HOLY FAMILY NURSING AND MIDWIFERY TRAINING COLLEGE, BEREKUM

A PATIENT / FAMILY CARE STUDY ON PNEUMONIA

BY

THOMPSON JANET

INDEX NUMBER (4120190138)

A PATIENT / FAMILY CARE STUDY SUBMITTED TO NURSING AND MIDWIFERY COUNCIL OF GHANA IN PARTIAL FULFILMENT FOR THE AWARD OF LICENSE TO PRACTICE AS A PROFESSIONAL REGISTERED GENERAL NURSE

AUGUST 2022

PREFACE

The Patient/Family Care Study is a detailed written report of nursing care rendered to a client and his/her family within a specific period of time. It explores nursing care rendered from the time of admission to termination of nurse-patient relationship. It gives an in depth description and explanation of how a patient response to a specific condition.

The Patient/Family Care Study involves a record nursing care, documenting the problems of nursing client and how they are dealt with by the nurse in the course of finding solution to the problems. It provides a systematic way of collecting data, analyzing information, and reporting the results of nursing care. This Patient/Family Care Study is based on the concept of holistic care, taking into account all factors impinging on the health of the individual. It includes a study of the interaction between the patient, the family, the community and the health team. It is done using the nursing process approach.

This care study was carried out in partial fulfillment of requirement for the award of professional license by the Nurses and Midwifery Council of Ghana. It is an integral part of the curriculum for educating nursing students hence a prerequisite for completing the nursing course. Care study offers the nursing student the opportunity to combine classroom academic work with clinical study of the practices of the nursing profession. It encourages learning by doing, the development of analytical and decision-making skills as well as reporting skills. Being based on the nursing process, the students become familiar with the use of the nursing process as a basis for practice thereby encouraging evidence based nursing care.

ACKNOWLEDGEMENT

This study would not have been realized if not for the efforts of certain personalities who contributed immensely in diverse ways.

My greatest gratitude goes to the Almighty God for His wisdom, knowledge, understanding, guidance, protection and patience granted me throughout the study.

I wish to express my heartfelt gratitude to Mr. A.S and his entire family for their support, co-operation and consent to interact with me and allowing me put my knowledge and skills into practice.

I would also like to express my deepest gratitude to the staff of the Holy Family Nursing and Midwifery Training College, especially to Mr. Dramani Ayamba and Alhassan Ibrahim under whose supervision this study became a reality.

Also, thanks go to the entire staff of Holy Family Hospital, Berekum especially the nurse in-charge of the Male's Ward and Emergency Ward as well as the ward doctors who gave me their support, contributions and guidance that has made this script a success.

Further, Special thanks goes to my wonderful mom, Mrs. Cynthia Alange and my dad Mr. Emmanuel Asamoah for their unending emotional, moral, spiritual, and financial support throughout the period of the study. They taught me the value of respect, hard work and patience. I also express deepest gratitude to the Authors and Publishers whose knowledge I assembled to make this script a masterpiece.

May the Good Lord bless them all and grant them their heart desires. Amen.

INTRODUCTION

The patient for the care study was Mr. A.S, a 50-year old man who was diagnosed of Pneumonia. He was admitted to the Male Medical Ward of the Holy Family Hospital, Berekum, on 3rd of December, 2021 after been detained at the Emergency Ward for a couple hours.

He was nursed for five (5) days. On admission, he was conscious but in pain and looked weak when he was admitted into the Pediatric. The medications prescribed for him included analgesics, intravenous fluids, antibiotics cough mixture and iron supplement. Diagnostic tests conducted include, Blood Film for Malaria Parasite, Full Blood Count (FBC), Chest X-ray and Chest CT Scan. The patient was chosen for the study because I wanted to have an in depth knowledge about his condition.

Also patient's house was visited during the period of admission and after discharge to assist in the determination of major predisposing factors of the condition, affirm the continuity of care and inspect the practice of various health education rendered during admission.

The patient/family care study was organized under six (6) headings which are;

1. Assessment of Patient/Family.
2. Analysis of Data.
3. Planning of Patient/Family Care.
4. Implementation of Patient/Family Care Plan.
5. Evaluation of Care Rendered to Patient/Family.
6. Summary and Conclusion.

TABLE OF CONTENTS

PREFACE I

ACKNOWLEDGEMENT II

INTRODUCTION III

TABLE OF CONTENTS IV

LIST OF TABLES VIII

TABLE OF FIGURES VIII

CHAPTER ONE 1

ASSESSMENT OF PATIENT/FAMILY 1

1.0 INTRODUCTION 1

1.1 THE PATIENT'S PARTICULARS 1

1.2 THE FAMILY MEDICAL HISTORY 2

1.3 SOCIO – ECONOMIC HISTORY 2

1.4 PATIENT DEVELOPMENTAL HISTORY 3

1.5 PATIENT LIFESYTLE AND HOBBIES 4

1.6 PAST MEDICAL OR SURGICAL HISTORY 5

1.7 PRESENT MEDICAL HISTORY 5

1.8 THE ADMISSION OF THE PATIENT 6

1.9 THE PATIENT'S CONCEPT OF ILLNESS 8

1.10 LITERATURE REVIEW OF THE CONDITION 9

1.11 VALIDATION OF DATA 24

CHAPTER TWO 25

ANALYSIS OF DATA.....25

2.0 INTRODUCTION 25

2.1 COMPARISON OF DATA WITH STANDARD.....25

2.1.1COMPARISON OF DIAGNOSTIC INVESTIGATIONS.....25

2.1.2 CAUSES 29

2.1.3 CLINICAL FEATURES.....29

2.1.4 TREATMENT OF PNEUMONIA 30

2.1.5 COMPLICATIONS 36

2.2 PATIENT/FAMILY STRENGTH.....36

2.3 HEALTH PROBLEMS IDENTIFIED 36

2.4 NURSING DIAGNOSIS 37

CHAPTER THREE 38

PLANNING FOR PATIENT AND FAMILY CARE 38

3.0 INTRODUCTION 38

3.1 NURSING OBJECTIVES 38

3.3 NURSING CARE PLAN.....39

TABLE III. NURSING CARE PLAN FOR MR A.S.....40

CHAPTER FOUR.....46

IMPLEMENTATION OF NURSING CARE PLAN.....46

4.0 INTRODUCTION TO CHAPTER.....46

4.1 A SUMMARY OF CARE RENDERED TO MY PATIENT 46

FIRST DAY OF ADMISSION (03/12/21).....46

SECOND DAY OF ADMISSION (04/12/21).....49

THIRD DAY OF ADMISSION (05/12/21) 51

FOURTH DAY OF ADMISSION (06/12/21).....52

FIFTH DAY OF ADMISSION/DAY OF DISHARGE (07/12/21) 53

4.2 PREPARATION OF PATIENT AND FAMILY TOWARDS DISCHARGE AND REHABILATATION AND FOLLOW-UPS AND HOME VISITS.....54

4.3 FOLLOW-UPS/HOME VISITING/CONTINUITY OF CARE. 55

MY FIRST HOME VISIT (04/12/21) 55

MY SECOND HOME VISIT (13/12/21) 56

DAY OF REVIEW (17/12/21) 57

MY THIRD HOME VISIT (28/12/21).....58

CHAPTER FIVE 60

EVALUATION OF CARE.....60

5.0 INTRODUCTION TO THE CHAPTER.....60

5.1 STATEMENT OF EVALUATION.....60

1. Patient was relieved of chest pain within 24 hours. (04/12/21).....60

2. Patient was able to tolerate activities within 72 hours. (06/12/21).....61

3. Patient was relieved of persistent productive cough within 48hours. (06/12/21).....61

4. Patient would regain normal sleep pattern within 48 hours. (06/12/21).....62

5. Patient regained his normal nutritional status. (07/12/21).....62

6. Patient gained adequate understanding of his condition within 48 hours. (07/12/21)..63

5.2 AMMENDMENT OF NURSING CARE PLAN FOR PARTIALLY MET OR UNMET OUTCOME CRITERIA 63

5.3 TERMINATION OF CARE.....64

CHAPTER SIX 65

SUMMARY AND CONCLUSION 65

6.1 SUMMARY 65

6.2 CONCLUSION 66

BIBLIOGRAPHY 67

APPENDIX 69

Table 6.1: Vital Signs of Mr. A.S 69

SIGNATORIES ..... **Error! Bookmark not defined.**

LIST OF TABLES

Table 2.1: COMPARISON OF DIAGNOSTIC INVESTIGATIONS…….. 26

TABLE 2.2: DIAGNOSTIC INVESTIGATIONS CARRIED OUT ON MR A.S ……..27

TABLE 2.3: CLINICAL FEATURES OF MR. A.S COMPARED WITH THOSE IN THE LITERATURE REVIEW ……...29

TABLE 2.4: TREATMENT GIVEN TO PATIENT AS COMPARED WITH LITERATURE REVIEW …….31

TABLE III. NURSING CARE PLAN FOR MR A.S …….40

TABLE 6.1: VITAL SIGNS OF MR. A.S……..……. 69

TABLE OF FIGURES

FIGURE 1: DIAGRAM SHOWING THE ANATOMY OF THE RESPIRATORY SYSTEM……12

FIGURE 2: DIAGRAM SHOWING THE DIFFERENCE BETWEEN LOBAR PNEUMONIA AND BRONCHOPNEUMONIA……14

CHAPTER ONE

ASSESSMENT OF PATIENT/FAMILY

1.0 INTRODUCTION

Assessment of patient/family is the lead and paramount phase in the nursing process and also the concrete foundation in clinical nursing. It encompasses a comprehensive and systematic data collection about the patient, family and the community of inhabitation at large. The data collected facilitates the nurse to establish an effective and individualised care to the client. In assessment the information collected basically includes the patient particulars such as name, sex, marital status, religion, place and date of birth, nationality, family and medical history, lifestyle and hobbies, past and present medical history, admission, literature review of the disease condition and validation of data. This can be done through observation, physical examination, interviewing, laboratory investigations, x-ray reports and others. Thus information gained here will help in the analysis of the patient's condition and in making clinical judgement so that the other stages of the nursing process can effectively be carried out.

1.1 THE PATIENT'S PARTICULARS

According to Elamine (2011), particulars refer to a fact or detail especially one that is officially written down, usually of an individual's personal details such as name, address, etc. Mr A.S the patient for care study is a 50 year – old– man. He was born on 21st May, 1972 to Mr. J.B and Mrs A.M at Mpatapo in Berekum East District in the Bono Region of Ghana. He is Akan by tribe and speaks Bono language. According to him, he had his education up to middle school but had to terminate school due to financial constraints. Mr. A.S indicated that he got married to Ms. A.M and was blessed with two sons and one daughter but had to divorce her afterwards due to reasons he cannot explain. He is currently married to Ms. A.R, of which they have given birth to one male and one female. He is a farmer and attends Christ Apostolic Church, Ghana. Mr A.S is dark in complexion, 1.62m in height and weighed 60kg on admission. Mr. T.T is his

next of kin who happens to be his brother. He stays at their family house at Mpatapo a suburb of Berekum, H/NO MP/26. While in the ward, the patient was identified with the O.P.D number, 12798/21 at the Holy Family Hospital, Berekum.

1.2 THE FAMILY MEDICAL HISTORY

According to patient, there is no known chronic disease in the family. He also added that hereditary diseases like essential hypertension, diabetes, mental illness among others are not known in the family. Besides the above mentioned diseases, communicable diseases like Tuberculosis, leprosy, among others are not also present in the family. As the interaction proceeded, he yielded the fact that he is not allergic to any food or drug. Mr A.S also told me that he has never gone through any surgical treatment. According to Mr. A.S, his parents died as a result of old age. However, he added that his family do suffer from medical conditions like malaria, common cold and headache which they often combat through herbal medicine. With this they sometimes resort to orthodox medications from a drug store in case the former treatment proves futile. Based on this information I educated him on the outcome of taking herbal medicine and over the counter drugs and told him to seek medical treatment in any clinic or hospital when they fall ill. He also revealed the common cause of death in his family is not known.

1.3 SOCIO – ECONOMIC HISTORY

According to patient, they are neither rich nor poor but they classify themselves in the middle class income earners. They are able to take care of their education and hospital bills and meet their needs. Their family is very united to the extent that they support each other whenever any member of the family is in need. Mr A.S is a farmer. According to him, he cultivates variety of crops some of which are; maize, cashew and yam which is his main financial source. He further added that he goes to farm at 7: 00am and closes at 4:00pm each day exception Fridays and Sundays which serve as resting days for him. Mr A.S also indicated that he generates at least GH₵2000.00 in each farming season and GH₵5000.00 in a year. Besides the work as a

farmer, this is his main source of his income. Mr A.S revealed that he does not belong to any social group in his community. However he did say that he often attends social activities like funerals, festivals among others. There are no known taboos in the family but they cherish good moral values and also practice customary marriage.

