Nursing Care Plan

By: Smriti Gurung
11/9/06
Section 1: Detailed Background Information

Client gender: Female Age 75 Admitting diagnoses: Medical Dx: Chronic Obstructive Pulmonary disease, Right upper lobe mass, Surgical Dx: Right posterolateral mini thoracotomy, Right upper lobe apical segmentectomy.

Other diagnoses: Hx of Pneumonia, HTN

1. Brief History of Current Hospital Stay.

Ms. Z is a 75-year-old female with COPD with a 40 years history of tobacco use. She has a Right Upper Lung mass which was discovered in July. She declined surgical intervention at the time and upon follow up the mass was noted to be larger. A 2 cm speculated right upper lobe posterolateral apical mass was noted by cross sectional imaging. Ms. Z’s pulmonary function tests were somewhat marginal and her clinical performance status is remarkable for daily SOB and limitations in terms of her exercise tolerance based on these complaints. A mini thoracotomy was performed and an apical segment of the right upper lobe was excised and passed off for pathologic analysis on 3 days prior to care.

Functional status before thoracotomy: She feels SOB every morning after beginning to perform activities of daily living. However, she notes significant amelioration after taking morning meds/inhalers. She is able to climb a flight of stairs but gets SOB with rapid exertion. No recent ER visits, she notes multiple yearly episodes of “walking pneumonia” over the past few years.

2. Pathophysiology of Disease Processes.

Chronic obstructive pulmonary disease (COPD) is an umbrella term referring to two lung diseases, chronic bronchitis and emphysema, that are characterized by obstruction to airflow that interferes with normal breathing. Both of these conditions frequently co-exist. By the time the disease has progressed to the point of COPD, hypertension (HTN) has also developed as a matter of circumstance. HTN can be considered a secondary sequelae associated with chronic pulmonary disease. Asthma however is not included as COPD since inflammation is considered the distinguishing feature of asthma.

According to Lewis et al. more than 15 million people in the USA suffer from chronic bronchitis (presence of chronic productive cough for 3 months in each of 2 successive years in whom other cause of cough have been excluded) and emphysema
(abnormal permanent enlargement of the airspaces distal to the terminal bronchioles, accompanied by destruction of their walls and without obvious fibrosis).

Cigarette smoking is the most common cause of COPD. Breathing in other kinds of lung irritants, like pollution, dust, or chemicals, over a long period of time may also cause or contribute to COPD. Most people with COPD are smokers or former smokers and so is Ms. Z, who has been smoking for the past 40 years.

One of the most frequent complications of COPD is pneumonia. *S. pneumoniae, H. influenzae*, and viruses are the most common causative agents. As the disease progresses, hypertension often occurs, and smoking, as in the case of this patient, does nothing to help this situation.

Thoracotomy is a surgical opening into the thoracic cavity. This incision is large, cutting into bone, muscle, and cartilage. There are two types of thoracic incisions: 1) median sternotomy which is performed by splitting the sternum and 2) lateral thoracotomy. Lateral thoracotomy is further divided into 1) posterolateral, used for most surgery involving the lungs and 2) anterolateral, used for surgery or trauma victims, mediastinal operations, and wedge resections of the upper and middle lobes of the lungs. Ms. Z had the posterolateral mini thoracotomy.

A pneumothorax is air in the pleural space, as a result, complete or partial collapse of lung occurs. The purpose of chest tubes and pleural drainage is to remove the air and fluid from the pleural space and to restore normal intrapleural pressure so that the lungs can reexpand.

