N321 Care Plan 3

Lakeview College of Nursing

Shannon O’Malley

Demographics (3 points)

Date of Admission	Patient Initials	Age	Gender
11/10/2019	GG	70	Male
Race/Ethnicity	**Occupation**	**Marital Status**	**Allergies**
White	Retired	Married	Ace Inhibitors Benazepril Tape
Code Status	**Height**	**Weight**	
Full	179.0 cm	116.5 kg	

Medical History (5 Points)

Past Medical History: Afib, CAD, CHF, COPD, GERD, HTN, hypercholesterolemia, hyponatremia, obesity, bilateral cataracts
Past Surgical History: Stent placement, cardiac catheterization, rotator cuff repair
Family History: Father- hodgkins disease, hypertension **Mother-** colon cancer, heart failure, stroke, hypertension
Social History (tobacco/alcohol/drugs): Former smoker for 47 years, no alcohol or substance abuse
Assistive Devices: Walker
Living Situation: Assisted living facility with his wife
Education Level: High school

Admission Assessment

Chief Complaint (2 points): Shortness of breath and wheezing

History of present Illness (10 points): Patient was brought to the ED on 11/10/2019 because he "hasn't been feeling right the past couple days". Patient has a history of COPD due to smoking for 47 years. The patient has been experiencing shortness of breath and wheezing and it has gotten worse. Patient has an increase in sputum production, which is green/brown in color. Due to patient's comorbidities and compromised immune system due to his lung cancer, he was admitted.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Health care associated pneumonia

Secondary Diagnosis (if applicable): Lung cancer

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

Pneumonia is characterized by inflammation of lung tissue, which causes the alveolar spaces to fill with inflammatory cells and fibrin (Capriotti & Frizzell, 2016). Pneumonia can be caused by a variety of different bacteria and causes more death in the US than any other infection (Capriotti & Frizzell, 2016). In this patient's case, he was diagnosed with hospital-acquired pneumonia due to immunosuppression from chemotherapy. It is generally caused by inhalation of droplets that contain bacteria (Capriotti & Frizzell, 2016). "Pathogens adhere to respiratory epithelium and stimulate an inflammatory reaction. At the sites of inflammation, vasodilation occurs with attraction of neutrophils out of capillaries and into the air spaces. Mucous and exudative edema accumulate between the alveoli and capillaries" (Capriotti & Frizzell, 2016, p. 450).

Patients typically present with a cough that can be productive, fever, chills, chest pain, shortness of breath, hemoptysis, and occasionally nausea and vomiting. Crackles are usually present and in the patients case this is true. He also presented with shortness of breath and a productive cough. "Conditions such as influenza, asthma, or COPD increase susceptibility to pneumonia" (Capriotti & Frizzell, 2016, p. 450). This patient has COPD related to smoking for 47 years. This comorbidity only makes the diagnosis of pneumonia more complicated.

The most accurate method of diagnosing pneumonia is with a chest x-ray. A CBC, ABG's, sputum culture, and thoracocentesis can also help in diagnosing pneumonia. Treatment generally includes antibiotic therapy and adequate oxygenation. It is critical to assess patient's ability to swallow and cough in order to prevent aspiration. The patient is currently being treated with Augmentin, 2L of O2 therapy, and is sat up in a fowler's position. He makes sure to spit out any sputum he has from his cough.

Lung cancer is the leading cause of cancer related death in the world. 85% of lung cancer patients are current or former smokers (Capriotti & Frizzell, 2016). “A respiratory tract lesion develops and typically undergoes sequential genetic and structural changes from hyperplasia, an increased mass of cells, to dysplasia, a precancerous mass of cells, to an invasive neoplasia, cancerous mass” (capriotti & Frizzell, 2016, p. 954). Lung cancer is categorized in stages 0-4 and is generally likely to metastasize to other parts of the body. The patient is a former smoker for 47 years. He also has a diagnosis of COPD.

Patients with lung cancer generally present with a cough, hemoptysis, wheeze, stridor, chest pain, and shortness of breath. Patients can experience weight loss, excessive fatigue, and weakness. My patient has a chronic productive cough with green/brown sputum. “A lung tumor can frequently cause an obstructive accumulation of secretions in the bronchioles that appear as pneumonia” (Capriotti & Frizzell, 2016, p. 955). The patient has pneumonia and lung cancer, so the symptoms overlap. He presented with shortness of breath and a productive cough, which are symptoms indicative of pneumonia and lung cancer.