1.4 PATIENT DEVELOPMENTAL HISTORY

Development is defined as the process of growth and differentiation. Growth, as well is the progressive development of a living thing, especially the process by which the body reaches its point of complete physical development. Maturation is the process of development in which an individual matures or reaches full functionality (Weller, 2014).

According to Mr A.S, his mother revealed to him that he was put to bed spontaneously per vagina after successful 9months of pregnancy at his home town in Mpatapo by a Traditional birth attendant. Further interaction with patient indicated that his mother never experienced any complications after delivery. Patient further made known to me that, his mother could not remember any childhood immunization given to her son neither could he remember anything of that sort as this was evidenced by me not seeing any BCG scar on his right arm. According to Mr A.S, his mother made known to him that he exhibited normal developmental cycle thus, sitting, crawling, walking, and talking among others. Patient also added that he entered into puberty at about 16 years of age and started manifesting characteristics of old age such as developing wrinkle skin and grey hair at age 45. He doesn't have any difficulty in walking or eating and he was an active person before admission. Mr. A.S first got married to Ms. A.M but due to some reasons he couldn't explain, they got divorced with three children. He added that his dream plans was to extend his farming lands or get a lot of farm lands in order to expand the farming activities.

As specified by Gilleard C, Higgs P. (2016), according to Erik H. Erikson (1902) theory of Psychosocial Development that describes the human life cycle as a series of eight ego developmental stages from birth to death, my patient falls under the seventh stage which is

“generativity versus stagnation ” (from ages 35 to 60yrs). Generativity refers to “making your mark” on the world through creating or nurturing things that will outlast an individual. During middle age individuals experience a need to create or nurture things that will outlast them, often having mentees or creating positive changes that will benefit other people. We give back to society through raising our children, being productive at work, and becoming involved in community activities and organisations. Through generativity, we develop a sense of being part of the bigger picture. Success leads to feelings of usefulness and accomplishment, while failure results in shallow involvement in the world. By failing to find a way to contribute, we become stagnant and feel unproductive. These individuals may feel disconnected or uninvolved with their community and with society as a whole. Success in this stage will lead to the virtue of care. Taking into account the interaction I had with Mr A.S, it can be concluded that he is in a state of generativity as he is able to mentor some youth in the society, taking care of his children, being able to raise some amount from his farm work and gets involved in all community activities such as communal labour.

1.5 PATIENT LIFESYTLE AND HOBBIES

Life style is defined as the pattern of daily living that an individual develops (Weller, 2014). According to Mr A.S, he prays every day before going to bed and does the same thing each time he wakes up from bed. He also emphasised that he brushes his teeth using a toothbrush and tooth paste every morning and evening so as to prevent infection. He also added that, he takes his bath in the morning and evening using warm water and keysoap. Further interaction with patient also indicated the fact that he empties his bowels every morning and evening and empties his bladder whenever he feels the urge.

On Sundays, the entire family go for church service, after the church service he sometimes visit his friends from the neighbourhood and then returns home to have some rest. From Mr. A.S, his major stress is working in the farm for long periods.

He also made mention that every member in the family has a separate sponge and towel which they use for bathing. Mr A.S is a farmer and according to him he goes to farm every day from 7:00am to 4:00pm except Fridays and Sundays and on sacred days. On the aspect of diet, he yielded the fact that he takes porridge for breakfast, ampesi and kontomire stew for lunch and fufu and garden soup for supper. His favourite game is football and enjoys watching the national team play on television. Having met and interacted with my patient, I noted that he is a kind hearted person who is ever ready to listen and share both joyful and sorrowful experiences with others.

1.6 PAST MEDICAL OR SURGICAL HISTORY

According to patient, he has never suffered from any disease that deemed hospitalization apart from his current condition. However he did indicate that he has ever suffered from minor ailments like headache and catarrh which he treated successfully using over the counter medications. He also said access to healthcare facility was not difficult and he does not go for medical checkups.

Mr. A.S has no history of accidents or any form of serious injury. Mr. A.S said he has no known allergy to drugs or animals. From my observation, the patient has no physical disabilities.

1.7 PRESENT MEDICAL HISTORY

According to him, his current condition started with dry cough on 29th November, 2021 of which he resulted to herbal medication but to no avail. He went to the pharmacy shop and complained and over the counter drugs which he couldn't identify was sold to him. Having relied on the chemical seller's drugs for three days, there was no improvement but instead the condition seem to be getting worse so he was reported to the Emergency unit of Holy Family Hospital, Berekum on, 3rd of December, 2021 at 3:25pm for medical attention following a sudden onset of difficulty in breathing, chest pain, productive cough, dizziness and loss of appetite. At the Emergency Unit, his vital signs were checked and recorded.

Having checked his vital signs, he was administered Intranasal Oxygen at 4L/min to increase the oxygen saturation levels. The doctor on duty examined him and requested for lab investigations and diagnosed him of Pneumonia. He was trans-out to male medical ward after the oxygen saturation rose to 98% and was declared a bit stable for continuity of care.

1.8 THE ADMISSION OF THE PATIENT

According to Esena (2011), admission is the initiation of care, usually referring to inpatient care, either lasting for a day or more. It is a change of environment to the patient and relatives. This change of environment could either be elective/planned or emergency/unplanned. My patient underwent an unplanned admission since he was detained at the emergency unit just at the time he was rushed in without any prior arrangement and was later sent to the males ward to be admitted there.

Mr A.S was admitted to male medical ward of Holy Family Hospital, Berekum through the Emergency Unit on the 3rd of December, 2021 at 3:25pm. He was in a wheel chair accompanied by a staff nurse and some relatives with the diagnosis of Pneumonia. On observation, he presented a history of sudden onset of difficulty in breathing, chest pain, productive cough, dizziness and loss of appetite. He was humbly welcomed and was made to feel at home as I assured him of competent nursing care which would aid to alleviate his condition. The patient was further made to feel more relaxed as I introduced myself and the other nurses on duty. I then collected the patient's folder number from the accompanying staff nurse and his name was mentioned loudly and clearly so as to confirm the identity of the patient on the ward's computer. Other relevant information such as, the medications, diagnoses and laboratory investigations were confirmed. Having successfully confirmed patient's relevant information, I admitted him into a comfortable already prepared simple bed in the ward. The patient's vital signs were checked and recorded as follows;

Temperature – 36.5^0C

Blood pressure – 105/70mmHg

Pulse – 89bpm

Respiration – 26cpm

SPO2 - 98%

Patient weight on admission was 60kg.

The laboratory investigations that were ordered as of the time of admission included;

1. Chest X- ray
2. Blood Film for malaria parasite
3. Full blood count
4. Gene Xpert for TB
5. Chest CT scan

The following drugs were prescribed for patient but stat and initial doses were not administered on arrival since they were administered at the Emergency unit.

1. Tablet paracetamol 1g tid x 5days
2. Tablet cefuroxime 500mg bid x 5days
3. Azithromycin tablet 500mg daily x3days
4. IV Ceftriaxone 2g daily x 5days
5. Carbocysteine Syrup 10mls tds x 7days
6. Cap Iron III Polymaltose (Nexcofer) once daily x 14days
7. IV Normal saline 1 litre x 24 hours

When patient was made stable on bed, he was introduced to other patients beside his bed. His family alongside him were orientated to the ward and its environment. Family members and patient were educated on ward protocols such as the visiting time, ward rounds, medication time, breakfast and lunch time.

Mr A.S luggage were taken and kept in safety. The patient was also being prepared for discharge since preparation for discharge begins on the day of admission. Mr A.S was allowed to interact privately with his family members before they exited the hospital premises. The patient's information was then entered into the Admission and Discharge book, nurse's notes and the daily ward state. The prescribed medications were also recorded appropriately. I went to him later and introduced myself to him again as a final year student of Holy Family Nursing and Midwifery Training College, Berekum. I made him aware that as a final year student, it is a requirement by the Nursing and Midwifery Council to take a patient, to render individualised nursing care to him until discharge and follow up visit after discharge until he recovers fully. A partial fulfilment of an award of a Diploma in Registered General Nursing in Ghana will be achieved. Mr A. S. and his family permitted me after I explained to them and said they will cooperate with me and give all necessary information to complete the care am rendering to them. I then informed the in-charge about my intention to use Mr A.S for my care study. I was given the nod to go ahead. Then I drew a comprehensive care plan to guide my care for the patient and this was implemented afterwards. I chose Mr A.S for my care study because I wanted to have an in depth knowledge about his condition.

1.9 THE PATIENT'S CONCEPT OF ILLNESS

Upon questioning him about his concerns on his present condition, he confidently said he cannot attribute it to spiritual forces. However he never had hope of coming back home alive due to the abrupt manner, pain and difficulty he went through with regards to his current condition. He has now gathered courage and believes in the competence of the health team and he was assured by the health team that he will get well with his maximum cooperation. He further mentioned that, he would comply with medical and nursing treatment as his sickness is of much concern to him. He also said that, he has got great expectations that the treatment rendered him would help to alleviate his sickness.

1.10 LITERATURE REVIEW OF THE CONDITION

The literature review on the condition will be discussed under the headings below.

1. Anatomy and physiology of the respiratory system
2. The definition/ description
3. Incidence
4. Causative organism
5. Mode of transmission
6. Risk factors
7. Pathophysiology
8. Diagnostic investigations
9. Clinical manifestation
10. Medical treatment
11. Standard Nursing intervention
12. Prevention
13. Complication

Anatomy and physiology of the respiratory system

The lungs are membranous and also the main organs of respiration. They are two (2) in number (that is left and right) and located in the thoracic cavity. Each lung is conical in shape and has the following areas; the apex, base, coastal surface and medial surface.

The base: the base is concave in shape and rest on the thoracic surface of the diaphragm.

The apex: the apex is the more tapered part that rises into the root of the neck to a point approximately 2.5cm superior to the clavicle.

The coastal surface: it is the surface that lies closer to the ribs, intercostal muscles and convex in shape.

The medial surface: it is the surface of the lung toward the midline of the body. It is concave in shape and roughly triangular. The medal surface has site where blood vessels, respiratory structures passes through. The entry and exit point of structures of the lung is called the hilum. The structures include; a pulmonary artery, 2 pulmonary veins, a bronchial artery and vein, lymphatic vessels and nerves.

The right lung is larger than the left lung and it weighs about 620g whereas the left lung weighs 560g. The right lung is divided into 3 lobes(superior, middle and inferior). They are divided by a fissure. The horizontal fissure divides the superior lobe from the middle lobe. The oblique fissure separates the middle lobe from the inferior lobe.

The left lung is smaller because it shares space on the left side of the midline with the heart. It is divided into 2 lobes(superior and inferior). The superior lobe is separated from the inferior lobe by the oblique. The lobes further divides into lobules. The space between the 2 lungs is termed the mediastinum. The structures in the mediastinum include: the heart and great vessels, esophagus, trachea, primary bronchi, nerves, lymph nodes and lymph vessels.

The pleura is a sac of serous membrane that covers the lungs, it is made up of 2 layers. One layer adheres to the inside of the thoracic wall (including the thoracic surface of the diaphragm) and is called the parietal layer. The other layer adheres to the surface of the lung and it is called the visceral layer. It dips into the fissures separating the lobes to cover each lobe. In between the 2 layers, is a potential space called pleural cavity. The pleural cavity is filled with thin film of serous fluid produced by the epithelial cells of the membrane. The serous fluid helps to prevent friction between the 2 layers during breathing.

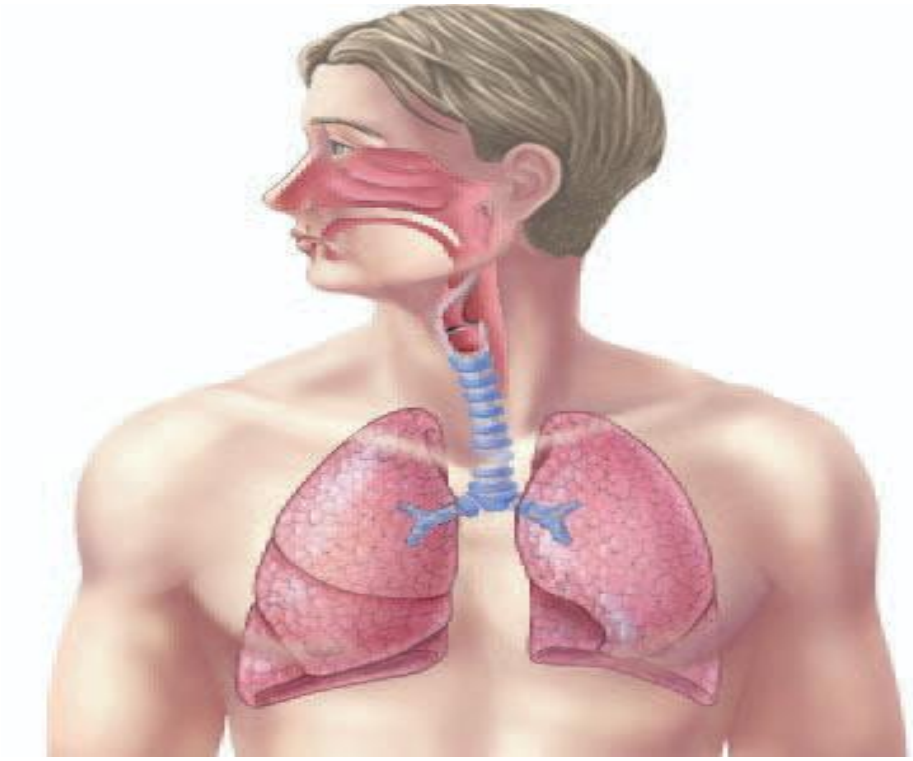
The two primary bronchi are formed when the trachea divides, at the level of the 5^{th} thoracic vertebra.