### 3. Medications.

<table>
<thead>
<tr>
<th>Medication (Dose Route Frequency)</th>
<th>Action</th>
<th>Rationale</th>
<th>Dose Appropriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beazepril 40mg QID PO</td>
<td>ACE inhibitors block the conversion of angiotensin I to the vasoconstrictor angiotensin II, inactivates the vasodilator bradykinin and other vasodilatory prostaglandins, increase plasma renin levels and reduce aldosterone levels. Net result is systemic vasodilation</td>
<td>Lowering of blood pressure in hypertensive patients</td>
<td>Yes. Maintenance dose of 20–40 mg/day as single dose or 2 divided doses</td>
</tr>
<tr>
<td>Medication</td>
<td>Effect</td>
<td>Dosage/Intake</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Clonidine 0.3mg QID PO</td>
<td>Stimulates alpha-adrenergic receptors in the CNS; which results in decreased sympathetic outflow inhibiting cardio acceleration</td>
<td>Lowers blood pressure; Yes - 0.1-0.3mg/24 hr</td>
<td></td>
</tr>
<tr>
<td>Enoxaparin 40mg QID SQ</td>
<td>the inhibitory effect of antithrombin on factor Xa and thrombin</td>
<td>Prevention of thrombus formation; Yes-40 mg subcut 20–80 mg/day as a single dose initially once daily</td>
<td></td>
</tr>
<tr>
<td>Furosemide 20mg QID PO</td>
<td>Inhibits the reabsorption of sodium and chloride from the loop of Henle and distal renal tubule increases renal excretion of water, sodium, chloride, magnesium, hydrogen, and calcium</td>
<td>Decreased blood pressure; Yes-20–80 mg/day as a single dose initially</td>
<td></td>
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<tr>
<td>Pantoprazole EC 40mg QID PO</td>
<td>Binds to an enzyme in the presence of acidic gastric pH, preventing the final transport of hydrogen ions into the gastric lumen.</td>
<td>Diminished accumulation of acid in the gastric lumen, with lessened acid reflux; Yes-40 mg once daily</td>
<td></td>
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<tr>
<td>Tiotropium Bromide 18mcg QID PO</td>
<td>Acts an anticholinergic by selectively and reversibly inhibiting M3 receptors in smooth muscle of airways</td>
<td>Decrease Incidence and severity of bronchospasm; Yes-18 mcg once daily</td>
<td></td>
</tr>
<tr>
<td>Diltiazem ER 240mg QID PO hold SBP&lt; 90</td>
<td>Inhibits transport of calcium into myocardial and vascular smooth muscle cells, resulting in inhibition of excitation-contraction coupling and subsequent contraction</td>
<td>Systemic vasodilation resulting in decreased blood pressure; Yes-180–240 mg once daily</td>
<td></td>
</tr>
<tr>
<td>Oxycodeone/Acetaminophen 10mg/325mg 1 tab Q12H PO</td>
<td>Alter the perception of and response to painful stimuli, while producing generalized CNS depression</td>
<td>Decrease pain; Yes-10–40 mg 3–4 times daily initially, as needed</td>
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</tr>
</tbody>
</table>

**PRN Medications:**

<table>
<thead>
<tr>
<th>Medication</th>
<th>Effect</th>
<th>Dosage/Intake</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium Hydroxide 30ml PRN constipation</td>
<td>osmotically active in GI tract, drawing water into the lumen and causing peristalsis</td>
<td>Evacuation of the colon; Yes- 30–60 ml single or divided dose or 10–20 ml as concentrate.</td>
</tr>
<tr>
<td>Hydromorphone Inj 1mg PRN break through pain</td>
<td>Alters the perception of and response</td>
<td>Decrease in moderate to severe pain; Yes-1.5 mg q 3–4 hr as needed initially; may be increased.</td>
</tr>
<tr>
<td>Albuterol 90 mcg oral inhaler PRN wheezing</td>
<td>Relaxation of airway smooth muscle with subsequent bronchodilation</td>
<td>Bronchodilation; Yes-Via metered-dose inhaler —2 inhalations q 4–6 hr or 2 inhalations 15 min before exercise (90 mcg/spray)</td>
</tr>
</tbody>
</table>
4. **Interactions and Special Considerations.**

Beazepril, Clonidine and Diltiazem can have the combined effect of lowering HR and BP to dangerously low levels. Patients should be started on a low dosage and be allowed to adjust to become accustomed to changes such as orthostatic hypotension upon rising. Patient should be urged and taught to dangle their legs over the edge of the bed before rising and to avoid sudden changes of position.

Lasix can have serious effects by depleting necessary electrolytes especially potassium. The patient should be instructed to eat a banana per day or the equivalent of in order to avoid hypokalemia.

Oxycodone/Acetaminophe and Hydromorphone can cause constipation with prolonged use and patients should receive instructs on how to increase dietary fiber in addition to anti-constipation medication to avoid straining.

With Enoxaparin risk of bleeding may be ↑ and patients should be advised to avoid activities that can cause injury. Also before administering Enoxaparin, check for ↓ platelets count.

