N431 Care Plan #2

Lakeview College of Nursing

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Demographics (3 points)

Date of Admission 10/20/2019	**Patient Initials** K.C.	**Age** 74	**Gender** Male
Race/Ethnicity Caucasian	**Occupation** Retired/Disabled	**Marital Status** M	**Allergies:** Bactrim Acetaminophen (red spots) Lisinopril Oxycodone Phenytoin
Code Status Full Code	**Height** 184 cm	**Weight** 57.2 kg	

Medical History (5 Points)

Past Medical History: Acute blood loss anemia; Acute hypoxemia respiratory failure; Allergic rhinitis; Atherosclerosis of left lower extremity with rest pain; Bilateral carotid bruits; Carcinoma in situ of prostate; Celiac artery stenosis; Constipation; COPD; Coronary artery calcification seen on CT scan severe; Coronary artery disease; Enlarged lymph node; ESBL; GERD; Hematemesis; Hypocholesteremia; Hypertensive cardiovascular disease; Major depressive disorder; MRSA; Mini stroke; Murmur; Neurogenic bladder; Neuropathy; New onset atrial fibrillation; Nodule of right lung; Obstructive uropathy; Peripheral vascular disease; Renal stones; Restless leg syndrome; Suprapubic catheter; Thyroid nodule; Tobacco use

Past Surgical History: Change of bladder TURF (12/04/2015); FEM/POPL REVAG W/ATHER (06/01/19), INS CATH ABD/L-EXT ART (10/27/2014); Facial bone; Hernia repair

Family History: No qualifying data

Social History (tobacco/alcohol/drugs): Patient smokes a pack of cigarettes per week for the past 60 years. Patient denies drinking alcohol and the use of illicit drug.

Assistive Devices: Wheelchair

Living Situation: Nursing home resident

Education Level: High School

Admission Assessment

Chief Complaint (2 points): Difficulty breathing

History of present Illness (10 points):

A 74-year-old male nursing home resident was brought to the emergency department (ED) for acute respiratory distress and hypoxemia on 10/20/2019. The patient has a history of COPD, CAD, a-fib, hyperlipidemia, ESBL, and recurrent right-sided pneumonia. The patient states that he had an unproductive cough and chills. ED found his vital signs to be RR 48, P 134, T 41, O2Sat 75%. ED put patient on BiPAP, magnesium sulfate, and DuoNeb.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): Healthcare-associated pneumonia (HCAP)

Secondary Diagnosis (if applicable): Acute respiratory failure with hypoxemia

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

Pneumonia is an acute bacterial or viral infection that causes inflammation of the lungs, particularly the inflammation of the alveolar spaces and interstitial tissue (Swearingen, 2016). The inflammation causes the tissue to swell with fluid and fills the alveolar spaces exudate (Swearingen, 2016). When this occurs, gas exchange cannot happen; non-oxygenated blood is shunted into the vascular system and causes hypoxemia (Swearingen, 2016). Bacterial pneumonia involves all or part of a lobe; whereas, viral pneumonia diffuses throughout the lungs (Swearengin, 2016).

Diagnostic testing used to determine HCAP include chest x-ray, sputum for gram stain and culture and sensitivity tests, white blood cell (WBC) count, chemistry panel, blood culture

and sensitivity, urinary antigen test, oximetry, arterial blood gas (ABG) values, serologic studies, and acid-fast stains and cultures (Swearingen, 2016). The chest x-ray is used to confirm the presence of pneumonia. A sputum culture of the lower respiratory tract before antibiotic therapy identifies the causative organism, and is obtained via expectoration, suctioning, trans-tracheal aspiration, bronchoscopy, or open-lung biopsy. An increased WBC count indicates infection. A chemistry panel detects the presence of hypernatremia, hyperglycemia, and dehydration. A blood culture determines if there is bacteria in the blood and what type of bacteria it is. A urinary antigen test detcts *Legionella pneumophila* and *Streptococcus pneumoniae* in the urine. An oximetry shows if there is a decrease in oxygen saturation. An ABG test can determine hypoxemia, hypocarbia, respiratory alkalosis, or respiratory acidosis. A serologic study can diagnose viral pneumonia. Acid-fast stains and cultures is used to rule out tuberculosis (Swearingen, 2016).

Immunosuppressed patients and those who are neutropenic have a higher risk in developing HCAP (Kollef et al., 2007). Severely immunocompromised patients are affected not only by bacterial but also viruses, such as cytomegalovirus and fungal viruses (*Candida*, *Aspergillus*, *Pneumocystis jirovecci*) (Swearingen, 2016).

HCAP usually occurs after aspiration of oropharyngeal flora or stomach contents in an immunosuppressed patient, or whose coughing mechanisms are impaired (Swearingen, 2016). Bacteria invade the lower respiratory tract via three routes: (1) gastric acid respiration (the most common), (2) obstructions (fluids or foreign body), and (3) infections (Swearingen, 2016). Aspiration pneumonia is a non-bacterial (anaerobic) cause of HCAP that occurs when gastric contents are aspirated (Swearingen, 2016). Gram-negative pneumonia has a high mortality rate

(Kollef et al., 2007). HCAP is the second most infection in critically ill patients and is the leading cause of death in hospital-acquired infections (Swearingen, 2016).