In order to diagnose lung cancer the doctors will order a chest x-ray, CT scan, an examination of sputum, and bronchoscopy (Capriotti & Frizzell, 2016). The treatment of lung cancer is based off of the staging. Treatment involves surgery, radiation, and chemotherapy. My patient receives chemotherapy every other week and therefore has a compromised immune system. His lack of white blood cells and multitude of comorbidities is what caused him to develop pneumonia.

Pathophysiology References (2) (APA):

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

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 mcl	2.99	2.60	Patients RBC's are abnormal due to chemotherapy and radiation related to lung cancer
Hgb	11.3-15.2 g/dL	9.6	8.2	Patients Hgb is low due to diagnosis of lung cancer and chemotherapy
Hct	33.2-45.3 %	28.0	23.7	Patients Hct is low due to diagnosis of lung cancer and chemotherapy
Platelets	149-393 k/mcl	151	108	Patients platelets are low due to diagnosis of lung cancer and chemotherapy
WBC	4.0-11.7 k/mcl	21.8	7.5	Patients WBC's are elevated due to healthcare-associated pneumonia
Neutrophils	45.3-79.0 %	94.0	89.7	Patients neutrophils are elevated due to neutropenic fever
Lymphocytes	11.8-45.9%	1.8	4.4	Patients lymphocytes are low due to chemotherapy for lung cancer
Monocytes	4.4-12.0 %	4.0	5.4	Patients monocytes are low due to chemotherapy for lung cancer
Eosinophils	0-6.3 %	0.1	0.4	N/A
Bands	N/A	N/A	NA	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 mmol/L	123	127	Patients sodium is low due to diagnosis of CHF
K+	3.5-5.1 mmol/L	4.0	3.5	N/A
Cl-	98-107 mmol/L	90	93	Patients chloride is low due to fluid loss from vomiting after chemotherapy

CO2	21-31 mmol/L	26	27	N/A
Glucose	74-109 mmol/L	102	93	N/A
BUN	7-25 mg/dL	12	11	N/A
Creatinine	0.50-0.90 mg/dL	0.58	0.57	Patients creatinine is low due to loss of muscle mass related to old age
Albumin	3.5-5.2 g/dL	3.5	N/A	N/A
Calcium	8.6-10.3 mg/dL	8.8	8.6	N/A
Mag	1.6-2.4 mg/dL	N/A	N/A	N/A
Phosphate	35-105 unit/L	N/A	N/A	N/A
Bilirubin	0.3-1.0 mg/dL	1.3	N/A	Patients bilirubin is high due to chemotherapy
Alk Phos	35-105 unit/L	111	N/A	N/A
AST	0-32 intlunit/L	12	N/A	N/A
ALT	0-33 intlunit/L	6	N/A	N/A
Amylase	56-90	N/A	N/A	N/A
Lipase	0-110	N/A	N/A	N/A
Lactic Acid	6-16	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	0.9-1.2	N/A	N/A	N/A
PT	11-14	N/A	N/A	N/A

PTT	16-40	N/A	N/A	N/A
D-Dimer	0-250	N/A	N/A	N/A
BNP	<100	154	N/A	Patients BNP is elevated due to chronic hypoxia related to COPD and lung cancer
HDL	N/A	N/A	N/A	N/A
LDL	N/A	N/A	N/A	N/A
Cholesterol	<200	N/A	N/A	N/A
Triglycerides	<150	N/A	N/A	N/A
Hgb A1c	N/A	N/A	N/A	N/A
TSH	N/A	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	Yellow and clear	N/A	N/A
pH	5.0-8.0	6.0	N/A	N/A
Specific Gravity	1.005-1.035	1.011	N/A	N/A
Glucose	Normal	Negative	N/A	N/A
Protein	Negative	Negative	N/A	N/A
Ketones	Negative	Negative	N/A	N/A
WBC	<5	1	N/A	N/A
RBC	0-3	5	N/A	Patient has RBC in his urine due to infection (pneumonia)
Leukoesterase	Negative	Negative	N/A	N/A

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

Test	Normal Range	Value on Admission	Today's Value	Explanation of Findings
Urine Culture	Negative	N/A	N/A	N/A
Blood Culture	Negative	N/A	N/A	N/A
Sputum Culture	Negative	N/A	N/A	N/A
Stool Culture	Negative	N/A	N/A	N/A

Lab Correlations Reference (APA):