5. **Laboratory data:**

<table>
<thead>
<tr>
<th></th>
<th>Previous day</th>
<th>Patient care day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium (135-145 mmol/L)</td>
<td>↓132</td>
<td>↓129 = tissue injury, drugs S/E such as lasix, syndrome of inappropriate antidiuretic hormone (SIADH)</td>
</tr>
<tr>
<td>Potassium (3.5-5.0 mmol/L)</td>
<td>4.7</td>
<td>3.9</td>
</tr>
<tr>
<td>Chloride (101-111 mmol/L)</td>
<td>↓97</td>
<td>↓97 = Diuretics, chronic respiratory acidosis, low sodium</td>
</tr>
<tr>
<td>CO2 (22-32 mmol/L)</td>
<td>32</td>
<td>30</td>
</tr>
<tr>
<td>BUN (8-20 mg/dL)</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>Creatinine (0.7-1.2 mg/dL)</td>
<td>0.7</td>
<td>0.7</td>
</tr>
<tr>
<td>Red Blood Cells (4.6-6)</td>
<td>3.58</td>
<td>↓3.45 = Hemorrhage (blood loss), Anemia,</td>
</tr>
<tr>
<td>WBC (4.5-11 k/uL)</td>
<td>6.8</td>
<td>↓4.2 = could be due to drugs use such as acetaminophen, furosemide</td>
</tr>
<tr>
<td>Hemoglobin(13.9-16.3 g/dL)</td>
<td>↓111.1</td>
<td>↓10.4 = Anemia, cancer</td>
</tr>
<tr>
<td>Hematocrit (39-55%)</td>
<td>↓32.3</td>
<td>↓30.6= Acute blood loss, anemia, malnutrition</td>
</tr>
<tr>
<td>Platelets (150-400 k/uL)</td>
<td>211</td>
<td>205</td>
</tr>
<tr>
<td>Glucose (70-100 mg/dL)</td>
<td>116</td>
<td>109</td>
</tr>
<tr>
<td>Lymph (24-44%)</td>
<td>↓11.5</td>
<td>↓15.6 = possible cancer</td>
</tr>
<tr>
<td>Monocytes (0-9%)</td>
<td>8.5</td>
<td>↑9.8 = viral disease, possible cancer</td>
</tr>
<tr>
<td>Calcium (8.5-10.5 mg/dL)</td>
<td>8.8</td>
<td>9.1</td>
</tr>
</tbody>
</table>
6. Diagnostic Tests

1) Chest X-Ray – A single frontal view of the chest is submitted showing no change in the bones, soft tissues, subcutaneous emphysema, and right chest tube. There is a right apical pneumothorax, increased since yesterday and most conspicuous in the right apex as well as the subpulmonic region.
2) Lung mass biopsy result pending.
3) Pulmonary function tests- were somewhat marginal and her clinical performance status is remarkable for her daily SOB and exercise limitation (per H&P).

Section 2: Critical Thinking Worksheet

AIR (respiratory):

1) RR 24, breath sounds diminished bilaterally with crackles throughout all over lung field noted, 88% O2 sat on RA-95% on 1 ½ L/NC with SOB upon activity.
2) Medical Dx: Chronic Obstructive Pulmonary disease, Right upper lobe mass, Hx multiple yearly episode of "walking pneumonia" Surgical Dx: Right posterolateral mini thoracotomy, Right upper lobe apical segmentectomy (3 days prior to care); Meds: Tiotropium Bromide, Albuterol, Nebulizer treatment via RT, Oxycodone/Acetaminophen, 3L/ NC PRN for O2 sat <92%. Labs: (the day of care)↓ H/H 10.7/30.6, (previous day)↓ H/H 11.1/32.3, Diagnostic: Chest X-Ray with right apical pneumothorax, increased since yesterday and most conspicuous in the right apex as well as the subpulmonic region.
3) Assessment was performed to improve respiratory status, promote airway patency and prevent atelectasis and development of pneumonia. Also to assess O2 saturation and tissue perfusion
4) Impaired gas exchange r/t air and fluid present in lungs and pleural space, decreased functional lung tissue aeb crackles throughout all lung field and Chest X-Ray with right apical pneumothorax, O2 Sat 88% on RA and diminished breath sounds bilaterally. Tachypnea (24)

Water/Food (cardiovascular):