The right bronchus: This is wider, shorter and more vertical than the left bronchus and more likely to become obstructed by an inhaled foreign body. It is about 2.5cm long.

The left bronchus: This is about 5cm long and is narrowed than the right. After entering the lung at the hilum, it divides into two branches, one to each lobe. Each branch then subdivides into progressively smaller airways within the lungs.

Within each lobe, the lung tissue is further divided by fine sheets of connective tissues into lobules. Each lobule is supplied with air by a terminal bronchiole, alveolar ducts and number of alveoli. There are about 150 million alveoli in the adult lung. It is in these structures that the processes of gas exchange occur. As airways progressively divide and become smaller and smaller, their walls gradually become thinner until muscle and connective tissue disappears. On microscope examination, the extensive air spaces are clearly seen and healthy lung tissue has a honey- comb appearance. Lying between the squamous cells are septal cells that secrete a phospholipid fluid which prevents the alveoli from drying out. Its presence in newborn babies facilitates expansion of the lungs and the establishment of respiration. It may not be present in sufficient amount in the immature lungs of babies, causing serious breathing pattern (Waugh & Grant, 2014).

FIGURE: 1. DIAGRAM SHOWING THE ANATOMY OF THE RESPIRATORY SYSTEM



PNEUMONIA

Pneumonia is a form of acute respiratory infection that affects the lungs and bronchus(WHO, 2013). Pneumonia is an inflammation of the lung parenchyma caused by various microorganisms including bacteria, mycobacteria, fungi and viruses. (Smeltzer S. C., Bare, Hinkle, & Cheever, 2010) Pneumonia is an inflammatory condition of the lung that affects primarily the microscopic air sacs known as alveoli. It is usually caused by infection with bacteria and less commonly other microorganisms, certain drugs and other conditions such as autoimmune diseases. When an individual has pneumonia, the alveoli are filled with pus and

fluid, which makes breathing painful and limits oxygen intake. The area of the involved lung is said to have undergone consolidation.

Types of Pneumonia

Pneumonia is subdivided into two main type based on the anatomical position. They are lobar pneumonia and bronchopneumonia.

Bronchopneumonia

This is a less dramatic form of pneumonia but more prevalent than lobar pneumonia. The area affected is usually smaller than in the lobar type. The inflammation is localized in or around the bronchi and causes the lungs to be spotted or patched with clusters of infectedtissue. It is mostly caused by organisms like streptococcus, influenza and infections which are present in the upper respiratory tract (URT), travels down to infect the terminal bronchi (Smeltzer S. C., Bare, Hinkle, & Cheever, 2010).

Lobar pneumonia

Lobar pneumonia is when a segment or entire lobe of the lung may be affected. When both lungs are affected the disease is called double or bilateral lobar pneumonia. It is most frequently caused by Pneumococcal and *Klebsiella pneumonia*. Others include *Staphylococcus aureus*, streptococcus and viruses like influenza and adenovirus. In this condition, a whole or part of the lungs becomes solidified by inflammatory material and as such air cannot enter the alveoli (Smeltzer S. C., Bare, Hinkle, & Cheever, 2010).

FIGURE: 2. DIAGRAM SHOWING THE DIFFERENCE BETWEEN LOBAR PNEUMONIA AND BRONCHOPNEUMONIA

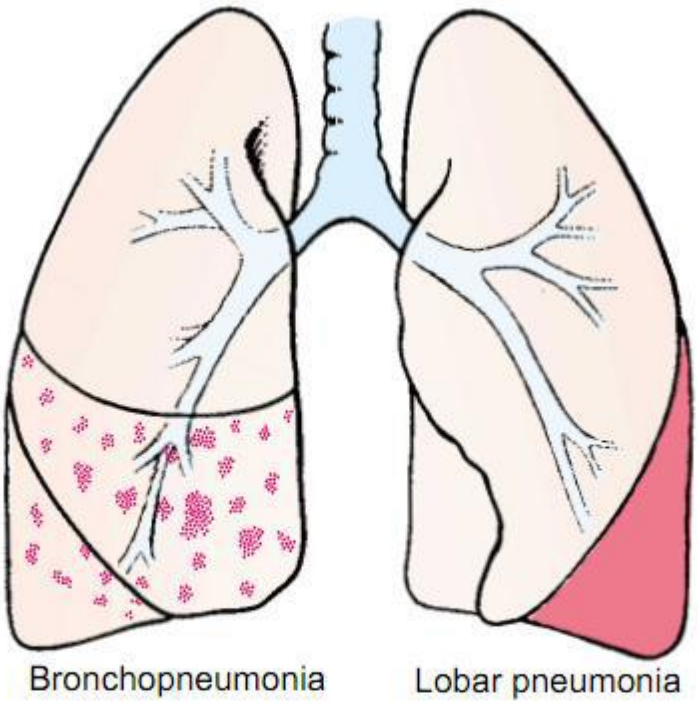


FIGURE 23-2 Distribution of lung involvement in bronchial and lobar pneumonia. In bronchopneumonia (*left*), patchy areas of consolidation occur. In lobar pneumonia (*right*), an entire lobe is consolidated.

Epidemiology

Pneumonia is the single largest cause of death in children worldwide. Every year, it kills an estimated 1.2 million children under the age of five years, accounting for 18% of all deaths of children under five years old worldwide. Pneumonia affects children and families everywhere, but is most prevalent in South Asia and sub- Saharan Africa (WHO, 2013).

Pneumonia and influenza are the most common causes of death from infectious diseases in the United States. Together they account for nearly 60,000 deaths annually and rank as the eighth leading cause of death in the United States. The condition is common in the following people;

1. It is common in patients with suppressed immunity.
2. It is prevalent in patient with respiratory disease and malfunction.
3. People who smoke cigarette are highly affected and 90% of cigarette smokers die as a result of pneumonia every year which is due to disruption in both mucociliary and macrophages activity.
4. People in overcrowded places and areas with poor environmental hygiene.
5. Elderly patients are highly affected because of decreased cough reflex.
6. Patient undergoing radiation therapy.

Causative Organism

Pneumonia is caused by a number of infectious agents, including viruses, bacteria and fungi. The most common are:

- Bacteria: *Streptococcus pnuemoniae;* the most common cause of bacterial pneumonia in children;
- *Haemophilus influenzae* type B (HiB); the second most common cause of bacterial pneumonia;(WHO, 2013).
- Viral: respiratory syncytial virus is the most common viral cause of pneumonia; in infants infected with HIV, *pneumocystis jiroveci* is one of the commonest causes of pneumonia, responsible for at least one quarter of all pneumonia deaths in HIV-infected infants (WHO, 2013).

Non microorganism causes include radiation, ingestion of chemicals and aspiration of gastric secretions, food or fluids (aspirated pneumonia) and retention of secretions which occurs mostly in elderly people (hypostatic pneumonia) (Smeltzer S. C., Bare, Hinkle, & Cheever, 2010).

Risk Factors

According to Smeltzer, Bare, Hinkle & Cheever (2010), certain groups of people are more at risk for developing pneumonia. Risk factos include:

1. Having a lung disease such as cystic fibrosis, asthma, or chronic obstructive pulmonary disease (COPD)
2. Having HIV/ AIDS
3. Smoking
4. Patient with decrease level of consciousness
5. Having a chronic disease, such as heart disease or diabetes
6. Being malnourished
7. Having a weakened immune system, which may be caused by chemotherapy or use of immunosuppressive drugs
8. Heavy alcohol intake
9. Being age 2 or younger and being 65 years old or older
10. Living in an overcrowded area
11. Being on a mechanical ventilator
12. Decreased cough reflex and abnormal swallowing mechanism

Mode of Transmission

Pneumonia can be spread in various ways. The viruses and bacteria that are commonly found in a patient's nose or throat can infect the lungs if they are inhaled or aspirated. They also spread via air-borne droplets as sneeze or cough.

Pathophysiology

Normally, the upper respiratory tract prevents infectious particles from reaching the sterile lower respiratory tract, the cells lining the airways, alveoli or lung parenchyma. The invasion of the lungs by the agent leads to varying degree of cell death. This therefore,

triggers an inflammatory response producing exudates that interferes with the diffusion of oxygen and carbon dioxide. White blood cells mostly neutrophils, migrate to the alveoli and fills the normally air- filled spaces. Area of the lung is inadequately ventilated because of secretion and mucosal edema that cause partial occlusion of the bronchi and alveoli, with a resultant decrease in alveolar oxygen tension. Because of the hypoventilation, ventilation-perfusion mismatch occurs in the affected area of the lung. Venous blood entering the pulmonary circulation passes through the under ventilated area and travels to the left side of the heart poorly oxygenated. The mixing of oxygenated and deoxygenated blood eventually results in arterial hypoxemia (Smeltzer S. C., Bare, Hinkle, & Cheever, 2010).

Clinical Manifestations

Onset of symptoms develops suddenly or gradually. Viral lobar pneumonia may initially present with flu- like symptoms, but progresses in a few days. Symptoms of pneumonia include:

1. Shortness of breath
2. Chest pain
3. Rapid breathing
4. Increased pulse rate
5. Fever
6. Headache
7. chills
8. General malaise
9. Anorexia
10. Sweating
11. Wheezing and crackling sound heard on auscultation
12. Elevation in leucocytes count
13. Cough; unproductive cough from onset and later productive

Diagnostic Investigation

1. Proper history taking and physical examination is conducted to assess for the presence of crackling, wheezing sound or fever etc.
2. Full Blood Count (FBC) indicates an elevated number of white blood cells.
3. Erythrocyte Sedimentation Rate (ESR) to assess the level of inflammation.
4. A chest X- ray is one of the best ways to diagnose this condition. This test uses electromagnetic radiation to create a picture of the chest and lungs, which allows location of areas affected by lobar pneumonia to be seen.
5. A computed tomography (CT) scan produces a picture similar to an X- ray but in more detail. This will tell the doctor where the infection is occurring in lung specifically.

6. A sputum culture test; where a sample of mucus from the lungs is taken to determine the cause of the infection.

7. Bronchoscopy done using a special c amera to look at the bronchial tubes to determine other factors causing the pneumonia.

Medical Treatment

1. Antibiotics such as Gentamycin, Cefuroxime, Ciprofloxacin etc. to combat infections.
2. Cough mixtures given to relief cough.
3. Analgesics and antipyretic such as paracetamol administered for pain and pyrexia.
4 Anti- inflammatory such as diclofenac for pain and to reduce inflammation.
5. Intravenous infusions such as ringers lactate, dextrose saline to hydrate the patient other non- pharmacological therapy include;
6. Administration of oxygen to hypoxemic patient
7. Respiratory measures such as endotracheal intubation and mechanical ventilation can be done.

Nursing Management

With reference to Kumar and Clark (2005), Smeltzer, Bare, Hinkle & Cheever (2010), the nursing management of pneumonia can be carried out under the following headings:

Psychological Care

a. Reassure client that she/ he is in the hands of competent health workers who are willing to take care of him/ her.

b. Educate client and family on the condition and allow them to ask question and answer them tactfully.

c. Introduce client to other patients who had the same condition but have recovered successfully.

All these are done to allay fears and anxiety of client and for the patient to have confidence in the staff.

Observation

a. Observe client for signs and symptoms of respiratory distress.

b. Check and record vital signs such as blood pressure, pulse, respiration and temperature accurately to check whether client's condition is improving or deteriorating.

c. Monitor intake and output chart and observe the site for swelling or dislodgement of the needle if client is on intravenous infusion.

d. Observe for the effects and side effects of medication and report any abnormalities for measures to be taken.

Position

a. Put patient in a semi- fowler's position supported with pillows at the back to facilitate smooth and effective breathing.

b.Change position frequently to prevent client from developing pressure sores and improve proper circulation of blood.

Maintenance of Airway

a.Change position of patient every two hours to prevent pooling up of secretions.

b. Encourage patient to do deep breathing exercise.

c. Where client is a child and unable to cough sputum out, oropharyngeal suction is done to clear the airway. This is done with care in order not to introduce foreign substance into the pleural cavity.

