelphia, PA: F.A. Davis Company.

Diagnostic Imaging—All Other Diagnostic Tests (EKG, Echocardiogram, X-rays, CT scan, etc.) (5 points): .

EKG 12 LEAD

The electrocardiogram records the electrical impulses that stimulate the heart to contract. The test is used to evaluate arrhythmias, conduction defects, myocardial injury and damage. The patient's EKG flagged as abnormal indicating atrial fibrillation with rapid ventricular response of 164 beats per minute.

VENTILATION/PERFUSION LUNG SCAN

The lung scan is indicated in the diagnosis of pulmonary embolism. The patient presented to the ER with shortness of breath and chest pain. A physical exam revealed atrial fibrillation with a rapid ventricular rate. The lung scan showed no ventilatory defects and the probability for a pulmonary embolism is low.

PORTABLE CHEST X-RAY

The chest x-ray was obtained to find more information about the heart, lungs, bony thorax, mediastinum, and great vessels. The patient's heart is normal in size and the lungs revealed no acute infiltrates or signs of pulmonary edema.

Diagnostic Test Correlation, APA Format & References (5 points): .

Van Leeuwen, A. M., & Bladh, M. L. (2017). *Davis's comprehensive handbook of laboratory & diagnostic tests with nursing implications*(7th ed.). Philadelphia, PA: 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	Norvasc (amlodipine)	Lopressor (metoprolol tartrate)	Zestoretic (lisinopril-hydrochlorothiazide)	Lantus (insulin glargine	Glucophage (metformin)
Dose	1x5 mg tablet	1x50 mg tablet BID	1x20-25 mg tablet BID	1x100 unit/ml TID PC	1x1,000 mg tablet BID w/meals
Route	PO	PO	PO	Subcutaneous	PO
Classification	Calcium Channel Blocker	Beta-blocker	ACE inhibitor w/ thiazide diuretic	Insulin	Antidiabetic
Action	Decreases intracellular calcium level, inhibiting smooth-muscle cell contractions and relaxing coronary and vascular smooth muscles, decreasing peripheral vascular resistance, and reducing systolic and diastolic blood pressure	Inhibits stimulation of $beta_1$-receptor sites located mainly in the heart, resulting in decreased cardiac excitability, cardiac output, and myocardial oxygen demand. These effects help to relieve angina, minimize cardiac tissue	May reduce blood pressure by inhibiting conversion of angiotensin I to angiotensin II. Lisinopril may also inhibit renal and vascular production of angiotensin II. Decreased release of aldosterone reduces sodium and water reabsorption and increases their excretion, thereby	Helps the regulation of glucose metabolism. Insulin and its analogs lower blood glucose levels by stimulating peripheral glucose uptake, especially by skeletal muscle and fat, and by inhibiting hepatic glucose production	May promote storage of excess glucose as glycogen in the liver, which reduces glucose production. This drug also may increase the number of insulin receptors on cell membranes and make them more sensitive to insulin. In addition,

		damage from myocardial infarction, and help relieve symptoms of heart failure	reducing blood pressure		metformin modestly decreases blood total cholesterol and triglyceride levels
Reason Client Taking	Patient has a past medical history that includes hypertension	Patient has a past medical history that includes hypertension	Patient has a past medical history that includes hypertension	Patient has a past medical history that includes type 2 diabetes	Patient has a past medical history that includes type 2 diabetes
Contraindications (2)	1. GFR<60 ml/min 2. Hypersensitivity to amlodipine or its components	1. Pulse <45 beats/min 2. Sick sinus syndrome	1. Hereditary or idiopathic angioedema **2**. GFR <60	1. Hypoglycemia 2. Allergy to insulin glargine	1. Advanced renal disease (GFR<30 ml/min) 2. Metabolic acidosis
Side Effects/Adverse Reactions (2)	1. Anxiety 2. Decreased libido	1. Confusion 2. Blurred vision	1. Ataxia 2. Orthostatic hypotension	1. Excessive hunger 2. Fast heart beat	1. Headache 2. Aplastic anemia
Nursing Considerations (2)	1. Monitor patient with impaired hepatic function closely because amlodipine is extensively metabolized by the liver, and expect to titrate dosage slowly when administering drug to patients with	1. Use cautiously in patients with angina or hypertension who have congestive heart failure because beta blockers such as metoprolol can further depress	1. Be aware that lisinopril should not be given to a patient who is hemodynamically unstable after an acute MI 2. Use lisinopril cautiously in patients with fluid volume deficit, heart failure,	1. Insulin is only intended for the subcutaneous route, which is the layer of skin below the dermis & epidermis. 2. Insulin should not be mixed with any other insulin	1. Know that metformin should never be given to a patient with severe renal impairment (GFR<30 ml/min) 2. Give metformin tablets with food, which decreases