1) Skin turgor adequate, mucous membranes moist, pedal pulses present bilaterally, apical pulse regular, BP 149/74, T 98.5, HR=61, RR=24 Wt. 156lbs, ate 50% (regular diet) dinner, intake on shift 650cc, amber colored urine 300 cc, Chest tube drainage=400cc of serosanguinous drainage.
2) Regular diet, Saline lock to left forearm, pain level 7-8/10 at surgical site, restrict free water 1000 cc q day. Medical Dx: Chronic Obstructive Pulmonary disease, Right upper lobe mass, Hx multiple episodes of "walking pneumonia"yr, HTN; Surgical Dx: Right posterolateral mini thoracotomy, Right upper lobe apical segmentectomy (3 days prior to care). Continuous Chest Tube suction with 400 cc drainage, ↓H/H 10.7/30.6, RBC 3.45, WBC 4.2, BUN 14 , Creatine 0.7, Medications: Dilatazem, Benazepril, Clonidine, Furosemide
3) Assessing the patient’s fluid volume status is essential and even critical for the post-op status. A fluid overload could very quickly fill the lungs and compromise gaseous exchange. Assessment of lung sounds, weight, skin turgor, mucus membrane and blood pressures will help to evaluate hydration status. Lab values (H&H) can also be useful indicators of hydration/dehydration or hemostasis. Low Hct and low HGB and Hct might due to the blood loss during surgery. ↓ WBC may indicate to risk for infection. Pulse rate
and blood pressure are an indication of fluid volume (low pressure and increased pulse = hypovolemia)

4) Risk for Fluid Volume Imbalance r/t invasive chest tube, restriction of fluid intake, S/E of med

5) Assess for changes in mental status. Monitor lab values, electrolytes. Monitor infusion rates of IV fluids if any; carefully, monitor pulse rate and blood pressure and maintain strict I&O

**Activity & Rest:**

1) Muscle tone good, 100% ROM in UE, 100% ROM in both LE, bed rest, SCD present, pain 8/10-4/10 constantly, assistance required with ADLs, Adventitious breath sounds, dyspnea, RR=24 while resting, pulse= 61, SpO2 of 96% on 1 ½ LNC,

2) Medical Dx: Chronic Obstructive Pulmonary disease, Right upper lobe mass, Hx: multiple yearly episode of "walking pneumonia", HTN Surgical Dx: Right posterolateral mini thoracotomy, Right upper lobe apical segmentectomy (3 days prior care); Medication: Albuterol, Diltiazem, Benazepril, Clonidine, Oxycodone/Acetaminophen, Tiotropium Bromide Lab tests: ↓ Hct, Hgb, RBC, Calcium; WBC

3) To establish patient’s needs and capabilities, help establish obtainable goals and implement appropriate interventions, provide activity based on patient’s response and promote ↑ feeling of accomplishment, reduce stress and promote rest, slow respiratory rate with a prolonged exhalation.

4) Activity intolerance r/t ↓ activity level, hypoxia, interrupted sleep/wake cycle, generalized weakness, imbalance between oxygen supply and demand Aeb: fatigue, dyspnea, increased pulse and respiration after activity (RR=32, Pulse=100)

5) Assess and determine patient’s physical limitation.

Monitor cardiorespiratory and oxygen response to activity (e.g., ↑ dyspnea, respiratory rate, tachycardia, pallor, cyanosis etc.). Plan activities for periods when patient has the most energy and alternate rest and activity periods. Encourage afternoon nap. Educate re: conscious controlled breathing techniques (pursing lips and diaphragmatic breathing).

**Elimination:**

1) Hypoactive bowel sounds X4 Q, abd soft and non-distended, Ø BM since hospitalization, able to pass flatus, bed rest

2) Meds: Oxycodone/Acetaminophen, Hydromorphone, Magnesium Hydroxide.

3) There are multiple reasons for constipation (narcotics, anesthesia, immobility after surgery), thus assessment of the usual pattern of the BM is important.

4) Constipation r/t bed rest i.e., immobility, opioid (meds), insufficient fiber/fluid intake AEB: Ø BM on shift, hypoactive BS.

5) Assess for regular pattern of BM. Monitor I&O. Encourage activity as tolerated q shift. Administer stool softener as ordered. Increase fiber uptake and fluids as allowed by fluid restriction.

**Solitude & Social Interaction:**

1) Patient awake, alert and oriented x 3, pleasant and quiet, cooperative with staff. Sister visited, patient eager to accept phone calls and visitors, speech clear and coherent. States, "I wish my grandchildren lived close by so that they could visit me".