Pathophysiology References (2) (APA):

Kollef, K., Kollef, M., Micek, S., Reichley, R., & Roubinian, N. (2007). Health Care-Associated Pneumonia and Community-Acquired Pneumonia: a Single-Center Experience. *American Society for Microbiology*, 51(10), 3568-3573. https://aac.asm.org/content/aac/51/10/3568.full.pdf

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

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	3.9–5	2.5	2.94	A decreased RBC count is associated with anemia, erythropoietin deficiency, kidney disease, and hemolysis (Fang et al., 2017).
Hgb	11-15.5	7.6	8.9	Low hemoglobin is caused by infection or anemia (Hinkle & Cheever, 2018).
Hct	33.2-45.3%	23.2	29.4	A low hematocrit is caused by infection or anemia (Hinkle & Cheever, 2018).

Platelets	150-400(k)	173	166	
WBC	5-10(k)	12.2	11.5	
Neutrophils	45-80%	N/A	93.4	An elevated neutrophil counts signifies bacterial infection chronic inflammation, medication use, and stress (Riley & Rupert, 2015).
Lymphocytes	11.8-46	N/A	2.1	A low lymphocyte count indicates lymphocytopenia, infection, intense physical exercise, severe stress, or malnutrition (Riley & Rupert, 2015).
Monocytes	4.4-12	N/A	4.4	
Eosinophils	0-6.3	1.4	N/A	
Bands	< x 10^9/L	N/A	0.1	

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-	135-145	139	140	
K+	3.5-5.0	4.7	4.7	
Cl-	98-107	110	113	Hyerchloremia may indicate kidney dysfunction, and possibly an underlying cause of liver failure (Hinkle & Cheever, 2018).
CO2	21-34	25	21	
Glucose	70-99	100	136	Hyperglycemia can be associated with liver disease (Hinkle & Cheever, 2018).
BUN	6-20	38	24	Elevated BUN levels can indicate impaired kidney function. In this patient, it can signify dehydration, medication use, or degree of liver failure (Hinkle & Cheever, 2018).
Creatinine	0.5-0.9	0.78	0.85	

Albumin	3.5-5.2	N/A	N/A	
Calcium	8.6-10.4	8.8	8.7	
Mag	1.6-2.4	1.8	2.0	
Phosphate	2.5-4.5	N/A	N/A	
Bilirubin	<1.2	N/A	N/A	
Alk Phos	32-100 U/L	N/A	N/A	
AST	<32	N/A	N/A	
ALT	<33	N/A	N/A	
Amylase	50-150	N/A	N/A	
Lipase	10-140 U/L	N/A	N/A	
Lactic Acid	0.4-2.3	N/A	N/A	
Troponin	0-0.4 ng/mL	N/A	N/A	
CK-MB	5-25 IU/L	N/A	N/A	
Total CK	22-198 U/L	N/A	N/A	

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

Lab Test	Normal Range	Value on Admission	Today's Value	Reason for Abnormal
INR	0.86-1.14	N/A	N/A	
PT	11.9-15	N/A	N/A	

PTT	23-37	N/A	N/A	
D-Dimer	< 500ng/mL	N/A	N/A	
BNP	<100pg/mL	N/A	N/A	
HDL	> 40	N/A	N/A	
LDL	< 100	N/A	N/A	
Cholesterol	< 200	N/A	N/A	
Triglycerides	< 150	N/A	N/A	
Hgb A1c	0-5.7	N/A	N/A	
TSH	0.358-3.740	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	N/A	
pH	4.5-8.0	N/A	N/A	
Specific Gravity	1.005-1.035	N/A	N/A	
Glucose	< 0.8 mml/L	N/A	N/A	
Protein	6.4-8.4 g/dL	N/A	N/A	
Ketones	0.6-1.5	N/A	N/A	
WBC	5-10(k)	N/A	N/A	
RBC	3.9-5.0	N/A	N/A	
Leukoesterase	4.5-11(k)	N/A	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	7.41	N/A	
PaO2	75-100	97.3	N/A	
PaCO2	35-45	36.6	N/A	
HCO3	22-26	23.4	N/A	
SaO2	>92%	97.6	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	Straw	N/A	N/A	
Blood Culture	N/A	N/A	N/A	
Sputum Culture	N/A	N/A	N/A	
Stool Culture	N/A	N/A	N/A	

Lab Correlations Reference (APA):

Hinkle, J.L., & Cheever, K.H. (2018). *Brunner & Suddarth's Textbook of Medical Surgical Nursing (14th ed.).* Philadelphia, PA: Wolters Kluwer Health Lippincott William & Wilkins.

Normal Lab Values - Common Laboratory Values. (n.d.). Retrieved from https://www.meditec.com/resourcestools/medical-reference-links/normal-lab-values/

Riley, L., & Rupert J. (2015). Evaluation of Patients with Leukocytosis. *American Family Physician*, 92(11), 1004-1011. https://www.aafp.org/afp/2015/1201/p1004.html

Diagnostic Imaging

All Other Diagnostic Tests (5 points):

Chest x-ray (Sarah Bush, 2019).

Diagnostic Test Correlation (5 points):

Chest x-ray: Impression:

- Improved aeration of the right mid lung, otherwise stable pulmonary opacities (Sarah Bush, 2019).

The chest x-ray confirms the presence of pneumonia as seen by infiltrates present on film (Hinkle & Cheever, 2018).

Diagnostic Test Reference (APA):

Hinkle, J.L., & Cheever, K.H. (2018). *Brunner & Suddarth's Textbook of Medical Surgical Nursing (14th ed.).* Philadelphia, PA: Wolters Kluwer Health Lippincott William & Wilkins.

Sarah Bush Lincoln Hospital (2019). *Cerner Database*. Unpublished internal document.