	severe hepatic impairment 2. Monitor blood pressure while adjusting dosage, especially in patients with heart failure or severe aortic stenosis because symptomatic hypotension may occur	myocardial contractility, worsening heart failure 2. If patient with heart failure develops symptomatic bradycardia, expect to decrease the metoprolol dosage	impaired renal function, or sodium depletion	solutions	and slightly delays absorption, thus reducing risk of adverse GI reactions. Give E.R. tablets with evening meal; don't break or crush them
Client Teaching needs (2)	1. Tell patient to take missed dose as soon as remembered and next dose in 24 hours 2. Suggest taking amlodipine with food to reduce GI upset	1. Instruct patient to take metoprolol with food at the same time each day-once daily for E.R. tablets. Explain that he may halve tablets but no chew or crush them 2. Advise patient to notify prescriber if pulse rate falls below 60	1. Explain that lisinopril helps to control, but doesn't cure, hypertension and that patient may need lifelong therapy 2. Advise patient to take lisinopril at the same time every day	1. Unopened insulin should be kept in the refrigerator 2. Alternate injection sites as skin can become irritated	1. Direct patient to take drug exactly as prescribed and not to change the dosage or frequency unless instructed 2. Emphasize importance of checking blood glucose level regularly, controlling weight, exercising regularly, and

		beats/minute or is significantly lower than usual			following prescribed diet

Hospital Medications (5 required)

Brand/Generic	Cardizem (diltiazem)	Magnesium (magnesium sulfate)	Multaq (dronedarone)	Eliquis (apixaban)	Lanoxin (digoxin)
Dose	125 mg in sodium chloride 0.9 % 125 mL infusion Rate: 5 mg/hr	2 grams	1x400 mg tablet BID w/meals	1x5 mg tablet BID	500 mcg
Route	IV	IV	PO	PO	IV
Classification	Calcium Channel Blocker	Antiarrhythmic, electrolyte replacement	Antiarrhythmic	Anti-thrombolytic	Cardiac glycoside
Action	Inhibits transport of calcium into myocardial and vascular smooth muscle cells, resulting in inhibition of excitation-contraction coupling and subsequent contraction.	Magnesium is required for normal function of the ATP-dependent sodium-potassium pump in muscle membranes. It may effectively treat digitalis glycoside-induced	Although specific effect on heart rhythm is unknown, dronedarone possesses properties of all four Vaughn-Williams antiarrhythmic classes	Inhibits factor Xa, apixaban decreases thrombin generation and thrombus development	Increases the force and velocity of myocardial contraction, resulting in positive inotropic effects. Digoxin produces antiarrhythmic effects by decreasing

	Therapeutic Effect(s): Systemic vasodilation resulting in decreased BP. Coronary vasodilation resulting in decreased frequency and severity of attacks of angina. Reduction of ventricular rate in atrial fibrillation or flutter.	arrhythmias because correction of hypomagnesemia improves the sodium-potassium pump's ability to distribute potassium into intracellular spaces and because magnesium decreases calcium uptake and potassium outflow through myocardial cell membranes.			the conduction rate and increasing the effective refractory period of the AV node.
Reason Client Taking	To treat atrial flutter	To correct low serum magnesium levels	To normalize and control rhythmic function of the heart	To prevent the formation of thrombi	To increase the contractility of the heart and improve cardiac output
Contraindications (2)	1. Acute Myocardial infarction 2. Pulmonary edema	1. Heart block 2. MI	1. Oral macrolide antibiotics 2. Permanent atrial fibrillation	1. Active bleeding 2. Severe hypersensitivity to apixaban or its components	1. Ventricular fibrillation 2. Ventricular tachycardia
Side Effects/Adverse Reactions (2)	1. Acute renal failure 2.	1. Muscle cramps 2.	1. Asthenia 2. Nonproductive	1. Hemorrhagic stroke	1. Electrolyte imbalances

