HOLY FAMILY NURSING AND MIDWIFERY TRAINING COLLEGE

BEREKUM

A PATIENT/FAMILY CARE STUDY ON

PNEUMONIA

AGYEI YEBOAH ERNEST

4120220009

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

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PREFACE

Although the origins of nursing predate the mid-19th century, the history of professional nursing traditionally begins with Florence Nightingale. Nightingale, the well-educated daughter of wealthy British parents, defied social conventions and decided to become a nurse. The nursing of strangers, either in hospitals or in their homes, was not then seen as a respectable career for well-bred ladies, who, if they wished to nurse, were expected to do so only for sick family and intimate friends. In a radical departure from these views, Nightingale believed that well-educated women, using scientific principles and informed education about healthy lifestyles, could dramatically improve the care of sick patients. Moreover, she believed that nursing provided an ideal independent calling full of intellectual and social freedom for women, who at that time had few other career options.

In 1854 Nightingale had the opportunity to test her beliefs during Britain's Crimean War. Newspaper stories reporting that sick and wounded Russian soldiers nursed by religious orders fared much better than British soldiers inflamed public opinion. In response, the British government asked Nightingale to take a small group of nurses to the military hospital at Scutari. Within days of their arrival, Nightingale and her nurses had reorganized the barracks hospital in accordance with 19th-century science: walls were scrubbed for sanitation, windows opened for ventilation, nourishing food prepared and served, and medications and treatments efficiently administered. Within weeks death rates plummeted, and soldiers were no longer sickened by infectious diseases arising from poor sanitary conditions. Within months a grateful public knew of the work of the "Lady with the Lamp," who made nightly rounds comforting the sick and wounded. By the end of the 19th century, the entire Western world shared Nightingale's belief in the worth of educated nurses.

Nursing became professionalized after the Civil War. The Nightingale system of nurse training was adopted and offered at hospitals.

After the war, the role of nurses evolved once again to become what it is today. Nurses became more authoritative and took control of their profession.

Today, nurses remain the cornerstone of our healthcare system, especially those working with Clipboard Health. The field of nursing continues to grow, and more areas of specialization are open to nurses as technology evolves. Nurses continue to prove how integral they are, and at no time in recent history has this been more apparent than during the COVID-19 pandemic. Modern nursing is a profession that requires knowledge, skills and attitude. The ability to render comprehensive nursing care rests on the nurses' ability to assess the client's condition, analysis, plan, implement and evaluate the effects of management on client health status.

The Patient/ family care study is a detailed account of nursing care rendered to the Patient and family to meet their needs. The study is designed to give a comprehensive nursing care to both patient and family from the time of admission till when patient is finally discharged to go home, as well as follow-ups or home visits for continuity of care. The study also involves the nursing process which involves assessment of patient/family, planning of care to be rendered, implementing the plan and evaluating care rendered to patient/ family. The study is carried out to enable the student nurse put into practice the knowledge and skills acquired from the three-year training period in school to ascertain how best the theoretical knowledge would be used to nurse patients who will come under his or her care in the near future. The study also forms part of the requirements of the Nursing and Midwifery Council of Ghana for the award of license in General Nursing. In this study, initials of patient are used for confidentiality.

ACKNOWLEDGMENT

My first and ultimate appreciation goes to the Almighty God for providing me with the strength and knowledge for this project to materialize. It is my greatest pleasure to express my sincere gratitude to my supervisor Ms. Rita Agyei Boakye for her efforts and direction that ensured the success of the study.

Special thanks go to Mr. E.K.B., the subject of the study and his family for the smooth interactions and co-operation.

I am also grateful to the medical doctors and the staff nurses of the Male's Ward of Holy Family Hospital, Berekum.

Further, I would like to extend my appreciation to my wonderful parents, for their unending emotional, moral, spiritual, and financial support throughout the period of the study.

Lastly, I am very grateful to all the publishers and authors whose books I used during the course of my Study.

May God bless them.

INTRODUCTION

The patient and family care study is a study conducted on patient/family using the nursing process to nurse the patient and family as an individual, taking into account all the needs of the patient to arrive at a desired outcome. It also takes into account patient's psychological and social needs in planning the care.

Mr. E.K.B. was admitted on 21st August, 2023 at 2:34pm, to the Male's Ward of Holy Family Hospital, Berekum. He presented with fever, cough and nasal congestion. He was diagnosed of pneumonia. With the use of nursing process, the following problems were identified; Patient could not breathe properly, patient had high body temperature, patient was anxious, patient complained of chest pains, patient could not sleep properly and patient lacked knowledge on his disease condition.

The following diagnostic investigations were done;Full blood count (RBC, WBC, Hb),pulse oximetry check,sputum examination, chest x-ray

His treatment plan was as follows: Intravenous Cefuroxime 1.5g Stat, then 750mg tds x 72hrs ,intravenous Amoxiclav 1.2g bid x 48 hours ,tablet Diclofenac 50mg bid x 5 days,intravenous paracetamol 1g tds x 24 hours ,intravenous Normal saline 1liter x 24 hours,intranasal Oxygen 3L/min x 12 hours, capsule Iron III polymaltose 1 daily x 30days,tablet Azithromycin 500mg daily× 72 hours

Using the nursing care plan, effective nursing care was carried out on the patient to ensure full recovery of Mr. E.K.B. Among the care provided to him were bed making, monitoring of vital signs (temperature, pulse, respiration, and blood pressure), proper positioning in bed, administration of oxygen, and patient/family education on personal hygiene. All goals were fully met during evaluation of care. He was discharged on 25th August, 2023 when his condition had

improved and was declared fit to go home with no complains. He reported to the hospital for review on the 1st September, 2023. Three home visits were paid to him to assess progress of his condition at home. There was termination of care on 7th September, 2023.

This care study comprises of six chapters as follows:

Chapter one deals with assessment of patient and family. This involves collection of data about the patient to identify his problems.

Chapter two deals with analysis of data.

Chapter three comprises the planning phase of the nursing process and has the tabulated plan of care for the stated nursing diagnoses spanning the objective criteria, nursing orders, intervention and evaluation.

Chapter four tackles the actual implementation of the care plan giving summary descriptions of activities which were undertaken from the moment of first contact with the patient at the time of admission to the ward till discharge and subsequent follow up with home visit.

In chapter five, evaluation of nursing care given to the patient and family from encounter till termination of nurse-patient relationship is discussed.

Chapter six focuses on the summary and conclusion of the care study report by reviewing thematic issues that arose in the care study from admission to last home visit after discharge.

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CHAPTER ONE

THE ASSESSMENT OF PATIENT AND FAMILY

1.0 Introduction

This is the initial phase of the nursing process. Assessment is the gathering of information about the patient's health status, analysis and synthesis of the data and the making of a clinical nursing judgment.

It can be done through observations, physical examination, interviewing and investigation such as laboratory results. It includes the patient particulars, patient/family medical history, socio-economic history, patient developmental history, patient's obstetric history, patient's lifestyle/hobbies, patient's past and present medical/surgical history, admission of patient, patient/family concept of illness, literature review on malaria and validation of data. All information was gathered from patient and her relatives

1.1 Patient's Particulars

Patient refers to an individual under medical care and treatment (Merriam-Webster, 2022). Particulars is defined as an individual fact or details regarding information (Merriam Webster, 2022). Patient particulars give detailed information about the patient including his/her name, age, hometown, date of birth, nationality, religion, etc. The name of the patient is Mr. E.K.B. He is a 28year-old man, born on 10th May, 1995 to Mr. S.K.Y and Mrs. R.T. He comes from Berekum Abisase in the Bono Region of Ghana and currently resides Berekum Abisase with house number AS040. He is dark in complexion, 1.78m tall and weighs 57kg on admission. He is the first born of his parents and an Akan by ethnicity. He started his pre- school at Abisase and completed his Junior High School at Abisase their home town. He has nine siblings. He is married and has a

male child. His mother is his next of kin. He is currently a trader. Patient is a Christian who worships with the Methodist church at Abisase. He speaks Asante Twi and English.

1.2 Patient/Family's Medical/ Surgical History

Medical history includes a more in-depth inquiry into the patient's medical issues which includes all diseases and illnesses currently being treated, and those which have had any residual effects on the patient's health (Jonathan R. Nichol, 2021)

Patient and his relative(mother) mentioned that there is no hereditary diseases or chronic diseases such as hypertension or diabetes in both the paternal and maternal side of the family. There are no known allergies to food or drug in the family. However, headache and abdominal pains are the common disorders that are seen and their source of medical care has been a blend of herbal and orthodox medications from over the counter drug sellers and from the hospital if sometimes treatment fails. There is no history of mental illness and communicable diseases in either family. No birth defects or congenital anomalies has been reported in the family. Currently his parents are alive and so are his siblings. His grandfather is deceased; the course of death was revealed as hypoglycemia.

1.3 Patient's/Family's Socio-Economic History

Mr. E.K.B. and family are having a good family cohesion and lives harmoniously with neighbours. They all depend on the National Health Insurance Scheme to seek medical care. They are also highly religious and take part in all religious activities. Mr. E.K.B. also classified their family as a middle class and can afford a three-square meal every day. According to Mr. E.K.B. there are no known taboos in the family but they cherish good moral values and also practice customary marriage in their family. Mr. E.K.B. receives external support from their extended family when they are in need of help and support. He is a trader and his wife is also a

trader. Annually they are able to contribute a substantial amount that is used for the family's welfare.

1.4 Patient's Developmental History

Development is defined as the process of growth and differentiation (Merriam-Wester, 2020). Development thus takes place in various stages right from the time of conception till death. Growth generally refers to the process that results in increased in size. It is characterized by magnitude and direction. Maturation refers to the total way in which a person grows and develops as directed by inheritance.

According to Mr. E.K.B he was born on 10th May,1995 at Holy Family Hospital, Berekum in the Bono region of Ghana to Mr. S.K.Y and Mrs. R.T. He was born at the hospital through spontaneous vaginal delivery with the assistance of a well-trained midwife.

According to Mr. E.K.B, he was immunized against childhood killer diseases. This made him grow up healthy and successfully through the developmental milestone. He started sitting with support at the age of 9/12 month, crawled at the age of 11/12 month and started walking at the age of 1 year and 2 months. At the age of 3 years, he could speak and understand the language when spoken by his mother. The information gathered from Mr. E.K.B indicates that he developed normally without difficulties or deformities. Mr. E.K.B completed his primary and junior high school at the age of eighteen (18), he did not further his education.

As specified by (Jarvis, 2018), Erik Erikson (1902 to 1994) focused on cultural and societal influences as determinants of behavior. Erickson was concerned with the growth of ego**,** the conscious, organized, rational part of the personality. He described eight stages of ego development that encompass the life span. Each stage is characterized by a distinct conflict, or

crisis, relating to the person's physiologic maturation and to what society expects of a person at that age.

Mr. E.K.B is within the sixth stage; Intimacy versus Isolation during young adulthood, during which there is a conflict centered on forming intimate and loving relationships with other people and failure to establish them results in loneliness and isolation. Through various interactions with the patient, I realized patient had fulfilled intimacy through his close relationship with his family. I also observed this from how he interacted with a number of people who visited him while on the ward.

1.5 Patient's Lifestyle/Hobbies

Patient's Lifestyle /Hobbies Lifestyle refers to the way in which a person or group of people lives and works (Weller, 2019). Mr. E.K.B. is very sociable and communicates a lot with his friends and other people.