Van Leeuwen, A. M., & Bladh, M. L. (2017). Davis's Comprehensive Handbook of Laboratory and Diagnostic Tests with Nursing Implications (7th ed.). Philadelphia, PA: F.A. Davis Company

Diagnostic Imaging

All Other Diagnostic Tests (5 points):

- EKG, CT angio chest pulmonary, x-ray chest 1 view

Diagnostic Test Correlation (5 points):

- **EKG-** Monitor heart function and strength due to patients diagnosis of A fib, CHF, and CAD
- **CT Angio Chest Pulmonary-** Monitor and diagnose presence of pneumonia and COPD in the lungs
- **Chest X-Ray-** Can detect and diagnose presence of pneumonia in the lungs as well as monitor lung cancer progression

Diagnostic Test Reference (APA):

Capriotti, T., & Frizzell, J. (2016). Pathophysiology: Introductory Concepts and Clinical Perspectives. Philadelphia: PA. 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	**Augmentin**	**Calcium**	**Carvedilol**	**Nitroglycerine**	**Eliquis**
Dose	875 mg	500 mg	25 mg	0.4 mg	5 mg
Frequency	Q12H	BID	BID	PRN	Once daily
Route	PO	PO	PO	PO	PO
Classification	Penicillin's	Elemental cation	Beta blocker	Nitrate	Anticoagulants
Mechanism of Action	A semisynthetic antibiotic with a broad spectrum of bactericidal activity, covering both gram-negative and gram-positive microorganisms	Increases levels of intracellular and extracellular calcium	Nonselective beta-adrenergic and alpha1-adrenergic blocking agent with no intrinsic activity for use in congestive heart failure and hypertension	May interact with nitrate receptor in vascular smooth muscle cell membranes	Inhibits platelet activation by selectively blocking the active site of factor Xa
Reason Client Taking	Treatment of pneumonia	Patient does not consume enough calcium in his diet	Treatment of hypertension	Manage chest pain	Hospital precaution
Contraindications (2)	Allergy to penicillin's, history of jaundice	Hypercalcemia, renal calculi	Hypersensitivity, bronchial asthma	Acute MI, cerebral hemorrhage	Increased risk of stroke, spinal hematoma
Side Effects/Adverse Reactions (2)	Diarrhea, mycosis	Paresthesia, hypotension	Dizziness, fatigue	Agitation, tachycardia	GI bleeding, skin rash
Nursing Considerations (2)	Different tablets are not interchangeable, risk for CDAD	Use cautiously for patients with chronic kidney insufficiency, Assess renal function prior to giving	Use caution in anesthesia or surgery, increased risk of stroke	Assess patient for evidence of overdose, check vitals before administering dosage	Prolongs PT and aPTT, monitor for bleeding

		medication			

Hospital Medications (5 required)

Brand/Generic	**Aspirin**	**Atorvastatin**	**Carvedilol**	**Furosemide**	**Pantoprazole**
Dose	81 mg	20 mg	25 mg	40 mg	40 mg
Frequency	Q AM	Daily	BID	Daily	Daily
Route	PO	PO	PO	PO	PO
Classification	Salicylate	Synthetically derived fermentation product	Beta blocker	Sulfonamide	Substituted benzimidazole
Mechanism of Action	Blocks activity of cyclooxyhenase synthesis	Reduces plasma cholesterol by inhibiting HMG-CoA cholesterol synthesis in the liver.	Nonselective beta-adrenergic and alpha1-adrenergic blocking agent with no intrinsic activity for use in congestive heart failure and hypertension	Inhibits water and sodium reabsorption to increase urine formation	Interferes with gastric secretion by inhibiting the enzyme system
Reason Client Taking		Control lipid levels due to obesity	Treatment of hypertension	Treatment of hypertension	To treat and manage GERD
Contraindications (2)	Asthma, bleeding problems	Active hepatic disease, breastfeeding	Hypersensitivity, bronchial asthma	Hypersensitivity	Hypersensitivity
Side Effects/Adverse Reactions (2)	Confusion, diarrhea	Amnesia, arrhythmias	Dizziness, fatigue	Dizziness, arrhythmias	Annxiety, chest pain
Nursing Considerations	Don’t crush time-released	Expect liver	Use caution in anesthesia or	Obtain a patients	Monitor PT and INR

(2)	tablets. Advise client to not take ibuprofen	function tests to be ordered. Expect atorvastatin to be used in clients without CAD	surgery, increased risk of stroke	weight before and periodically during therapy to monitor fluid loss, monitor blood pressure	levels if patient takes anticoagulants. Monitor patient for diarrhea

Medications Reference (APA):

Jones & Bartlett Learning. (2019). 2019 Nurses drug handbook (18th ed.). Burlington, MA.