	Hyperglycemia	Diaphoresis	cough	2. Rash	2. Colored halos around objects
Nursing Considerations (2)	1. Monitor patient's blood pressure, heart rate and rhythm by continuous ECG, and pulse rate as appropriate during therapy. Keep emergency equipment and drugs available 2. Assess patient for signs and symptoms of heart failure	1. Be aware that magnesium sulfate is the elemental form of magnesium 2. Observe for and report early evidence of hypermagnesemia: bradycardia, depressed deep tendon reflexes, diplopia, dyspnea, flushing, hypotension, nausea, slurred speech, vomiting and weakness	1. Assess patient for evidence of heart failure, such as dependent edema, increasing shortness of breath, or weight gain. If present, notify prescriber; dronedarone may need to be discontinued 2. Monitor patient's serum creatinine levels, as ordered. Elevation may occur rapidly, plateau after 7 days, and usually is reversible after therapy stops.	1. Do not give to patients with severe hepatic dysfunction 2. Monitor patient closely for bleeding, as apixaban may cause life-threatening bleeding. Expect drug to be discontinued with active pathological hemorrhage because there is no antidote for apixaban. Know that effects of drug may persist for at least 24 hours after last dose.	1. Take patient's apical pulse before giving each dose and notify prescriber it it's below 60 beats/minute 2. Monitor patient closely for signs of digitalis toxicity, such as altered mental status, arrhythmias, heart block, nausea, vision disturbances, and vomiting. If they appear, notify prescriber, check serum digoxin level as ordered, and expect to withhold drug until

					level is known. Monitor ECG tracing continuously
Client Teaching needs (2)	1. Tell patient that stopping drug suddenly may have life-threatening effects 2. Explain that capsules and E.E. tablets must be swallowed whole.	1. Teach patient to prevent constipation by increasing dietary fiber and fluid intake and exercising regularly 2. Tell patient to notify prescriber and avoid using magnesium-containing laxative if she has abdominal pain, nausea, or vomiting	1. Inform patient that dronedarone must be taken with a meal 2. Warn patient that dronedarone should not be taken with grapefruit juice	1. Emphasize the importance of taking exactly as prescribed 2. Tell patient unable to swallow whole tablets to crush tablet and mix with apple juice or water or mix with applesauce and take immediately	1. Instruct patient to take digoxin at same time each day to help increase compliance 2. Instruct patient to carry medical identification that indicates her need for digoxin.

Medications Reference (APA Format):.

Carpenito, L. J. (2017). *Nursing diagnosis: Application to clinical practice*(15th ed.).

Philadelphia, PA: Wolters Kluwer.

Assessment

Physical Exam (18 points)

NEUROLOGICAL (2 points): **MAEW: Y ☒ N☐** **PERLA: Y ☒ N☐** **Strength Equal: Y ☒ N ☐ if no - Legs ☐ Arms ☐ Both ☐** **Orientation, Mental Status, Speech, Sensory, LOC:**	Patient is awake and sitting in the bedside chair. She is easily aroused, responsive to stimuli, and is A&O x 4 (person, place, time, and situation). Her speech is clear and regular, and she speaks English well. She is pleasant and happy to have the attention of a nursing student. Patient MAEW for current age and condition. Patient's strength is equal bilaterally. Patient shows no signs of acute distress and neurological deficit.
MUSCULOSKELETAL (2 points): **Neurovascular status, ROM, Supportive devices/strength** **ADL Assistance Y☐ N ☐** **Fall Risk: Y ☐ N☐** **Activity/Mobility Status:** **Independent (up ad lib) ☐** **Needs assistance with equipment ☐** **Needs support to stand and walk☐**	**Fall Risk: 3** **According to the MFS, patient is not a fall risk.** Patient exhibits active range of motion bilaterally. Patient shows no sign of neurovascular deficit. Patient is not have a history of falls and is not a fall risk. Patient can move independently without assistance or equipment. Patient does not need support to stand from a sitting position. .
CARDIOVASCULAR (2 points): **Heart sounds:** S_1, S_2 **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable)** **Peripheral Pulses:** Radial, brachial, & pedal **Capillary refill:** _<3 sec_____ **Neck Vein Distention: Y ☐ N ☒** **Edema Y ☐ N ☒** **Location of Edema_N/A_____**	Patient is no longer being monitored on telemetry. Patient's status is currently stable and waiting for report regarding current magnesium draw and possible discharge instructions. S1 and S2 audible with regular rate and rhythm. No audible murmur detected. Radial pulses 2+ bilaterally, brachial pulses 2+ bilaterally, and dorsalis pedal pulses 2+ bilaterally. Capillary refill is less than 3 seconds and within normal limits. Patient shows no sign of edema and is negative for bilateral neck vein distention and carotid bruit. Peripheral IV Line initiated on 2/3/19 - Single Lumen metacarpal vein (top of left hand), 20-gauge, peripheral line is patent, stable. No complications. Patient denies pain at site. No evidence of erythema, drainage or swelling.

