N321 Care Plan # 1

Lakeview College of Nursing

Mary Jensen

Demographics (3 points)

Date of Admission	**Patient Initials**	**Age**	**Gender**
3/19/2020	TLT	58	Male
Race/Ethnicity	**Occupation**	**Marital Status**	**Allergies**
Caucasian	Taxi Driver	Married	NKDA
Code Status	**Height**	**Weight**	
Full code	177.8 cm	100 kg	

Medical History (5 Points)

Past Medical History: Pt. has a history of HTN, BPH, upper respiratory tract infections, and Hyperlipidemia.

Past Surgical History: Pt had a right rotator cuff repair in 1998.

Family History: Pt. reports a family history of hypertension on mother's side of the family.

Social History (tobacco/alcohol/drugs): Pt is a current smoker of 40 years, smoking approximately 20 cigarettes pers day. Client drinks socially on weekends having one to two beers each time and does not have a history of illegal drug use.

Assistive Devices: Pt. wears glasses normally during the day.

Living Situation: Pt. lives at home with wife.

Education Level: Patient's highest education completed is some college.

Admission Assessment

Chief Complaint (2 points):: "Shortness of breath"

History of present Illness (10 points): Mr. TLT was brought to the emergency department on 3/19/20 complaining of shortness of breath which increasingly worsened over the previous 4 days. The client had a productive cough with sputum and wheezing noted. Mr. TLT reports the dyspnea post upper respiratory tract infection. The client has been experiencing the cough and sputum production for the past 3 years and shortness of breath with exertion for the last 1 year.

When presented in the ED Mr. TLT was given salbutamol, normal saline, and a nebulizer of ipratropium bromide which helped relieve his symptoms.

Primary Diagnosis

Primary Diagnosis on Admission (2 points): COPD

Secondary Diagnosis (if applicable):

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

Chronic Obstructive Pulmonary Disease or COPD is an umbrella term that includes chronic bronchitis, hyperactive airway disease, and emphysema all of which limit reversible air exchange. As stated by Capriotti & Frizzell (2016), “COPD is a combination of chronic bronchitis and emphysema. In chronic bronchitis, there is inflammation, edema, and excess mucus production within the airways. In emphysema, there is an excess of air in the alveoli.” (p. 467). The walls of the alveoli are unable to shrink back to size due to weakness and overdistension. There are several pathological changes that occur with COPD including, hypertrophy of the smooth muscle, excess mucus buildup in the bronchioles, narrowing of the airway, and loss of elasticity in the alveoli (Capriotti & Frizzell, 2016). The bronchioles structure is altered and begins to thicken causing inflammation and increased response from the WBCs Capriotti & Frizzell, 2016). COPD can also cause hypertrophy in the heart typically beginning in the right ventricle eventually also affecting the left ventricle. According to Mayo Clinic (2017), signs and symptoms of COPD are shortness of breath (most commonly during exertion), wheezing, tightness in the chest, a chronic cough, cyanosis, and fatigue. It can also be observed that in people who have had COPD for long periods of time they have clubbed fingers. In the case of this patient he presented with shortness of breath, wheezing, and use of accessory

muscles to breath. Expected findings for individuals with COPD are an increased CO2, barrel chest, and increased respiratory rate. In order to diagnose a client with COPD a pulmonary function test (PFT) can be used along with a CBC, chest X-ray, ECG, and AGB (Capriotti & Frizzell, 2016). Mr. TLT had all of the previously discussed tests done and the data was supportive of the diagnosis. The treatment for patients with COPD is to start with the use of short-acting bronchodilators and when they have an exacerbation to use corticosteroids. Patients should also use lifestyle modifications such as cessation of smoking, progressive exercise programs, and respiratory exercises. Another treatment option that is available is oxygen therapy whish should be set to the lowest setting possible (Capriotti & Frizzell, 2016). This patient is currently receiving oxygen to keep his O2 saturation up, he is also taking a bronchodilator and cortocosteriod.