He goes to bed around 9:00pm and wakes up at 5:00am. He has normal bowel and bladder elimination 1 to 2 for bowel and anytime he feels the urge to urinate he does so without any difficulties. He brushes his teeth and baths twice daily. In the morning, he usually takes hot milo with bread. He takes his lunch around 1pm His favorite food is fufu and groundnut soup. He does not smoke but occasionally drinks alcohol. Upon further interaction with him, he agreed to give up the drinking because he was made aware of the harmful effects of alcohol. According to him, he always listens to music and plays football, whenever he is less busy. He goes to church on Sundays. He eats a three-square meal daily thus breakfast, lunch and supper. According to patient, he does not have any allergies to any food or drugs. His recreational activity is playing football (goalkeeper) and listening to music. He likes to visit places of interest occasionally with friends

and attends weddings and funerals when the need arises. He is an introvert and also likes to verbalize his feelings when things are not being done the right way. He is not very good in the use of non- verbal communication styles. He does not like to be cheated and likes to be sincere and truthful. He plays the role of a son to his parents and an elder brother to his younger siblings. Currently, patient is not in any intimate relationship with anyone. Patient does not have any allergies to food or drugs. Personally, I see patient to be a kind person.

1.6 Patient's Past Medical History

Past medical history is a narrative or record of past events and circumstances that are or may be relevant to a patient's current state of health (Weller, 2019). It is the first step in the successful evaluation of a patient.

According to Mr. E.K.B. he never experienced any childhood illness like whooping cough, measles, tetanus, tuberculosis or any other disease as he grew through adolescent to adulthood. Patient has no known allergy to a drug, animal, or insect. He has not been hospitalized before and this happen to be his first time of hospitalization to the hospital and have not suffered from any disability from his previous illness. He has not seen any specialist for treatment. His visits to the hospital have been on the outpatient basis and has always been easy apart from normal delays from longer cue at the hospital. He normally goes to neighbouring hospital when feeling unwell. Patient does not use any form of assistive aids such as lenses, or hearing aids. Patient does not smoke.

1.7 Patient Present Medical History

The history of the present health concern or illness is the single most important factor in helping the health care team arrive at a diagnosis or determine the patient's needs. The physical examination is helpful but often only validates the information obtained from the history. A careful

history assists in correct selection of appropriate diagnostic tests (Hinkle, Cheever, & Overbaugh, 2022). According to Mr. E.K.B., he was feeling well until 20th August, 2023, where he started experiencing general body pains, chills, difficulty in breathing when performs normal daily activities. He was brought to the Emergency Unit of Holy Family hospital, Berekum. His vital signs were checked and recorded as follows; Temperature - 39.7^0C, Pulse-128bpm, Respiration-40cpm and Oxygen saturation-85%.

The following laboratory investigations were ordered;

1. Full blood count (RBC, WBC, Hb)
2. Pulse oximetry check
3. Sputum examination
4. Chest x-ray

Upon investigations and assessments, he was diagnosed as having bronchial pneumonia. Oxygen was set up with flow rate of 5mm/l, IV paracetamol 1g was administered and tepid sponging was done for patient. He was transferred to the Males ward for continuity of care.

1.8 Admission of the Patient

On 21st August 2023, at 2:34pm, Mr. E.K.B. was brought from the emergency and accident unit to the Males ward of Holy Family hospital, Berekum, accompanied by a staff nurse, two student nurses and a relative (patient mother). Identification was confirmed by mentioning his name and cross checking with his particulars to ensure that he was the right patient and also brief introduction of staffs to patient and relative. Patient was fully conscious and alert with oxygen in situ (on nasal prong in a flow rate 0f 5mm/l and a recorded Spo2 of 99%) with the diagnose of pneumonia. On arrival an admission bed free from creases and crumbs was provided for patient. On examination, patient had fever, he was coughing and had nasal congestion.

His Vital signs was checked and recorded as follows;

Temperature - 38.9^0C

Pulse - 129bpm

Respiration - 32cpm

Blood pressure (BP) - 125/80mmHg

Oxygen saturation -99%(patient was on nasal prong in a flow rate of 5mm/l)

IV paracetamol 1g was administered and tepid sponging was done for patient. Patient was conscious and oriented to time and place. Patient and relatives were reassured of competent nursing care made comfortable in bed.

The following laboratory investigations were already ordered;

1. Full blood count (RBC, WBC, Hb)
2. Pulse oximetry check
3. Sputum examination
4. Chest x-ray

His weight was 57kg. Patient high body temperature was intervened by administering oral Paracetamol and was tepid sponged until his temperature was found to be within the normal range. Patient was also served with cold milo drink and nearby windows and doors were also opened to enhance proper ventilation.

Mr. E.K.B. treatment plan is as follows:

1. Intravenous Cefuroxime 1.5g Stat, then 750mg tds x 72hrs
2. Intravenous Amoxiclav 1.2g bid x 48 hours
3. Tablet Diclofenac 50mg bid x 5 days
4. Intravenous paracetamol 1g tds x 24 hours
5. Intravenous Normal saline 1liter x 24 hours
6. Intranasal Oxygen 3L/min x 12 hours
7. Capsule Iron III polymaltose 1 daily x 30days
8. Tablet Azithromycin 500mg daily× 72 hours

I introduced myself and staff present to patient and relative (patient's mother). They were told of the visiting hours and routine practices of the ward including the time for doctor's rounds, medication times and also meal times. He was oriented to the ward and its annexes such as bathroom. patient was introduced to other patients on the ward with same condition and recovering. Ward policies, payment of bills, and vital signs checking time was also communicated to patient. Patient's particulars such as name, sex, age, and residential address were recorded in the admission and discharge book as well as on the daily ward state. When Mr. E.K.B. condition was stable and responding to treatment, I reintroduced myself to patient as final year student nurse of Holy Family Nursing and Midwifery Training College, Berekum, with the desire to use Mr. E.K.B and family for a care study. He was informed that the study is a requirement by the Nursing and Midwifery Council of Ghana in partial fulfillment towards the award of a license to practice as a Registered General Nurse. I explained to them, the concept of patient/family care study and assured her of privacy and confidentiality. It was added that, a report will be written after the entire event. I started planning for discharge. To discharge a patient from a hospital is a departure process, which could be due to attending doctors' advice to leave the hospital on required completion of treatment or patient may leave against medical advice due to personal reasons. Discharge planning begins the moment a patient is admitted to the health facility. Nurse play important role in discharge planning in the hospital, where continuity of care is important. To achieve continuity of care, nurse use critical thinking skills and apply the nursing process. To anticipate and identify patient needs, nurses work with all the members of the interdisciplinary health care team. They take lead to develop a plan of care that moves the patient from the hospital to another 10 level of health care such as patient home a nursing home or a nursing home. Discharge planning is a centralized, coordinated, interdisciplinary process that ensures that the

patient has a plan for continuity of care after leaving the health agency. Since I wanted to know more about pneumonia and how it differs from other related respiratory diseases, I decided to use Mr. E.K.B. for my care study.

1.9 Patient's Concept about Illness.

This talks about patient's idea or perception about her condition. Mr. E.K.B. believed every disease is from God and is a way of testing man's faith. He therefore added that with good nursing and medical management coupled with prayers, his condition would be cured.

1.10 Literature Review on Pneumonia.

Literature review of a condition gives a detailed insight into the condition. It consists of Anatomy and physiology of the respiratory system

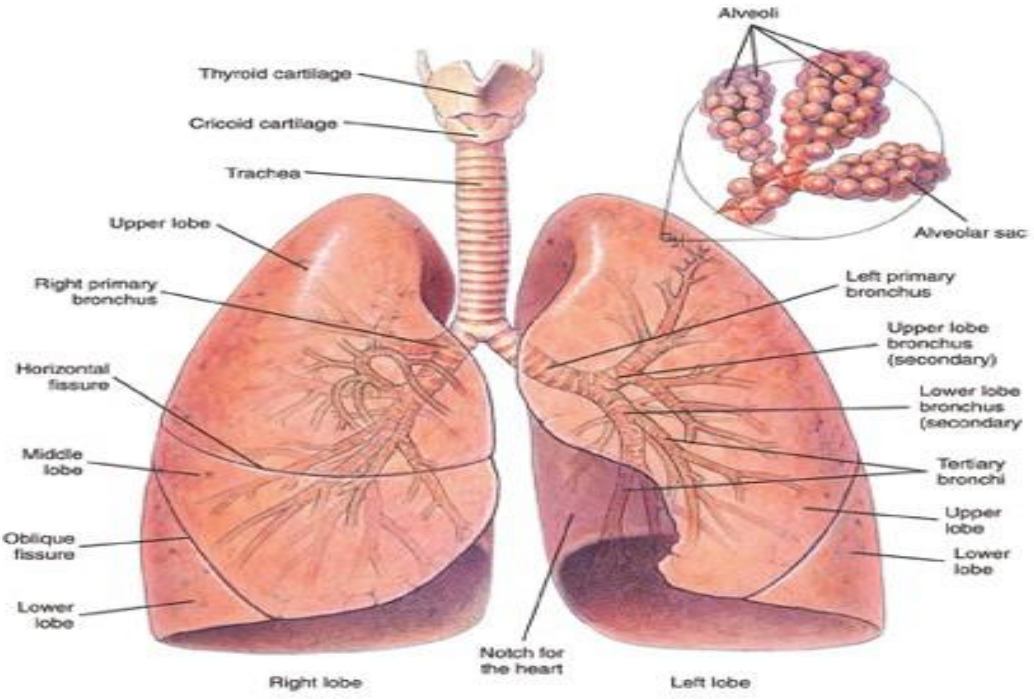
1. The description of respiratory system
2. Incidence
3. Causative organism
4. Mode of transmission
5. Risk factors
6. Pathophysiology
7. Diagnostic investigation
8. Clinical investigation
9. Medical treatment
10. Standard nursing interview
11. Prevention

12. Complication

Review Anatomy and Physiology of the Respiratory System

The primary purpose of the respiratory system is gas exchange, which involves the transfer of oxygen and carbon dioxide between the atmosphere and the blood. The respiratory system is divided into two parts: the upper respiratory tract and the lower respiratory tract. The upper respiratory tract includes the nose, pharynx, adenoids, tonsils, epiglottis, larynx and trachea. The lower respiratory tract consists of the bronchi, bronchioles, alveolar ducts and alveoli. The right lung is divided into three lobes (the upper, middle and lower lobes) and the left lung is divided into two lobes (upper and lower) (Brown, et al., 2018).

Figure 1: Structure of the Respiratory System



Source: (Hoffman, 2014)

The Diagram Above Illustrate the Gross Anatomy of The Lungs

According to Waugh and Grant (2014) the lungs are the major organs of the respiratory system. There are two lungs, one lying on each side of the midline in the thoracic cavity. The lungs are cone –shaped and have an apex, a base, costal surface and medial surface.

The lungs have lobes and fissures (separate the lobes)

The right lung has 3 lobes; Superior, middle and inferior. It has 2 fissures; horizontal and oblique

The left lung has 2 lobes; Inferior and
Superior. The left lung has1 fissure; oblique.

The Pleurae

The pleura is a double-layered serous sac surrounding each lung. They include;

- Parietal pleura
- Visceral pleura

Pleural Cavity-potential, space between the visceral and parietal pleurae. The pleural helps divide the thoracic cavity, central mediastinum and the two lateral pleural compartments. If either layer of the pleural is punctured, air is sucked into the pleural space and part or all of the entire underlying lung collapses.