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

Home Medications (5 required)

Brand/Generic	Accuneb	Norco	Bayer	Requip	Zofran

	(albuterol)	(hydrocodone)	(aspirin)	(ropinirole)	(ondansetron)
Dose	2.5mg/3mL inhale	5 mg tablet	81 mg tablet	0.5 mg tablet	4 mg = 2 mL injectable
Frequency	Every 4 hours PRN	Every 4 hours PRN	Daily	HS	Every 6 hours PRN
Route	Inhalant	PO	PO	PO	IV
Classification	Bronchodilator	Analgesic	Antipyretic	Dopamine agonist	Antiemetic
Mechanism of Action	Binds to beta2-adrenergic receptors in airway smooth muscle, leading to activation of adenyl cyclase and increased levels of cyclic-3,5-adenosine monophosphate(cAMP). Increases in cAMP activate kinases, which inhibit the phosphorylation of myosin and decrease intracellular calcium — decreased intracellular calcium relaxes smooth muscle airways. Relaxation of airway smooth muscle with subsequent bronchodilation. Relatively selective for	Bind to opiate receptors in the CNS. Alter the perception of and response to painful stimuli while producing generalized CNS depression: Suppress the cough reflex via direct central action. A decrease in the severity of moderate pain. Suppression of the cough reflex.	Produce analgesia and reduce inflammation and fever by inhibiting the production of prostaglandins. Decreases platelet aggregation. Analgesia. Reduction of inflammation. Reduction of fever. Decreased incidence of transient ischemic attacks and MI.	Ropinirole stimulates the dopamine receptors in the brain and decreases tremor and rigidity in Parkinson's disease. Decreased leg restlessness	Blocks serotonin receptors centrally in the chemoreceptor trigger zone and peripherally at vagal nerve terminals in the intestine.

	beta2 (pulmonary) receptors. Therapeutic Effects: Bronchodilation.				
Reason Client Taking	COPD	Reduce pain	Anti-inflammatory for pneumonia	Reduces restless leg syndrome	Reduce nausea
Contraindications (2)	1) Hyperthyroidism 2) Glaucoma	1) Hypercarbia 2) Respiratory depression	1) Thrombocytopenia 2) Cross-sensitivity with other NSAIDs	1) Hepatic impairment 2) Severe cardiovascular disease	1) Concomitant use of apomorphine. 2) Congenital long QT syndrome
Side Effects/Adverse Reactions (2)	1) Supraventricular tachycardia 2) Hyperglycemia	1) Lethargy 2) Peripheral edema	1) GI bleeding 2) Urticaria	1) Syncope 2) Confusion	1) Dystonia 2) Torsade's de pointes
Nursing Considerations (2)	1) Use cautiously in patients with cardiac disorders, diabetes mellitus, digitalis intoxication, hypertension, hyperthyroidism, or history of seizures. 2) Monitor serum potassium level because	1) Be aware that opioid therapy should only be used concomitantly with benzodiazepines in patients for whom other treatment options are inadequate. 2) Monitor patient for respiratory	1) Assess pain and limitation of movement; note type, location, and intensitybefore and at the peak (see Time/Action Profile) after administration. 2) Assess fever and	1) Assess BP periodically during therapy. 2) Assess patients for drowsiness and sleep attacks. Drowsiness is a common side effect of ropinirole, but sleep attacks or episodes of falling asleep	1) Place disintegrating tablet or oral soluble film on patient's tongue immediately after opening package. It dissolves in seconds. 2) Use calibrated container or oral syringe

	albuterol may cause transient hypokalemia.	depression.	note associated signs (diaphoresis, tachycardia, malaise, chills).	during activities that require active participation may occur without warning. Assess patient for concomitant medications that have sedating effects or may increase serum ropinirole levels (see Interactions). May require discontinuation of therapy.	to measure dose of oral solution.
Key Nursing Assessment(s)/Lab(s) Prior to Administration	1) May cause transient decrease in serum potassium concentrations with nebulization or higher-than-recommended doses. 2) Assess lung sounds, pulse, and BP before administration and during peak of medication. Note amount, color, and character of sputum produced.	1) May cause elevated plasma amylase and lipase concentra-tions 2) If an opioid antagonist is required to reverse respiratory depression or coma, naloxone is the antidote. Dilute the 0.4-mg ampule of naloxone in 10 mL of 0.9% NaCl and administer 0.5 mL (0.02 mg) by direct	1) Monitor hepatic function before anti-rheumatic therapy and if symptoms of hepatotoxicity occur, more likely in patients, especially children, with rheumatic fever, systemic lupus erythematosus, juvenile arthritis, pre-existing hepatic disease. May cause an increase	1) May increase BUN 2) Assess sleep patterns and frequency of restless leg disturbances.	1) Monitor ECG in patients with hypokalemia, hypomagnesemia, HF, bradyarrhythmias, or patients taking concomitant medications that prolong the QT interval. 2) May cause transient elevation in serum bilirubin, AST, and ALT levels.

		IVpush every 2 min. For children and patients weighing40 kg, dilute 0.1 mg of naloxone in 10 mL of 0.9% NaCl for a concentration of 10 mcg/mL and administer 0.5mcg/kg every 2 min. Titrate dose to avoid withdrawal, seizures, and severe pain.	in serum AST, ALT, and alkaline phosphatase, especially when plasma concentrations exceed 25 mg/100 mL. May return to normal despite continued use or dose reduction. If severe abnormalities or active liver disease occurs, discontinue and use with caution in future 2) Monitor for the onset of tinnitus, headache, hyperventilation, agitation, mental confusion, lethargy, diarrhea, and sweating. If these symptoms appear, withhold medication and notify health care professional immediately.		