Assessment

Physical Exam (18 points)

GENERAL (1 point): **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	Patient is A+O4 upon assessment. He is alert and in good spirits. Patient is aware of his surroundings and able to answer questions thoroughly. Patient appears to be well kept and put together.
INTEGUMENTARY (2 points): **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** **Drains present: Y☐ N ☐** **Type:**	Patient's skin is pink, warm, and dry. His skin turgor is loose and not taunt. He has a little bit of a pink rash over his coccyx and has a bandage over it for protection. Patient has no bruises or open wounds upon assessment. Patient is a 17 on the Braden scale. Patient has no drains present at this time.
HEENT (1 point): **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	Patients head is midline with no deviations. His face is symmetric. Patient is bald due to chemotherapy. Ears are symmetrical. His eyes meet PEERLA, but takes a few seconds longer due to his bilateral cataracts. Nose is midline and patient is on 2L of oxygen therapy. Patient's teeth are clean. Oral mucosa is pink and moist. .
CARDIOVASCULAR (2 points): **Heart sounds:** **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** **Peripheral Pulses:** **Capillary refill:** **Neck Vein Distention: Y ☐ N ☐** **Edema Y ☐ N ☐** **Location of Edema:**	.Patient presents with normal sinus rhythm on telemetry. S1 and S2 are present upon assessment. Peripheral pulses are palpable. Capillary refill is < 3 seconds. No neck vein distention noted. No edema is present.
RESPIRATORY (2 points): **Accessory muscle use: Y☐ N ☐** **Breath Sounds: Location, character**	. The use of accessory muscles while breathing was observed. Patient is only able to take shallow breaths. Patient presented with SOB but felt relief after admission. Crackles were heard bilaterally at the base of the lungs. Patient wears 2L O2.
GASTROINTESTINAL (2 points): **Diet at home:** **Current Diet** **Height:** **Weight:**	Patients diet at home is regular. Patient is currently on a regular diet while in the hospital. Patient is 179.0 cm tall and weighs 116.5 kg. Bowel sounds are present and hyperactive in all four quadrants. Last bowel movement was

Auscultation Bowel sounds: **Last BM:** **Palpation: Pain, Mass etc.:** **Inspection:** **Distention:** **Incisions:** **Scars:** **Drains:** **Wounds:** **Ostomy: Y ☐ N ☒** **Nasogastric: Y ☐ N ☒** **Size:** **Feeding tubes/PEG tube Y ☐ N ☒** **Type:**	11/08/19. Patient says he has been experiencing a lot of gas. No pain expressed during palpation in all four quadrants. No distention, incisions, scars, or drains observed. Patient has no open wounds. Patient has no ostomy, NG tube, or feeding tubes**.**
GENITOURINARY (2 Points): **Color: Yellow** **Character: No smell** **Quantity of urine: N/A** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☒ N ☐** **Type:** **Size:**	Patient is incontinent. Patient reports no pain with urination. Patient has a Coude catheter that is size 14. Patient is not on dialysis. Genitals are normal in appearance upon assessment.
MUSCULOSKELETAL (2 points): **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☒ N ☐** **Fall Risk: Y ☒ N☐** **Fall Score: 60** **Activity/Mobility Status:** **Independent (up ad lib) ☐** **Needs assistance with equipment ☐** **Needs support to stand and walk☐**	.Patients fall risk score is 60. Patient uses walker and is a +2 assist. Patients ROM and strength could not be assessed due to weakness from chemotherapy. Patient has no pain upon moving extremities. Patient uses gait belt and a walker but is on general bed rest due to his condition.
NEUROLOGICAL (2 points): **MAEW: Y ☐ N☐** **PERLA: Y ☐ N☐** **Strength Equal: Y ☐ N ☐ if no -** **Legs ☐ Arms ☐ Both ☐** **Orientation:** **Mental Status:** **Speech:**	Patient is A+Ox 4. He is not confused or agitated. Patient cannot move all extremities well due to his obesity and weakness. PERLA is present. Strength is not equal in all extremities. Patient's mental status is not altered. Patient's speech is clear. Patients taste, touch, site, and smell are in tact. LOC x4.