Definition

Pneumonia is the inflammation of the lung parenchyma caused by various microorganisms, including bacteria, mycobacteria, fungi and viruses (Hinkle, Cheever, & Overbaugh, 2022). The

context in which pneumonia develops is highly indicative of the likely organism(s) involved therefore pneumonias are usually classified as community- or hospital acquired, or as occurring in immune-compromised hosts (Hinkle, Cheever, & Overbaugh, 2022).

Epidemiology

Pneumonia and Influenza is the most common causes of death from infectious diseases in the United States. Pneumonia accounted for close to 51,000 deaths in the United States in 2009 and 1.1 million discharges from hospitals (Hinkle, Cheever, & Overbaugh, 2022).

Classification

Pneumonia can be classified into four types: community acquired pneumonia (CAP), health care-associated pneumonia (HCAP), hospital acquired pneumonia (HAP) and ventilator acquired pneumonia (VAP).

Community-Acquired Pneumonia (CAP)

It occurs either in the community setting or within the first 48hours after hospitalization or institutionalization. The need for hospitalization for CAP depends on the severity of the pneumonia. The specific etiologic pathogen is identified in about 50% of cases. More than five million cases of CAP are reported each year, with more than 915,000 episodes in adults 65years and older. *S. pneumoniae* (pneumococcus) is the most common cause of CAP in people younger than 60years without comorbidity and in those 60 years and older with comorbidity. *S. pneumoniae*, a gram-positive organism that resides naturally in the respiratory tract, colonizes the upper respiratory tract and can cause disseminated invasive infections, pneumonia and other lower respiratory tract infections and upper respiratory tract infections such as otitis media and

rhino sinusitis. It may occur as a lobar or bronchopneumonic form in patients of any age and may follow a recent respiratory illness (Hinkle, Cheever, & Overbaugh, 2022).

Health Care- Associated Pneumonia (HCAP)

An important distinction of HCAP is that the causative pathogens are often multidrug–resistant (MDR). Identifying this type of pneumonia in areas such as the emergency department is very crucial. Because HCAP is often difficult to treat, initial antibiotic treatment must not be delayed. Initial antibiotic treatment for HCAP is different from that for CAP due to the possibility of MDR bacteria (Hinkle, Cheever, & Overbaugh, 2022).

Hospital Acquired Pneumonia (HAP)

Hospital acquired or nosocomial pneumonia is a new episode of pneumonia occurring at least two days after admission to the hospital. It is the second most common hospital acquired infection (HAI) and leading cause of HAI-associated death. The elderly are particularly at risk, along with patients in intensive care units, especially when mechanically ventilated; in the latter case, the term 'ventilator-associated pneumonia' VAP is used (Hinkle, Cheever, & Overbaugh, 2022). HAP is associated with high mortality rate, because of the virulence of the organisms, the resistance to antibiotics and the patient's underlying disorder. The common organisms responsible for HAP include the *Enterobacter* species, *Escherichia coli, H. influezae,* and *klebsiella* species, *Proteus*, *Serratia marcescens*, *Pseudomonas aeruginosa*, methicillin-resistant or methicillin sensitive *Staphylococcus aureus* (MRSA), and *S. pneumoniae.* Most patients with HAP are colonized by multiple organisms (Hinkle, Cheever, & Overbaugh, 2022).

Ventilator-Associated Pneumonia

As noted earlier, VAP can be thought of as a subtype of HAP; however, in such cases, the patient has been endotracheally intubated and has received mechanical ventilator support for at

least 48hours. VAP is the most common infection seen in intensive care units (ICUs); it accounts for 25% of the infections occurring in critically ill patients. It contributes significantly to the morbidity and mortality of ICU patients, with an estimated attributable mortality rate of 8% to 15% (Hinkle, Cheever, & Overbaugh, 2022).

Other forms of pneumonia include
Aspiration pneumonia and pneumonia in immunocompromised host (Hinkle, Cheever, & Overbaugh, 2022).

Aspiration pneumonia: refers to the pulmonary consequences resulting from entry of endogenous or exogenous substances into the lower airway. The most common form of aspiration pneumonia is bacterial infection from aspiration of bacteria that normally reside in the upper airways. Common pathogens are anaerobes, S. *aureus*, *Streptococcus* species, and gram-negative bacilli. Substances other than bacteria may be aspirated into the lung, such as gastric contents, exogenous chemical contents or irritating gases. This type of aspiration or ingestion may impair lung defenses, cause inflammatory changes, and lead to bacterial growth and a resulting pneumonia.

Pneumonia in the immunocompromised hosts: includes pneumocystis pneumonia (PCP), fungal pneumonias, and mycobacterium tuberculosis. The organism that that causes PCP is known as *Pneumocystis jiroveci.* Pneumonia in immunocompromised hosts occurs with the use of corticosteroids or other immunosuppressive agents, chemotherapy, nutritional depletion, the use of broad~ spectrum antimicrobial agents, acquired immunodeficiency syndrome (AIDS), genetic immune disorders and long term advanced life support technology (mechanical ventilation) (Hinkle, Cheever, & Overbaugh, 2022).

Types of Pneumonia

According Waugh and Grant (2014), types can be based on anatomical position. They are lobar pneumonia and Bronchopneumonia.

Bronchopneumonia

This involves patchy inflammation of the airway and the alveoli. This is the less dramatic pneumonia but more prevalent the lobar pneumonia. The area affected is usually smaller than in the lobar pneumonia. The inflammation is localized in the bronchi (Hinkle, Cheever, & Overbaugh, 2022).

Lobal Pneumonia

This the inflammation of part of the lo\be or the entire lobe of the lung. When both lungs are affected, the disease is called double or bilateral lobar pneumonia (Hinkle, Cheever, & Overbaugh, 2022).

Causative Organism

According to Hinkle, Cheever, and Overbaugh (2022), pneumonia is cause by number of infectious agents, including virus, bacteria, and fungi.

- Bacteria streptococcus pneumonia; the most common cause of bacterial pneumonia on children.
- Haemophilous influenza a type B(HiB); the second most common cause of bacterial pneumonia.
- Viral; respiratory syncytial virus is the most common viral cause of pneumonia, infants infected with HIV, pneumocystis jiroveci is one the commonest cause of pneumonia, responsible at least one quarter of all pneumonia deaths in HIV infected infants.
- Non microorganism cause of pneumonia includes; radiation, ingestion of chemicals and aspiration of gastric secretion,foods or fluids,(aspirational pneumonia).

Risk Factors

According to Hinkle, Cheever, and Overbaugh (2022), the following are the risk factors of pneumonia;

- ✦ Immunosuppressed patients

- Smoking (cigarette smoke disturbs both mucociliary and macrophage activity)
- Prolonged immobility and shallow breathing pattern.
- Depressed cough reflex (due to medications, a debilitated state, or weak respiratory muscles)
- Aspiration of foreign material into the lungs during a period of unconsciousness (head injury, anaesthesia, depressed level of consciousness)
- Alcohol intoxication (because alcohol suppresses the body's reflexes, may be associated with aspiration, and decreases white cell mobilization and tracheobronchial ciliary motion).
- Transmission of organism from health care providers
- Respiratory therapy with improperly cleaned equipment.
- Advanced age, because of possible depressed cough and glottic reflexes and nutritional depletion.
- Antibiotic therapy (in very ill people, the oropharynx is likely to be colonized by gram negative bacteria)
- Nothing –by-mouth (NPO) status; placement of nasogastric, orogastric or endotracheal tube.

Pathophysiology

Normally, the upper airway prevents potentially infectious particles from reaching the sterile lower respiratory tract. Pneumonia arises from the normal flora present in patients whose resistance has been altered or from aspiration of flora present in the oropharynx; patients often have an acute or chronic underlying disease that impairs host defenses. Pneumonia may also result from blood borne organisms that enter the pulmonary circulation and are trapped in the pulmonary capillary bed (Hinkle, Cheever, & Overbaugh, 2022).

Pneumonia affects both ventilation and diffusion. An inflammatory reaction can occur in the alveoli, producing an exudate that interferes with the diffusion of oxygen and carbon dioxide.

White blood cells, mostly neutrophils, also migrate into the alveoli and fill the normally air-filled spaces. Areas of the lung are not adequately ventilated because of secretions and mucosal edema that cause partial occlusion of the bronchi and alveoli, with a resultant decrease in alveolar oxygen tension. Bronchospasm may also occur in patients with a reactive airway disease. Because of hypoventilation, a ventilation perfusion (V/Q) 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 unoxygenated blood eventually results in arterial hypoxemia. If a substantial portion of one or more lobes is involved, the disease is referred to as **lobar pneumonia**. The term **bronchopneumonia** is used to describe pneumonia that is distributed in a patchy fashion, having originated in one or more localized areas within the bronchi and extending to the adjacent surrounding lung parenchyma.

Bronchopneumonia is more common than lobar pneumonia (Hinkle, Cheever, & Overbaugh, 2022).

Clinical Manifestation

Pneumonia varies in its signs and symptoms depending on the type, causal organism, and presence of an underlying disease. According to Hinkle, Cheever, and Overbaugh (2022), the following are the signs and symptoms of pneumonia;

1. Purulent sputum production sometimes blood stained
2. A sudden onset of fever and chills
3. Respiratory distress (Shortness of breath)
4. Pleuritic chest pain that is aggravated by deep breathing and coughing
5. Patient may be delirious in severe attacks
6. Coughing
7. Hypoxemia and signs of central cyanosis

8. Patient prefers to be propped up in bed because of the cough which is short and painful
9. Tachypnea (25 to 45 breaths/min)
10. Nasal congestion or sore throat
11. Poor appetite

Assessment and Diagnostic Findings

As specified in Harding, Kwong, Roberts, Hagler, and Reinisch (2020), the following are the diagnostic investigations for pneumonia;

1. Physical examination and history (particularly of a recent respiratory tract infection)
2. Chest x-ray: disclose infiltration and confirms diagnosis
3. Pulse oximetry check: may show reduced arterial or oxygen saturation level.
4. Blood culture (bloodstream invasion [bacteraemia] occurs frequently)
5. Sputum examination
6. Full blood count: white blood cell count shows leucocyte elevation

Prevention

1. Vaccination
2. Encourage smoke cessation
3. Promote frequent oral hygiene
4. Reposition frequently to prevent aspiration
5. Promote frequent turning, early ambulation and mobilization
6. Encourage effective coughing and breathing exercise

7. Maintain adequate nutrition to boost immune system (Hinkle, Cheever, & Overbaugh, 2022).

Medical Management

According to Harding et al. (2020), the medical management for pneumonia include;

- Antibiotics such as penicillin are prescribed on the basis of gram stain results and antibiotic guidelines (resistance patterns, risk factors, aetiology must be considered). Penicillin non-resistant organisms are treated with penicillin G or Amoxicillin. For penicillin resistant organisms, cephalosporin such as ceftriaxone or cefuroxime is mostly used. Fluoroquinolone such as ciprofloxacin or macrolides like azithromycin can also be prescribed or a combination therapy may also be used.
- Supportive treatment includes hydration, antipyretics, antitussive medications, or nasal decongestants and pain medications.
- Oxygen therapy is given for hypoxemia.

Nursing Management

Nursing assessment is critical in detecting pneumonia. It is important to assess older adult patients for unusual behavior, altered mental status, dehydration, excessive fatigue, and concomitant heart failure (Hinkle, Cheever, & Overbaugh, 2022).

