

# Comprehensive assessment of a chosen patient nursing essay



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This essay will give a critical account of a patient summary given below. It will incorporate the pathophysiology of COPD, linking the signs and symptoms that the patient presented on admission. It will also explore the detailed process of respiratory assessment of a patient experiencing exacerbation of COPD in hospital. The patient's name has been changed to maintain confidentiality in accordance with Nursing and Midwifery Council standards (NMC, 2008). Below is the summary of patient's condition.

Mrs Williams had been admitted to A & E following exacerbation of COPD. She is known type two diabetes, asthmatic and a heavy smoker. On admission she is alert and orientated. However she is unable to talk in full sentences and to take up her peak expiry flow rate due to an increased respiratory rate. She presented with BM of 2.4mmHg, RR of 32BPM, HR of 120BPM, and SPO<sub>2</sub> levels of 80% on 60% O<sub>2</sub>. Her presenting symptoms included increased breathlessness, wheeziness, cough, increased sputum production and increased anxiety. She was using her accessory muscles while breathing and appeared distressed and tired. From the summary above it is clear that Mrs. William is acutely ill suffering from diagnosis given at the handover of exacerbation of COPD. It was evident from her old medical notes that she has been admitted with the same problems before several times.

Chronic obstructive pulmonary disease (COPD) is a chronic lung disease marked by an irreversible, damage to the smaller air sacs in the lungs called alveoli (www. patient. co. uk). COPD leads to damaged airways in the lungs, causing them to become narrower and making it harder for air to get in and out of the lung. George-Gay & Chernecky (2002) claims that an

exacerbation of COPD is acute in onset and a constant deterioration of the patient's symptoms.

The main complaint of the presented complain on admission was increased breathlessness which is common worsening symptom of exacerbation of COPD. The primary cause for breathless in COPD is due to the interference of gaseous exchange process in the alveoli. The interference is caused due to the loose of elasticity of the alveoli which results in the airways to become narrow (Hoggs and Senior 2002). Therefore the lungs hyper-inflates in order to get rid of trapped air in side the lungs which causes shortness of breath (Bersten & Soni (2009) and Price et al, 2005).

Another symptom of exacerbation of COPD is breathlessness with wheeze. Mrs. Williams also presented with wheeziness as well as shortness of breath which could be heard without stethoscope. A wheeze is an unusual symptom of COPD however it is classic for Mrs. William as she has history of asthma and the fact that she is a heavy smoker. A wheeze is defined as a whistling sound while breathing. This occurs as a result of an air flow due to an obstructed airway in the lungs (www. patient. co. uk & Ali, Summer & Levitzky (2009).

Cox (2001) states that the purpose of the respiratory assessment is to determine the respiratory status of the patient and to determine information related to other systems such as cardiovascular and neurological system. It is claimed the deterioration in patient condition often starts with respiratory function abnormalities. Hunter & Rawlings-Anderson (2008) also claims that a thorough assessment helps the nurses to diagnose, manage and evaluate

therapeutic interventions for the patient at an early stage which is also agreed by Kennedy (2007).

The look, listen and feel approach is used throughout the assessment in the practice in order to carry out an effective assessment. The use of this approach is also emphasized by Hunter & Rawlings-Anderson (2008).

Simpson (2006) suggests that a comprehensive respiratory assessment is carried out in different steps. These steps include initial assessment, history taking, physical examination and further examinations. Following these steps will ensure that no information is missed which can give a vital information on patient's health status (Hunter & Rawlings-Anderson, 2008). This essay will now explore each stage in detail.

Simpson (2006) identifies the first stage in respiratory assessment as preparing the patient for an assessment making sure that the patient is comfortable and patient has been explained with the procedure and consented verbally. It also involves making sure that patient is seated in an upright position to facilitate maximum lung expansion. According to Bickely (2003) and Moore (2007) an upright position also helps to access the anterior and posterior thorax. Moreover, it is responsibility of the nurse to make sure that a suitable environment is provided in order to ensure privacy. Cox (2001) agrees that this can help physical and psychological comfort for the patient. Simpson (2006) and Hunter & Rawlings-Anderson (2008) states that using the look listen and feel approach during an initial assessment stage is paramount as by observing a patient can give us lots of vital information about their condition. This involves observing the patient to determine the degree of breathlessness, distress, cyanosis and their speech pattern. Vital  
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signs of the patient must be noted as an emergency interventions must be provided such as oxygen therapy is provided if signs of restlessness, anxiety, inability to focus on the conversation or laboured breathing is shown.

Addressing such issues is paramount before continuing to take the full assessment of the patient. (Cox , 2001).

Simpson (2006) identifies the next stage of respiratory assessment as history taking stage. However, Kennedy (2007) suggests that the respiratory assessment should begin with history taking stage as it provides vital information which can help to identify the cause of respiratory illness.

Simpson (2006) also agrees that in some cases patient's condition might not allow to obtain history such as if patient is unconscious. In this instance the nurse has to rely on patient's family to provide as much information as they can. Finesilver (2003) agrees with this stating that the purpose of physical examination is to emphasize the information gathered from history.

