

Pneumonia is an acute respiratory infection

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Data collected from the patient, the patient's chart and the interaction between the patient and the student nurse is also identified to provide the reader with the patient's background and present condition. The nursing process was used to assess this data and identify 3 nursing diagnoses along with nursing care plans for each diagnosis. Interventions were implemented to meet short term and long term goals with positive outcomes in spite of the restricted time frame.

Introduction Pneumonia is an acute respiratory infection that affects the lungs.

The lungs are made up of small sacs called alveoli, which fill with air when a healthy person breathes. When an individual has pneumonia, the alveoli are filled with pus and fluid, which makes breathing painful and limits oxygen intake. According to the Centers for Disease Control, pneumonia strikes over 4 million Americans each year and is the fifth leading cause of death in people age 65 and older. There are several different causes of pneumonia which include bacteria, viruses, macrocosms, fungi, parasites, and chemicals and is classified as either community acquired or hospital acquired pneumonia.

It's important to determine the classification of pneumonia because of the differences in the likely causative organisms and their corresponding treatment. Community acquired pneumonia (CAP) involves onset in the community or during the first 2 days of hospitalizing while hospital acquired pneumonia (HAP) occurs after a hospital stay of 48 hours or longer. The focus of this paper will be on bacterial CAP since Tanat was ten malting Lagoons AT ten patient in tens case situ y a . Because AT their damaged and diseased lungs, any patient with COOP is a susceptible host.

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Other risk factors for pneumonia are many and include aging, prolonged immobility, chronic diseases such as diabetes mellitus, upper respiratory infections, miscomprehended, cigarette smoking, crowded living conditions, malnutrition, and asthma. Classic signs and symptoms can have a sudden onset and include fever, shaking, chills, and shortness of breath, cough with or without sputum production, depression, and epileptic chest pain.

A physical examination will reveal signs of pulmonary consolidation such as bronchial breath sounds, crackles, and dullness to percussion.

Diagnostic tools include blood cultures, sputum cultures, and x-rays.

Bacterial Pneumonia is usually successfully treated with antibiotics. Other reattempts, according to patient need, may include supplemental oxygen to treat hyperemia, analgesics to relieve chest pain, and antipathetic for fever. Education plays a big part in nursing care for patients with pneumonia because preventing it is safer than trying to cure it. This includes teaching patients the importance of meticulous hand hygiene and getting annual influenza vaccines.

Additionally, the Centers for Disease Control and Prevention (CDC) recommend all children younger than 5 years old, all adults 65 years or older, and people 6 years or older with certain risk factors get the pneumatically vaccine. . Data Collection History of Present Problem: Patient MAC is a 57-year-old female with a history of COOP and asthma who had a cough, SOB, and flu symptoms for approximately 1 week that continues to persist. She presented to Express Care on Tuesday, Feb. 23 where they found she had some wheezing.

They gave her some predisposing, a Z-Pack (Astronomic), some cough medicine, and a nebular and she states that none of these treatments seemed to help. MAC was up all night coughing and she states that she pulled a muscle on her right side from all the coughing that was causing her some pain. She was feeling a little bit better the following day so decided to go to Millionaire snowmobiling. However, over the course of the day she continued to be short of breath and then developed some nausea, mimesis, and significant diarrhea which she said is very watery.

She is having incontinence of stool anytime she coughs. She denies any fever, rash or sick contacts.

MAC has had decreased P. O. Intake, increased fatigue, and because of all the diarrhea she has had some rectal pain and bleeding. She also states she has had about an 8-pound weight loss over the past couple of weeks and mom mild dysphasia. MAC went to the ERE in Millionaire on Friday where an extensive workup was done and she states that they told her she had pneumonia.

It is unclear from her records what medication she was given in Millionaire.

She arrived at Maine General by ambulance late Friday night and was admitted early Saturday just after midnight. Her assessment and vital signs on admission were: Temperature: 98.3, Heart rate: 73, BP: 148/81, O2 sat: 95% on room air. Overall the patient was alert with no acute distress. HEN were traumatic, PEARL, nearer were patent and throat was clear.

Upon inspection of her neck, there was some mild cervical tenderness and she had some tenderness associated with this. The SON knows that the lymph nodes most often swell in response to infection or inflammation.

Her cardiovascular system was normal with no murmurs, rubs, or gallops. A tender was no evidence of tachycardia. Upon lung auscultation, some mild diffuse wheezing and crackles in the lower lung fields, greater on the left than on the right. Her abdomen revealed positive bowel sounds and was soft, nontender and unobscured. There was no joint effusion or swelling and she showed strength of 5/5.