Medication

a. Administer prescribed medication and should be properly documented.

b. During drug administration, the rights of drug administration must observe; that is, right patient, right drug, right route, right time and right dose.

c. Observe for the therapeutic and side effects of the drug been served and document in the nurses' notes.

Nutrition

a. Client must be encouraged to take in fruits and fluids (oral and intravenous) about 3-4 liters daily to thin secretions and facilitate breathing and also avoid constipation.

b. If client experiences dyspnoea, liquid diet is more preferable to avoid choking.

c. Food served should be rich in protein, vitamins, carbohydrates and mineral salts to help fight infections, repairing worn- out tissues, build patient's immunity and providing the body with energy.

d. Serve food attractively as patient can tolerate in bits but frequent.

Personal Hygiene

a. A comfortable bed should be made for patient and soiled linen should be changed.

b. Patient should bath twice daily to maintain personal hygiene, improve circulation and to induce sleep.

c. Care of the mouth must be done at least twice daily to stimulate client's appetite

d. Care of hands and feet must be done when necessary to prevent harboring of microorganisms

e. Client should be given water to rinse mouth after coughing out sputum due to unpleasant

Taste of the sputum.

Exercise

a. Engage patient in passive exercise as condition permits to improve circulation.

b. Breathing exercises can be done to loosen and mobilize secretions.

Elimination

a. Bedpan must be given promptly on demand to prevent patient from soiling him/herself.

b. Monitor intake and output accurately.

c. Monitor patient bowel movement and assess patient for any abnormality.

d. Fibers and roughages should be given to prevent constipation.

e. Mild exercise and turning patient in bed to promote peristalsis.

Rest and Sleep

a. A comfortable bed free from creases and crump must be prepared for client to prevent him from developing pressure sores.

b. Encourage client to rest and remain in bed to avoid exertion and relief symptoms.

c. Warm bath and warm drink such as warm milk may be given to induce sleep.

d. Patient must be nursed in a well-ventilated room and quiet environment

e. Plan and carry out care in such a way that the client's resting time will not be interrupted.

f. A quiet environment must be ensured by asking other patient to communicate in low tone and also keep volumes of television and radio sets low.

Health Education

a. Educate the patient and family on the disease condition so that they can prevent any complication.

b. Educate on the need for follow- up and treatment regimen of antibiotics.

c. The patient should be taught coughing and breathing exercise.

d. Patient should be educated on avoidance of alcohol, smoking and strenuous exercises.

e. Educate patient to avoid dust and cold environment because this can predispose one to getting pneumonia.

f. Teach patient and family to avoid passive smoking which can increase an individual's susceptibility.

g. Educate on the need to avoid sleeping directly under fans but rather should open windows for ventilation.

Prevention of Pneumonia

According to Smeltzer, Bare, Hinkle & Cheever (2010), pneumonia can be prevented in the following ways;

1. Educate on proper environmental and personal hygiene.

2. Avoid excessive intake of alcohol, smoking and environmental pollution (smoky or dusty environment).
3. A person should sleep in a well ventilated room.
4. Sleeping in a cold environment should be avoided.
5. Educate patient on the avoidance of indiscriminate use of antibiotics for infections.
6. Having adequate and balanced diet to help maintain natural resistance to disease.
7. Sudden change of body temperature should be reported to the appropriate health facility.
8. Frequent suctioning of secretion in patients who are unconscious or have poor cough reflex.
9. Upper respiratory tract infections should be treated quickly to avoid organism descending into lower respiratory tract.

Complications

According to Smeltzer, Bare, Hinkle, Cheever (2010), any disease or disorder that occurs during the course or because of another disease is a complication. Complications of pneumonia include:

1. Systemic infection
2. Pleural effusion (inflammation and exudation of serous fluid in the pleural cavity)
3. Lung abscess
4. Pulmonary edema
5. Respiratory failure
6. Emphysema (accumulation of air in the lungs)
7. Endocarditis (inflammation of the endocardium)
8. Atelectasis (collapse of the lungs; either all or part of the lung)
9. Hypoxemia(low oxygen in the blood)
10. Pericarditis (inflammation of the pericardium of the heart)

1.11 VALIDATION OF DATA

Validation is the act of checking or providing the validity or accuracy of data or something (Simpson, 2017). This is to ensure that, data compiled on client and relatives are free from biases, misinterpretation and errors as possible. Physical assessment and diagnostic investigations (laboratory and radiology) carried out on the patient were compared with standard features and measurement. Also information gathered on patient was cross checked with his family, the medical officer and from his folder. Patient's family were asked several questions needed for the validation of data collected during home visit and answers provided were genuine to validate the collected data. All information collected on client indicates lobar pneumonia. These checks were done to ensure the validity of data as much as possible and can therefore be affirmed that the data is suitable for this study.

CHAPTER TWO

ANALYSIS OF DATA

2.0 INTRODUCTION

Analysis of data is another important aspect of the nursing process after assessment of a patient and family. To analyze means to study or take a critical look at something (data) to know more about it, therefore, analysis of data forms the bases for which the strength and weakness of the patient and family are identified and also to enables the nurse to outline his or her plan of action towards the recovery of the patient and his family.

The following are therefore discussed under data analysis:

1. Comparison of data with standards
2. Patient / family strengths
3. Health problems
4. Nursing diagnosis

2.1 COMPARISON OF DATA WITH STANDARD

It is part of the data analysis that entails comparison of information collated about the patient such as causes, diagnostic investigations, vital signs, clinical features, management and complications with that in the literature review.

2.1.1COMPARISON OF DIAGNOSTIC INVESTIGATIONS

Diagnostic investigations are procedures performed to determine the nature of a disease (Weller, 2014).Test is session in which a product or piece of equipment examined under everyday or extreme conditions to evaluate its faults and durability (Livio, 2009).The following are list of investigations carried out on Mr. A.S during his period of hospitalization; Chest X-Ray, Blood Film for Malaria Parasites, Full Blood Count, Gene Xpert for TB and Chest CT scan.

Table 2.1: COMPARISON OF DIAGNOSTIC INVESTIGATIONS

DIAGNOSTIC INVESTIGATION IN LITERATURE	DIAGNOSTIC INVESTIGATION CARRIED ON PATIENT
Full blood count	Full blood count was done
Erythrocyte sedimentation rate	Erythrocyte sedimentation rate was not done
Chest X-ray	Chest X-ray was done
Computed tomography scan(CT scan)	Chest CT scan was done
Sputum culture test	Gene Xpert for tuberculosis was done
Bronchoscopy	Bronchoscopy was not done

The following Diagnostic investigations were performed on my client: full blood count, Chest X-ray, Gene Xpert for TB and Chest CT scan were done. Some of the investigations conducted on my client are found in the literature review. Sputum culture test and bronchoscopyare all part of the literature review but were not ordered. Blood film for malaria parasite (MPs) was done on the patient but is not found on the literature review. The MPs test is to rule out malaria.

TABLE 2.2: DIAGNOSTIC INVESTIGATIONS CARRIED OUT ON MR A.S

DATE	SPECIMEN	INVESTIGATION	RESULT	NORMAL VALUES	INTERPRETATION	REMARKS
3/12/21	Blood	Blood film for Malaria Parasites	Negative	No Malaria Parasite should be seen	No Malaria parasites indicated the absence of Malaria	No treatment was given
4/12/21	Sputum	Gene Xpert for tuberculosis	Negative	No acid fast bacilli should be seen	No acid fast bacilli indicated absence of tuberculosis	No treatment was given
3/12/21	Chest	Chest X-ray	Indicated few opacities on the right lobe of the lung	There should not be opacities on the lobes of the lungs	Few opacities on the right lobe of the lungs indicated right lobar pneumonia	The following antibiotics were given; Tab azithromycin 500mg daily for 3days Tab Cefuroxime

						500mg bid for 5days
3/12/21	Blood	Full blood count (FBC)	WBC $16.6X10^9$/L RBC $4.76X10^{12}$/L HB 9.3g/dL HCT 35.2% MCV 106.6fL	$4.00 – 10.00x10^9$/L $4.00 - 5.50x10^{12}$/L 11.00 – 15.00g/dL 40.00 – 48.00% 86.00 – 99.00fL	HIGH NORMAL LOW LOW HIGH	Antibiotics such as tab azithromycin tab and cefuroxime and haematinics such as cap Iron (III) Polymaltose daily for 14days were given
4/12/21	Chest	CT scan	No mass or nodule seen	There should be no mass or nodules seen	No evidence of lung tumour	No treatment was given

2.1.2 CAUSES

With reference to the literature review, the cause of pneumonia may include Infection from viruses, bacteria, and fungi, radiation, ingestion of chemicals and aspiration of stomach content into the lungs and retention of secretions which mostly occur in elderly people However, in the case of Mr. A.S, the cause may be as a result of bacterial and his advanced age (Age 50years and above).

2.1.3 CLINICAL FEATURES

TABLE 2.3: CLINICAL FEATURES OF MR. A.S COMPARED WITH THOSE IN THE LITERATURE REVIEW

SIGNS AND SYMPTOMS FROM THE LITERATURE REVIEW	SIGNS AND SYMPTOMS EXPERIENCED BY THE PATIENT
Fever	Patient experienced fever
Cough productive and non-productive	Patient experienced productive cough
Restlessness	Patient did not experience restlessness
Anorexia	Patient experienced anorexia
Fast breathing	Patient experienced fast breathing
Use of accessory muscle for respiration and flaring nasal margin	Patient did not experience the use of accessory muscle for respiration and flaring nasal margin
Restricted movement of the affected side of the chest due to pain	Patient experienced restricted movement of the affected side of the chest due to pain
Sweating	Patient experienced Sweating
Fast pulse rate	Patient had fast pulse rate

Sign of consolidation or pleural effusion on chest examination	Patient did not have consolidation or pleural effusion on chest examination
Cyanosis	Patient did not experience cyanosis

From the comparison in the table, my patient exhibited most of the sign and symptoms in the literature review which confirms patient was having pneumonia.

2.1.4 TREATMENT OF PNEUMONIA

The following drugs were prescribed for Mr.A.S

8. Tab Paracetamol 1g tid x 5days
9. Tab cefuroxime 500mg bd x 5days
10. Tab azithromycin 500mg daily x3days
11. IV Ceftriaxone 2g daily x 5days
12. Carbocisteine Syrup 10mls tds x 7days
13. Cap iron III Polymaltose (Foligrow) once daily x 14days
14. IV Normal saline 1 litre x 24 hours

TABLE 2.4: TREATMENT GIVEN TO PATIENT AS COMPARED WITH LITERATURE REVIEW

DRUGS OUTLINED IN THE LITERATURE REVIEW	**DRUGS GIVEN TO MR. A.S**
1.Antibiotics eg. Erythromycin, Ampicillin, Amoxicillin, Cefuroxime, Gentamycin.	Tab Cefuroxime, IV Ceftriaxone, Tab azithromycin was prescribed and given
2.Analgesics and Antipyretics eg. Paracetamol, Naloxone.	Tab Paracetamol was prescribedand given
3. Cough mixture eg. Carbocystein.	Carbocystein syrup was prescribed and given
4. Intravenous infusions eg. Normal saline, Ringers Lactate.	Normal saline was prescribed and administered.
5.Respiratory measures such as endotracheal intubation and mechanical ventilation can be done	None was done.
6.Iron supplement was not seen in the literature review	Iron supplement such as foligrow caps was prescribed and administered.
7. Anti- inflammatory such as diclofenac for pain and to reduce inflammation.	None was prescribed.

Most of the drugs in the literature review were prescribed for my patient, thus means that patient was correctly diagnosed.