Finesilver (2003) also agrees that it enables the nurse to assess the patient's mental status which can indicate if the information provided by patient is accurate or not. As agreed by Cox (2001) above a compromised mental status of the patient can be as a result of hypoxemia, anxiety, laboured breathing which affects the history taking process.

Jarvis (2004) and Cox (2001) identify main areas of focus for a respiratory history as following. The main focus of the history taking should be on patient's presenting complain which can help to lead the diagnosis process.

However other components of history taking are equally important as that can indicate if patient has chronic or acute illness. Jarvis (2004) also

emphasizes on finding about patients present health status by asking  
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questions such as if they had cough, shortness of breath, chest pain while breathing. Patients past history medical and surgical history also plays an important part in history taking as that will help to indicate if patient is suffering from any secondary illness that is caused by any underlying problems that patient may have already. Other components of history taking process include smoking history, environmental exposure history, family health and travel history. It is also supported by Reinke (2008).

The next stage of respiratory assessment includes physical examination. Simpson (2006) & Rhoads (2006) states physical examination stage of respiratory assessment involves four stages which are identified as inspection, palpation, percussion and auscultation. Sheppard, Adam & Wright (2006) claims that this stage involves using look, listen and feel approach. Moore and Woodrow (2004) identifies the main components of inspection stage as counting respiratory rate, checking the rhythm, quality of breathing, degree of effort in breathing, skin colour deformities, patient's mental status and secretions.

According to Moore (2007) respiratory rate should be count for the full minute in order to categorize their breathing rate in one of the following: eupnoea (normal rate of 10-18BPM), tachyponoia (greater than 18BPM), bradypnoea (less than 10 BPM) and hypopnoea which refers to an abnormally shallow breathing rate. Drain (2003) claims that checking rhythm is equally important as rate. It is also suggested that gender should be consideration when checking the rhythm as it could be very due to the nature of breathing pattern. An abnormal rhythm indicates underlying disorders depending on type of rhythm. For example, kussmaul breathing  
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indicates possible metabolic acidosis and cheyne strokes respirations rhythm indicates left ventricular failure or possible cerebral injury.

White (2004) states that the inspection stage includes looking at quality of breathing. This involves looking at the chest movement which should be symmetrical. If the chest movements are not symmetrical it could be an indication of fibrosis, collapse of upper lobes of the lung or bronchial obstruction. The degree of efforts should also be inspected for the use of any accessory muscles while breathing as it suggests that patient is having difficulty in breathing. The skin also should be inspected for cyanosis which is a late sign of respiratory dysfunction and also finger nails could indicate signs of clubbing (Simpson, 2006).

The next component of the examination stage is palpation stage. This stage aims to assess the bilateral movements of the chest and the diaphragm and to identify any abnormalities (Simpson, 2006). It also helps to assess vibrations caused by the transfer of sound waves from inside the chest to the chest wall. This assessment involves use of the hands and fingers in order to gain information through the sense of touch (Francis, 2006). The trachea should be palpated to ensure that is in the midline. In addition, the thoracic area should be palpated for any pulsation, tenderness, and depression to the thoracic cavity (White, 2004) .

Percussion is identified as next important component of physical examination. According to Grefory & Mursell (2010) percussion is aimed at listening to the sounds produced on the patient's chest wall by tapping with fingers and hands. It helps to find out whether the underlying tissues are

filled with air, fluid or solid material. There are different sounds that can be heard during percussion which can indicate what problem patient might be suffering. Springhouse (2008) categorizes the sounds as following.

Resonance sounds are referred as normal lung tissue sounds. the tympanic like sound which are normally heard over the stomach which indicates air in the bowel however sounds heard over the chest is an indication of excessive air in the chest which can be occur from pneumothorax. Hyperresonance which are heard when lungs are hyper inflated and such sound is an indication of pneumothorax. Dullness like sounds heard when fluid or solid tissue replaces air in the lung tissue and occurs in patient with pneumonia, pleural effusions or tumours (Terry, Jardins & Burton, 2006).

According to Middleton and Middleton (2002), the last stage of the physical examination is identified as auscultation. This stage involves listening to the sounds transmitted through the thorax with the use of stethoscope. The sounds are described as vesicular, bronchovesicular and bronchial sounds. Abnormal breath sounds are known as adventitious sounds such as crackles which can be indicated as pulmonary oedema, wheezing, indicating asthma.

Finally, the last stage of the comprehensive respiratory assessment involves carrying out further investigations in order to confirm the provisional diagnosis which was from the history taking stage and physical examination (Simpson, 2006).

If the patient is able to produce sputum it should be tested as it can give an indication of the infection suspected. Moreover, other useful investigations include spirometry, arterial blood gases, pulse oximetry reading and chest



radiography, lung function tests and peak expiratory flow rate. Simpson (2006) claims that all these tests will help to determine the adequacy of ventilation, oxygen delivery to the tissue, acid base balance and a clear picture of the extent and severity of disease. On completion of the assessment the nurse must document the whole assessment process thoroughly as it might help other members of the team which are looking after the patient as well.

In conclusion, this essay covered a rationale for the need of respiratory assessment and explored the assessment procedure in detail. In addition, it also discussed the anatomy and physiology related to signs and symptoms of exacerbation of COPD that the patient presented used in the scenario.

WORD COUNT: 2,029.