Sensory: **LOC:**	
PSYCHOSOCIAL/CULTURAL (2 points): **Coping method(s):** **Developmental level:** **Religion & what it means to pt.:** **Personal/Family Data (Think about home environment, family structure, and available family support):**	Patient enjoys watching sports on television and spending time with his wife in his free time. He is a veteran. Patient has a high school education. Patient is Christian. Patient lives in an assisted living facility and spends time with his children when he can.

Vital Signs, 2 sets (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0400	87	105/62	18	37.0	94
0700	100	113/68	20	36.2	92

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0700	0-10	N/A	0	N/A	N/A
0930	0-10	N/A	0	N/A	N/A

IV Assessment (2 Points)

IV Assessment	Fluid Type/Rate or Saline Lock
Size of IV: Port on right side of chest **Location of IV:** Midline right chest **Date on IV:** 11/10/19 **Patency of IV:** Open with no blockage **Signs of erythema, drainage, etc.:** No visible drainage or erythema **IV dressing assessment:** No phlebitis or infiltration present, catheter patent	

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
1945	**3250**

Nursing Care

Summary of Care (2 points)

Overview of care: During my shift I was able to pass all of my patient's medications, which included hanging Augmentin and priming the tubing. I was able to sit in on his physical therapy and observe him. He was in good spirits but struggled with holding long conversations due to shortness of breath. During the assessment I was able to hear crackles in his lungs bilaterally.

Procedures/testing done: Patient got a chest X-ray 1 view, an EKG, and a CT angio chest pulmonary.

Complaints/Issues: Patient has no complaints or issues throughout the shift.

Vital signs (stable/unstable): Patients vital signs are stable throughout the shift.

Tolerating diet, activity, etc.: Patient is tolerating his regular diet. Patient spends most of his day in bed due to shortness of breath upon activity.

Physician notifications: No notifications necessary.

Future plans for patient: Patient is discharged back to his assisted living facility. He should follow up with his primary after discharge.

Discharge Planning (2 points)

Discharge location: Back to Brookstone assisted living facility.

Home health needs (if applicable): Patient will go back to assisted living facility.

Equipment needs (if applicable): Patient will need a walker and continuous O2 therapy at the assisted living facility.

Follow up plan: Patient will follow up with primary care provider and continue chemotherapy.

Education needs: Patient should be educated on signs and symptoms for pneumonia incase of reoccurrence.