Date	Drugs	Dosage/ Route Of Administration In Literature Review	Dosage/ Route Of Administration Given To Client	Classification	Desired Effect	Actual Effect Observed	Side Effect	Remarks
3/12/21	Paracetamol	**Dose;** Adult 0.5g- 1g 4-6 times daily **Route;** Oral, rectal, IV	**Dose:**1g tid X 5days **Route:** Oral	Non-opioid analgesic and antipyretic	To block pain receptors by inhibition of prostaglandins and also to control pyrexia	Fever and pain reduced	Haemolytic anaemia, neutropenia, pancytopenia, liver damage hypoglycaemia, jaundice	No side effect was observed
3/12/21	Cefuroxime	**Dose:** 250mg to 500mg every 12hours for 10days **Route:** Intravenous, Intramuscular, Orally	**Dose:** 500mg bid X 5days **Route:** Orally	Cephalosporins (Antibiotic)	To combat infection by inhibiting the third and last stage of bacteria cell wall synthesis resulting in bacterial lysis	Infection treated	Nausea, vomiting, diarrhea, anorexia, abdominal pain and flatulence	No side effect seen

3/12/21	Azithromycin	**Dose:**500mg for adult **Route:** Oral, Intravenous, Topical	**Dose:** 500mg daily x 3days **Route:** Orally	Antibiotic (macrolides)	To combat infections in the lower respiratory tract infections	Infection treated	Abdominal discomfort, nausea vomiting	No side effect seen
3/12/21	Ceftriaxone	**Dose:** 1-2g daily for **Route**: Intravenous, Intramuscular	**Dose:** 2g daily x 5 days **Route:** Intravenously	Cephalosporin antibiotics	It works by interfering with the formation of bacterial cell walls. Ceftriaxone impairs the bonds that hold the bacterial cell wall together, which allows holes to appear in the cell walls. This kills off the bacteria causing the infection.	Infection treated	Swelling, redness, or pain at the injection site may occur. Abdominal pain, nausea, vom iting.	No side effect seen

3/12/21	Carbocisteine syrup	**Dose:** 250mg in divided doses until satisfactory. 250mg/5mls **Route:** Orally	Syrup 10mls tds x 7 days orally	Mucolytic agent	A mucolytic helps you cough up phlegm (also called mucus or sputum). It works by making your phlegm less thick and sticky.	Patient coughed up phlegms: coughing ceased.	Diarrhoea, black tarry stools	No side effect seen
3/12/21	Iron III polymaltose (foligrow)	**Dosage:** 100 mg Syrup, Capsule **Route:** oral.	Caps once daily x 14 days orally	iron supplement	To treat or prevent iron deficiency anaemia	iron deficiency anaemia treated	Constipation, diarr hoea, stomach cra mps, or upset stomach	No side effect seen

3/12/21	Intravenous Normal Saline	**Dosage:** 500mls **Route:**intravenous	1 litre x 24 hours intravenously	Isotonic solution	For fluid and electrolyte replacement, temporal treatment of circulatory insufficiency and shock.	Fluid and electrolyte balance maintained.	Confusion, fluid overload, glycosuria, pulmonary edema.	None was observed.

2.1.5 COMPLICATIONS

From the literature the following are the complications of pneumonia; hypotension, septic shock, respiratory failure, pleural effusion. None of the above mentioned complications were exhibited by Mr. A.S since he reported to hospital early enough for treatment and also had the right medical and nursing management.

2.2 PATIENT/FAMILY STRENGTH

This involves activities the patient can perform and those the family can also perform in helping the patient recover.

Mr. A.S is an old gentleman, very calm and easy approachable. These qualities enhanced speedy recovery from his condition since he cooperated well with the health team especially nurses in the ward.

1. Patient can verbalize the location and intensity of pain.
2. Patient can walk short distances around his bed.
3. Patient can cover the mouth when coughing.
4. Patient could sleep for an hour during the day and for two hours during the night.
5. Patient can eat one third of meal served.
6. Patient verbalised the importance of acquiring adequate knowledge on pneumonia.

2.3 HEALTH PROBLEMS IDENTIFIED

A health problem is any physical, social or psychological stress on a patient and her family that can cause a change to his health and which the nurse and other members of the health team help to solve. During the hospitalization of Mr A.T the following problems were identified;

1. Patient complained of chest pain. (03/12/21)
2. Patient complained of general body weakness. (03/12/21)
3. Patient had persistent productive cough. (04/12/21)

4. Patient complains of difficulty falling asleep. (04/12/21)
5. Patient has loss of appetite. (05/12/2021)
6. Patient had inadequate knowledge on disease condition. (05/12/21)

2.4 NURSING DIAGNOSIS

According to Hinkle and Cheever (2014), nursing diagnosis is the organization, analysis, synthesis and summarization of data collected and determines the patient's need for care. Based on the problems listed or identified above aided me in formulation of the nursing diagnosis to indeed enhance effective nursing care to be rendered to my patient. The nursing diagnoses are as follows;

1. Acute pain (chest pain) related to inflammation of the lungs as evidenced by self-report of pain. (3/12/21)
2. Activity intolerance (bathing and mouth care) related to general body weakness.(3/12/21)
3. Ineffective airway clearance (cough) related to copious trachea bronchial secretion. (4/12/21)
4. Insomnia related to change in environment as evidenced by early awakening and difficulty maintaining sleep state. (4/12/21)
5. Altered nutritional pattern (less than body requirement) related to anorexia. (5/12/21)
6. Knowledge deficit related to insufficient information on pneumonia as evidenced by insufficient knowledge on disease condition. (5/12/21)

CHAPTER THREE

PLANNING FOR PATIENT AND FAMILY CARE

3.0 INTRODUCTION

According to Williams and Hopper, (2015), planning involves setting priorities, establishing outcomes, and identifying interventions that will help the patient meet the outcomes. It is important to include the patient in the development of the plan and care.

It involves the use of the nursing care plan to set objectives for patient and family. It is based on the potential and actual problems identified.

3.1 NURSING OBJECTIVES

After the problem and needs have been identified, objectives/outcome criteria are set for specific nursing orders to enable the nurse achieve a positive outcome.

The objectives set for Mr. A.S and family are as follows;

1. Patient would be relieved of chest pain within 24 hours as evidenced by;

    a. Patient verbalising absence of chest pains.

    b. The nurse observing patient breath or cough without pain in the chest.

2. Patient would be able to tolerate activities (bathing and mouth care) within 72 hours evidenced by

    a. Patient verbalizing relief of general body weakness.

    b. Patient performing his daily activities without assistance.

3. Patient would have an effective airway clearance within 48 hours as evidenced by

    a. Patient verbalising absence of cough

    b. Patient family reporting that patient has stop coughing

4. Patient would regain his normal sleeping pattern (6-8 hours at night and 3-4 hours a day) within 48 hours evidenced by

   a. Patient reporting that he has regained his normal sleeping pattern

   b. The nurse observing the patient had uninterrupted sleep during the day and night

5. Client would regain his normal nutritional pattern (good appetite) within 48 hours as evidenced by;

   a. Patient verbalizing that he has gained appetite and can now eat more of his meals served.

   b. The nurse observing that patient eats more than half of his meals served.

6. Patient and family would gain adequate understanding of his condition within 48 hours as evidenced by

   a. Patient verbalising understanding of the causes, risk factors, signs and symptoms and management of pneumonia.

   b. Client/family answering questions asked by nurse correctly

3.3 NURSING CARE PLAN

This is written guideline for patient case designed by nurses based on their nursing assessment and diagnosis for an individual patient. Eventually, the patient's problems are solved. Essential component of the nursing care plan include the following;

- Nursing diagnosis
- Nursing objectives
- Nursing orders
- Nursing intervention
- Evaluation of care plan

Detailed daily nursing care plan of my patient is presented on table III on the next page.

TABLE III. NURSING CARE PLAN FOR MR A.S

DATE /TIME	NURSING DIAGNOSIS	OBJECTIVES /OUTCOME CRITERIA	NURSING ORDERS	NURSING INTERVENTIONS	DATE/ TIME	EVALUATION	SIGN
03/12/21 4:00pm	Acute pain related to inflammation of the lungs (chest pains) as evidenced by self-report of chest pain.	Patient would be relieved of chest pain within 24 hours as evidenced by a) Patient verbalising absence of chest pain. b) The nurse observing patient breath or cough without pain.	1. Assess patient's level of pain using the numerical rating scale of 0-10 where "0" represents no pain and "10" worst pain ever. 2. Reduce external stimulation(noise) 3. Engage patient in diversional activities. 4. Reduce external stimulation (noise). 5. Educate the patient on pain pathology and management. 6. Administer prescribed analgesics	1. Patient's level of pain was assessed and patient rated it as 6 on the numerical pain rating scale. 2. External stimulation was reduced by restricting visitors to reduce noise. 3. Patient was engaged in diversional activities such as listening to news and music on radio. 4. Visitors were restricted to reduce noise. 5. Patient was educated on the reason for his pain and its management. 6. Prescribed analgesic tab paracetamol 1g was administered orally.	04/12/21 4:00pm	Goal fully met as patient verbalised absence of chest pains and nurse observed patent breath or cough without pain.	J.T

TABLE III. NURSING CARE PLAN FOR MR A.S. CONT.

DATE /TIME	NURSING DIAGNOSIS	OBJECTIVES /OUTCOME CRITERIA	NURSING ORDERS	NURSING INTERVENTIONS	DATE/ TIME	EVALUATION	SIGN
03/12/21 5:15pm	Activity intolerance (bathing, mouth care) related to general body weakness.	Patient would be able to tolerate activities within 72 hours evidenced by a) Patient verbalising relief of general body weakness. b) Patient performing his daily activities (bathing, mouth care) without assistance.	1. Patient's personal items within his reach Place. 2. Ensure adequate rest for the patient. 3. Assist patient to bath twice daily. 4. Gather supplies for mouth care and assist patient to do mouth care. 5. Investigate the patient's perception of the activity intolerance. 6. Assist the patient to exercise all the extremities every 2 to 4hours	1. Patient's items such as water, phones etc were placed within his reach. 2. Enough rest was ensured to conserve energy to alleviate fatigue. 3.Patient was assisted to bath twice in bed 4. Patient supplies for mouth care was gathered and he was assisted to do mouth care. 5. Enough rest was ensured to conserve energy to alleviate fatigue. 6. Patient was engaged in passive and gradually active exercises every 4hours.	06/12/21 5:15pm	Goal fully met as patient verbalized relief of general body weakness and patient performing his daily activities without assistance.	J.T

TABLE III. NURSING CARE PLAN FOR MR A.S. CONT.

DATE /TIME	NURSING DIAGNOSIS	OBJECTIVES /OUTCOME CRITERIA	NURSING ORDERS	NURSING INTERVENTIONS	DATE/ TIME	EVALUATION	SIGN
04/12/21 7:30am	Ineffective airway clearance (cough) related to copious trachea bronchial secretion.	Patient would have an effective airway clearance within 48 hours as evidenced by a) Patient verbalising absence of cough. b) Patient family reporting that patient has stop coughing.	1. Assess for respiratory rate 2. Teach the patient the proper ways of coughing and breathing. 3. Position the patient upright in bed to aid in gaseous exchange. 4. Encourage patient to increase fluid intake to 3 litres per day. 5. Administer prescribed cough suppressant. 6. Assess the effectiveness of the cough suppressant.	1. Respiratory rate was assessed. 2. Patient was taught proper ways of coughing and breathing (e.g., take a deep breath, hold for two seconds, cough two or three times in succession) 3. Patient was placed in high-fowlers position. 4. Patient took in about 2L of water in a day. 5. Carbocistein 10mls tds was administered. 6. Patient was observed and evaluated on effect medication on cough.	06/12/21 7:30am	Goal partially met as patient /family reported that cough has subsided but not completely relieved as he still coughs and produce small mucus.	J.T

TABLE III. NURSING CARE PLAN FOR MR A.S. CONT.

DATE /TIME	NURSING DIAGNOSIS	OBJECTIVES /OUTCOME CRITERIA	NURSING ORDERS	NURSING INTERVENTIONS	DATE/ TIME	EVALUATION	SIGN
04/12/21 9:10am	Insomnia related to change in environment as evidenced by early awaking and difficulty maintaining sleep state.	Patient would regain normal sleep pattern (6-8 hours at night and 3-4 a day) within 48 hours as evidenced by; a) Patient reporting that he has regained his normal sleeping pattern. b) The nurse observing the patient having uninterrupted sleep during the day and night	1. Reassure patient of restorative sleep. 2. Prepare and make a comfortable bed free from wrinkles to enhance quality of sleep. 3. Ensure a noise free and calm environment. 4. Serve patient with warm drink at bed time to stimulate sleeping. 5. Evaluate the patient's knowledge on the cause of sleep problems and potential relief measures to facilitate treatment. 6. Observe and evaluate the timing or effects of medications that can affect sleep.	1. Patient was reassured of having a restorative sleep and regaining normal sleep pattern. 2. A well prepared bed was made for patient which provided comfort during sleep as it was wrinkle free. 3. The ward was kept calm and conducive for sleep by restricting visitors and ensuring adequate ventilation. 4. Patient was served with warm milo drink at bedtime. 5. After evaluation it was identified patient had sleeping problem as a result of change in environment 6. Patient was observed and evaluated on effect medication on sleep.	06/12/21 9:10am	Goal fully met as patient reported he has regained his normal sleeping pattern and nurse observing patient had uninterrupted sleep during the day and night.	J.T

TABLE III. NURSING CARE PLAN FOR MR A.S. CONT.