2) The patient was not combative or resistant to treatments. Had been living at home alone. Sister’s visits are infrequent due to her own familial responsibility; she is available by phone as is the patient’s grandchildren who live in Chico and Salinas. Most of her friends are deceased except for one friend but she lives in Santa Rosa.
3) Family members’ visit will decrease feeling of loneliness, decrease anxiety and stress especially when pt is in the hospital. Assess LOC to determine the possible level of social interaction. Culture and Religion might effect the behavior and communication style.

4) Impaired Social interaction r/t environmental barriers due to hospitalization i.e., oxygen use, activity intolerance; AEB: States “I wish my grandchildren lived close by so that they could visit me”, Sister’s visits are infrequent due to her own family responsibility; most of her friends are deceased risk for loneliness r/t hospitalization,

5) Assess mental status q shift. Encourage pt to express feelings about hospitalization and illness. Encourage family members and friends to visit as tolerated. Monitor for depression. Be aware of cultural /religion differences.

Prevention of Hazards:
1) Assistance required for ADLs, chest tube to suction, O2 of 1 ½ L/NC, side rails up x2, bed low and call light within reach, bed rest.

2) Med Dx: Right posterolateral mini thoracotomy, Meds: Opioids (Oxycodone/Acetaminophen, Hydromorphone) Allergy: Aspirin, sensitive to non-steroidal anti-inflammatory, tape

3) Side effect of medication, decreased muscle strength, fatigue etc. could be contributing factor to a risk of injury.

4) Risk for injury r/t side effect of pain meds, fall, weakness, chest tube

5) Assess environment for threats to safety e.g., high bed without side rails down. Assess administration of medication. Assess A&O q shift. Monitor amounts of opioid administered and tolerance. Educate caregivers & family re: identifying and correcting identified hazards.

Development Self-Care Requisites:
1) 75 yo ⊕ lives alone. Expresses concern that she is not able to do things independently. She is waiting for her biopsy result and thinks that she has lung cancer because she is a heavy smoker. Also, her sister and only daughter died of cancer couple years ago. She has a sister who lives 3 miles away from her, came to visit her at the hospital. Her 24 yo grandson lives in Chico and 22 yo granddaughter lives in Salinas. Needs assistance with ADL’s, limited activity tolerance, a&oX3.

2) Medical Dx: Chronic Obstructive Pulmonary disease, Right upper lobe mass, Hx multiple episodes of "walking pneumonia"/Year, HTN; Surgical Dx: Right posterolateral mini thoracotomy, Right upper lobe apical segmentectomy (3 days prior to care) Presence of chest tube and O2 via NC

3) Powerlessness can be experienced by people suffering from chronic debilitating illnesses, as well as by attempting health promotion thus correctly identifying the actual or perceived problem is essential to providing appropriate support measures. When negative life events occur, depression based on hopelessness can result especially if social support is low. Praise assists in developing positive feelings and enhances self-esteem/ self image.

4) Powerlessness r/t lifestyle of helplessness Aeb: Needs assistance with ADL’s, limited activity tolerance, a&oX3, inability to perform previous tasks and activities, not able to take care of self independently.

5) Assess for signs/symptoms of hopelessness/depression/availability of social support. Observe for factors contributing to powerlessness (e.g. mobility, hospitalization etc). Establish therapeutic relationship with the client. Give realistic and sincere praise for accomplishments.
Health Deviation Self-Care Requisites:

1) Actual:
   a) Impaired gas exchange r/t air and fluid present in lungs and pleural spaces, decreased functional lung tissue aeb crackles all over the lung field and Chest X-Ray with right apical pneumothorax, O2 Sat 88%RA, diminished breath sounds
   b) Ineffective Breathing pattern r/t pain, position, and possible complication on affected side AEB: shortness of breath, shallow breath
   c) Anxiety r/t feelings of dyspnea and pain AEB: anxious facial expression, difficulty in complying with instructions to breath slowly.
   d) Acute pain r/t presence of chest tube, incision AEB: facial grimacing, c/o pain at incision area, pain level 7-8/10, asking for pain med often. States “It hurts at incision area when I move”.
   e) Constipation r/t bed rest i.e., immobility, opioid (meds), insufficient fiber/fluid intake AEB: O BM on shift, hypoactive BS
   f) Self-care deficit RT side effects of medications, immobility and weakness. AEB inability to perform minimal ADL’s and requiring total assist.