	Flushes easily. IV site is clean, dry, and intact.
RESPIRATORY (2 points): **Accessory muscle use: Y☐ N ☐** **Breath Sounds: Location, character:** Lung sounds clear bilaterally. Patient currently breathing room air.	No accessory muscle use observed while breathing. Trachea midline. No deviations. Patient denies shortness of breath, wheezing, and cough. Anterior and posterior lung sounds auscultated. Lung sounds clear bilaterally. Current pulse ox reading is 97% on room air.
GASTROINTESTINAL (2 points): **Diet at home:** Patient states she eats "whatever she wants." **Current Diet:** Carb control **Height:** 165.1 cm **Weight:** 90.7 kg **Auscultation Bowel sounds:** Present in all four quadrants **Last BM:** 2/2/19 **Palpation: Pain, Mass etc** **Inspection: distention, incisions, scars, drains, wounds** **Ostomy: Y ☐ N ☒** **Nasogastric: Y ☐ N ☒** **Feeding tubes/PEG tube Y ☐ N ☒** **Type:**_N/A_____	Patient is a type 2 diabetic and current diet is a carb control diet. Last A1C check was less than 6.5%. Patient does have a history of GERD and denies any recent flare ups and discomfort after eating. Abdomen is soft and nontender. Bowel sounds present in all four quadrants. Patient exhibits no pain on abdominal palpation. no tenderness noted. No masses present. Patient does not have an ostomy and abdomen is free of drains, wounds, and scars. Patient's last BM was 2/2/29 and was brown and formed. Patient denies any rapid or current weight loss.
INTEGUMENTARY (2 points): **Skin color** **character, turgor, rashes, bruises:** **wounds:** N/A **Braden scale :** __22_____ **Drains present: Y☐ N ☒** **Type___ N/A _____**	Patient states she is Caucasian and presents with a fair skin tone. Skin has normal elasticity that is warm to touch. No abnormal texture, rashes, bruising is visible on inspection. No notable skin turgor. There is no evidence of lower extremity edema. Patient has a peripheral 20 G IV saline lock initiated on 2/3/19 - Single Lumen metacarpal vein on top of left hand. Peripheral line is patent, stable. No complications. Patient denies pain at site. No evidence of erythema, drainage or swelling. Flushes easily. IV site is clean, dry, and intact. Braden scale: 22

HEENT (2 points): **Head:** . **Ears:** **Eyes:** **Nose:** **Teeth**	**Head:** Hair is loose, gray, and evenly distributed. No noticeable lesions on the scalp. **Ears:** Soft and no cerumen noticeable in both ears. **Eyes:** Conjunctiva is pink; sclera is white. Pupils are 4 mm equal, round, and reactive to light with 2-step method bilaterally. Accommodation with convergence and constriction bilaterally. EOMs are intact bilaterally. Patient does wear glasses. **Nose**: No deviations present. Mucosa is pink and moist. Patient reports no nose bleeds. **Mouth:** Lips are symmetrical. Oral mucosa is moist and pink. **Teeth:** Patient's teeth are intact and white in color. There is no visible sign of tooth decay. **Neck:** Trachea appears midline. Thyroid not palpable along with tonsillar, submandibular and submental lymph nodes. No pulsations present bilaterally.
GENITOURINARY (2 Points): **Color, character, quantity of urine, pain,** **Dialysis Y ☐ N ☐** **Inspection of genitals** **Catheter: Y ☐ N ☐** **Type_N/A_____**	Patient is independent and can ambulate to the bathroom. Last void was pale yellow in color and unremarkable. Patient denies pain, hesitancy or urgency on urination. Patient has no genital abnormalities. Patient is on I&O's.
PSYCHOSOCIAL/CULTURAL (2 points): **Coping methods,** **Educational level** **Developmental level,** **Ethnicity,** **Religion & what it means to pt.** **Occupation (previous if retired)** **Personal/Family Data (Think about home environment, family structure, and available family support)**	Patient is a Caucasian female that is married and will be discharged to her husband. Her husband is a strong source of support. She is currently unemployed. Patient is coping well and is showing no adverse effects of current medication regimen. Patient states she will maintain current medication schedule and follow-up appointments.