Assessment

1. Assess for fever, chills, night sweats, pleuritic- type pain, fatigue, tachypnea, use of assessor muscles for breathing, bradycardia or relative bradycardia, coughing, and purulent sputum.
2. Monitor patient for the following: changes in temperature and pulse, amount, odour, and colour of secretions, severity and frequency of cough and degree of tachypnea.

Improving Airway Patency

1. Encourage hydration; fluid intake (2 to 3L/day) to loosen secretions.

2. Provide humidified air using high humidity face mask

3. Encourage patient to cough effectively and provide correct positioning, chest physiotherapy, and incentive spirometry.
4. Provide nasotracheal suctioning if necessary.
5. Provide appropriate method of oxygen therapy and monitor effectiveness.

Promoting rest and conserving energy

1. Encourage the debilitated patient to rest and avoid overexertion and possible exacerbation of symptoms.
2. Patient should assume a comfortable position to promote rest and breathing (e.g. Semi-fowler's position) and should change positions frequently to enhance secretion clearance as well as pulmonary ventilation and perfusion.
3. Instruct outpatients not to overexert themselves and to engage in only moderate activity during initial phases of treatment.

Promoting fluid intake and maintaining Nutrition

1. Encourage fluids (2L/day minimum with electrolytes and calories).
2. Administer IV fluids and nutrients, if necessary.

Promoting patients' knowledge

1. Educate patient on cause of pneumonia, management of symptoms, signs and symptoms that should be reported to the physician or nurse and the need for follow – up.
2. Explain treatments in simple manner and using appropriate language; provide written instructions and information and alternative formats for patients with hearing or vision impairment.
3. Repeat instructions and explanations as needed (Hinkle, Cheever, & Overbaugh, 2022).

Monitoring and preventing potential complications

1. Monitoring for continuing symptoms of pneumonia (patients usually begin to respond to treatment within 24 to 48hours after antibiotic therapy is initiated).
2. Assess for signs and symptoms of shock, multisystem organ failure, and respiratory failure (e.g., evaluate vital signs, pulse oximetry, and haemodynamic monitoring parameters).
3. Assess for atelectasis and pleural effusion
4. Assist with thoracenthesis, and monitor patient for pneumothorax after procedure.
5. Assess for confusion or cognitive changes; assess underlying factors.

Promoting Home and Community-Based Care

1. Instruct patient to continue taking full course of antibiotics as prescribed.
2. Teach patient about their proper administration and potential side effects.
3. Instruct patient about symptoms that require contacting the health care provider such as difficulty in breathing, worsening cough, increasing fever etc.
4. Advice patient to increase activity gradually after fever subsides.
5. Advise patient that fatigue and weakness may linger.
6. Encourage breathing exercises to promote lung expansion and clearing.
7. Encourage follow up chest x-rays.
8. Encourage patient to stop smoking
9. Review principles of adequate nutrition and rest.
10. Refer patient for home care to facilitate adherence to therapeutic regimen, as indicated.

Complications

According to Hinkle, Cheever, and Overbaugh (2022), the following are complications of pneumonia;

1. Shock; septicemia and toxins of bacteria in pneumonia can lead to septic shock.
2. Respiratory failure; Purulent sputum and damaged to alveoli can cause the respiratory system not to function as expected.
3. Atelectasis; The affected part of the lung can stop working and collapse.
4. Pleural effusion; Pneumonia can lead to accumulation of excessive fluid in the pleural space.

1.11 Validation of Data

Validation of Data is defined as the extent to which a data measure, indicator or method of data collection possesses the quality of being sound or true, as far as can be judged (Weller, 2019).

Data collected from patient and clinical manifestation were compared with the literature obtained from text books. I also questioned patient's mother on the validity of the symptoms she earlier provided during assessment. Again, the same information gathered from the doctor's notes, nurse's records, investigations carried out and the results and literature review of the condition strongly confirms the validity of the information gathered. When the data collected were compared with literature review it was clear that patient was suffering from Bronchopneumonia. There were no deviations which included that the data collected is valid and free from errors.

CHAPTER TWO

ANALYSIS OF DATA

2.0 Introduction

This chapter principally deals with analysis of data collected during the assessment phase of the study. In data analysis, critical and logical study with arrangement is done about an object under study (Johnson, 2021). Data collected during the assessment phase is compared 19 with standards in literature. The chapter also presents patients/family strength, patients/family health problems and formulation of nursing diagnosis.

2.1 Comparison of Data with Standards

According to (Merriam-Wester, 2020), comparison is the fact of considering something similar or equal quality to something else. It also involves comparing the cause, clinical manifestation, treatment, diagnostic measures and complications of the patient's condition(pneumonia) with those stated in textbooks. The pharmacology of drugs prescribed is also captured as well as patient/family strength and health problems are identified Nursing diagnosis are then formulated for rendering of care. According to Weller (2019), Diagnosis is the determination of the nature of a disease and Test is defined as an examination or trial. Investigation refers to procedures performed to establish a diagnosis, to monitor a person's health, disease or the effectiveness of treatment (Weller, 2019).

A. Diagnostic Investigations / Tests

Test is a procedure intended to establish the quality, performance, or reliability of something, especially before it is taken into widespread use.

Below are the various diagnostic investigations ordered by the physicians and carried on MR. E.K.B

1. Full blood count (RBC, WBC, Hb)
2. Pulse oximetry check

3. Sputum examination
4. Chest x-ray

The table below shows the comparison of diagnostic tests carried out on patient and those listed in the literature review.

Table 1: Comparison of diagnostic investigation with literature

Test outlined in literature review	**Test carried out on patient**
1. Physical examination and history	1. Physical examination was done and history was taken from patient
2. Chest x-ray	2. Chest x-ray was done
3. Pulse oximetry check	3. Pulse oximetry was checked
4. Blood culture	4. Blood culture was not done for patient
5. Sputum examination	5. Sputum examination was not done.
6. Full blood count	6. Full blood count was done

With reference to the table above, Sputum examination was not done because, patient could not provide sputum after several attempts were made. Blood culture was not done because diagnosis was made with chest x ray, pulse oximetry and physical examination and history taking.

Table 2: Diagnostic Investigations Carried Out on Patient

Date	Specimen	Investigations	Results	Normal Values	Interpretation	Remarks
20/08/23	Blood	Full blood count: Neutrophils	82.48%	40.0-75.0%	Indicates the presence of infections	Amoxiclav and Cefuroxime were administered
		White blood cells	12.33×10^9⁄l	3.5-9.5×10^ 9⁄l	Indicates the presence of infections	Amoxiclav and Cefuroxime were administered
		Red blood cells	4.17×10^12⁄l	4.3-5.8×10 12⁄l	Slightly low	Iron III polymaltose was prescribed
		Haemoglobin	10.8.5*g⁄dl*	**Males:** 13g/dL -18g/dL **Females:** 12g/dL -16g/dL	Slightly low	Iron III polymaltose was prescribed
		Haematocrit	47.5%	40.0-50.0%	Normal	No treatment required.
20/08/23	Lungs	Chest x-ray	Shows consolidation on the right and left lower lung zones.	Intact lung with no consolidation	Indicates the presence of infection in the lungs	Amoxiclav and Cefuroxime were administered

2.1.1 Causes of patient Illness

With reference to the causes of pneumonia as stated in the literature review and home visits conducted, Mr. E.K.B.'s condition can be attributed to exposure to air pollutants, reduced immunity (undeveloped immunity) and continue exposure to cold. Mr. E.K.B.'s home environment is dusty and he is also expose to cold room.

Table 3: Comparison of Clinical Manifestation in the Text Book with those Exhibited by The Patient

Clinical Features in The Literature Review	Clinical Features Presented by Patient
1. Purulent sputum, sometimes blood stained	1. Absence of purulent sputum.
2. Rapid and bounding pulse	2. Presence of rapid bounding pulse.
3. Sudden onset of fever and chills.	3. There was sudden onset of fever (39.3^{o}C) and chills
4. Respiratory distress (Shortness of breath)	4. Patient exhibited shortness of breath.
5. Pleuritic chest pain aggravated by coughing and deep breathing.	5. Chest pain was pleuritic in nature and aggravated by coughing and deep breathing.
6. Patient may be delirious in some severe attacks.	6. Patient was not delirious.
7. Coughing	7. He experienced coughing.
8. Hypoxemia and signs of central cyanosis	8. Absence of hypoxemia and no signs of central cyanosis.
9. Patient prefers to be propped up in bed because of the cough which is short and painful.	9. He preferred to be propped up in bed.
10. Tachypnea (25 to 45 breaths/min)	10. Patient experienced tachypnea (32 cpm)
11. Nasal congestion or sore throat	11. Patient did not present nasal congestion or sore throat
12. Poor appetite	12. Patient did not have poor appetite

In table three above, the patient exhibited most of the signs and symptoms in the literature review which actually confirm his condition.

2.1.2 Treatment given to patient.

According to Weller (2019), Treatment refers to the mode of dealing with a patient or disease. The following drugs were used in the treatment of the condition:

1. Intravenous Cefuroxime 1.5g Stat, then 750mg tds x 72hrs
2. Intravenous Amoxiclav 1.2g bid x 48 hours
3. Tablet Diclofenac 50mg bid x 5 days
4. Intravenous paracetamol 1g tds x 24 hours
5. Intravenous Normal saline 1liter x 24 hours
6. Intranasal Oxygen 3L/min x 12 hours
7. Capsule Iron III polymaltose 1 daily x 30days
8. Tablet Azithromycin 500mg daily× 72 hours

Table 4: Treatment Given to Patient as Compared with Literature Review

Treatment as in literature review	**Treatment given to my patient**
1. Antibiotics	1. Amoxiclav was prescribed for patient. 2. Cefuroxime was prescribed for patient. 3. Azithromycin was prescribed for patient.
2. Supportive treatment	1. Hydration; Normal saline infusion was prescribed 2. Antipyretics; Paracetamol was prescribed for the patient. 3. Pain medications; Paracetamol and Diclofenac were prescribed for patient.
3. Oxygen therapy is given for hypoxemia.	3. Oxygen was given to patient.
4. Iron supplement was not in literature review	4. Iron III polymaltose was prescribed

Most of the drugs given to patient corresponded with literature and that is to say, patient was given the right treatment which aided in his timely recovery. Iron III polymaltose was prescribed for patient because he had low haemoglobin level.

Table 5: Pharmacology of Drugs Administered to Patient

Date	Drug	Dosage/ Route of Administration (Literature)	Dosage/ Route of Administration Given to Patient	Classification	Desired Effect	Actual Action	Side Effect/ Remedies
21/08/23	Normal saline	**Dosage:** Depends on patient's fluid and electrolyte level **Route** IV	**Dosage:** 1.0L for 24 hours **Route:** Intravenously	Isotonic solution of sodium chloride	To correct fluid and electrolyte imbalance	Patient's body fluids and electrolytes were raised	Oedema, over hydration, hypocalcaemia. None of these side effects were observed.
21/08/23	Cefuroxime	**Dosage** 750 mg every 6–8 hours **Route** Oral, IV, IM	**Dosage** 1.5g Stat, then 750mg tds x 72hrs **Route** Intravenously	Second generation' Cephalosporin	Cephalosporins are antibacterials that attach to penicillin binding proteins to interrupt cell wall biosynthesis, leading to bacterial cell lysis and death.	Patients infection was controlled	Gastrointestinal disorders, Cutaneous vasculitis. None of these side effects were observed.