Cranial nerves 2-12 were grossly intact and her sensation was intact. There was no pitting edema in the lower extremities, nor were any rashes or injuries noted. The patient's affect was appropriate and mood was authentic.

Her lab data from Millersville on Friday the 27th showed a white count slightly elevated at 11.7. Lab data taken at Maine General early Saturday morning show a white count of 6.

3 which is within normal range. The student nurse thinks this decrease in white count must be due to the initial reaction of the antibiotics given to the patient in Millersville. Slightly low were hemoglobin at 11. And hematocrit at 35.5.

While this was not low enough to be of major concern, the SON looked at subsequent labs to compare and found that the hemoglobin levels stayed between 9.4 and 11.1. And the hematocrit stayed between 30 and 35.5. The

SON realizes that there could be many reasons for this slightly low level. The patient's mother had anemia which would put the patient at risk for anemia.

The drop in hemoglobin and homoerotic could also be due to multiple blood draws or the patient's diarrhea could be impairing the absorption of iron.

Since these levels were not low enough to cause alarm, this paper will focus on the patient's primary diagnosis of pneumonia. The patient did state that she's aware her mother's anemia places her at risk and will follow up.

Mac's glucose levels were slightly elevated and the SON recognized that this could be due to the methyl-prednisolone, a corticosteroid used to battle inflammation, or it could be due to stress from being ill and hospitalized.

Typically, in non-diabetics, once the dose of prednisolone is reduced or when treatment is discontinued, these increases in blood-sugar levels should end (Stand, Rebate, ; Schnabel, 2012). A test for Colostomies official was negative, but a stool leukocyte test was positive.

Leukocytes are not normally seen in stools in the absence of infection or other inflammatory processes. The stool leukocyte test confirms that the patient was experiencing an infection or inflammatory process. The most widely used test to diagnose pneumonia is the chest x-ray (Via, 2013). A CT scan of the chest and abdomen showed bilateral lower lobe reticular nodular opacities consistent with an atypical infection. Additionally, an abdominal CT scan showed a possible enteritis which could account for the diarrhea.

Personal/Social History:

MAC is widowed, lives with a significant other, and has 2 grown sons who live nearby. She has a sister who lives a few miles away but cannot come to visit her at the hospital very often due to her responsibilities with her own family. MAC has been working at the same office job for over 15 years and denies ever using tobacco or alcohol. She was born and grew up in a Catholic family, however, she does not attend church often and states, "I do not need to go to the church to pray. I pray whenever and wherever I desire."

Relevant Data: Data the SON considered relevant from the present problem and its clinical significance include: Productive cough of green sputum, SOB, and flu symptoms that continue to persist: A productive cough with color is always a red flag because sputum that is various shades of yellow to green is typical of bacterial infection that are present. Decrease in neutrophils have responses to a Decelerate Intention (Yugoslav, et al, 2013).

In previously healthy individuals, pneumonia may present with cough, fever, dyspepsia, fatigue, and can mimic the cold or flu (Driver, 2012).

Was given predisposing, a Z-Pack, cough medicine, and a nebulator: Knowing that this respiratory infection was treated by an antibiotic and steroids, the SON determined that this medical treatment was not effective based on the progression of respiratory distress. This may be either due to an asthmatic or COPD exacerbation or an infection that is not susceptible to antibiotic. The SON wondered why the physician would order predisposing in addition to the antibiotic and if this medication could worsen an underlying infection.

In patients with COPD there is also underlying inflammation that can cause swelling in the bronchioles that can impair ventilation, therefore it is not

uncommon to see this ordered. Predisposing blunts the immune response and therefore can increase the risk of infection.

The SON wondered if this could be a potential problem, however studies have shown that predisposing treatment in patients with community-acquired pneumonia shortens time to clinical stability without an increase in complications (Blue, et al, 2015).

Non-smoker, denies alcohol consumption, and mother has asthma and COOP: Genetics increases the risk factor of asthma and COOP (Lewis, 2011). Oral Temperature of 98.3: Temp has trended upward from her readings at home which are typically 97.8 according to the patient.

This is may be reflecting the body's effort to increase WBC/interruption production to fight sepsis and is a clinical red flag.

Respirations 20 and slightly labored: Labored breathing could be due to possible underlying hypoxia from infection/pneumonia and difficulty to diffuse O₂/CA at the alveolar level. BP 148/81: Elevated due to anxiety and respiratory distress. Expected, but needs to be trended over time. Mild aching pain 3/10: While this level of pain is low, pain of any kind is relevant and must be noted. The nurse must gather further data to determine the relevance and clinical concerns that this pain represents.