2) Risk For:
   a. Risk for injury r/t presence of invasive chest tube, side effects of pain meds, fall, weakness,
   b. Risk for fluid volume imbalance r/t invasive chest tube, restriction of fluid intake, S/E of med
   c. Risk for imbalance nutrition, less than body requirements r/t inadequate food intake due to dyspnea, activity intolerance
   d. Risk for infection r/t chest tube, IV lines and surgical incision sites.

Section 4: Cultural Aspects of Care

Ms Z is a Caucasian divorcée who lives by herself after her boyfriend’s death 15 years ago. Her only daughter died of cancer at the age of 54. She has two grand-children, a grandson who lives in Chico and granddaughter that lives in Salinas. Ms. Z’s sister lives 3 miles away but can not come to visit her at the hospital very often due to her responsibilities with her own family. Ms. Z was born and grew up in a Catholic family in California. However, she does not attend church often due to her illness. She says, “I do not need to go to the church to pray anyway”. “I pray whenever and where ever I desire and I pray every night.” adds Ms. Z.

Among Christians, spiritual/religious beliefs that explain the presence of Health and Illness vary within many sects and groups. Whereas generally Christians emphasize individual responsibility and conscience over following tradition or religious authority, Catholics on the other hand follow a more rigid adherence to the more dogmatic guidelines of the church. In most denominations, prayers and blessings of the sick may be practices in a health crisis but Catholics believe that prayer has the power to heal. Many denominations including Catholics may prohibit euthanasia based on belief that only God can give life and only God can take it. However, many Catholics are becoming more open minded and they may allow for termination of extraordinary treatment but not active euthanasia.
When Ms. Z's primary physician came to see her, she expressed her desire to change her full code status to no code and no further surgical treatment saying "Dr., I don't care what my biopsy result will say I am 90% sure that I have cancer. God gave me 75 good years to live and I am okay if he wants to take me at this age. My daughter only lived to be 54 and my sister only 60. I am glad that I got longer life than they did." She further added that she believes in the middle position. She neither believes in euthanasia nor using any and all means available to extend life without any significant hope of recovery.

In terms of illness, blood and blood products are permissible, medications may be taken if benefits outweigh risks and most surgical procedures are permissible except abortion and sterilization. Healing practices include "Sacrament of the Sick", burning candles, laying on of hands and offering prayers. As her nurse I asked if she would like a visit from clergy for prayer. She responded, "I will accept communion if possible. Just because I don't go to church doesn't mean I am a non believer. I just don't believe in going to church just to pray."

References:


<table>
<thead>
<tr>
<th>Evaluation</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Monitor chest for abnormal movements, audible breath sounds, and normal pulses</td>
<td>To ensure adequate ventilation and perfusion.</td>
</tr>
<tr>
<td>2. Monitor respiratory rate, depth, and effort</td>
<td>To allow early recognition of respiratory failure.</td>
</tr>
<tr>
<td>3. Assess for accessory muscle use</td>
<td>Presence of retractions and wheezes may be due to airflow obstruction.</td>
</tr>
<tr>
<td>4. WBC count, other</td>
<td>With normal leukocytes and viable cells.</td>
</tr>
<tr>
<td>5. Sputum analysis, bronchoscopy</td>
<td>Bronchoscopy was performed due to the cough and fevers.</td>
</tr>
<tr>
<td>6. Encourage use of supplemental O2</td>
<td>To provide visual feedback to the patient.</td>
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**Nursing Interventions**

1. Administer oxygen 1-2 L/min 
2. Encourage slow, deep breaths 
3. Keep O2 set 
4. Monitor chest excursion 
5. wrists/forearms, check for arm movements 

**Client Goals**

- To improve hypoxemia and O2 sat 
- To improve respiratory drive 
- To prevent respiratory arrest 

**Nursing Diagnoses**

- Respiratory Inadequacy 
- Imbalanced gas exchange RT 
- Decreased tissue perfusion 

**Client Diagnosis**

- Hypoxemia: Respiratory acidosis 
- Hypoxemia: Respiratory alkalosis 
- Hypoxemia: Hypoxic respiratory failure 