Table 5: Pharmacology of Drugs Administered to Patient Cont'd…

Date	Drug	Dosage/ Route of Administration (Literature)	Dosage/ Route of Administration Given to Patient	Classification	Desired Effect	Actual Action Observed	Side Effects/Remedies
21/08/23	Amoxicillin + Clavulanic Acid (CoAmoxiclav)	**Dosage:** 1.2g every twelve hours for 1 day **Route:** Oral and IV	**Dosage:** 1.2g bd for 24hours **Route:** Intravenously	Antibacterial (Penicillins, Broad spectrum with betalactamase Inhibitor)	To inhibit bacteria growth	Patients condition improved	Cholesteric jaundice, Hepatitis, Dizziness, Headache None of these side effects were observed.
21/08/23	Paracetamol	**Dosage** 0.5–1 g every 4–6 hours; maximum 4g per day **Route** Oral and IV	**Dosage** 1g tds x 24 hours **Route** Intravenously	Analgesic (Non-Salicylic Acid)	To reduce pain	Patient had a reduction in pain and did not experience any increase in temperature	Malaise, skin reactions, Stevens Johnson syndrome, allergic reactions and liver damage. Patient experienced no side effects.

21/08/23	Oxygen	**Dosage**: Amount depends on oxygen saturation level **Route**: Nasal	3litres ×12hours nasally	Oxidant	It increases oxygen saturation of haemoglobin, It is necessary for metabolism.	Ineffective breathing pattern was corrected with the oxygen in situ.	Retinopathy of prematurity, seizures, oxidative damage. None was observed.

Table 5: Pharmacology of Drugs Administered to Patient Cont'

Date	Drug	Dosage/ Route of Administration (Literature)	Dosage/ Route of Administration Given to Patient	Classification	Desired Effect	Actual Action Observed	Side Effects/ Remedies
21/08/23	Diclofenac	**Dosage:** **Oral**: 75-150mg daily **Rectum**: 75-150mg IM: 75mg daily **Route:** Oral, Rectal, IM	**Dosage:** 50mg bid for 5days **Route:** Orally	Nonsteroidal antiinflammatory drug	Diclofenac inhibits cyclooxygenase-1 and -2, the enzymes responsible for production of prostaglandins.	Patients pain reduced	**A**ppetite decreased, diarrhoea, dizziness, gastrointestinal discomfort. None was observed in patient
21/08/23	Azithromycin	**Dosage** 500 mg once daily for 5days **Route** Oral	**Dosage** 500mg once daily for 3 days **Route** Orally	Macrolides	To inhibit bacteria growth	Patient condition improved	Arthralgia, Numbness, oedema. None of these side effects were observed.

21/08/23	Iron III polymaltose	**Dosage** One capsule daily **Route** Oral	**Dosage** 1 capsule daily x 30days **Route** Orally	Iron supplement	To help increase oxygen delivery and blood cells	Patient condition improved	Diarrhoea, vomiting, restlessness, heartburn, muscle pain. None of these side effects were observed.

D. Complications of Pneumonia

According Hinkle, Cheever, and Overbaugh (2022) complications of pneumonia includes; Shock, Respiratory Failure, Atelectasis, Pleural effusion, Confusion

None of these complications was manifested by the patient because treatment was sought earlier, comprehensive assessment, diagnosis, management and effective monitoring and observations by the health team was able to prevent these occurrences.

2.2 Patient / Family Strengths

Strength refers to the ability to do things that need lot of physical or mental effort (Weller, 2019). The following strengths were observed in patient and family during their period of hospitalization.

1. Patient could breathe when propped up or placed in high fowler's position.
2. Patient could tolerate cold drinks.
3. Patient could stay calm.
4. Patient could take analgesics to help relieve pain.
5. Patient was able to sleep when the environment was quiet.
6. Patient was ready to learn about disease condition.

2.3 Patient Problems

Problem is defined as a situation, person that needs attention and needs to be dealt with or solved (Weller, 2019). From the data collected during assessment, the following health problems were noticed on patient:

1. Patient could not breathe properly (dyspnoea) (21/08/23)
2. Patient had high body temperature (21/08/23)
3. Patient was anxious (21/08/23)
4. Patient complained of chest pains (22/08/23)

5. Patient had intermitted sleep and found it difficult to fall asleep after waking up (22/08/23)

6. Patient lacked knowledge on his disease condition (22/08/23)

2.4 Nursing Diagnosis

According to Hinkle, Cheever, and Overbaugh (2022) nursing diagnosis is the organization, analysis, synthesis and summarization of data collected and determines the patient's need for care.

1. Ineffective breathing pattern (dyspnoea) related to inflammatory process of both lungs (21/08/23)
2. Hyperthermia (38.9^{o}c) related to infectious process in the lungs (21/08/23)
3. Anxiety related to unknown outcome of disease condition (Bronchopneumonia) (21/08/23)
4. Acute pain (chest) related to cough (22/08/23)
5. Insomnia related to interruptions for therapeutics and lighting (22/08/23)
6. Knowledge deficit related to lack of education about the causes, clinical manifestation, treatment and prevention of disease condition (22/08/23)

CHAPTER THREE

PLANINNG FOR PATIENT/FAMILY CARE

3.0 Introduction

Planning is the process in which the nurse and patient together consider the goals to achieve in meeting the patient's identified or potential problems in daily life and produce an individual care plan (Weller, 2019). Planning comprises of four main principles.

3.1 Objectives and Outcome Criteria

1. Patient would maintain an effective breathing pattern within 24 hours as evidenced by;
    a. Nurse visualizing patient has a normal respiratory rate between 18-24 cycles per minute
    b. Patient verbalizing, he feels relaxed in bed.
2. Patient temperature would reduce to normal after 6 hours as evidenced by;
    a. Nurse observing patient temperature has reduced by recording a temperature within the normal range (36.2^0c-37.2^0c).
    b. Patient verbalizing, he no longer feels hot.
3. Patient would be less anxious within 24hours as evidenced by;
    a. Patient anticipating a positive outcome and verbalizing he feels less anxious
    b. Nurse observing patient has a cheerful face and is relaxed in bed.
4. Patient would be relieved of chest pain and made comfortable within 48hours as evidenced by;
    a. Patient rating pain as at least 3 on the 0-10 numerical pain rating scale
    b. Nurse observing patient is comfortable in bed.
5. Patient would attain optimal sleep and rest within 24 hours as evidenced by;

a. The nurse visualizing patient having a sound uninterrupted sleep for at least 6-8 hours.

b. Patient verbalizing, he feels well rested.

6. Patient would understand and gain more insight to his disease condition within 4 hours as evidenced by;
   a. Nurse observing patient is able to answer simple questions asked about the disease condition.
   b. Patient verbalizing, he anticipates a better prognosis of the disease condition.

Table 6a: Nursing Care Plan for Patient

Date/ Time	Nursing Diagnosis	Objective/ Outcome Criteria	Nursing Orders	Nursing Intervention	Date/ Time	Evaluation	Sign
21/08/23 2:40pm	Ineffective breathing pattern related to inflammatory process of both lungs.	Patient would maintain an effective breathing pattern within 24 hours as evidenced by; 1. Nurse visualizing patient has a normal respiratory rate between 18-24cycles per minute. 2. Patient verbalizing, he feels relaxed in bed.	1. Reassure patient that respiration will normalize with proper interventions. 2. Assess for impaired respiratory function. 3. Prop patient up in bed and support him with pillows. 4. Loosen tight clothing around the neck and the chest. 5. Teach patient deep breathing exercise. 6. Monitor and record respiratory rate. 7. Administer intranasal oxygen (INO_2) as prescribed.	1. Patient was reassured that his respiration will normalize. 2. Patient was assessed for shallow and rapid respirations function to enhanced breathing. 3. Patient was propped up in bed and supported with pillows to enhance breathing. 4. Tight clothing around neck and chest were loosened. 5. Patient was taught deep breathing exercise. 6. Respiratory rate and depth were monitored and recorded. 7. INO_2 3L/min was administered for 12 hours	22/08/23 2:40pm	Goal fully met as patient's respiratory rate within normal range (20cycles per minute) and patient verbalizes he is relaxed.	

Table 6b: Nursing Care Plan for Patient

Date/ Time	Nursing Diagnosis	Objective/ Outcome Criteria	Nursing Orders	Nursing Intervention	Date/ Time	Evaluation	Sign
21/08/23 2:45pm	Hyperthermia (38.9^{o}C) related to infectious process in the lungs.	Patient temperature would reduce to normal within 6 hours as evidenced by: 1. Nurse recording a temperature within the normal range (36.2^{0}C-37.2^{0}C). 2. Patient verbalizing, he no longer feels hot.	1. Reassure patient that temperature can be restored to normal. 2. Remove tight and heavy clothing on patient. 3. Ensure proper ventilation by opening windows and rolling up curtains. 4. Serve cold drinks to patient. 5. Monitor patient temperature. 6. Serve prescribed antipyretics to patient.	1. Patient was reassured that temperature will restore to normal. 2. Tight and heavy clothing on patient were removed. 3. Windows were opened and curtains rolled up to ensure proper ventilation. 4. 500mls of cold sachet water was served to patient. 5. Patient's temperature was monitored hourly. 6. IV paracetamol 1g was administered.	21/08/23 8:45pm	Goal fully met as nurse recorded a temperature within the normal range (36.6^{0}C) and patient verbalized he no longer feel hot.	

Table 6c: Nursing Care Plan for Patient

Date/ Time	Nursing Diagnosis	Objective/ Outcome Criteria	Nursing Orders	Nursing Intervention	Date/ Time	Evaluation	Sign
21/08/23 2:50pm	Anxiety related to unknown outcome of disease condition.	Patient would be less anxious within 24hours as evidence by; 1. Patient verbalizing that he is feeling less anxious and anticipates a positive outcome of his condition. 2. Nurse observing patient has a cheerful face and is relaxed in bed.	1. Reassure patient that the condition is curable. 2. Assess for signs and symptoms of anxiety. 3. Allow patient to voice out his fears and ask questions. 4. Introduce other patients who have recovered from same condition to patient and allow him to interact with them. 5. Introduce health team members to him. 6. Explain all procedures to patient and seek consent before carrying them out.	1. Patient was reassured that there is cure for the condition. 2. Patient's anxiety level was assessed by asking him of his fears and worries. 3. Patient was allowed to voice out his feelings and questions were tactfully answered. 4. Patient was allowed to interact with other patients with the same condition to share their experience. 5. Health team members were introduced to patient. 6. All procedures were explained to patient and consent was sought before being carried out.	22/08/23 2:50pm	Goal fully met as patient verbalized that he feels less anxious and anticipating a good prognosis of his condition and nurse observed patient has a cheerful face and relaxed in bed.	

Table 6d: Nursing Care Plan for Patient

Date/ Time	Nursing Diagnosis	Objective/ Outcome Criteria	Nursing Orders	Nursing Intervention	Date/ Time	Evaluation	Sign
22/08/23 8:30am	Acute pain (chest) related to cough.	Patient would be relieved of pain and made comfortable within 48hours as evidenced by; 1. Patient rating pain as at least 3 on the 0-10 numerical pain rating scale. 2. Nurse observing patient is comfortable in bed.	1. Reassure patient. 2. Assess the patient's level of pain. 3. Put patient in the high fowler's position. 4. Identify aggravating and alleviating factors of the pain. 5. Teach patient to splint chest when coughing and take deep breaths. 6. Provide calm and restful environment for patient. 7. Administer prescribed analgesics.	1. Patient and family were reassured that chest pain is common with pneumonia and will subside with treatment. 2. Patient's level of pain was assessed using the 0-10 numerical pain rating scale and he rated it as 6. 3. Patient was put in the high fowler's position in bed. 4. Patient was made to voice out aggravating and alleviating factors of the pain. 5. Patient was encouraged to splint chest with pillows when coughing and also breathe deeply. 6. Calm and restful environment was provided. 7. Tablet Diclofenac 50mg served.	24/08/23 8:30am	Goal fully met as patient rated pain as 2 on the 0-10 numerical pain rating scale and nurse observed patient was comfortable in bed and interacting with relatives.	