Pathophysiology References (2) (APA):

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

COPD. (2017, August 11). Retrieved March 25, 2020, from https://www.mayoclinic.org/diseases-conditions/copd/symptoms-causes/syc-20353679

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	4.28-5.56	N/A	8	The high RBC count is indicative of secondary polycythemia which can be seen in COPD patients (Capriotti, 2016).
Hgb	13-17	N/A	20	The increased Hgb count is telling of secondary polycythemia which can be seen in COPD patients (Capriotti, 2016).
Hct	38.1-48.9%	N/A	56%	The higher percentage of Hct found is suggestive of secondary polycythemia which can be seen in COPD patients (Capriotti, 2016).
Platelets	149-393	N/A	420	This client has many factors that can increase his platelet count including secondary polycythemia, HTN, hyperlipidemia, & Hx of smoking (Capriotti, 2016).
WBC	4-11.7	N/A	12	Secondary polycythemia due to COPD can also increase the number of WBCs as well as the upper respiratory infection (Capriotti, 2016).
Neutrophils	45.3-79	N/A	85%	You may see a higher percentage of neutrophils because of the increase in the WBC count from the respiratory infection due to the neutrophils being the first line of WBCs to be utilized (Capriotti, 2016).
Lymphocytes	11.8-45.9	N/A	45%	
Monocytes	4.4-12.9	N/A	12%	
Eosinophils	0-6.3	N/A	5%	
Bands	0-6	N/A	N/A	

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

Lab	Normal Range	Admission Value	Today's Value	Reason For Abnormal
Na-	136-145	N/A	138	
K+	3.5-5.1	N/A	4.0	
Cl-	98-107	N/A	102	
CO2	21-31	N/A	N/A	
Glucose	74-109	N/A	92	
BUN	7-25	N/A	8	
Creatinine	0.6-1.3	N/A	0.6	
Albumin	3.5-5.2	N/A	3.5	
Calcium	8.6-10.3	N/A	9.2	
Mag	1.6-2.4	N/A	2.2	
Phosphate	2.5-4.5	N/A	N/A	
Bilirubin	0.3-1.1	N/A	1.1	
Alk Phos	35-105	N/A	105	
AST	13-39	N/A	34	
ALT	7-52	N/A	36	
Amylase	23-85	NA	N/A	
Lipase	0-160	N/A	N/A	
Lactic Acid	0.5-1	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	<1.1	N/A	N/A	
PT	11-13.5	N/A	N/A	
PTT	60-70	N/A	N/A	
D-Dimer	<0.5	N/A	N/A	
BNP	0-100	N/A	N/A	
HDL	23-92	N/A	N/A	
LDL	<,= 100	N/A	N/A	
Cholesterol	<,= 149	N/A	N/A	
Triglycerides	0-149	N/A	N/A	
Hgb A1c	<,= 6.4	N/A	N/A	
TSH	0.45-5.33	N/A	N/A	

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

Lab Test	Normal Range	Value on Admission	Today's Value	Reason for Abnormal
Color & Clarity	Yellow & clear	N/A	N/A	
pH	6.0	N/A	N/A	
Specific Gravity	1.005-1.034	N/A	N/A	
Glucose	Normal	N/A	N/A	
Protein	Negative	N/A	N/A	
Ketones	Negative	N/A	N/A	

WBC	<5	N/A	N/A	
RBC	0-3	N/A	N/A	
Leukoesterase	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	**No growth**	N/A	N/A	
Blood Culture	**No growth**	N/A	N/A	
Sputum Culture	**No growth**	N/A	No growth	
Stool Culture	**No growth**	N/A	N/A	

Lab Correlations Reference (APA):

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

Diagnostic Imaging

All Other Diagnostic Tests (5 points): EKG, Chest X-Ray, ABGs

Diagnostic Test Correlation (5 points):

- ECG

- The patient arrived at the ED with a complaint of shortness of breath. An EKG was done to rule out any cardiac events (Capriotti, 2016), and the results were a normal sinus rhythm at 72 bpm with no ischemic changes or LVH noted.