Vital Signs, 2 sets (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0743	69 beats per minute	148/71 mmHg Right arm	16	36.6 Celsius (97.9 Fahrenheit)	96% on Room Air
1100	70 beats per minute	136/85 mmHg Right Arm	16	37.1 Celsius (98.8 Fahrenheit)	97% on Room Air

Vital Sign Trends:

Patient has a past medical history that includes hypertension. Metoprolol is the first-line treatment for patients with atrial fibrillation to help maintain normal sinus rhythm. Also, digoxin increases the contractility of the heart to ensure adequate tissue perfusion. With the addition of dronedarone, to normalize and control rhythmic function of the heart, and magnesium sulfate to prevent dangerous arrhythmias from low levels, vital signs are currently stable. Patient is not in acute distress and denies pain. Cap refill is less than 3 seconds and a pulse ox of 97% indicates adequate tissue perfusion.

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0743	Numeric Scale 0/10	No location indicated	Patient reports no pain	N/A	No interventions implemented
1100	Numeric Scale 0/10	No location indicated	Patient states, “I have no pain.”	N/A	No interventions implemented

IV Assessment (2 Points)

Site Location, Patency/Condition & Date	Fluid Type/Rate or Saline Lock
2/03/19 Peripheral IV Line - Single Lumen metacarpal vein (top of left hand), 20-gauge, peripheral line is patent, stable. No complications. Patient denies pain at site. No evidence of erythema, drainage or swelling. Flushes easily. IV site is clean, dry, and intact.	Saline lock

Intake and Output during Your Shift (2 points)

Intake	Output
360 ml oral	800 ml urine

Nursing Care

Summary of care- Narrative of Nursing care provided, patient status throughout the day, any major concerns, etc. (2 points):

Patient care for atrial fibrillation with rapid ventricular rate:

- Continue to monitor and assess rate and rhythm of heart
  - Frequent vitals
  - Continue with Cardizem drip and look for new order for oral medication form in the morning
  - Maintain telemetry
  - Hold amlodipine but continue with metoprolol
- Patient is a high risk for stroke
  - Continue to trend troponins
  - Continue with Eliquis
    - Provide patient with education regarding new medication including signs and symptoms of bleeding
  - Echocardiogram scheduled for morning
- Begin process for follow-up cardiology evaluation as an outpatient
- Monitor blood sugars
- Continue to replenish magnesium levels
  - Re-check levels in morning
- Carb-controlled diet

Discharge Planning- Identify discharge needs, education, home health services/equipment, family involved, etc. (2 points):

Patient is being discharged to her husband and will need follow-up for an electrophysiology after discharge. Refill of metoprolol lisinopril sent to the pharmacy along with new medications Eliquis and Multaq. To help minimize the incidence of stroke, she was started on Eliquis. Also, Multaq was added to her medication regimen to help pursue rhythm control. Patient will need to be alert to signs and symptoms of bleeding while taking Eliquis. It is essential that the patient understand the importance of compliance regarding future appointments, medication regimen, and logging daily weights. Patient also needs to monitor and track blood sugar levels and return in two weeks for a follow-up.

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

Nursing Diagnosis ● Include full nursing diagnosis with "related to" and "as evidenced by" components	**Rational** ● Explain why the nursing diagnosis was chosen	**Intervention (2 per dx)**	**Evaluation** ● How did the patient/family respond to the nurse's actions? ● Client response, status of goals and outcomes, modifications to plan.
1. Decreased Cardiac Output related to alteration in heart rate and rhythm as evidence by EKG showing Atrial Fibrillation with a rapid ventricular rate of 164 beats per minute (Swearingen, 2016, p. 173)	Low cardiac output can further reduce myocardial perfusion, resulting in a decline of the oxygen-carrying capacity of RBCs. The strain on the heart places essential organs that need oxygen at risk.	**1.** Monitor electrocardiogram for rate, rhythm, and ectopy **2.** Assess peripheral pulses, including cap refill	Met. Patient started on Cardizem drip, per doctor order to get heart rate below 100 beats per minute. Initiation of medication converted the patient back to normal sinus rhythm.
2. Ineffective breathing pattern related to chest pain as evidenced by patient reports feeling "shortness of breath"	Respiratory rate and rhythm changes are early warning signs of impending respiratory difficulties.	**1.** Use pulse oximetry to monitor oxygen saturation **2.** Assess the respiratory rate, rhythm, and depth.	Met. Patient's vital signs stabilized once the heart rate lowered and converted back to normal sinus rhythm. Patient able to breath normally without shortness of breath. This