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

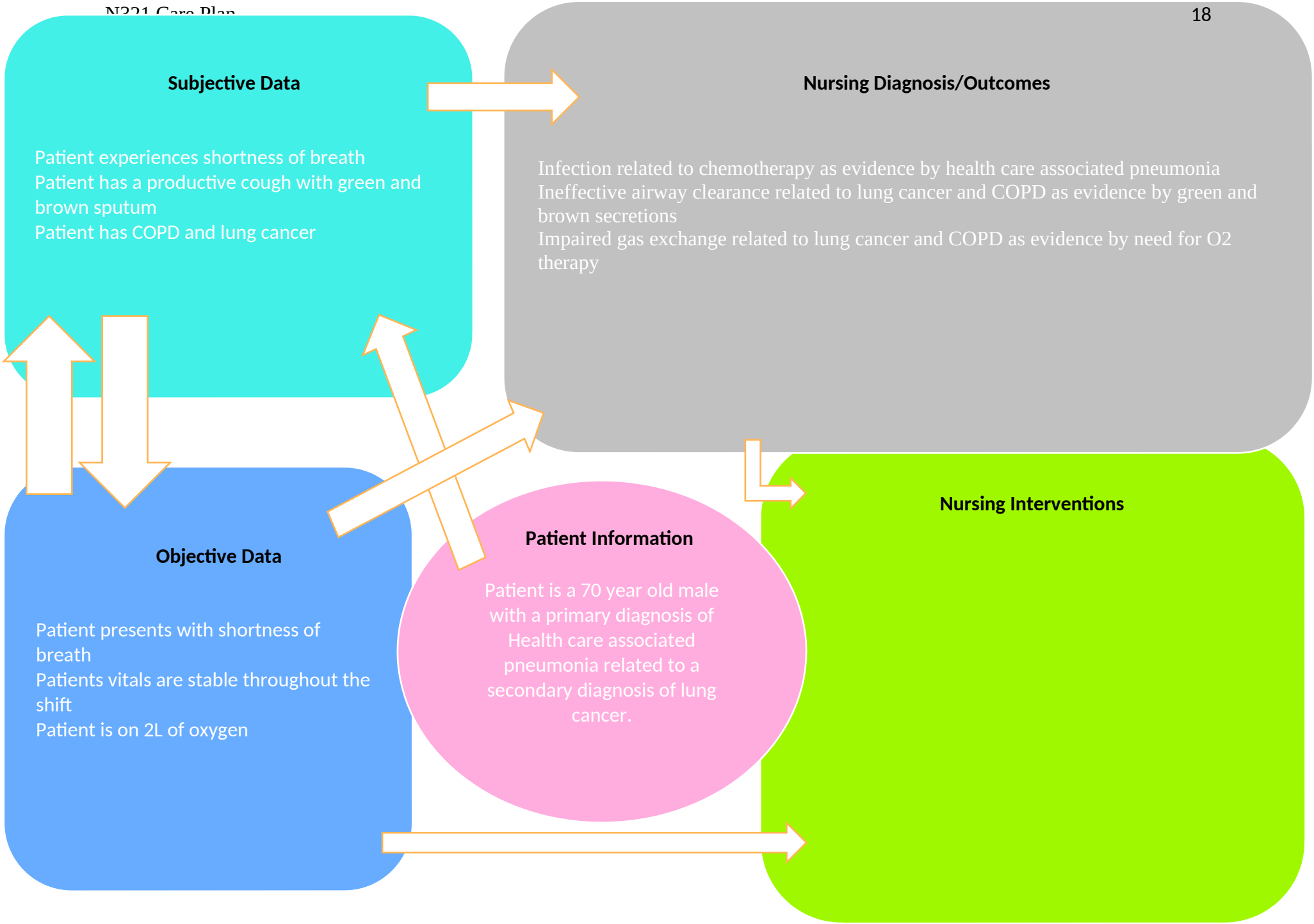
Nursing Diagnosis • Include full nursing diagnosis with "related to" and "as evidenced by" components	**Rational** • Explain why the nursing diagnosis was chosen	**Intervention (2 per dx)**	**Evaluation** • How did the patient/family respond to the nurse's actions? • Client response, status of goals and outcomes, modifications to plan.
1. Infection related to chemotherapy as evidence by health care associated pneumonia	Patient was admitted for health care associated pneumonia due to compromised immune system from chemotherapy	**1.** Monitor WBC counts and blood cultures **2**. Monitor serial chest x-ray reports	• Patients WBC count is low due to chemotherapy so precautions are in place • X-Ray shows presence of pneumonia bilaterally
2. Ineffective airway clearance related to lung cancer and COPD as evidence by green and brown secretions	Patient has lung cancer and COPD due to smoking for 47 years and has green/brown secretions when he coughs	**1.** Asses respirations, noting the rate, rhythm, depth, and use of accessory muscles **2.** Assess cough for effectiveness and productivity	• Patient takes shallow breaths when inhaling and uses accessory muscles. • Patient coughs up green/brown sputum every few minutes.
3. Impaired gas exchange related to	Patient has impaired gas exchange due to	**1.** Assess respirations, skin, nail bed, and mucous membranes	• Patient's nail beds appear to be slightly blue,

lung cancer and COPD as evidence by need for O2 therapy	COPD and lung cancer and wears a nasal cannula with 2L O2	**2.** Monitor for changes in HR and BP	indicating hypoxia. • No changes were noted during the shift.

Other References (APA):

Gulanick, M., & Myers, J. L. (2014). *Nursing care plans: diagnoses, interventions, & outcomes*. St. Louis, MO: Mosby, an imprint of Elsevier Inc.

Concept Map (20 Points):


Subjective Data
Patient experiences shortness of breath
Patient has a productive cough with green and brown sputum
Patient has COPD and lung cancer
Nursing Diagnosis/Outcomes
Infection related to chemotherapy as evidence by health care associated pneumonia
Ineffective airway clearance related to lung cancer and COPD as evidence by green and brown secretions
Impaired gas exchange related to lung cancer and COPD as evidence by need for O2 therapy
Objective Data
Patient presents with shortness of breath
Patients vitals are stable throughout the shift
Patient is on 2L of oxygen
Patient Information
Patient is a 70 year old male with a primary diagnosis of Health care associated pneumonia related to a secondary diagnosis of lung cancer.
Nursing Interventions