DATE /TIME	NURSING DIAGNOSIS	OBJECTIVES /OUTCOME CRITERIA	NURSING ORDERS	NURSING INTERVENTIONS	DATE/ TIME	EVALUATION	SIGN
05/12/21 7:00am	Altered nutritional pattern (less than body requirement) related to anorexia.	Client will regain his normal nutritional pattern (good appetite) within 48 hours as evidenced by; a) Patient verbalizing that he has gained appetite and can now eat more of his meals served. b) The nurse observing that patient eats more than half of his meals serve.	1. Ensure oral hygiene (mouth care). 2. Prepare and serve child's favourite meal. 3. Serve food in bits and at regular interval. 4. Educate patient to chew food slowly and allowing time to swallow. 5. Explain to patient on the need to take nutritious diet. 6. Serve fruits after meal	1. Client's mouth was brushed twice daily. 2. Clients favourite meals such as fufu and garden egg soup were prepared and served. 3. Food was served in bits and at regular intervals 4. Patient was taught to chew food served slowly and allowed time to swallow 5. Dietician explained to patient on the need to take nutritious diet. 6. Fruits such as oranges were served after each meal.	07/12/21 7:00am	Goal fully met as patient verbalized that he has gained appetite and can now eat more of his meals served and the nurse observing that patient eats more than half of his meals serve.	J.T

TABLE III. NURSING CARE PLAN FOR MR A.S. CONT.

DATE /TIME	NURSING DIAGNOSIS	OBJECTIVES /OUTCOME CRITERIA	NURSING ORDERS	NURSING INTERVENTIONS	DATE/ TIME	EVALUATION	SIGN
05/12/21 9:00am	Knowledge deficit related to insufficient information on pneumonia as evidenced by insufficient knowledge on disease condition.	Patient would gain adequate understanding of his condition within 48 hours evidenced by; a) Patient verbalizing understanding of the causes, risk factors, signs symptoms and management of pneumonia b) Patient/family answering questions asked by nurse correctly.	1. Reassure the patient/family of acquiring much information about causes of pneumonia, its management and prevention. 2. Assess the ability of patient to learn. 3. Keep the environment free from noise and any distractions 4. Use repetition and positive feedback and include learner actively in the learning process. 5. Assess motivation and willingness of patient to learn 6. Assess barriers to learning.	1. Patient/family was reassured of gaining enough knowledge on causes of pneumonia, its management and prevention. 2. Patient expressed desire to learn more about the causes of pneumonia, its management and prevention. 3. Teaching and learning was commenced when there was no noise and distraction at the ward. 4. Patient was asked to repeat what he had been thought and he did that but not exactly. 5. Teaching was repeated to enhance learning as patient was involved actively in the learning process. 6. Barriers such as noise was assessed.	07/12/21 9:00am	Goal fully met as patient/family asked questions and sought clarification on patient's care and verbalized knowledge regarding pneumonia.	J.T

CHAPTER FOUR

IMPLEMENTATION OF NURSING CARE PLAN

4.0 INTRODUCTION TO CHAPTER

This is the fourth stage of the nursing process which entails execution or putting into action the nursing orders formulated. It encompasses doing, delegating and recording. It also includes key interventions rendered on daily basis as well as those carried out in cooperation with the family members and the health team. The care rendered to Mr A.S was comprehensive and holistic and started in the Emergency ward to the Male Medical ward of the Holy Family Hospital, Berekum.

4.1 A SUMMARY OF CARE RENDERED TO MY PATIENT

Below are the care and services rendered to my patient and family. The care has been organised on daily basis from the day of admission to the day of discharge.

FIRST DAY OF ADMISSION (03/12/21)

Mr A.S was admitted to male medical ward of Holy Family Hospital, Berekum through the Emergency Unit on the 3rd of December, 2021 at 3:25pm. On observation, he presented a history of sudden onset of difficulty in breathing, chest pain, productive cough, dizziness and loss of appetite. He was in a wheel chair accompanied by a staff nurse and some relatives with the diagnosis of Pneumonia. He was humbly welcomed and was made to feel at home as I assured him of competent nursing care which would aid to alleviate his condition. The patient was further made to feel more relaxed as I introduced myself and the other nurses on duty. I then collected the patient's folder number from the accompanying staff nurse and his name was mentioned loudly and clearly so as to confirm the identity of the patient on the ward's computer. Other relevant information such as, the medications, diagnoses and laboratory investigations were confirmed. Having successfully confirmed patient's relevant information, I admitted him into a comfortable already prepared simple bed in the ward. The patient's vital signs were checked and recorded as follows;

Temperature – 36.5^0C

Blood pressure – 105/70mmHg

Pulse – 89bpm

Respiration – 26cpm

SPO2 - 98%

Patient weight on admission was 60kg.

The laboratory investigations that were ordered as of the time of admission included;

6. Chest X- ray
7. Blood Film for malaria parasite
8. Full blood count
9. Gene Xpert for TB
10. Chest CT scan

The following drugs were prescribed for patient but stat and initial doses were not administered on arrival since they were administered at the Emergency unit.

15. Tablet paracetamol 1g tid x 5days
16. Tablet cefuroxime 500mg bid x 5days
17. Azithromycin tablet 500mg daily x3days
18. IV Ceftriaxone 2g daily x 5days
19. Carbocysteine Syrup 10mls tds x 7days
20. Cap Iron III Polymaltose (Nexcofer) once daily x 14days
21. IV Normal saline 1 litre x 24 hours

When patient was made stable on bed, he was introduced to other patients beside his bed. His family alongside him were orientated to the ward and its environment. Family members and patient were

educated on ward protocols such as the visiting time, ward rounds, medication time, breakfast and lunch time.

Mr A.S luggage were taken and kept in safety. The patient was also being prepared for discharge since preparation for discharge begins on the day of admission. Mr A.S was allowed to interact privately with his family members before they exited the hospital premises. The patient's information was then entered into the Admission and Discharge book, nurse's notes and the daily ward state. The prescribed medications were also recorded appropriately. I went to him later and introduced myself to him again as a final year student of Holy Family Nursing and Midwifery Training College, Berekum. I made him aware that as a final year student, it is a requirement by the Nursing and Midwifery Council to take a patient, to render individualised nursing care to him until discharge and follow up visit after discharge until he recovers fully. A partial fulfilment of an award of a Diploma in Registered General Nursing in Ghana will be achieved. Mr A. S. and his family permitted me after I explained to them and said they will cooperate with me and give all necessary information to complete the care am rendering to them. I then informed the in-charge about my intention to use Mr A.S for my care study. I was given the nod to go ahead. Then I drew a comprehensive care plan to guide my care for the patient and this was implemented afterwards. I chose Mr A.S for my care study because I wanted to have an in depth knowledge about his condition.

At 4:00pm, Patient complained of chest pain. A nursing diagnosis of acute pain related to inflammation of the lungs (chest pains) as evidenced by self-report of chest pain was made. An objective was set to relieve patient of chest pain within 24 hours. The following nursing interventions were carried out: Patient's level of pain was assessed and patient rated it as 6 on the numerical pain rating scale, external stimulation was reduced by restricting visitors to reduce noise, patient was engaged in diversional activities such as listening to news and music on radio, visitors were restricted to reduce noise, patient was educated on the reason for his pain and its management, prescribed analgesic tab paracetamol 1g was administered orally.

At 5:15pm, Patient complained of general body weakness. A nursing diagnosis of activity intolerance (bathing, mouth care) related to general body weakness was made. An objective was set to help patient tolerate activities within 72 hours. Nursing interventions implemented include Patient's items such as water, phones etc were placed within his reach, enough rest was ensured to conserve energy to alleviate fatigue, patient was assisted to bath twice in bed, patient supplies for mouth care was gathered and he was assisted to do mouth care, enough rest was ensured to conserve energy to alleviate fatigue, patient was engaged in passive and gradually active exercises every 4hours.

At 5:45pm, patient was served his evening meal (jollof rice). At 6:00pm, vital signs were checked and recorded as in the appendix and patient was assisted to maintain his personal hygiene.
At 10:00pm, vital signs was checked and recorded as in the appendix and due medications were served as prescribed. Patient slept around 10:20pm.

SECOND DAY OF ADMISSION (04/12/21)

Patient woke up around 5:00am, he was assisted to maintain his personal hygiene (bathing and mouth care).

At 6:00am his vital signs were checked and recorded; as indicated in the appendix and due medication served as prescribed.

At 7:30am, I interacted with patient and it was observed that patient was coughing which was confirmed by him. A nursing diagnosis of ineffective airway clearance (cough) related to copious trachea bronchial secretion was made and the objective set was, patient would have an effective airway clearance within 48 hours. The following interventions were carried out; respiratory rate was assessed, patient was taught proper ways of coughing and breathing (e.g., take a deep breath, hold for two seconds, cough two or three times in succession), patient was placed in high-fowlers position, patient took in about 2L of water in a day, carbocistein 10mls tds was administered, patient was observed and evaluated on effect medication on cough. Patient had his breakfast which was Hausa

porridge and bread. During the ward rounds at 8:40am, Dr. B attended to Mr A.S and the plan was to continue his medications. The night nurses reported that client was not able to sleep well.

So, at 9:10am a nursing diagnosis was formulated as, Insomnia related to change in environment as evidenced by early awaking and difficulty maintaining sleep was made. An objective was set to help client regain normal sleep pattern (6-8 hours at night and 3-4 a day) within 48 hours. Nursing actions implemented are as follows; patient was reassured of having a restorative sleep and regaining normal sleep pattern, a well prepared bed was made for patient which provided comfort during sleep as it was wrinkle free, the ward was kept calm and conducive for sleep by restricting visitors and ensuring adequate ventilation, patient was served with warm milo drink at bedtime, after evaluation it was identified patient had sleeping problem as a result of change in environment, patient was observed and evaluated on effect medication on sleep.

At 10:00am clients vital signs were checked and recorded as indicated in the appendix. All interventions were rendered successfully and the patient was made comfortable in bed.

At 1:30pm, patient was served his afternoon meal (boiled yam with palava sauce), 2:00pm, vital signs documented and recorded indicated in the appendix and the prescribed drugs was served and documented.

At 4:00pm, I evaluated the goal I set on the 3rd December, 2021 to relieve patient of chest pain within 24 hours. The goal was fully met as patient verbalised absence of chest pains and nurse observed patent breath or cough without pain.

In the evening session (6:00pm), his vital signs were checked and recorded as indicated in the appendix. The patient was assisted with the maintenance of his personal hygiene. Following the maintenance of his personal hygiene, he was served his super of which he could not eat all.

At 10pm, patient vital signs was checked and recorded as in the appendix and due medications served as prescribed. Patient finally slept around 10:30pm.

THIRD DAY OF ADMISSION (05/12/21)

Patient woke up at 4:30am, he brushed his teeth and was assisted to take his bath.

At 6:00am his vital signs were checked and recorded as stated in the appendix.

All due medications were served as prescribed and recorded. At 7:00am Mr A.S was served his breakfast (Milo tea and bread) and he ate very little of the meal. Therefore a nursing diagnosis of altered nutritional pattern (less than body requirement) related to anorexia was formulated. The following nursing actions were implemented; client's mouth was brushed twice daily, clients favourite meals such as fufu and garden egg soup were prepared and served, food was served in bits and at regular intervals, patient was taught to chew food served slowly and allowed time to swallow, dietician explained to patient on the need to take nutritious diet, fruits such as oranges were served after each meal.

At 9:00am, upon having interaction with patient I realized that patient had less knowledge on condition (pneumonia). A nursing diagnosis of knowledge deficit related to insufficient information on pneumonia as evidenced by insufficient knowledge on disease condition was made. An objective was set to help patient gain adequate understanding of his condition within 48 hours. Nursing interventions implemented included; patient/family was reassured of gaining enough knowledge on causes of pneumonia, its management and prevention, patient expressed desire to learn more about the causes of pneumonia, its management and prevention, teaching and learning was commenced when there was no noise and distraction at the ward, patient was asked to repeat what he had been thought and he did that but not exactly, teaching was repeated to enhance learning as patient was involved actively in the learning process, barriers such as noise was assessed.

At 10:00am patient's vital signs were checked and recorded in the appendix.

Subsequently, at 2:00pm client's medications were served and recorded and vital signs checked and recorded in the appendix. Patient was given jollof rice and chicken as lunch.

He had his supper, banku with okrostew at 5:00pm.

In the evening session, thus 6:00pm his vital signs were checked and recorded in the appendix;

The patient was assisted again with the maintenance of his personal hygiene. All teachings given the previous day were reinforced.

FOURTH DAY OF ADMISSION (06/12/21)

Patient woke up at 5:05am and he was assisted in the maintenance of his personal hygiene as usual. At 6:00am, his vital signs were checked and recorded in the appendix. All due medications were served and recorded appropriately. Patient took rice porridge and bread for breakfast.

At 7:30am, an evaluation of the objective to help patient have an effective airway clearance within 48 hours was done and goal was partially met as evidenced by patient /family reporting that cough has subsided but not completely relieved as he still coughs and produce small mucus.

At 8:00am, the doctor came for ward rounds and ordered for continuation of treatment for the client. The doctor told him about his possible discharge the next day. The patient was advised on the need to eat nourishing diet to promote his nutritional status, boost his immune system and help to increase his haemoglobin level. He was also educated on how the drugs were taken because of the anticipated possible discharge the next day, which he was informed by the doctor during the ward rounds. The patient was so excited that he could not wait for the next day.