(Swearingen, 2016, p. 165)	Shortness of breath is a typical finding of pulmonary embolism.	Assess for any increase in the work of breathing: shortness of breath, and use of accessory muscles	allowed for proper gas exchange increasing the oxygen-capacity of RBCs to parts of the body.
3. Risk for injury related to venous stasis and hypercoagulable state as evidenced by an abnormal d-dimer level of 1,090 (Swearingen, 2016, p. 186)	Atrial fibrillation results in the pooling of blood in the atria, increasing the patient's risk of a pulmonary embolism and stroke.	**1.** Assess for factors relating to venous thrombus formation **2**. Collaborate with the health care provider regarding treatment with prophylaxis	Met. The hypercoagulability of the blood increased the incidence of clot formation. Administration of Eliquis decreased the risks of a pulmonary embolism. Patient's response is favorable with the conversion normal sinus rhythm and prophylaxis blood thinner and no longer in acute distress.
4. Risk for electrolyte imbalance related failure of regulatory mechanisms as evidenced by low serum magnesium level of 1.1 (Swearingen, 2016, p. 368)	Low serum magnesium levels place the patient at risk for tetany, seizures, and confusion progressing to coma	**1.** Assess for poor skin turgor, dry mucous membranes, sunken and soft eyeballs, tachycardia, and orthostatic hypotension **2.** Measure I&O accurately and weigh patient daily	Met. Patient is no longer at risk for tetany, seizures, and confusion from a low magnesium level. Heart is able to beat normally with regular rate and rhythm. Patient is no longer in acute distress and denies chest pain.
5. Ineffective Health Maintenance related to obesity as evidenced by BMI of 33.3 (Swearingen, 2016, p. 166)	The health care provider needs to ensure that the patient has all the information needed to make good lifestyle choices. Some patients may know that certain	**1.** Assess the patient's knowledge of health maintenance behaviors **2.** Assess the patient's health history over the past 5 years	Not met. Patient's BMI and history of diabetes increases places her at risk for atrial fibrillation. Patient will need to be assessed regarding the importance of losing weight and adopting healthy behaviors.

	unhealthy behaviors can result in poor health outcomes but continue the behavior despite this knowledge.		

Overall APA Format/Neatness/Grammar (5 point):

Swearingen, P. L. (2016). *All-in-one nursing care planning resource: Medical-surgical, pediatric, maternity, psychiatric nursing care plans*. St. Louis, MO: Elsevier/Mosby.

Concept Map (20 Points):

Subj
Shortness of breath
Chest pain
Dyspnea upon exer

Objective
Abnormal EKG
Heart rate of 164 bpm
Abnormal D-dimer 1,090
Magnesium level of 1.1

.B. is a 6 year old Caucasian female who presents with sudden onset of palpitations that began about 1:00 p.m. on February 1st. She continued with her day but started to feel some chest discomfort with dyspnea after dinner and decided to come to the emergency room. She was found to be in atrial fibrillation with a rapid ventricular rate

Nursing Diagnosis/Outcomes

Decreased Cardiac Output related to alteration in heart rate and rhythm as evidence by EKG showing Atrial Fibrillation with a rapid ventricular rate of 164 beats per minute
After administration of Cardizem drip, heart rate converted back NSR with regular rate and rhythm

Ineffective breathing pattern related to chest pain as evidenced by patient reports feeling "shortness of breath"
Patient no longer in acute distress and able to breathe normally after administration of Cardizem

Risk for injury related to venous stasis and hypercoagulable state as evidenced by an abnormal d-dimer level of 1,090
Administration of blood thinner (Eliquis) decreases patient's risk for pulmonary embolism and hypercoagulability.

rventions
ardiogram for rate, rhythm, and ectopy
pulses, including cap refill
y to monitor oxygen saturation
ory rate, rhythm, and depth. Assess for
work of breathing: shortness of
accessory muscles
relating to venous thrombus formation
he health care provider regarding
ophylaxis