Client Teaching needs (2)	1) Teach patient to use inhaler. Tell him to shake canister before use and to check that a new canister is working y spraying it the appropriate number of times into the air while looking for a fine mist. 2) Instruct patient to wash mouthpiece with water once a week and let it air dry.	1) Instruct patient to take drug exactly as ordered and not to adjust dosage without speaking to prescriber first. 2) Urge patient to consume plenty of fluids and high-fiber foods to prevent constipation.	1) Instruct patient to take salicylates with a full glass of water and to remain in an up-right position for 15–30 min after administrati on. 2) Advise patient to report tinnitus; unusual bleeding of gums; bruising; black, tarry stools; or fever lasting longer than 3 days.	1) Instruct the patient to take the medication exactly as directed. Missed doses should be betaken as soon as possible, but not if almost time for next dose. Do not double doses. 2) Caution patient to change positions slowly to minimize orthostatic hypotension.	1) Advise patient to use calibrated container or oral syringe to measure oral solution. 2) Advise patient to immediately report signs of hypersensiti vity, such as rash.

Hospital Medications (5 required)

Brand/Generic	Simbicort (budesonide)	Cardizem (dilitazem)	Protonix/p(antoprazole)	DuoNeb (ipratropium)	Plavix (clopidogrel)
Dose	160 mcg = 4.5 mcg inhale	30 mg tablet	20 mg tablet	0.5mg-2.5mg/ 3mL inhale	75 mg tablet
Frequency	Twice per day	Every 6 hours	Daily	Four times per day	Every morning
Route	Inhalant	PO	PO	Inhalant	PO

Classification	corticosteroid	Calcium channel blocker	Antiulcer	Anticholinergic	Antiplatelet
Mechanism of Action	It is a potent, locally acting anti-inflammatory and immune modifier. It decreases the frequency and severity of asthma attacks. It improves asthma symptoms.	Inhibits transport of calcium into myocardial and vascular smooth muscle cells, resulting in inhibition of excitation-contraction coupling and subsequent contraction. Therapeutic Effects: 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.	Inhibits the hydrogen-potassium-adenosine triphosphatase enzymes in gastric parietal cells.	It inhibits cholinergic receptors in bronchial smooth muscle, resulting in decreased concentrations of cyclic guanosine monophosphate (cGMP). Decreased levels of cGMP produce local bronchodilation. Intranasal: Local application inhibits secretions from glands lining the nasal mucosa. Therapeutic Effects: Bronchodilation without systemic anticholinergic effects. Intranasal: Decreased rhinorrhea.	Inhibits platelet aggregation by irreversibly inhibiting the binding of ATP to platelet receptors. Decreased occurrence of atherosclerotic events in patients at risk.
Reason Client	COPD	To reduce blood	Reduce GERD	COPD	Reduce platelets in pneumonia

Taking		pressure with hypertensive cardiovascular disease	symptoms		
Contraindications (2)	1) Acute attack of asthma 2) immunosuppression	1) Sick sinus syndrome 2) AV block	1) Acute interstitial nephritis 2) Bronchospasm	1) Prostatic hyperplasia 2) Acute bronchitis	1) Pathologic bleeding 2) Impaired CYP2C19 (liver enzyme) function due to genetic variation
Side Effects/Adverse Reactions (2)	1) Otitis media 2) Pharyngitis	1) Arrythmias 2) Stevens-Johnson Syndrome	1) Confusion 2) *Clostridium difficile* associated with diarrhea	1) Hypotension 2) Rash	1) Depression 2) Epistaxis
Nursing Considerations (2)	1) Monitor respiratory status and lung sounds. Assess pulmonary function tests periodically during and for several months following a transfer from systemic to inhalation corticosteroids. 2) Advise patients using	1) May be administered without regard to meals. May be administered withmeals if GI irritation becomes a problem. 2) Do not open, crush, break, or chew sustained-release capsules or tablets. Empty	1) Don't give within 4 weeks of testing for *Helicobacter pylori* because may lead to false-negative results. 2) Expect to monitor PT/INR during therapy if patient takes an oral anticoagulant.	1) When ipratropium is administered concurrently with other inhalation medications, administer adrenergic bronchodilators first, followed by ipratropium, then corticosteroids. Wait 5 min between medications. 2) The solution for nebulization can be diluted with	1) Assess patient for symptoms of stroke, peripheral vascular disease, or MI periodically during therapy. 2) Monitor patients for signs of thrombotic thrombocytic purpura (thrombocytopenia, microangiopathic hemolytic anemia, neurologic findings, renal dysfunction, and fever). May rarely occur, even after short