Table 6e: Nursing Care Plan for Patient

Date/ Time	Nursing Diagnosis	Objective/ Outcome Criteria	Nursing Orders	Nursing Intervention	Date/ Time	Evaluation	Sign
22/08/23 8:40am	Insomnia related to interruptions for therapeutics and lighting.	Patient would attain optimal sleep and rest within 24hours as evidenced by; 1. Nurse visualizing patient having a sound uninterrupted sleep for at least 6-8 hours. 2. Patient verbalizing that he feels well rested.	1. Reassure patient. 2. Plan time for treatment and assessment with the patient. 3. Restrict and Limit visitors 4. Provide warm bath. 5. Ensure dim light at night. 6. Ensure adequate ventilation.	1. Patient was reassured that all actions will be done at the right time. 2. Time for assessment and treatment were planned with the patient. 3. The number of visitors and their length of stay were restricted and limited. 4. Patient took a warm bath in the evening to induce sleep. 5. Room light was turned off in the night. 6. Doors and windows were opened to ensure adequate ventilation.	23/08/23 8:40am	Goal fully met as patient attained optimal amount of sleep as evidence by nurse visualizing patient having a sound sleep for 8 hours and patient verbalized he had a good night sleep.	

Table 6f: Nursing Care Plan for Patient

Date/ Time	Nursing Diagnosis	Objective/ Outcome Criteria	Nursing Orders	Nursing Intervention	Date/ Time	Evaluation	Sign
22/08/23 8:50am	Knowledge deficit related to lack of education about the cause, clinical manifestation, treatment and prevention of disease condition.	Patient would understand and gain more insight to his disease condition within 4hours as evidenced by; 1. Nurse observing Patient is able to answer simple questions asked about the disease condition. 2. Patient verbalizing he anticipates a better prognosis about condition.	1. Reassure patient. 2. Ensure a quiet and conducive environment. 3. Assess patient's and relative's level of knowledge on condition 4. Educate them on disease condition. 5. Present teaching aids to enhance learning. 6. Encourage patient and relatives to ask questions and tactfully answer them.	1. Patient was reassured that bilateral pneumonia is treatable. 2. Conducive environment was ensured during the education section. 3. Patient and relatives were asked about the knowledge they had on his condition. 4. Education on disease condition, desired and adverse effects of drugs were provided to patient and relatives. 5. Pictures and other materials were provided to aid their understanding. 6. Questions asked were tactfully answered.	22/08/23 12:50pm	Goal fully met as patient could answer simple questions asked about disease condition and also was relaxed in bed hoping to return to normal activities at home.	

CHAPTER FOUR

IMPLEMENTATION OF PATIENT/FAMILY CARE PLAN

4.0 Introduction.

Implementation is the process of putting the nursing care plan into action (Weller, 2019). It is the actual nursing rendered to the patient and family throughout the period of hospitalization. This may be categorized into summary of actual nursing care rendered, preparations towards patient and family discharge, rehabilitation and follow up visits or continuity of care.

4.1 Summary of The Actual Care Rendered to Patient/Family.

The actual care rendered to patient and family commenced on the day of admission, 21st August 2023 to the time care was terminated thus, 25th August 2023. The management of patient and family was planned to meet their physiological, psychological, emotional and spiritual needs. The care given to the patient such as grooming, feeding, medication administration is summarized on daily basis as follows:

4.1.1 First Day of Admission (21st August 2023)

On 21st August 2023, at 2:34pm, Mr. E.K.B. was brought from the emergency and accident unit to the Males ward of Holy Family hospital, Berekum, accompanied by a staff nurse, two student nurses and a relative (patient mother). Identification was confirmed by mentioning his name and cross checking with his particulars to ensure that he was the right patient and also brief introduction of staffs to patient and relative. Patient was fully conscious and alert with oxygen in situ (on nasal prong in a flow rate of 5mm/l and a recorded Spo2 of 99%) with the diagnose of pneumonia. On arrival an admission bed free from creases and crumbs was provided for patient. On examination, patient had fever, he was coughing and had nasal congestion.

His Vital signs was checked and recorded as follows;

Temperature - 38.9^0C

Pulse - 129bpm

Respiration - 32cpm

Blood pressure (BP) - 125/80mmHg

Oxygen saturation -99%(patient was on nasal prong in a flow rate of 5mm/l)

IV paracetamol 1g was administered and tepid sponging was done for patient. Patient was conscious and oriented to time and place. Patient and relatives were reassured of competent nursing care made comfortable in bed.

The following laboratory investigations were ordered

1. Full blood count (RBC, WBC, Hb)
2. Pulse oximetry check
3. Sputum examination
4. Chest x-ray

His weight was 57kg. Patient high body temperature was intervened by administering oral Paracetamol and was tepid sponged until his temperature was found to be within the normal range. Patient was also served with cold milo drink and nearby windows and doors were also opened to enhance proper ventilation

Mr. E.K.B. treatment plan is as follows:

1. Intravenous Cefuroxime 1.5g Stat, then 750mg tds x 72hrs
2. Intravenous Amoxiclav 1.2g bid x 48 hours

3. Tablet Diclofenac 50mg bid x 5 days
4. Intravenous paracetamol 1g tds x 24 hours
5. Intravenous Normal saline 1liter x 24 hours
6. Intranasal Oxygen 3L/min x 12 hours
7. Capsule Iron III polymaltose 1 daily x 30days
8. Tablet Azithromycin 500mg daily× 72 hours

I introduced myself and staff present to patient and relative (patient's mother). They were told of the visiting hours and routine practices of the ward including the time for doctor's rounds, medication times and also meal times. He was oriented to the ward and its annexes such as bathroom. patient was introduced to other patients on the ward with same condition and recovering. Ward policies, payment of bills, and vital signs checking time was also communicated to patient. Patient's particulars such as name, sex, age, and residential address were recorded in the admission and discharge book as well as on the daily ward state.
Due medications of IV Cefuroxime 1.5g and IV paracetamol 1g were administered. Normal saline 500mls was set up on patient.
At 2:40pm, as patient presented with difficulty in breathing, a nursing diagnosis of ineffective breathing pattern related to inflammatory process of both lungs was formulated for patient. An objective of patient would maintain an effective breathing pattern within 24 hours was set. Nursing intervention implemented included; Patient was reassured that his respiration will normalize, Patient was assessed for shallow and rapid respirations function to enhanced breathing, Patient was propped up in bed and supported with pillows to enhance breathing,

Tight clothing around neck and chest were loosened, Patient was taught deep breathing exercise, Respiratory rate and depth were monitored and recorded and INO_2 3L/min was administered for 12 hours.

At 2:45pm, because patient had high body temperature, a nursing diagnosis of hyperthermia (38.9^{o}C) related to infectious process in the lungs was formulated. An objective of patient temperature would reduce to normal within 6 hours was set for patient. The nursing interventions carried out included; Patient was reassured that temperature will restore to normal, Tight and heavy clothing on patient were removed, Windows were opened and curtains rolled up to ensure proper ventilation, 500mls of cold sachet water was served to patient, Patient's temperature was monitored hourly and IV paracetamol 1g was administered.

At 2:50pm, on observation it was realized patient was anxious so a nursing diagnosis of anxiety related to unknown outcome of disease condition was made. An objective of patient would be less anxious within 24hours was set. The nursing interventions carried out were; Patient was reassured that there is cure for the condition, Patient's anxiety level was assessed by asking him of his fears and worries, Patient was allowed to voice out his feelings and questions were tactfully answered, Patient was allowed to interact with other patients with the same condition to share their experience, Health team members were introduced to patient and All procedures were explained to patient and consent was sought before being carried out.

At 5:30pm, patient was served with rice and tomato stew.

At 6:00pm, patient's vital signs were checked and recorded as indicated in the appendix. Patient's due medications of IV Amoxiclav 1.2g and Tab Diclofenac 50mg, were administered and recorded. Patient was assisted in the performance of his personal hygiene (bath and oral

care) and was engaged to watch television. Patient was handed over to the night nurses at 7:10pm.

At 8:45pm, the objective of patient temperature would reduce to normal within 6 hours set at 2:45pm was evaluated and goal was fully met as the nurse recorded a temperature within the normal range (36.6^0C) and patient verbalized he no longer feel hot.

At 10:00pm patient's vital signs were checked and recorded as indicated in the appendix. His due medications of IV Cefuroxime 750mg and IV paracetamol 1g were administered and recorded. Patient went to bed at 10:30pm.

4.1.2 Second Day of Admission (22nd August 2023)

On the second day of admission, at 7:00am I went to the ward to continue with my nursing care for patient, the night nurse reported that patient could not sleep well which was later confirmed by the patient. His morning vital signs were already checked at 6am and recorded as indicated in the appendix. He had already taken his assisted bath and his teeth brushed. His due medications of IV Amoxiclav 1.2g, Tab Diclofenac 50mg, IV Cefuroxime 750mg and IV paracetamol 1g had been administered and recorded. At 8:20am, patient had his breakfast which was Hausa porridge with milk and bread. 500mls of normal saline was set up on patient.

At 8:30am, patient complained of chest pain and a nursing diagnosis of acute pain related to cough was formulated. An objective of patient would be relieved of pain and made comfortable within 48hours was set. Nursing actions carried out were; Patient and family were reassured that chest pain is common with pneumonia and will subside with treatment, Patient's level of pain was assessed using the 0-10 numerical pain rating scale and he rated it as 6, Patient was put in the high fowler's position in bed, Patient was made to voice out aggravating and alleviating factors of the pain, Patient was encouraged to splint chest with

pillows when coughing and also breathe deeply and Calm and restful environment was provided.

At 8:40am, because of patient's inability to sleep well, a nursing diagnosis of insomnia related to interruptions for therapeutics and lighting was formulated for patient. An objective of patient would attain optimal sleep and rest within 24hours was set. Nursing interventions carried out were as follows; Patient was reassured that all actions will be done at the right time, Time for assessment and treatment were planned with the patient, The number of visitors and their length of stay were restricted and limited, Patient took a warm bath in the evening to induce sleep, Room light was turned off in the night and Doors and windows were opened to ensure adequate ventilation.

At 8:50am, upon interactions with patient, it was realized that he had little knowledge about the condition so a nursing diagnosis of knowledge deficit related to lack of education about the cause, clinical manifestation, treatment and prevention of disease condition was formulated. An objective of patient would understand and gain more insight to his disease condition within 4hours was set. The following nursing actions were implemented; Patient was reassured that bilateral pneumonia is treatable, Conducive environment was ensured during the education section, Patient and relatives were asked about the knowledge they had on his condition, Education on disease condition, desired and adverse effects of drugs were provided to patient and relatives, Pictures and other materials were provided to aid their understanding and Questions asked were tactfully answered.

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

At 12:50pm, the objective of patient would understand and gain more insight to his disease condition within 4hours set at 8:50am was evaluated and goal was fully met as patient could answer simple questions asked about disease condition and also was relaxed in bed hoping to return to normal activities at home.