At 9:10am, I evaluated the goal I set on the 4th December, 2021 to help patient regain normal sleep pattern (6-8 hours at night and 3-4 a day) within 48 hours. The goal was fully met as patient reported he has regained his normal sleeping pattern and nurse observing patient had uninterrupted sleep during the day and night.

At 8:00am, the doctor came for ward rounds and ordered for continuation of treatment for the client. The doctor told him about his possible discharge the next day. The patient was advised on the need to

eat nourishing diet to promote his nutritional status, boost his immune system and help to increase his haemoglobin level. He was also educated on how the drugs were taken because of the anticipated possible discharge the next day, which he was informed by the doctor during the ward rounds. The patient was so excited that he could not wait for the next day.

At 10:00am, his vital signs were checked and recorded as in the appendix and prescribed medication due was served. At 1:15pm, patient was served lunch (rice and beans stew). I embarked on my first home visit this day and that was to know my patient's residence and the environment in which he lives, verify the information given to me, identify the risk factors and stresses that could have led to his condition.

At 2:00pm, his vital signs were checked and recorded in the appendix as well as due medications served to patient and recorded.

At 5:15pm, an evaluation of the objective to help patient tolerate activities within 72 hours and goal was fully met as patient verbalized relief of general body weakness and patient performing his daily activities without assistance. At 5:35pm, patient was served his supper (fufu and light soup) for the day.

At 6:00pm, patient vital signs were checked and recorded as in the appendix and patient was allowed to rest.

10:00pm, vital signs were checked and recorded as in the appendix and due medications were served as prescribed and patient finally slept at 10:20pm.

FIFTH DAY OF ADMISSION/DAY OF DISHARGE (07/12/21)

On the fifth day on admission, patient's condition was very good as reported by the night nurses. He took his bath, emptied his bowels, brushed his teeth, and dressed up nicely all by himself. His vital signs checked at 6:00am and recorded as indicated in the appendix and his medications served and recorded.

At 7:00am, the goal set on 05/12/21 for patient to regain his normal nutritional pattern (good appetite) within 48 hours was evaluated. Goal was fully met as patient verbalized that he has gained appetite and can now eat more of his meals served and the nurse observing that patient eats more than half of his meals serve.

At 9:00am the goal set on 05/12/21 for patient to gain adequate understanding of his condition within 48 hours was evaluated. Goal fully met as patient/family asked questions and sought clarification on patient's care and verbalized knowledge regarding pneumonia.

At 10:00am the medical officer finally discharges him to continue his oral medications and management at home.

Following his discharge, I collected his medications at the dispensary. The opportunity was used to educate him on the medication and treatment regimen at home. His education on the causes, signs and symptoms, prevention and the side effects of the medication was reinforced. Health education was also given him on his diet and personal hygiene. I congratulated him on his cooperation during the period of admission. The date of review and home visits/follow up were communicated to him and he embraced the proposal. I entered his name and the final diagnose in the admission and discharge book. His name was as well entered in the ward state. The patient was then assisted to get a means safely back to his destination.

4.2 PREPARATION OF PATIENT AND FAMILY TOWARDS DISCHARGE AND REHABILATATION AND FOLLOW-UPS AND HOME VISITS.

The preparation of Mr A.S towards discharge all started on the day of admission until he was eventually discharged on the 7th of December, 2021. This was done to allay anxiety and to get the patient in readiness for discharge. Education was given him on the causes, signs and symptoms, complications and treatment of Pneumonia. He was made to understand that pneumonia could be treated totally, and to prevent complications in order to extend life expectancy. The patient and family were educated on the signs and symptoms of worsening pneumonia and the need for regular checks-

ups and prompt reporting to the hospital in case of any clinical manifestations of the condition. He and the family were also educated to avoid the intake of over the counter medications as these drugs could exacerbate the signs and symptoms of pneumonia. Education was also given them on the side effects of the prescribed medications and the need to report to the doctor if any side effects are experienced. They were also assisted to evacuate the myth associated with pneumonia. Moreover, he and the family were also educated on the need for essence of good nutrition and personal hygiene. The discharged was done on the 7th of December, 2021, after the doctor did thorough assessment declared him fit and he was stressed on the importance of the review date (17/12/21). I took the opportunity to inform Mr A.S and his family about my intention of paying them another home visit and my proposal was gladly accepted. He and his family were then assisted to get a means back home.

4.3 FOLLOW-UPS/HOME VISITING/CONTINUITY OF CARE.

This refers to a visit paid to a patient and his/ her family by a member or some members of the health team with the aim of assessing the patient's actual home condition and progress. It offers the nurse the opportunity to visit the patient and family in their home to reinforce the health education given at the hospital. There exist two types of home visits. These include; routine home visit in which a member of members of the health team visit patients from house to house. The other type is a special or selective home visit in which a member or members of the health team visit a patient with a specific condition. In the case of this patient/family care study, a special or selective type of home visit was applied.

MY FIRST HOME VISIT (04/12/21)

My first home visit was made on the 4th of December, 2021 which happened to be the second day of admission of Mr A.S. I set off for Mpatapo a section of Berekum. I left the hospital around 12:15pm and got to the house at 12:30pm. On arrival, the residents of the house were surprised having seen a stranger they never expected. I greeted them and was humbly and warmly welcome. I had the opportunity of meeting his wife and children. Ceasing this very opportunity, I introduced myself as a

student nurse of Holy Family Nursing Training College who was rendering nursing care to Mr A.S the aim of my visit was to acquaint myself with the location of my patient's house, to provide health education based on the environmental condition of the patient, to identify the factors that predisposed my patient to the condition and to establish a cordial relationship with members of my patient's family and to validate data obtained from patient.

Based on my observation and questioning of my patient's family members, it revealed that the house is a family house with five bed rooms, a bathroom and private toilet facility and a kitchen. A total of two people according them, are entitled to a room with mosquito proof nets. There was well-connected electricity to the house and a tap where they obtain their source of water. They have large dustbins where they dispose their rubbish in and the Zoomlion come for it every week. I used this opportunity to educate them on the need for personal hygiene and environmental hygiene as well as the causes, signs and symptoms, complications and prevention of malaria. I therefore advised them to always cover their water reservoir, clean all cobwebs and keep their surroundings as neat as possible. Furthermore, I encouraged them to ensure that he complies with his medication regimen when eventually he is discharged home. I asked them a few questions in order to assess their understanding of the teaching given them and I was excited to receive positive responses. Opportunity was also given them to ask questions or make any contributions. All questions were addressed appropriately and I assured them of my next home visit. I finally sought permission to leave and eventually left the house at 3:30pm.

MY SECOND HOME VISIT (13/12/21)

My second home visit successfully came off on the 13th of December, 2021. It was to assess patient's health status, offer necessary education and remind him of the review date. I arrived at my patient's house at 1:00pm. On arrival, I was met with a humble reception from my patient and family who were exceptionally pleased to see me again in their house. They introduced me to other members of the family who never had the opportunity of meeting me during my first home visit. Having been

offered a seat, I enquired about my patient's state of health and his conformity with the medication regimen. His wife stated that he has been taking his medications as prescribed. In order to further ascertain the truth, I asked for his medication. Following the inspection of his medications, it actually proved the fact that he had been taking his medications as prescribed. He was also educated on good nutrition such as intake of fruits and vegetables. I also made quick examination from head to toe and realised that there was no abnormality. The patient and family were also educated on the signs of worsening pneumonia. I encouraged them to report any of such signs and symptoms to the hospital promptly for early medical intervention. I however, observed that the previous teaching on personal and environmental hygiene was adhered to as my patient and family and the environment were kept neat. I therefore congratulated them and urged them to continue the good work. I also revealed to them my intention of terminating my care and handing them over to a Community Health Nurse in order to make time for my books and ensure continuity of care in my absence. Opportunity was allowed for questions and all questions were addressed appropriately. I finally sought permission to leave which they gladly accepted after expressing their profound gratitude to me for my visit and care rendered them. I welcome their appreciation and low and behold left for my house at 4:00pm.

DAY OF REVIEW (17/12/21)

Mr A.S came to the OPD of the Bono Regional Hospital on the 17th of December, 2021. He arrived at the hospital in the morning looking cheerful and healthy. His vital signs were checked and recorded as follows;

Temperature – 35.2^{0}C

Blood pressure - 120/91mmHg

Pulse – 74bpm

Weight – 62kg

Respiration – 18cpm

Following the documentation of Mr A.S's vital signs, he was seen by the doctor who examined him and asked for any complains. He replied that he had no complains. After further examination, the doctor declared him fit. Since the medications that were given him to be taking at home were finished the doctor ordered the following drugs for him to be taken accordingly.

1. Carbocystein Syrup 10mls tds x 7days
2. Nescofer tablets 100mg once daily x 14days

Mr A.S was also advised on the need to conform to the dietary regimen and other instructions given him. And was asked to come back to the hospital when he was not well. I assured him of my third home visit on the 2nd December, 2021 and aided him to get a means back to his home.

MY THIRD HOME VISIT (28/12/21)

On the 28th December, 2021, I made my third but final home visit to my patient and family. I arrived at the house at 1:30pm with a Community Health Nurse. On arrival, I was warmly welcomed and offered a seat as usual. The aim of my visit was to basically hand over the care of my patient to the Community Health Nurse, assess the health condition of my patient and also to evaluate the positivity of the teachings given them previously. On examination of the patient from head to toe, I detected no abnormality. The patient also looked healthier than he was during my last home visit. In evaluation of the effectiveness of the previous teaching given to my patient and family, I was impressed having realised that the previous teaching had been adhered to. Thus, I realised that their environment was kept neat and tidy and all water pots were neatly covered with clean lids. Questions were posed to them about the patient's condition and positive responses were made with regards to the questions asked. Finally, I sought permission to terminate my therapeutic relationship with them as they were early on informed. Permission was granted me and I used the opportunity to introduce the Community Health Nurse who stays around his neighbourhood who would continue with the care even as I terminate my care. However, I made them know that I would make myself available to them anytime the need arises. The patient and family were very pleased and thank me very much for the care I

rendered them. I gave welcome in response to their thanks and added that God would offer them his blessings and keep them healthy. I then sought permission to leave and eventually set off for my house at 3:00pm.

CHAPTER FIVE

EVALUATION OF CARE

5.0 INTRODUCTION TO THE CHAPTER

Evaluation is the fifth and last step in the nursing process. It is the critical assessment of the effectiveness of objectives set for the patient/family health problems. It is simply means testing the outcome of nursing action against previously determined goals. This is carried out in order to determine whether the set objectives have been fully met, partially or unmet.

5.1 STATEMENT OF EVALUATION

Various goals were set for the checking of effectiveness of the implementation. After evaluation the following goals were met:

1. **Patient was relieved of chest pain within 24 hours. (04/12/21)**

On the 3rd of December, 2021 at 4:00pm, Patient complained of chest pain. A nursing diagnosis of acute pain related to inflammation of the lungs (chest pains) as evidenced by self-report of chest pain was made. An objective was set to relieve patient of chest pain within 24 hours. The following nursing interventions were carried out: Patient's level of pain was assessed and patient rated it as 6 on the numerical pain rating scale, external stimulation was reduced by restricting visitors to reduce noise, patient was engaged in diversional activities such as listening to news and music on radio, visitors were restricted to reduce noise, patient was educated on the reason for his pain and its management, prescribed analgesic tab paracetamol 1g was administered orally.

On 4th December, 2021, at 4:00pm, evaluation was done for the objective set on 03/12/2021 to help patient be relieved of chest pain within 24 hours. Goal was fully met as patient verbalised absence of chest pains and nurse observed patent breath or cough without pain.

2. **Patient was able to tolerate activities within 72 hours. (06/12/21)**

On 3rd December, 2021 at 5:15pm, Patient complained of general body weakness. A nursing diagnosis of activity intolerance (bathing, mouth care) related to general body weakness was made. An objective was set to help patient tolerate activities within 72 hours. Nursing interventions implemented include Patient's items such as water, phones etc were placed within his reach, enough rest was ensured to conserve energy to alleviate fatigue, patient was assisted to bath twice in bed, patient supplies for mouth care was gathered and he was assisted to do mouth care, enough rest was ensured to conserve energy to alleviate fatigue, patient was engaged in passive and gradually active exercises every 4hours.

On 6th December 2021, at 5:15pm, the goal set on 03/12/2021 to enable patient be able to tolerate activities within 72 hours was evaluated and goal was fully met as patient verbalized relief of general body weakness and patient performing his daily activities without assistance.

3. **Patient was relieved of persistent productive cough within 48hours. (06/12/21)**

On 4th December, 2021 at 7:30am, patient had persistent productive cough. A nursing diagnosis of ineffective airway clearance (cough) related to copious trachea bronchial secretion was made and the objective set was, patient would have an effective airway clearance within 48 hours. The following interventions were carried out; respiratory rate was assessed, patient was taught proper ways of coughing and breathing (e.g., take a deep breath, hold for two seconds, cough two or three times in succession), patient was placed in high-fowlers position, patient took in about 2L of water in a day, carbocistein 10mls tds was administered, patient was observed and evaluated on effect medication on cough.