	inhalation corticosteroids and bronchodilator to use bronchodilator first and to allow 5 min to elapse before administering the corticosteroid, unless otherwise directed by health care professional.	tablets that appear in stool are not significant. Crush and mix diltiazem with food or fluids for patients having difficulty swallowing.		preservative-free 0.9% NaCl. The diluted solution should be used within 24 hr at room temperature or 48 hr if refrigerated. The solution can be mixed with preservative-free albuterol, cromolyn, or metaproterenol if used within 1 hr of mixing.	exposure (2wk). Requires prompt treatment.
Key Nursing Assessment(s)/Lab(s) Prior to Administration	1) Periodic adrenal function tests may be ordered to assess the degree of hypothalamic-pituitary-adrenal (HPA) axis suppression in chronic therapy. Children and patients using higher than recommended doses are at the highest risk for HPA suppression. 2) May cause an increase in serum and urine	1) Total serum calcium concentrations are not affected by calcium channel blockers. 2) Monitor serum potassium periodically. Hypokalemia increases the risk of arrhythmia and should be corrected.	1) May cause hypomagnesemia. Monitor serum magnesium prior to and periodically during therapy. 2) May cause abnormal liver function tests, including elevated AST, ALT, alkaline phosphatase, and bilirubin.	1) Assess for allergy to atropine and belladonna alkaloids; patients with these allergies may also be sensitive to ipratropium. Atrovent HFA MDI does not contain CFC or soy and may be used safely in soy or CFC-allergic patients. However, CombiventMDI should be avoided in soy or peanut-allergic patients 2) Assess respiratory status (rate,	1) Monitor bleeding time during therapy. Prolonged bleeding time, which is time-and dose-dependent, is expected. Monitor CBC with differential and platelet count periodically during therapy. Neutropenia and thrombocytopenia may rarely occur. 2) May cause an increase in serum bilirubin, hepatic enzymes, total cholesterol, nonprotein nitrogen (NPN), and uric acid concentrations.

	glucose concentrations if significant absorption occurs.			breath sounds, degree of dyspnea, pulse)before administration and at the peak of medication. Consult a health care professional about alternative medication if severe bronchospasm is present; onset of action is too slow for patients in acute distress. If paradoxical bronchospasm (wheezing) occurs, withhold medication and notify health care professional immediately. Nasal Spray: Assess patient for rhinorrhea.	
Client Teaching needs (2)	1) Advise patient to take medication as directed. Take missed doses as soon as re-membered unless almost time for next dose. Advise patient not to	1) Advise patient to take medication as directed at the same time each day, even if feeling well. Take missed doses as soon as possible unless almost time	1) Instruct patient to swallow tablets whole and not to chew or crush them. 2) Instruct patient to take 30 minutes before a meal.	1) Instruct patient in proper use of inhaler, nebulizer, or nasal spray and to take medication as directed. Take missed doses as soon as remembered unless almost time for the next dose; space	1) Instruct the patient to take the medication exactly as directed. Take missed doses as soon as possible unless almost time for next dose; do not double doses. Do not discontinue clopidogrel without consulting health care professional;

	discontinue medication without consulting health care professional; gradual decrease is required. 2) Advise patients using inhalation corticosteroids and bronchodilators to use the bronchodilators first and to allow 5 min to elapse before administering the corticosteroid unless otherwise directed by a health care professional.	for next dose; do not double doses. May need to be discontinued gradually. 2) Advise patient to avoid large amounts (6 – 8 glasses of grapefruit juice/day) during therapy.		remaining doses evenly during day. Do not double dose. 2) Advise patients that rinsing mouth after using an inhaler, good oral hygiene, and sugarless gum or candy may minimize dry mouth. A health care professional should be notified if stomatitis occurs or if dry mouth persists for more than 2 wk.	may increase risk of cardiovascular events. Advise the patient to read the medication Guide before starting clopidogrel and with each Rx refill in case of changes. 2) Advise patient to notify health care professional promptly if fever, chills, sore throat, rash, or unusual bleeding or bruising occurs.

Medications Reference (APA):

2019 Nurse's Drug Handbook (18th ed.). (2019). Jones & Bartlett Learning.

Up-to-Date Drug Information. (2019). Retrieved from https://www.drugguide.com/ddo/

Assessment

Physical Exam (18 points)

GENERAL (1 point): **Alertness:** A&Ox4 Pt is alert and oriented to person/place/time/current situation. **Orientation:** A&Ox4 Pt is alert and oriented to person/place/ time/current situation **Distress:** No acute distress **Overall appearance:** Appears stated age	A&Ox4 Pt is alert and oriented to person/place/time/current situation. The pt has an unsteady gait and requires a wheelchair for mobility.
INTEGUMENTARY (2 points): **Skin color:** Pink **Character:** PWD **Temperature:** Warm **Turgor:** Appropriate for age **Rashes:** No noted rashes **Bruises:** Bruises on right & left arms bilaterally **Wounds:** Pt has an ulcer scar on coccyx and sacrum area; incisional wound on heels bilaterally; and pressure ulcer on left toe **Braden Score:** 15 **Drains present: Y☒ N ☐** **Type:** Suprapubic catheter	Skin is PWD (pink, warm and dry) and intact. Skin turgor is appropriate for age. Ecchymosis noted on arms bilaterally. Pt has an ulcer scar on coccyx and sacrum area; incisional wound on heels bilaterally; and pressure ulcer on left toe. Suprapubic catheter noted. Braden Score of 15 indicates mild risk for developing pressure ulcers.
HEENT (1 point): **Head/Neck:** Head is normocephalic and atraumatic. Trachea is midline **Ears:** TMs pearly gray bilaterally. **Eyes:** PERRLA and EOMI bilaterally **Nose:** No noted deviated septum, polyps or turbinates. **Teeth:** Pt shows most teeth are present	Patient has no palpable lymph nodes. Head is normocephalic and atraumatic. Eyes are PERRLA and EOMI bilaterally. TMs pearly gray bilaterally. No noted deviated septum, polyps or turbinates. Moist mucus membranes, no noted exudate, lesions, erythema around the head and neck. Trachea is midline. Pt does use a BiPAP for COPD
CARDIOVASCULAR (2 points): **Heart sounds:** **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** RRR **Peripheral Pulses:** dorsalis pedis 2+ bilaterally **Capillary refill:** <3 seconds upper and lower extremities bilaterally **Neck Vein Distention: Y ☐ N ☒** **Edema Y ☐ N ☒**	S1, S2, and murmur detected. Pt is on telemetry. No noted gallops, or rubs. Capillary refill less than 3 seconds. 2+ pedal pulses bilaterally. No noted deformities. No noted edema.