At 2:00pm, Afternoon vital signs were checked and recorded and due medications of IV Cefuroxime 750mg and IV paracetamol 1g were administered and recorded.

At 2:40pm, the objective of patient would maintain an effective breathing pattern within 24 hours set on 21st August, 2023 at 2:40pm was evaluated and goal was fully met as patient's respiratory rate within normal range (20cycles per minute) and patient verbalizes he is relaxed.

At 2:50pm, the objective of patient would be less anxious within 24hours set on 21st August, 2023 at 2:50pm was evaluated and goal was fully met as patient verbalized that he feels less anxious and anticipating a good prognosis of his condition and nurse observed patient has a cheerful face and relaxed in bed.

At 5:40pm, patient was served with fried rice with chicken.

At 6:00pm, patient's vital signs were checked and recorded as indicated in the appendix. Patient's due medications of IV Amoxiclav 1.2g, Tab Diclofenac 50mg, a Capsule of Iron III polymaltose and Tab Azithromycin 500mg were administered and recorded. Patient performed his personal hygiene (bath and oral care) and was engaged to watch television. Patient was handed over to the night nurses at 7:40pm. At 10:00pm patient's vital signs were checked and recorded as indicated in the appendix. His due medication of IV Cefuroxime 750mg was administered and recorded. Patient went to bed at 10:20pm.

4.1.3 Third Day of Admission (23rd August 2023)

On the third day of admission, patient looked cheerful that morning, he had brushed his teeth, had taken his bath and emptied his bowel. His morning vital signs were already checked at 6am and recorded as indicated in the appendix. He had already taken his assisted bath and his teeth brushed. His due medications of IV Amoxiclav 1.2g, Tab Diclofenac 50mg and IV Cefuroxime 750mg had been administered and recorded. Report from the night nurses read

that he was able to sleep well upon the measures put in place. I was told by the nurse who handed over that he had taken his breakfast which was porridge and sliced bread with vegetable salad. Doctor came for rounds and requested that patient should continue with treatment.

At 8:40am, the objective of patient would attain optimal sleep and rest within 24hours set on 22nd August, 2023 at 8:40am was evaluated and goal was fully met as patient attained optimal amount of sleep as evidence by nurse visualizing patient having a sound sleep for 8 hours and patient verbalized he had a good night sleep.

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

At 1:15pm patient was served with rice and tomatoes stew. At 2:00pm, patient's vital signs were checked and recorded as indicated in the appendix. His due medication of IV Cefuroxime 750mg was administered and recorded. Patient was handed over to the afternoon nurse and was told to call them for help any time. I embarked on my first home visit after work, I went with patient's wife.

At 5:25pm patient was served fufu and palm nut soup. At 6:00pm, patient's vital signs were also checked and recorded as indicated in the appendix and his due medications of Tab Diclofenac 50mg and a Capsule of Iron III polymaltose were also served and recorded. At 10:00pm, patient's vital signs were checked and recorded as indicated in the appendix. His due medication of IV Cefuroxime 750mg was administered and recorded. Patient slept at 10:10pm.

4.1.4 Fourth Day of Admission (24th August 2023)

According to the night nurses, patient woke up in the morning around 5:30am emptied his bowel and was looking well. He performed all his personal hygiene activities. His vital signs

had already been checked and recorded as indicated in the appendix. Patient's due medications of Tab Diclofenac 50mg and IV Cefuroxime 750mg had been administered and recorded.

At 8:10am, patient was served oat with milk and bread for breakfast. He was then reviewed by the Doctor during ward rounds and patient had no complains and the Doctor ask for treatment to be continued without any new medication added to his treatment. The Doctor told him he would be discharged the next day if there are no further complains from him.

At 8:30am, the objective of patient would be relieved of pain and made comfortable within 48hours set on 22nd August, 2023 at 8:30am was evaluated and goal fully was met as patient rated pain as 2 on the 0-10 numerical pain rating scale and nurse observed patient was comfortable in bed and interacting with relatives.

At 2:00pm patient vital signs were checked and recorded as in the appendix. Patient took fried rice and chicken as his supper around 5:00pm after which he watched television with his ward mates. At 6:00pm, patient's vital signs were also checked and recorded as indicated in the appendix and his due medication of Tab Diclofenac 50mg and a Capsule of Iron III polymaltose were also served and recorded. His vital signs at 10:00pm were checked and recorded as in the appendix. Patient went to bed around 10:30pm.

4.1.5 Fifth Day of Admission/ Day of Discharge (25th August 2023)

I went to continue the nursing care rendered to patient at 7:35am. Patient woke up feeling strong and better. Report from night nurses indicated that patient was able to sleep well. I greeted patient and his wife, they responded with a cheerful facial expression. I was inquisitive enough to ask patient why he has put up a smiley face. Upon asking, patient said that he feels grateful to have special nursing care rendered to him over the past few days since he was admitted. His 6:00am vital signs had already been checked and recorded as

shown in the appendix. Patient's due medication of Tab Diclofenac 50mg had been administered and recorded

During routine ward rounds at 9:20am, patient was discharged by the Doctor since his condition was stable and he had no complains. He was discharged home with no new medication but to continue with the Capsule Iron III polymaltose 1 daily x 30days prescribed on the day of admission. Patient was informed that he has been discharged.

I enquired whether he left any valuable items with any nurse and the response was no. Necessary documents were recorded into the admission and discharge book as well as the ward state. Assessment of patient bills were made with the help of National health insurance scheme. Patient was educated on the need to eat food containing high fiber like whole grains, the entire essential food nutrients, for example protein, vitamins and irons as well as maintaining good personal hygiene. I planned with the patient that I will be visiting them for the second home visit on the 30th August, 2023. Review date (2nd September 2023) was discussed with the patient and was informed to report for the review when the date is due. Patients used linen was removed and placed in the laundry basket. Bleach solution was used to disinfect the bed as well as the bed side locker.

4.2 Preparation of Patient/Family for Discharge

Preparation for discharge commenced from the time of admission at the hospital till the last day of visit. The patient and family were informed that staying in the hospital was for a temporal period of time.

Education of patient and family on pneumonia was reemphasized, some of the key points were: maintaining adequate nutrition to boost immune system, avoiding smoking, exercising, adhering to medication regimen and follow up visits to the health facility. This was aimed at helping the patient and relatives in the provision of adequate care. Patient and family were

also educated on the need to maintain personal and environmental hygiene to help improve immunity. Sleeping under insecticide treated mosquito net was also communicated to patient and his family. Patient was asked to come for review on 1st September, 2023. The importance and necessity of the review was explained to the patient.

I entered his name, date of discharge and receipt number into the Admission and Discharge book and daily ward state. They express their gratitude to the staff on the ward and bid the other patient's good bye. Patient belongings were packed and I accompanied them to the hospital entrance and bid them goodbye.

4.3 Follow Up/Home Visit/Continuity of Care

Home visit is a family-nurse contact which allows the health worker to assess the home and family situation in order to provide the necessary nursing care and health related services (Merriam-Wester, 2020). The purpose of home visit is to find out needs of patient/family and community in relation to health, socio-economic and cultural aspects, to provide teaching regarding the prevention and control of diseases, to assess the living condition of the patient/family, and to establish a close relationship between the nurses and the patient/family.

4.3.1 First Home Visit (23rd August, 2023)

My first home visit to patient's house at Abisase was on 23rd August, 2023 at 2:50pm when he was still on admission. The main aim of the visit was to acquaint myself with the patient's home environment, to familiarize myself with the other family members, to confirm information given to me about the family and their home environment, risk factors such as poor personal and environmental hygiene that could have led to his condition, to find out their health

needs and assist towards effective solutions to any health problems that may be identified and to find a healthcare provider I would hand over patient to during the termination for care.
I set off based with his wife around 2:50pm. We took a tricycle from Holy Family Hospital, Berekum. It was about 15minutes drive from the Hospital. We reached Abisase around 3:05pm where we walked to their house. It was about 5minutes walk from the roadside to their house.
We reached the house with house number AS040 around 3:10pm where I met other members of the family. Their house is near to Methodist church, he attends. They welcomed and offered me a seat and a bottled water. They asked me the reason why I have paid them a visit that evening. I introduced myself as a final year student of Holy Family Nursing and Midwifery Training College, Berekum who had taken their son to render him comprehensive nursing care in the hospital till he is discharged. I told them my visit was to help me interact with the other members of the family, give them the necessary support to promote health and also to find a healthcare provider to hand over patient to after I terminate my care.
They live in a semi - detached house which is at situated at Abisase. The house consists of seven bedrooms , two washrooms , two kitchen (one for them and the other for the rest of the family members) , a chamber and hall in which he lives with his wife.
The environment is very neat but dusty, good electricity and safe water supply for the family, good ventilation system , all the gutters have been well desilted free from mosquitoes breeding and a bigger trash can for disposing off refuse well covered and they were applauded for that. They also purchase bags of sachet water as their source of drinking water. Refuse generated in the house is kept in a waste bin before being taken to the refuse disposal center which is then emptied by waste management department of the assembly. I told them to wear facemask and always sprinkle water on the dusty environment especially during the dry season. I advised the children in the house to ensure good personal hygiene since they are the most vulnerable group in the house. They were also educated to cover foods to prevent flies, wash hands with soap and under running water after visiting the toilet and washing fruits before eating. They thanked me for given them such education. They were also reassured of their son's health.
I asked patient's wife for the healthcare facility in their town of which she said they do not have one. I sought for permission to leave at 5:00pm promising her of another visit after Mr. E.K.B. has been discharged from the hospital. She thanked me for having such a time to take care of her husband and assured me that she will ensure that all what has been said as to maintaining a good environmental hygiene, covering of foods to prevent flies, washing of

hands thoroughly with soap and water after visiting the toilet and washing fruits before eating will be put into practice. I also thanked her and bid farewell to her.

I left Abisase at 4:10pm.

4.3.2 Second Home Visit (30th August, 2023).

On Wednesday, 30th August, 2023**,** I paid Mr. E.K.B. and family a visit at their home as planned. The purpose of this visit was to check on how patient was feeling after discharge, to ascertain whether the education given to patient and his family during the period of hospitalization and first home visit had been adhered to and also to remind them of the review date. On arrival at patient's home at 12:00noon, we exchanged greetings and pleasantries, the family were happy to see me again. I was offered a seat in his room, he called his wife, sister and parent. When all the family members were seated. I told them of my mission for coming to the house, thus, to know how Mr. E.K.B. was responding to the care being given in the house and also to emphasize on the need to keep their environment clean. Upon investigations, I realized that patient's condition had improved. I reminded them of the review date. I congratulated them for keeping the environment clean. Emphasis was made on the need for Mr. E.K.B. to take a well-balanced diet. They were also told to allow him enough rest during the day. Lastly, I reminded them of the review date which was Friday 1st September, 2023 and its importance.

Patient and family had complied with the education given to them with regards to their personal hygiene. At 1:00pm, I sought permission to leave and told them that I would officially visit them for the last time where I would terminate the care given. I bade them fare well and they expressed their gratitude for the help they had gotten so far from me and accompanied me to the road side before they departed.

4.3.3 Review (1st September, 2023)

On Friday 1st September, 2023, patient and his wife were met at the Out Patient Department (consulting room 2) Holy Family Hospital, Berekum at 9:00am looking cheerful and lovely as noted from facial expression. Upon interaction with patient, it was observed that his condition had really improved. They were accompanied to go for the client's card to be assessed. The vital signs were checked and recorded as follows; temperature 37.3^{o}C, pulse 92bpm, respiration 21cpm and Blood Pressure 130/84mmHg. At the Out Patient Department (consulting room 2),

patient was seen by the medical officer at the consulting room. Upon assessment by the medical officer, patient was healthy. He made no complains. Patient and wife were told not to hesitate to report to the hospital if he should encounter any health problem. He was encouraged to eat well balanced diet (regularly) and fruits. Patient was assured of a third home visit. I then accompanied them to get a tricycle to their home.