- Chest X-Ray
  - Patient was brought to the ED with shortness of breath. A chest x-ray was performed, and results showed signs of hyperinflation of the lungs and 7 anterior ribs crossing the mid-clavicular line which is conducive with a diagnosis of COPD (Capriotti, 2016).
- ABGs
  - The client presented to the ED with shortness of breath and an ABG panel was done. The results were a pH of 7.32, PaCO2: 50mm Hg, HCO3: 26, and a PaO2: 78 mm Hg. These values show the patient is in respiratory acidosis which is another sign of COPD (Capriotti, 2016).

Diagnostic Test Reference (APA):

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

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

Home Medications (5 required)

Brand/Generic	Amlodipine/ Norvasc	Metoprolol/ Toprolol-XL	tamsulosin / Flomax	Simvastatin/ Zocor	acetaminophen / Tylenol
Dose	5 mg	25 mg	0.4 mg	20 mg	200 mg
Frequency	Daily	Daily	Daily	Daily	PRN every 8 hrs

Route	PO	PO	PO	PO	PO
Classification	Antihypertensive	Antihypertensive	BPH treatment	Antihyperlipidemic	Antipyretic/ nonopioid analgesic
Mechanism of Action	Calcium Channel Blocker inhibiting smooth muscle contractions, decreasing myocardial workload	Inhibits Beta1-receptor sites in the heart which limits cardiac excitability, decreasing blood pressure.	Blocks alpha1-adrenergic receptors in the prostate, this improves the rate of urine flow.	Inhibits hepatic enzymes decreasing the mevalonic acid equaling a decrease in cholesterol	Blocks prostaglandin production inhibiting pain impulse, also affects hypothalamus for temperature-regulation
Reason Client Taking	HTN	HTN	BPH	Hyperlipidemia	Pain management
Contraindications (2)	Hypersensitivity, Pt. on Aliskiren therapy with diabetes or renal impairment	Acute heart failure, pulse less than 45 bpm	Hypersensitivity to tamsulosin, quinazolines, or the components.	Active hepatic disease, breastfeeding	Hypersensitivity, hepatic impairment
Side Effects/Adverse Reactions (2)	Headache, dizziness	Insomnia, constipation	Nausea, dyspnea	Chest pain, Bronchitis	Abdominal pain, fatigue
Nursing Considerations (2)	Monitor BP, use caution in pt. hepatic impairment	Have pt. take dose at same time everyday, monitor pt. with hyperthyroidism.	Give drug 30 min post(same) meal daily, taking drug on empty stomach creates risk for orthostatic hypotension	Use caution in elderly and hepatic or renal impaired pt. Take medication in the evening.	Use caution in pt. with hepatic impairment, monitor renal function in long term use pt.

Hospital Medications (5 required)

Brand/Generic	levalbuterol Hydrochloride/ Xopenex	prednisone	levofloxacin/ Levaquin	guaifenesin/ Robitussin	acetaminophen/ Tylenol
Dose	0.63 mg	40 mg	750 mg	600 mg	1000 mg