Location of Edema:	
RESPIRATORY (2 points): **Accessory muscle use:** **Y☒ N ☐** **Breath Sounds: Location, character**	Pt has diminished lung sounds bilaterally with prolonged expiration. Rhonchi and wheezes also noted during auscultation.
GASTROINTESTINAL (2 points): **Diet at home:** Regular **Current Diet:** Regular **Height:** 184cm **Weight:** 57.2kg **Auscultation Bowel sounds:** Present in all four quadrants **Last BM:** 10/22/19 **Palpation: Pain, Mass etc.:** Pt states pain (9/10) in suprapubic region and left to right side of umbilicus. **Inspection:** No noted lesions or rashes **Distention:** No noted distention **Incisions:** No noted incisions **Scars:** No noted scars **Drains:** suprapubic catheter **Wounds:** No noted wounds **Ostomy: Y ☐ N ☒** **Nasogastric: Y ☐ N ☒** **Size:** **Feeding tubes/PEG tube Y ☐ N ☒** **Type:**	I did not palpate abdomen. Bowel sounds present in all four quadrants. Patient is on regular diet.
GENITOURINARY (2 Points): **Color:** Yellow **Character:** Yellow color, no foul odor **Quantity of urine:** 250 mL **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** I did not inspect genitals **Catheter: Y ☒ N ☐** **Type:** Suprapubic catheter **Size:** 16 FR	Patient uses a suprapubic catheter.
MUSCULOSKELETAL (2 points): **Neurovascular status:** All 4 extremities are atraumatic, well developed, and move without difficulty (MAEW). Ecchymosis	Patient uses a wheelchair at the nursing home. Hand grips equal bilaterally. DTRs intact. ROM intact in the upper and lower extremities

noted on arms bilaterally. No noted edema. **ROM:** Intact in the upper and lower extremities bilaterally and moves without difficulty **Supportive devices:** Wheelchair **Strength:** 5/5 in upper and lower extremities bilaterally **ADL Assistance: Y☒ N ☐** **Fall Risk: Y ☒ N☐** **Fall Score:** 55 **Activity/Mobility Status:** Patient is bedrest **Independent (up ad lib)** ☐ **Needs assistance with equipment ☒** **Needs support to stand and walk ☒**	bilaterally, 5/5 musculoskeletal strength in upper and lower extremities bilaterally and moves without difficulty (MAEW). Ecchymosis noted on arms bilaterally. No noted edema. Patient is a fall risk as evidence by Morse Fall Scale of 55. Patient is bedrest.
NEUROLOGICAL (2 points): **MAEW: Y ☒ N☐** **PERLA: Y ☒ N☐** **Strength Equal: Y ☒ N ☐ if no - Legs ☐ Arms ☐ Both ☐** **Orientation:** A&Ox4 **Mental Status:** A&Ox4 **Speech:** Normal **Sensory:** Intact **LOC:** Normal	Patient is A&Ox4. He is able to orient person/place/time/current situation. Muscle strength and sensation intact in upper and lower extremities bilaterally. No noted nuchal rigidity or meningeal signs.
PSYCHOSOCIAL/CULTURAL (2 points): **Coping method(s):** Listening to music **Developmental level:** Appropriate for age **Religion & what it means to pt.:** Patient is a Christian, and treats others with kindness. **Personal/Family Data (Think about home environment, family structure, and available family support):** Pt lives at a nursing home with friends. Pt is married and wife does visit him.	Patient's coping method is listening to music. Patient states that he is of Christian faith and to be kind towards others. Patient is married, but resides at a nursing home where he feels safe among his friends. His wife seems to be concerned about his welfare.

Vital Signs, 2 sets (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0930	110	138/70	20	36.7 C	95%
1130	115	145/53	20	36.7 C	94%

Vital Sign Trends:

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0930	9 out of a 10 (10 pain scale)	Right, left, and below the stomach	Severe	Sharp	Analgesics
1130	9 out of a 10 (10 pain scale)	Right, left, and below the stomach	Severe	Sharp	Analgesics

IV Assessment (2 Points)

IV Assessment	Fluid Type/Rate or Saline Lock
Size of IV: 22 gauge **Location of IV:** Right peripheral **Date on IV:** 10/23/2019 **Patency of IV:** Patent, no phlebitis/infiltration present, infusing without difficulty **Signs of erythema, drainage, etc.:** No noted signs of erythema, drainage, etc. **IV dressing assessment:** Clean, dry, and intact	0.9% NS IV solution 1,000 mL IV drip.

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
540 mL	250 mL (urine)

Nursing Care

Summary of Care (2 points)

Overview of care: The patient in room #412 is a 74-year-old Caucasian male diagnosed with have healthcare-associated pneumonia (HCAP) and acute respiratory failure with

hypoxemia. He was talkative and friendly, alert and oriented (A&Ox4). The patient's care began with a head-to-toe assessment, followed by changing body position to semi-fowlers. Afterward, the patient ordered breakfast (regular diet), and the patient ate 75% of his meal. The patient is receiving proper nutrients and fluids. The medication administration was given soon after he finished eating. The patient is on bed rest. The patient requires a wheelchair for mobility. The patient did not leave his room and stayed bedrest throughout the day. The patient complained of having pain in his stomach area and rated it a 9/10. I notified the nurse of his pain, and the medication administered was also to help him relieve his pain. Vital signs were taken twice during my time with the patient. His pulse was elevated (110 and 115), and his oxygen saturation stayed in the mid 90's. However, his vital signs did stay stable. The patient had a chest x-ray done later in the afternoon. An earlier chest x-ray that was taken closer to his date of admission revealed the presence of pneumonia, which the nurse already knew about. The patient seemed to tolerate the activities throughout the day. Once the patient's pneumonia is managed, and his breathing returned to normal, he will return to the nursing home. I anticipate the patient will require education on smoking cessation, proper hand hygiene, careful use of antibiotics, and breathing exercises to help prevent HCAP prior to discharge.