Pain located under right side of lower rib cage with no radiation, aggravated by deep breaths and cough to 6/10, alleviated by shallow breathing: Nurse determined that this correlated with the primary care provider's (PC) assessment of a pulled muscle from coughing and was not of cardiac origin.

Dyspepsia with mild diffuse wheezing and rales in the lower lung fields: Wheezing represents narrowed bronchioles that are whistling (Wilkins & Dexter, 2010). The SON wondered why she could not find an arterial blood gas (BAG).

Upon research, the SON found out that an ABG is done if the patient is critically ill and not responding to standard treatment (Sat, Ere, Nelson, & Pinky, 2013). According to the American Hospital Association's handbook, critical is defined as a questionable outlook where vital signs are unstable or not within normal limits, there are major complications, or death may be imminent (American Hospital Association, 2006). Mac's condition did not fit this criteria, therefore, she was not in critical condition and did not get ABG.

Relationship of patient's past medical history and current meds: One disease process often influences the development of other illnesses. Based on the SON'S research, it was determined that the patient's genetic factor of her mother having asthma and COPD as well as the patient's long-standing history of asthma are risk factors in the development of COPD in non-smokers (Zing & Gong, 2012). There are several classes of drugs used to treat COPD and asthma. Some of these medications combine two classes of medication in one convenient dosage.

An example of this is Advair.

It combines a corticosteroid for anti-inflammation with a beta 2-adrenergic agonist for bronchodilation. Other medication classes that this patient is taking include Singulair, a leukotriene antagonist. Leukotrienes are responsible for airway inflammation and bronchial hyper-responsiveness (Quibbler, <https://assignbuster.com/pneumonia-is-an-acute-respiratory-infection/>

2008). These medications reduce inflammation by blocking the illustriousness inflammatory actions as well as blocking illustriousness prognostications effects thereby causing procrastination (Leslie, Aching, Sippers, Brands, & Velvety, 2013).

II.

Patient Care Begins by SON: WAS taken by SON 3/2: 1200 1600 -r: 97. 9 (oral) -r: 97. 9 98. 4 p: 60 p: 96 p: 78 R: 18 R: 20 BP: 120/87 BP: 150/83 BP: 146/88 O2 sat: 95% room air O2 sat: 96% room air O2 sat: 98% room air Pain: 6/10 with cough 6/10 perennial area Pain: 4/10 with cough /10 perennial area Pain: 3/10 with cough 2/10 perennial area Location AT plan: unaware ruling sloe AT lower roll cage wilt no era Aggravated by deep breath and cough. Alleviated by rest.

Unchanged from previous assessment Alton wit n congou.

Location of pain: Perennial area with no radiation. Aggravated by touch when cleaning perennial area. Alleviated by rest Unchanged from previous assessment SON Assessment: Significance: General Appearance: The patient is alert and oriented in no acute distress. Respiratory: Dyspepsia with expiratory wheezes in all fields.

Cardiac: SSL, SO. No murmurs, rubs, or gallops. No tachycardia. No pitting edema noted. Neuron: Sensation is intact. Abdomen soft/non-tender, bowel sounds audible per auscultation in all 4 quadrants.

GU: Urine clear/yellow. Watery, loose stool. No evidence of blood. Skin: Skin integrity intact. Slight redness and tenderness in perineal area due to diarrhea.

The body system that the SON thoroughly assessed based on the primary and priority concern is respiratory. The SON recognized the clinical relationship of impaired ventilation and neurological status. As CO₂ levels rise, mentation goes from increased confusion/agitation to decreased levels of consciousness, which would eventually require intubations. The patient did not reach this level, but this correlation stayed on the radar screen of the SON as part of needed ongoing assessment priorities. The SON also monitored the cardiac system.

The potential for sepsis/septic shock was anticipated by the SON with any severe infectious process in the patient. As a susceptible host. Therefore close assessment of the C. V. system was performed. This included close trending of a heart rate that could elevate, and BP that trends downward over time.

In addition the SON monitored for the presence of depression and pale cool skin.

As can be seen on the chart below, there are only two incidences, both at 2 pm, where the heart rate elevated and the systolic BP decreased. Since this did not continue to trend, the SON did not anticipate the potential for sepsis. The most serious complication to anticipate in patients with pneumonia is respiratory failure resulting in decreased oxygenation that does not respond to increasing O₂ amounts. Nils would Kelly require intubation (Yamaha, 2

patient's O₂ stayed above 92%, so this complication was not an issue in this case.