Frequency	BID	Daily	Every 24 hrs	Every 12 hrs	Every 6hrs PRN
Route	Inhalation	PO	IV	PO	PO
Classification	bronchodilator	glucocorticoid	Antibiotic	Expectorant	Antipyretic/ nonopioid analgesic
Mechanism of Action	Inhibits beta2 receptors on bronchial cells to relax smooth muscle	Binds to the intracellular glucocorticoid receptors to suppress the immune system	Inhibits bacterial cell replication	Increases fluid and mucus removal from respiratory system	Blocks prostaglandin production inhibiting pain impulse, also affects hypothalamus for temperature-regulation
Reason Client Taking	Treat bronchospasm	Immunosuppressant for the Respiratory infection	Treatment of. Respiratory infection	relief and break-up mucus secretions	Antipyretic
Contraindications (2)	Hypersensitivity to levalbuterol or other sympathomimetics amines	Hypersensitivity, systemic fungal infections	Hypersensitivity, myasthenia gravis	hypersensitivity	Hypersensitivity, hepatic impairment
Side Effects/Adverse Reactions (2)	Tachycardia, dizziness	Adrenal insufficiency, heart failure	Fever, vomiting	Dizziness, nausea	Abdominal pain, fatigue
Nursing Considerations (2)	Give oral solution by nebulizer only. Watch for dyspnea, increased coughing and wheezing.	Take medication with food, assess pt. daily for adverse reactions	Use caution in Pt. with renal impairment, do. Not give the drug within 2 hrs of giving antacid	Have pt. drink a full glass of water with medication, do not break, crush, or chew tablet.	Use caution in pt. with hepatic impairment, monitor renal function in long term use pt.

Medications Reference (APA):

Jones & Bartlett Learning. (2018). *2019 Nurses Drug Handbook.* Burlington, MA.

Assessment

Physical Exam (18 points)

GENERAL (1 point): **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	Patient is AOx4 with no apparent stress. Pt. appears stated age and is pleasant and cooperative.
INTEGUMENTARY (2 points): **Skin color:** **Character:** **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** **Drains present: Y☐ N ☒** **Type:**	Skin color is consistent with stated race (Caucasian). Skin is pink, warm, and dry. Skin turgor is within normal limits. Capillary refill is less than 3 seconds. No noted wounds, rashes, or legions present. No drains or ports present. Braden score: 20 – Patient is a low skin risk.
HEENT (1 point): **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	Head is normocephalic with normal hair distribution. Ears are intact, no signs of irregular drainage, and tympanic membrane is pearly grey in color. Pt. uses eyeglasses and PERRLA is noted. No noted signs of polyps or of a deviated septum in the nose and turbinates are equal bilaterally. Oral mucosa in pink and moist and trachea falls midline. Patient has his own teeth which appear yellowed. .
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:**	Pt. is on telemetry, regular rate and rhythm noted, S1 and S2 heard. No noted murmurs, gallops, or rubs. Bilateral radial and pedial pulses are palpable with no noted peripheral edema.

RESPIRATORY (2 points): **Accessory muscle use: Y☒ N ☐** **Breath Sounds: Location, character**	Pt. uses intercostal, subcostal, and suprasternal accessory muscles. Observed increase in anterior posterior diameter of the chest with no chest wall deformities. Chest expansion appears equally reduced bilaterally during tactile fremitus. Hyperresonance is noted over both lungs, vesicular breath sounds are heard with ronchi noticeable in anterior and posterior fields. Pt. is on 3L of O2 via nasal cannula.
GASTROINTESTINAL (2 points): **Diet at home:** **Current Diet** **Height:** **Weight:** **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:**	Patient has a regular diet at home. Currently on heart healthy diet low in sodium. Pt. is 170 cm tall and weighs 100 kg. Abdomen is even and moves with each breath, no signs of muscle guarding or sensitivity. Bowel sounds are normoactive in all four quadrants. Last BM is unknown. No noted distention, incisions, scars, drains, or wounds.
GENITOURINARY (2 Points): **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☐ N ☒** **Type:** **Size:**	Patient ambulates to bathroom by his self. Urine is clear and light yellow. Reports no pain with urination. He is not on dialysis and does not need a catheter. Pt. genitals are pink, warm, and dry.
MUSCULOSKELETAL (2 points): **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☐ N ☒** **Fall Risk: Y ☐ N☒**	Full ROM and strength bilaterally in both upper and lower extremities. Pt. does not use any assistive devices and is able to ambulate to the bathroom. Fall score 35- low fall risk