Procedures/testing done: Chest x-ray

Complaints/Issues: Abdominal pain 9/10

Vital signs (stable/unstable): Stable. High pulse rate (110 and 115)

Tolerating diet, activity, etc.: Patient has a regular diet and tolerates bedrest activities

Physician notifications: Abdominal pain 9/10

Future plans for patient: Patient education

Discharge Planning (2 points)

Discharge location: Nursing home

Home health needs (if applicable): Assistance with ADLs

Equipment needs (if applicable): Wheelchair

Follow up plan with family support:

- Slow or reverse the cause HCAP
- Prevent, identify, and treat the complications of COPD
- Protect the lungs from other sources of damage
- Manage signs and symptoms of infection
- Provide patient education on HCAP and smoking cessation
- Provide assistance with ADLs at home

Education needs:

Patient education: HCAP

- Teach patient what is HCAP
- Smoking cessation
- Proper hand hygiene
- Careful use of antibiotics
- Elevating the head of the bed
- Breathing exercises

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. Ineffective airway clearance	The patient was admitted for acute dyspnea, and has	**1.** Assess the rate, rhythm, and depth of respiration, chest	***** The patient is cooperative and his wife agrees with intervention.

related to healthcare-associated pneumonia as evidence by acute respiratory failure.	a history of COPD and recurrent right-sided pneumonia.	movement, and use of accessory muscles. **2.** Assess cough effectiveness and productivity	***** The patient and his family understand that tachypnea, shallow respirations, and asymmetric chest movement are frequently present because of the discomfort of moving chest wall and/or fluid in the lungs due to a compensatory response to the airway obstruction. They understand that an altered breathing pattern may occur together with the use of accessory muscles to increase chest excursion to facilitate effective breathing. They understand that coughing is the most effective way to remove secretions and that pneumonia may cause thick and tenacious secretions to patients.
2. Impaired gas exchange related to hypoxemia as evidence by having an O2Sat of 75%.	The patient arrived at the ED complaining of dyspnea and showed signs of having hypoxemia, and vital signs showed RR 48, P 134, T 41, O2Sat 75%.	**1.** Assess respirations: note quality, rate, rhythm, depth, use of accessory muscles, ease, and position assumed for easy breathing. **2.** Observe the color of skin, mucous membranes, and nail beds, noting the presence of peripheral cyanosis (nail beds) or central cyanosis (circumoral).	***** The patient is cooperative and wife agrees with intervention. ***** The patient and his family understand that patients will adapt their breathing patterns to facilitate effective gas exchange. Rapid, shallow breathing patterns and hypoventilation directly affects gas exchange. Hypoxia is associated with signs of increased breathing effort. Tripod positioning is evidence of significant dyspnea.

3. Risk for infection related to HCAP as evidence by chest x-ray.	The patient has a chest x-ray confirming the presence of pneumonia as seen by infiltrates present on film.	**1.** Demonstrate and encourage good hand washing technique. **2.** Institute isolation precautions as individually appropriate. Keep patient away from other patients who are at high risk for developing pneumonia.	***** The patient is cooperative and wife agrees with intervention. * The patient and his family understand that effective hand hygiene reduces the spread or acquisition of infection. They understand that isolation precautions are dependent on the type of infection, response to antibiotics, patient's general health, and development of complications, isolation techniques may be desired to prevent spread from other infectious processes. HCAP is at high risk of development for immunocompromised patients, provide careful room assignments when patients are in semiprivate rooms.
4. Activity intolerance related to imbalance between oxygen supply and demand as evidence by exertional dyspnea.	The patient is unable to perform ADLs due to dyspnea.	**1.** Explain the importance of rest in the treatment plan and the necessity for balancing activities with rest. **2.** Assist with self-care activities as necessary. Provide for a progressive increase in activities during the recovery phase.	***** The patient is cooperative and wife agrees with intervention. * The patient and family understand that bedrest is maintained during the acute phase to decrease metabolic demands, thus conserving energy for healing. Activity restrictions thereafter are determined by individual patient response to activity and resolution of respiratory insufficiency. They also understand that after healing, the patient