On the 6th of December, 2021, at 7:30am the goal set on 04/12/2021 to help patient have an effective airway clearance within 48 hours was evaluated. Goal was partially met as evidenced by patient /family reporting that cough has subsided but not completely relieved as he still coughs and produce small mucus.

4. **Patient would regain normal sleep pattern within 48 hours. (06/12/21)**

On 4th December, 2021 at 9:10am, patient complains of difficulty falling asleep and a nursing diagnosis of insomnia related to change in environment as evidenced by early awaking and difficulty maintaining sleep state. An objective was set for patient to regain his normal sleep pattern (6-8 hours at night and 3-4 at day) within 48 hours. Nursing actions implemented are as follows; patient was reassured of having a restorative sleep and regaining normal sleep pattern, a well prepared bed was made for patient which provided comfort during sleep as it was wrinkle free, the ward was kept calm and conducive for sleep by restricting visitors and ensuring adequate ventilation, patient was served with warm milo drink at bedtime, after evaluation it was identified patient had sleeping problem as a result of change in environment, patient was observed and evaluated on effect medication on sleep.

On the 6th of December 2021, at 9:10am the goal set on 04/12/2021 for patient to regain his normal sleep pattern (6-8 hours at night and 3-4 at day) within 24 hours was evaluated. Goal was fully met as patient reported he has regained his normal sleeping pattern and nurse observing patient had uninterrupted sleep during the day and night.

5. **Patient regained his normal nutritional status. (07/12/21)**

On 5th December, 2021 at 7:00am, patient ate very little of meal served therefore nursing diagnosis of altered nutritional pattern (less than body requirement) related to anorexia. An objective was set to help regain his normal nutritional pattern (good appetite) within 48 hours. The following interventions were carried out; client's mouth was brushed twice daily, clients favourite meals such as fufu and garden egg soup were prepared and served, food was served in bits and at regular intervals, patient was taught to chew food served slowly and allowed time to swallow, dietician explained to patient on the need to take nutritious diet, fruits such as oranges were served after each meal.

On 7th December, 2021 at 7:00am, the goal set on 05/12/21 for patient to regain his normal nutritional pattern (good appetite) within 48 hours was evaluated. Goal was fully met as patient

verbalized that he has gained appetite and can now eat more of his meals served and the nurse observing that patient eats more than half of his meals serve.

6. **Patient gained adequate understanding of his condition within 48 hours. (07/12/21)**

On 5th December, 2021 at 9:00am, patient had express concern of inadequate knowledge on disease condition, a nursing diagnosis of knowledge deficit related to insufficient information on pneumonia as evidenced by insufficient knowledge on disease condition. An objective for patient to gain adequate understanding of his condition within 48 hours was set. The following interventions were carried out, patient/family was reassured of gaining enough knowledge on causes of pneumonia, its management and prevention, patient expressed desire to learn more about the causes of pneumonia, its management and prevention, teaching and learning was commenced when there was no noise and distraction at the ward, patient was asked to repeat what he had been thought and he did that but not exactly, teaching was repeated to enhance learning as patient was involved actively in the learning process, barriers such as noise was assessed.

On 7th December, 2021, at 9:00am, the goal set on 05/12/21 for patient to gain adequate understanding of his condition within 48 hours was evaluated and the goal was fully met as patient/family asked questions and sought clarification on patient's care and verbalized knowledge regarding pneumonia.

5.2 AMMENDMENT OF NURSING CARE PLAN FOR PARTIALLY MET OR UNMET OUTCOME CRITERIA

Mr A.S who was admitted in the ward for five days had six identified problems addressed, of which nursing diagnosis, objectives and interventions were rendered effectively. All the set goals were fully met as patient/family asked questions and sought clarification on patient's care and verbalized knowledge regarding pneumonia. Therefore there was no need to amend the nursing care plan drawn on him.

5.3 TERMINATION OF CARE

The therapeutic nurse-patient relationship between Mr A.S and I came to an end on the 28th January, 2021, the day of my last home visit (third home visit). On this very day, I made my last home visit to my patient accompanied by a Community Health Nurse just as he was earlier on informed of our coming. At the patient's house, a head to toe examination was carried out on him and it revealed that he was physically fit. Emotionally, my patient and family were also doing well. The Patient/Family were introduced and successfully handed over to the Community Health Nurse of their locality. He was advised on good nutrition, the need to comply with the medication regimen. The dietary regimen and the need to seek early medical intervention were also stressed. I however, made it known to them that I would still avail myself in times of need. My patient/ family were really grateful and thus expressed their sincere gratitude to me for my care rendered them. He also thanked them for their maximum cooperation during the discharge of my duties and entreated that such cooperation be extended to the Community Health Nurse.

CHAPTER SIX

SUMMARY AND CONCLUSION

6.0 INTRODUCTION

This is the last step of the patient/family care study which entails the student's personal appraisal of the therapeutic relationship with the patient as well as the use of the nursing process.

6.1 SUMMARY

Mr A.S, a 50 year – old - man was admitted at the male medical ward of the Holy family Hospital on the 3rd December, 2021 with the diagnosis of pneumonia. On observation, he presented a history of sudden onset of difficulty in breathing, chest pain, productive cough, dizziness and loss of appetite. Ordered laboratory investigations such as full blood count, chest x-ray and chest CT scan were performed as required and it revealed a raised white blood cells count indicating the presence of infection. Medically the following medications were prescribed for the patient;

1. Paracetamol 1g tid x 5days
2. tablet cefuroxime 500mg bid x 5
3. Tab azithromycin 500mg daily x3
4. IV Ceftriaxone 2g daily x 5
5. Carbocystein Syrup 10mls tds x 7
6. Nescofer tablets once daily x 14
7. IV Normal saline 1 litre x 24 hours

He was provided with physical, social and psychological preparation as a unique individual throughout the period of hospitalization. The following nursing care were rendered to him during his admission; vital signs were checked and recorded, Patient was placed on a well-made bed. Proper ventilation was ensured, Patient was taught deep breathing and coughing exercises to relieve patient of difficulty. On admission, various health problems were identified with the help of the nursing process approach; the appropriate nursing orders and interventions were carried out with the

maximum cooperation of the patient and family and so facilitated an effective addressing of the identified problems. The nursing interventions rendered to Mr A.S during his hospitalization included: assisting him to observe his personal hygiene, Total bed rest was ensured, Patient bed side rails were raised, and Patient was assisted in his daily activities.

Prescribed medications were administered. Patient was encouraged to eat more fruits and vegetables and to drink enough fluids to enhance proper hydration and patient and family teaching enforced. Three successful home visits were made thus on the 4th December, 2021(first home visit), 13th December, 2021 (second home visit) and 28th December, 2021(third home visit) to the patient as part of the care rendered to him in order to assess the home situation, identify any health problems and also give health education as and when necessary. On 28th of December, 2021, I ended my therapeutic care with Mr A.S during my third home visit on realizing that he was physically and emotionally healthy.

6.2 CONCLUSION

In conclusion, the patient and family care study has equipped me effectively with more knowledge and practical skills in the nursing process. It gave me the great opportunity to nurse a patient from the very day of admission till the day of discharge and even after the discharge. It also enabled me to establish interpersonal relationship with my patient, tutors and staff nurses. Furthermore, I am convinced that the knowledge that I have acquired on Pneumonia, I would be in a position to provide health education to people on the causes, signs and symptoms, treatment and complications of pneumonia. It has also provided me with the knowledge and skills in providing care for myself against this disease as well as helping others protect themselves against it. I therefore recommend the Nursing and Midwifery Council to ensure that all nursing students should be given the opportunity to embark on the patient/family care study implementing the nursing process in order to gain knowledge and skills on individualized comprehensive care before they complete training.

BIBLIOGRAPHY

Bickley, L. S., & Szilagyi, P. G. (2009). *Bates' Guide to Physical Examination and Hstory Taking* (10th ed.). Philadelphia: Walters Kluver Health/Lippincort Williams & Wilkins.

Colledge, N. R., Penman, I. D., Raltston, S. H., & Walker , B. R. (Eds.). (2014). *Davidson's principlses & practice of medicine* (22nd ed.). Edinburgh: Churchill Livingstone Elsevier.

Farlex, S. (2012, june 3). *the freedictionary.* Retrieved december 15, 2016, from free dictionary website: medical-dictionary.thefreedictionary.com/surgical+history.com

Herdman, H. T., & Kamitsuru, S. (Eds.). (2018). *NANDA Internation, Inc. nursing diagnosis: definitions and classifications: 2018-2020* (11th ed.). New York: Thieme.

Hinkle, J. L., & Cheever, K. H. (2014). *Brunner & Suddarth's textbook of medical-surgical nursing* (13th ed.). Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins.

Simpson, J. (2017). *Oxoford Dictionary of English.* London: Oxford University press 2020.

Livio. (2009). *The english dictionary.* Wikimedia.

MediLexicon. (2009). *Medical Abbreviations Dictionary: Database of over 200,000 medical, biotech, pharma and healthcare acronyms abbreviations*. Retrieved September 18, 2018, from Stedman’s Medical Dictionary: https://www.medilexicon.com/dictionary/41172

Pastorino, E., & Portillo, S. D. (2012). *What is psychology?* (3rd ed.). United States of America: Wadsworth Cengage Learning.

Saladin. (2003). *Anatomy and physiology.* The Mcgraw hill companies.

Smeltzer, B. &. (2010). Assessment. In S. H (Ed.), *Brunner & Suddarth medical-surgical nursing* (12th ed., Vol. I).

Smeltzer, S. C., Bare, B. G., Hinkle, J. L., & Cheever, K. H. (2010). *Brunner & Suddarth's textbook of medical-surgical nursing* (12th ed., Vol. I). Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins.

Tortora, G. J., & Derrickson, B. (2009). *Principles of anatomy and physiology* (12th ed.). Hoboken, N.J: John Wiley & Sons, Inc.

Wagh, A., & Grant, A. (2014). *Ross and Wilson anatomy and physiology in health and illness* (12th ed.). Edinburgh: Churchill Livingstone Elsevier.

WHO. (2013). WHO.

Waugh, G. (2014). *Ross and wilson anatomy and physiology in health and illness.* New York: CHURCHIL LIVINGSTONE ELSEVIER.

Weller, B. F. (2014). *Bailliere's nurses' dictionary: for nurses and healthcare workers* (25th ed.). London: Elsevier Health Sciences.

Weller, B. F. (2014). *Bailliere's Nurses' Dictionary: For Nurses and Healthcare Workers* (25th ed.). London: Elsevier Health Sciences.

Patient folder number is 12798/21.

APPENDIX

Table 6.1: Vital Signs of Mr. A.S

Date	Time	Temperature (ºC)	Pulse (Bpm)	Respiration (Cpm)	Blood pressure (mmHg)
3/12/21	3:25pm	36.5	89	26	105/70
	6:00pm	36.2	96	21	100/60
	10:00pm	36.1	100	23	120/90
4/12/21	6:00am	36.4	87	20	103/62
	10:00am	36.6	83	19	110/60
	2:00pm	36.4	95	21	100/60
	6:00pm	36.5	88	19	100/50
	10:00pm	36.6	95	20	120/60
5/12/21	6:00am	36.3	87	19	129/69
	10:00am	36.3	83	18	110/60
	2:00pm	36.2	91	19	120/80
	6:00pm	36.5	79	18	120/60
	10:00pm	36.7	86	19	120/70
6/12/21	6:00am	36.0	91	18	114/70
	10:00am	36.6	79	19	120/70
	2:00pm	36.3	80	20	129/80
	6:00pm	36.1	76	18	100/60
	10:00pm	36.0	87	22	120/70
7/1/21	6:00am	36.2	84	19	110/70

SIGNATORIES

HE STUDENT NURSE

me: THOMPSON JANET

nature:.....

e: 05/10/2022

THE NURSE-IN-CHARGE OF THE MALE MEDICAL WARD (HOLY FAMILY SPITAL, BEREKUM)

me: Effah Benjamin

nature:.....

e: 05/10/2022

THE SUPERVISOR, HOLY FAMILY NURSING AND MIDWIFERY TRAINING LLEGE, BEREKUM

me: Mr. DRAMANI AYAMBA

nature:.....

e: 05/10/2022

THE PRINCIPAL, HOLY FAMILY NURSING AND MIDWIFERY TRAINING LLEGE, BEREKUM.

me: MONICA NKRUMAH

nature:.....

e: 06/10/2022

ACADEMIC CO-ORDINATOR - NURSING
HOLY FAMILY NURSING & MIDWIFERY
TRAINING COLLEGE, BEREKUM