Fall Score: **Activity/Mobility Status:** **Independent (up ad lib)** ☐ **Needs assistance with equipment** ☐ **Needs support to stand and walk** ☐	
NEUROLOGICAL (2 points): **MAEW: Y ☒ N☐** **PERLA: Y ☒ N☐** **Strength Equal: Y ☒ N ☐ if no -** **Legs ☐ Arms ☐ Both ☐** **Orientation:** **Mental Status:** **Speech:** **Sensory:** **LOC:**	Pt is awake and A&O x4 and MAEW. Pt exhibits equal strength in all extremities. Pt has mental status appropriate to age, clear speech, and no noted loss of sensation.
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):**	Pt. is accompanied by wife and likes to spend time with family. His developmental level is normal for his stated age. Pt. is religious and attends church every Sunday morning it gives him comfort and morals to follow.

Vital Signs, 2 sets (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0800	72 bpm	129/73	28	37 C	95%
1030	90 bpm	130/86	24	37.2 C	95%

Pain Assessment, 2 sets (2 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0800	Numeric Scale 0/10	Patient denies pain	0/10	N/a	No interventions needed
1030	Numeric Scale 0/10	Patient denies pain	0/10	N/a	No interventions needed

IV Assessment (2 Points)

IV Assessment	Fluid Type/Rate or Saline Lock
Size of IV: **Location of IV:** **Date on IV:** **Patency of IV:** **Signs of erythema, drainage, etc.:** **IV dressing assessment:**	Pt has 20g saline lock peripheral IV in Left AC on 3/19/20. No signs of redness, drainage, tenderness, or swelling. IV is patent and dressing is clean, dry and intact.

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
340 mL	250 mL

Nursing Care

Summary of Care (2 points)

Overview of care: Assisting with administration of the patient's medication and providing care in hopes the patient could successfully return home.

Procedures/testing done: ABG's

Complaints/Issues: shortness of breath

Vital signs (stable/unstable): Stable with administration of O2 and HTN medication.

Tolerating diet, activity, etc.: Tolerating healthy heart diet well.

Physician notifications: Possibility of discharge for pt. after being signed off by physician

Future plans for patient: Work on weaning pt. off O2.

Discharge Planning (2 points)

Discharge location: Home with wife

Home health needs (if applicable): possible home oxygen

Equipment needs (if applicable): O2

Follow up plan: Schedule follow-up with pulmonology.

Education needs: Educate patient about new medications and breathing exercises.