**Documented Patient Care Plan**

**Intervention:** Client X is placed on high-flow ventilator to increase oxygen saturation and maintain normal respiratory patterns. The nurse monitors the client's vital signs closely and administers supplemental oxygen as needed. The client is encouraged to perform deep breathing exercises and take slow, deep breaths. The nurse also monitors the client's respiratory rate, depth, and effort to detect any signs of respiratory failure. The client's chest movements are assessed for abnormal movements, audible breath sounds, and normal pulses. The nurse monitors the client's oxygen saturation level, and interventions are implemented to maintain it within the normal range. The client is monitored for complications such as hypoxemia, respiratory acidosis, and respiratory alkalosis. The client's response to interventions is closely observed, and any necessary adjustments are made to ensure the client's safety and comfort.
<table>
<thead>
<tr>
<th>Interventions</th>
<th>Target Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Teach and implement nursing interventions</td>
<td>Pain is not an expected part of the patient's experience.</td>
</tr>
<tr>
<td>2. Teach patient to take medications as ordered.</td>
<td>Good pain management routes such as Oxycodeine/Acetaminophen.</td>
</tr>
<tr>
<td>3. Maintain pain level 4/10.</td>
<td>Assess for Side effects</td>
</tr>
<tr>
<td>4. Take an elderly client's pain seriously and ensure nonpharmaceutical</td>
<td>Non-pharmaceutical interventions should be used to supplement pharmaceutical preparations.</td>
</tr>
<tr>
<td>5. Teach and implement hospitalization</td>
<td>Pain level is below 4/10.</td>
</tr>
<tr>
<td>6. Take patient to a hospital if pain level remains free</td>
<td>Reduce pain by the patient's medication and activity.</td>
</tr>
<tr>
<td>7. Decrease pain medication</td>
<td>Acute Pain is present.</td>
</tr>
</tbody>
</table>

**Nursing Diagnosis**

- Acute Pain
- Pain management Discomfort

**Evaluation**

- To minimize pain and discomfort
- To improve pain management
- To assess for side effects

**Supportive Education**

- Partially Conscious
- Partially Conscious

**Nursing Interventions**

- IV: Oxycodeine
- PO: Acetaminophen

**Client Goals**

- Pain less than 4/10
- Pain management
- Comfortable

**Health Education**

- C/S: Right positioning
- C/O: Right position
- P/C: Right position

**Complications**

- DX: Right positioning
- Right positioning
- Right positioning

**Assessment Data**

- Pain level: 7/10
- Pain level: 4/10
- Pain level: 2/10

**Informed Consent**

- Pain level: 0/10
- Pain level: 6/10
- Pain level: 8/10

**Prevention**

- Pain level: 3/10
- Pain level: 5/10
- Pain level: 7/10
### Care Plan

**Goals:**
- Adaptation to the ST and LT
- Decrease in respiratory rate to 16
- Encourage patient to rest and take deep breaths
- Gradually increase activity
- Achieve short term and long term interventions

**Implementing nursing measures:**
- Patient's comfort level
- Education: Respiratory management
- Encourage breathing

**Evaluation:**

<table>
<thead>
<tr>
<th>Evaluation</th>
<th>Patient Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>Stabilized</td>
</tr>
<tr>
<td>Vital Signs</td>
<td>Normal</td>
</tr>
</tbody>
</table>

**Nursing Interventions:***

<table>
<thead>
<tr>
<th>Interventions</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nursing Goals:</strong></td>
<td><strong>Support via Education:</strong></td>
</tr>
<tr>
<td><strong>ST:</strong></td>
<td><strong>Early mobilization and ambulation:</strong></td>
</tr>
<tr>
<td><strong>LT:</strong></td>
<td><strong>Ambulation and early mobilization:</strong></td>
</tr>
</tbody>
</table>

**Nursing Diagnosis:**

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Short- and Long-term:</strong></td>
<td><strong>Support via Education:</strong></td>
</tr>
<tr>
<td><strong>Ambulation:</strong></td>
<td><strong>Early mobilization and ambulation:</strong></td>
</tr>
</tbody>
</table>

**Discharge Plan:**

- Discharge criteria:
  - Vital signs within normal limits
  - Ability to perform self-care
  - Able to manage exacerbations of acute illness

**Prevention Plan:**

- Maintenance of healthy lifestyle
- Regular exercise
- Tobacco cessation
- Nutrition counseling

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**Assessment Data:**

- **Height:** **6'2**
- **Weight:** **200 lbs**
- **BMI:** **30.3**
- **Blood Pressure:** **130/80**
- **Heart Rate:** **70**