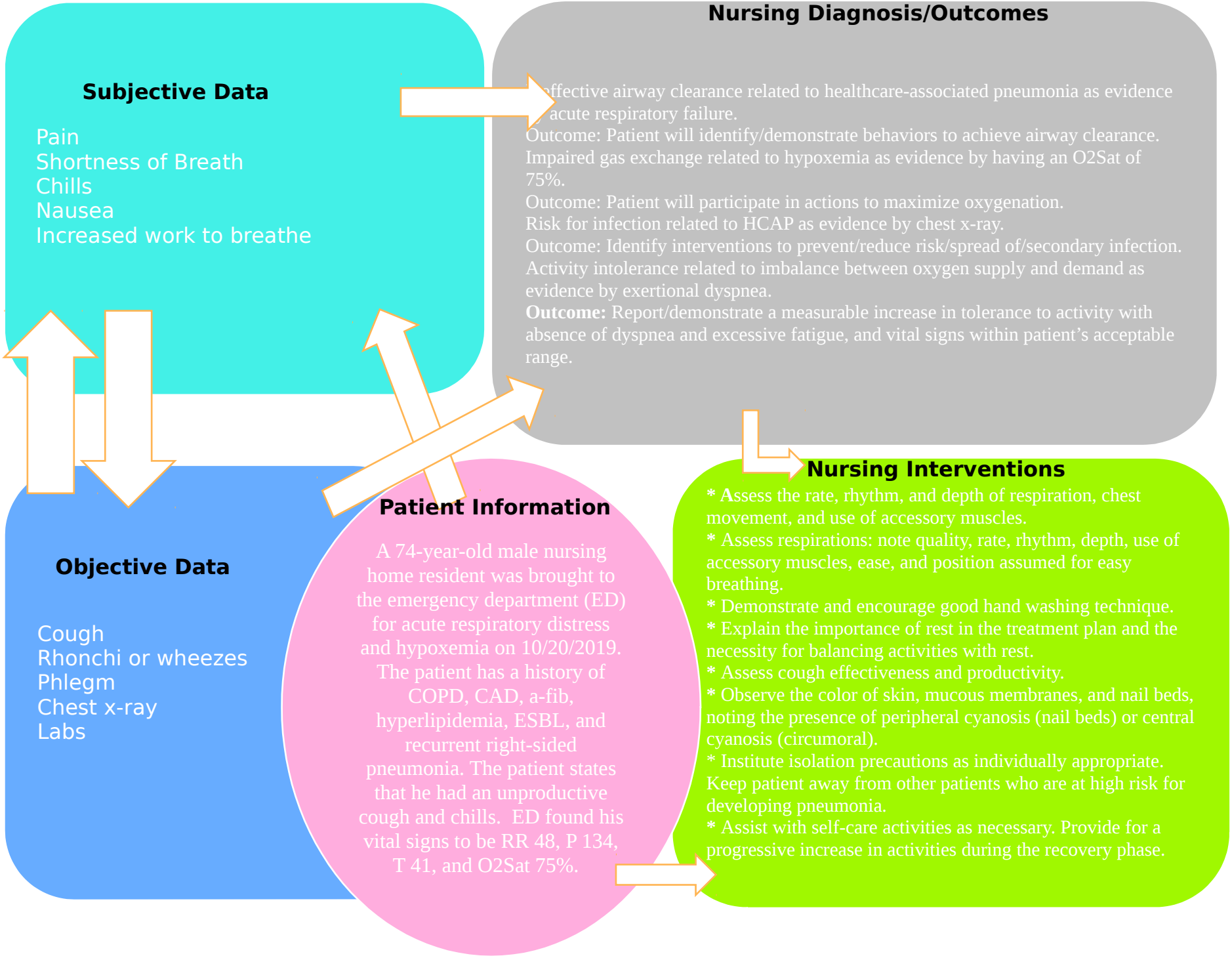
			will minimize exhaustion and help balance oxygen supply and demand by increasing tolerance in activities.

Other References (APA):

Hinkle, J.L., & Cheever, K.H. (2018). *Brunner & Suddarth's Textbook of Medical Surgical Nursing (14th ed.).* Philadelphia, PA: Wolters Kluwer Health Lippincott William & Wilkins.

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):


Subjective Data
Pain
Shortness of Breath
Chills
Nausea
Increased work to breathe
Nursing Diagnosis/Outcomes
ffective airway clearance related to healthcare-associated pneumonia as evidence
acute respiratory failure.
Outcome: Patient will identify/demonstrate behaviors to achieve airway clearance.
Impaired gas exchange related to hypoxemia as evidence by having an O2Sat of 75%.
Outcome: Patient will participate in actions to maximize oxygenation.
Risk for infection related to HCAP as evidence by chest x-ray.
Outcome: Identify interventions to prevent/reduce risk/spread of/secondary infection.
Activity intolerance related to imbalance between oxygen supply and demand as evidence by exertional dyspnea.
Outcome: Report/demonstrate a measurable increase in tolerance to activity with absence of dyspnea and excessive fatigue, and vital signs within patient's acceptable range.
Objective Data
Cough
Rhonchi or wheezes
Phlegm
Chest x-ray
Labs
Patient Information
A 74-year-old male nursing home resident was brought to the emergency department (ED) for acute respiratory distress and hypoxemia on 10/20/2019. The patient has a history of COPD, CAD, a-fib, hyperlipidemia, ESBL, and recurrent right-sided pneumonia. The patient states that he had an unproductive cough and chills. ED found his vital signs to be RR 48, P 134, T 41, and O2Sat 75%.
Nursing Interventions
* Assess the rate, rhythm, and depth of respiration, chest movement, and use of accessory muscles.
* Assess respirations: note quality, rate, rhythm, depth, use of accessory muscles, ease, and position assumed for easy breathing.
* Demonstrate and encourage good hand washing technique.
* Explain the importance of rest in the treatment plan and the necessity for balancing activities with rest.
* Assess cough effectiveness and productivity.
* Observe the color of skin, mucous membranes, and nail beds, noting the presence of peripheral cyanosis (nail beds) or central cyanosis (circumoral).
* Institute isolation precautions as individually appropriate. Keep patient away from other patients who are at high risk for developing pneumonia.
* Assist with self-care activities as necessary. Provide for a progressive increase in activities during the recovery phase.