III. Nursing Diagnosis: The patient's primary problem is acute respiratory distress that represents the molly seen relationship of COOP exacerbation caused by pneumonia The nursing priorities that will guide the plan of care are: IMPAIRED GAS EXCHANGE INEFFECTIVE AIRWAY CLEARANCE ACUTE PAIN IMPAIRED GAS EXCHANGE r/t lung consolidation with decrease in surface area available for gas exchange Abe wheezing, SOB, labored breathing. Long Term Goal: Patient will maintain optimal gas exchange by discharge.

Short Term Goal #1: Patient will experience adequate O₂ levels of at least 92% as evidenced by usual mental status of being alert without signs of confusion and being oriented to person, place and time by end of shift.

Nursing Interventions: Rationale: Evaluation: SON will assess IQ H for and report signs and symptoms of hyperemia such as tachycardia, restlessness, depression, headache, lethargy and confusion by checking and recording vital signs, auscultation lungs, checking capillary refill and LOC.

Tachycardia, restlessness, depression, headache, lethargy and confusion are all signs of hyperemia (Lewis, 2011).

Met: Patient remained free of signs of hypoxia. SON will assess IQ H for changes in orientation and behavior such as confusion and restlessness Restlessness is an early sign of hypoxia. Imitation gets worse as hypoxia increases due to lack of blood supply to the brain (Lewis, 2011). Met: Patient remained awake, alert and oriented to person, place, time, and situation.

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SON will pace activities such as medication administration, routine assessments, and ambulation, and provide rest periods to prevent fatigue PRNG. Even simple activities, such as bathing, can increase oxygen consumption and cause fatigue (Wilkins & Dexter, 2010).

No changes to cardiopulmonary status noted during activity. Patients Sass remained > 92%. Short Term Goal #2: Patient will demonstrate a normal depth, rate and pattern of aspirations with depth not overly shallow or deep, rate between 12 to 20 per minute, and evenly spaced between each breath by end of shift. Nursing Interventions: SON will assess respirations QUO: quality, rate, pattern, depth and breathing effort such as use of accessory muscles and flaring of the nostrils.

Rapid, shallow breathing and hyperventilation affect gas exchange by affecting CA levels.

Flaring of the nostrils, dyspepsia, use of accessory muscles, tachyon and lord pane are all signs of severe distress that require immediate intervention (Wilkins & Dexter, 2010) Met: Patient was Tree AT signs AT Lossless Day Ana AT smelt Pets respirations were AT a normal rate and depth by end of shift. SON will monitor pulse geometry QUO and whenever patient exhibits signs of hyperemia such as restlessness, lethargy, confusion, and tachycardia. Pulse geometry is useful in detecting changes in oxygenation. Oxygen saturation should be maintained at 92% or greater (Giuliani & Meyers, 2011).

Met: Sass via pulse geometry remained at 92 - 100% throughout shift. SON will provide supplemental O₂ if saturation falls below 92% via nasal canal as ordered. Early supplemental of oxygen is essential since early mortality is <https://assignbuster.com/pneumonia-is-an-acute-respiratory-infection/>

associated with inadequate delivery of oxygenated blood to brain and vital organs (Lewis, 2011). Met: Patient's breathing is unlabeled with O₂ Sat at least 92% or better room air at end of shift. Short Term Goal #3: Patient will verbalize understanding of therapeutic interventions to maintain oxygen demands by end of shift.

Nursing Interventions: SON will educate client about assessing the home environment for irritants that impair gas exchange and adjusting home environment as necessary (e.

G. , installing air filter to decrease presence of dust). Irritants in the environment decrease the client's effectiveness in accessing oxygen during breathing (Giuliani & Meyers, 2011). Goal met: Patient verbalized understanding by stating that she will change air filters in her home and conduct tests to detect irritants such as mold and radon. SON will assist client with identifying and avoiding situations that exacerbate impairment of gas exchange (e.

. , stress-related situations). Situations identified included clutter and organizing her home and work space, not taking on too many obligations, avoiding crowds, allowing time for everyday activities to avoid being rushed, taking time to relax between activities, controlling emotions. Avoiding stressful situations will improve relaxation and decrease dyspepsia (Ackley & Ludwig, 2010) Goal met: Patient successfully able to identify stressful situations and agreed to avoid them SON will assess patient's nutritional status and instruct client to eat several small meals daily and to use dietary supplements as necessary.

This included discussion about drinking water instead of soda, avoiding fad diets, consuming plenty of protein such as milk, eggs, cheese, meat, fish, poultry, nuts and beans; getting enough fiber with whole-grain breads and pastas, vegetables and fruit; limiting salt consumption, and to eating too fast.

Clients with decreased oxygenation have little energy to use for eating and will avoid meals. Malnutrition significantly affects the aerobic capacity of muscle and exercise tolerance in clients with chronic obstructive pulmonary disease (COOP) (Phalange et al, 2010).