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

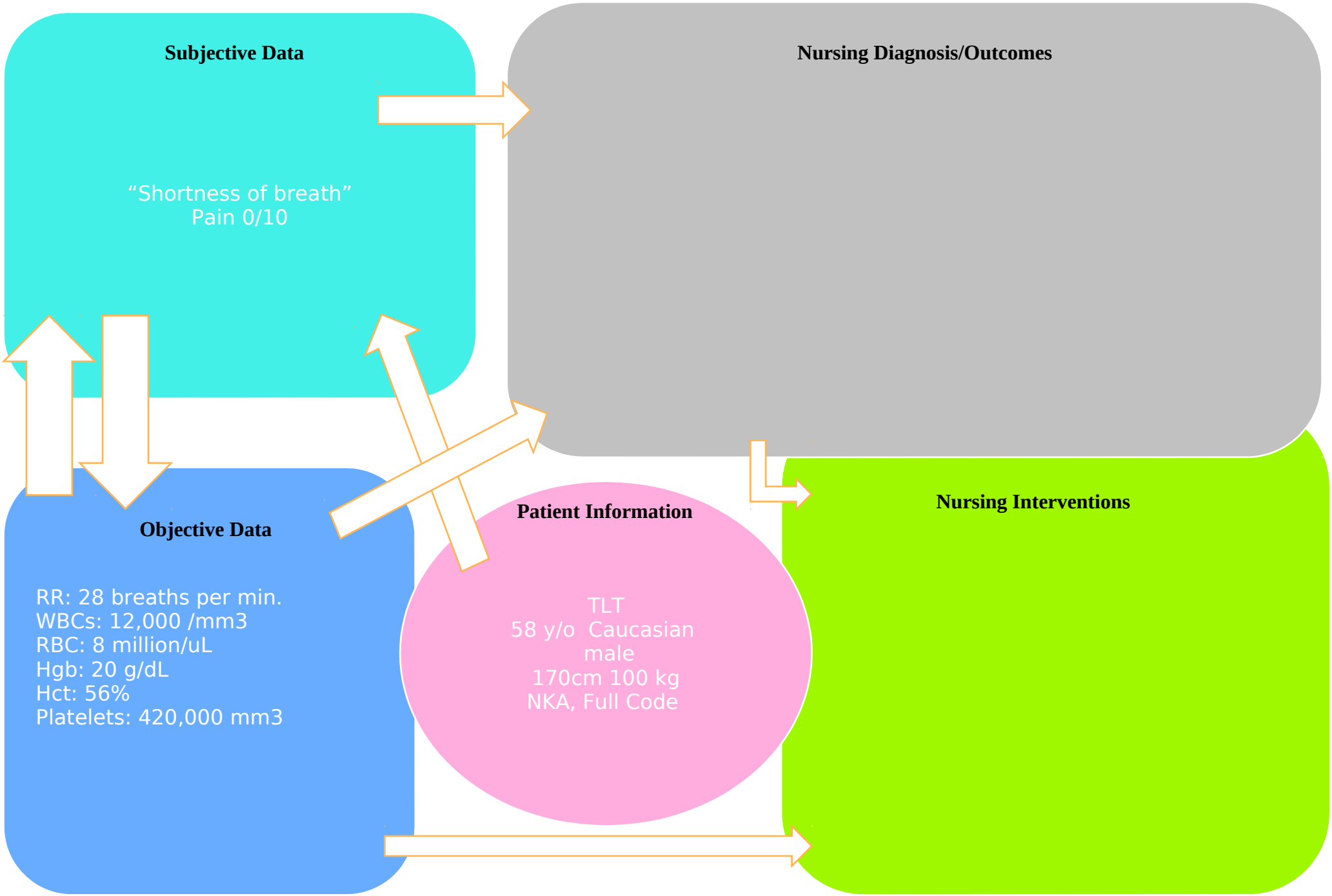
Nursing Diagnosis • Include full nursing diagnosis with "related to" and "as evidenced by" components	**Rational** • Explain why the nursing diagnosis was chosen	**Intervention (2 per dx)**	**Evaluation** • How did the patient/family respond to the nurse's actions? • Client response, status of goals and outcomes, modifications to plan.
1. Risk for. Impaired gas exchange related to new diagnosis of COPD.	The patient has audible wheezes when auscultated.	1. Auscultate breath sounds every 4 hrs as indicated by the pt. condition. 2. Keep head of Pt bed in high fowlers position	Pt. preferred the high fowlers position allowing him to breath easier.
2. Risk for. Ineffective breathing patterns related to COPD	The pt. presented with SOB and use of accessory muscles for respiration.	1. Monitor pulse oximetry and ABGs. 2. Administer bronchodilator therapy	Pt. and family responded well to treatment. Allows for easier breathing for client.
3. Risk of Activity intolerance due to an imbalance in oxygen supply and demand related to COPD.	The pt. is able to climb 1.5 flights of stairs before having SOB.	1**.** Allow 90 min between activities for undisturbed rest. 2. Ask patient perceived exertion	The patient did not mind the assessment or questions about how he was feeling.

Other References (APA):

Swearingen, P. L. (2016). *All-in-one nursing care planning resource: medical-surgical, pediatric, maternity, and psychiatric-mental health* (4th ed.). St. Louis, MO: Elsevier.

Concept Map (20 Points):

N321 Care Plan



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