4.3.4 Third Home Visit (7th September, 2023)

My last home visit was made on the 7th September, 2023 at 2:00pm. The main reason for conducting the third home visit was to: Assess the general condition of patient and family, reinforce the need to comply with treatment regimen, hand him over to the family and finally terminate care.

On arrival we exchanged greetings, patient and relatives welcomed me warmly. Mr. E.K.B. was happy and cheerful to see me again. He told me he was doing very fine. I thanked them for their co-operation during the care. The environment was tidy as there was neither rubbish nor dusty as my first visit. I however stressed on the importance of regular check-ups and to seek prompt medical attention whenever they fall sick and rather than relying on self-medication and herbal preparations.

Since patient was clinically fit on examination, he was handed over fully to his family members because there was no health care facility nor community health nurse in the community.

I told them I would visit them unofficially whenever I had the chance. They all said a prayer for me, asking God to bless and make me successful. Patient and relatives accompany me to the roadside to pick a tricycle back to my house.

CHAPTER FIVE

EVALUATION OF CARE RENDERED TO PATIENT AND FAMILY

5.0 Introduction

Evaluation is the final step of the nursing process which allows the nurse to determine the patient's response to the nursing interventions and the extent to which the objectives have been achieved. The plan of nursing care is the basis for evaluation (Hinkle, Cheever, & Overbaugh, 2022). This is the last phase of the nursing process. The chapter gives information about the statement of evaluation, amendment of nursing goals and the termination of the care rendered to patient and family.

5.1 Statement of Evaluation.

Throughout the period of admission, five health problems were recorded and objectives were set to solve them. Blow is the summary of the intervention carried out and to what extent the goals were met.

1. Patient maintained an effective breathing pattern.

On 21st August, 2023, at 2:40pm, patient presented with difficulty in breathing, a nursing diagnosis of ineffective breathing pattern related to inflammatory process of both lungs was formulated for patient. An objective of patient would maintain an effective breathing pattern within 24 hours was set. Nursing intervention implemented included; Patient was reassured that his respiration will normalize, Patient was assessed for shallow and rapid respirations function to enhanced breathing, Patient was propped up in bed and supported with pillows to enhance breathing, Tight clothing around neck and chest were loosened, Patient was taught deep breathing exercise, Respiratory rate and depth were monitored and recorded and INO_2 3L/min was administered for 12 hours.

On 22nd August, 2023, at 2:40pm, the objective of patient would maintain an effective breathing pattern within 24 hours was evaluated and goal was fully met as patient's respiratory rate within normal range (20cycles per minute) and patient verbalizes he is relaxed.

2. Patient high body temperature was reduced to normal (36.6^0C).

On 21st August, 2023, at 2:45pm, because patient had high body temperature, a nursing diagnosis of hyperthermia (38.9^{o}C) related to infectious process in the lungs was formulated. An objective of patient temperature would reduce to normal within 6 hours was set for patient. The nursing interventions carried out included; Patient was reassured that temperature will restore to normal, Tight and heavy clothing on patient were removed, Windows were opened and curtains rolled up to ensure proper ventilation, 500mls of cold sachet water was served to patient, Patient's temperature was monitored hourly and IV paracetamol 1g was administered.

At 8:45pm, the objective of patient temperature would reduce to normal within 6 hours set at 2:45pm was evaluated and goal was fully met as the nurse recorded a temperature within the normal range (36.6^0C) and patient verbalized he no longer feel hot.

3. Patient became less anxious.

On 21st August, 2023, at 2:50pm, on observation it was realized patient was anxious so a nursing diagnosis of anxiety related to unknown outcome of disease condition was made. An objective of patient would be less anxious within 24hours was set. The nursing interventions carried out were; Patient was reassured that there is cure for the condition, Patient's anxiety level was assessed by asking him of his fears and worries, Patient was allowed to voice out his feelings and questions were tactfully answered, Patient was allowed to interact with other patients with the same condition to share their experience, Health team members were

introduced to patient and All procedures were explained to patient and consent was sought before being carried out.

On 22nd August, 2023, At 2:50pm, the objective of patient would be less anxious was evaluated and goal was fully met as patient verbalized that he feels less anxious and anticipating a good prognosis of his condition and nurse observed patient has a cheerful face and relaxed in bed.

4. Patient was relieved of chest pain.

On 22nd August, 2023, at 8:30am, patient complained of chest pain and a nursing diagnosis of acute pain related to cough was formulated. An objective of patient would be relieved of pain and made comfortable within 48hours was set. Nursing actions carried out were; Patient and family were reassured that chest pain is common with pneumonia and will subside with treatment, Patient's level of pain was assessed using the 0-10 numerical pain rating scale and he rated it as 6, Patient was put in the high fowler's position in bed, Patient was made to voice out aggravating and alleviating factors of the pain, Patient was encouraged to splint chest with pillows when coughing and also breathe deeply and Calm and restful environment was provided.

On 24th August, 2023, at 8:30am, the objective of patient would be relieved of pain and made comfortable within 48hours was evaluated and goal fully was met as patient rated pain as 2 on the 0-10 numerical pain rating scale and nurse observed patient was comfortable in bed and interacting with relatives.

5. Patient attained optimal sleep and rest.

On 22nd August, 2023, at 8:40am, because of patient's inability to sleep well, a nursing diagnosis of insomnia related to interruptions for therapeutics and lighting was formulated for patient. An objective of patient would attain optimal sleep and rest within 24hours was set. Nursing interventions carried out were as follows; Patient was reassured that all actions will be done at the right time, Time for assessment and treatment were planned with the patient, The number of visitors and their length of stay were restricted and limited, Patient took a warm bath in the evening to induce sleep, Room light was turned off in the night and Doors and windows were opened to ensure adequate ventilation.

On 23rd August, 2023, at 8:40am, the objective of patient would attain optimal sleep and rest within 24hours was evaluated and goal was fully met as patient attained optimal amount of sleep as evidence by nurse visualizing patient having a sound sleep for 8 hours and patient verbalized he had a good night sleep.

6. Patient understood and gained more insight to his condition.

On 22nd August, 2023, at 8:50am, upon interactions with patient, it was realized that he had little knowledge about the condition so a nursing diagnosis of knowledge deficit related to lack of education about the cause, clinical manifestation, treatment and prevention of disease condition was formulated. An objective of patient would understand and gain more insight to his disease condition within 4hours was set. The following nursing actions were implemented; Patient was reassured that bilateral pneumonia is treatable, Conducive environment was ensured during the education section, Patient and relatives were asked about the knowledge they had on his condition, Education on disease condition, desired and adverse effects of drugs were provided to patient and relatives, Pictures and other materials were provided to aid their understanding and Questions asked were tactfully answered.

At 12:50pm, the objective of patient would understand and gain more insight to his disease condition within 4hours set at 8:50am was evaluated and goal was fully met as patient could

answer simple questions asked about disease condition and also was relaxed in bed hoping to return to normal activities at

home.

5.2 Amendment of care

Despite the numerous problems identified, with the individualized comprehensive nursing care and support from other members of the health team and co-operation of Mr. E.K.B. and family, all the goals set were fully achieved. The care plan was therefore not amended.

5.3 Termination of care

This forms the last aspect of the interaction with client and family. Due to the psychological effects accompanying separation, it could sometimes lead to anxiety and depression. To avoid this, client and family were prepared psychologically from the day of admission to the day of discharge.

I made my last home visit on 7th September, 2023. The main aim of the visit was to find out how patient and his family members were doing and to terminate the care by handing over Mr. E.K.B. to the members of his family to continue the care. After exchange of greetings and a little interaction, patient and his family confirmed they were doing well. I thanked them for their co-operation. I informed them that now that Mr. E.K.B.'s health has been restored; the care has officially ended. I advised them to report to the nearest health facility in case of any illness. They were not surprise to hear of the termination of care due to prior notice. He was however handed over fully to the members of the family, who promised to take very good care of him. I told them I would visit them unofficially whenever I had the chance. They were happy and said that they would miss my care and would strictly adhere to all instructions given to them. There was no separation anxiety as patient and the relatives had enough psychological preparations from the day of admission till discharge but it was still difficulty bidding them farewell.

CHAPTER SIX

SUMMARY AND CONCLUSION

6.0 Introduction

Summary is a comprehensive and usually brief abstract, recapitulation or compendium of previously stated facts or statements (Weller, 2019). Conclusion is the last part of something or an opinion reached after some thought (Weller, 2019). This is the last step of the patient/family care study which entails and the student's personal appreciation of the therapeutic relationship with the patient as well as the use of the nursing process.

6.1 Summary of care rendered.

Mr. E.K.B., a 28-year-old man was admitted on 21st August, 2023, around 2:34pm at the Holy Family Hospital, Berekum with diagnose of pneumonia. His vital signs on the day of admission were checked and recorded as;

Temperature - 38.9^0C

Pulse - 129bpm

Respiration - 32cpm

Blood pressure (BP) - 125/80mmHg

He presented fever, coughing and nasal congestion.

He spent a total of five days at the hospital. During her period of hospitalization six (6) health problem were identified. These were; dyspnoea, fever, anxiety, chest pains, difficulty in sleeping and inadequate information on pneumonia. Nursing diagnosis was formulated for each of the problems and in order to solve these problems objectives were set, nursing orders were given, orders were implemented and all the goals were fully met. The following diagnostic investigations were done;

1. Full blood count (RBC, WBC, Hb)
2. Pulse oximetry check
3. Sputum examination
4. Chest x-ray

His treatment plan is as follows:

1. Intravenous Cefuroxime 1.5g Stat, then 750mg tds x 72hrs
2. Intravenous Amoxiclav 1.2g bid x 48 hours
3. Tablet Diclofenac 50mg bid x 5 days
4. Intravenous paracetamol 1g tds x 24 hours
5. Intravenous Normal saline 1liter x 24 hours
6. Intranasal Oxygen 3L/min x 12 hours
7. Capsule Iron III polymaltose 1 daily x 30days
8. Tablet Azithromycin 500mg daily× 72 hours

With the identified health problems, a comprehensive nursing care was given to solve patient's health problems using the nursing process including administration of medication, education of patient and family about the condition and vital signs check.

On 25th August, 2023, patient was discharged during ward rounds. He was discharged with Capsule Iron III polymaltose 1 daily x 30days.

The need to take in medication was emphasized and review date was stressed. Patient and relatives were educated on how to keep the home clean and also abide by all the preventive measures already communicated to them and three (3) home visits were embarked upon. My first home visit was on 23rd August, 2023, the main aim of the visit was to acquaint myself with the patient's home environment, to familiarize myself with the other family members, to confirm information given to me about the family and their home environment, to find out their health needs and assist towards effective solutions to any health problems that may be identified and to find a healthcare provider in the town to handover patient to after the termination of care. The second home visit was on 30th August, 2023 and the purpose of the visit was to ascertain whether the education given to him and his family during the period of hospitalization and first home visit had been adhered to and also to remind them of the review date. The third home visit was on 7th September, 2023 and the reason for the visit was also to assess the general condition of patient and family, reinforce the need to comply with treatment regimen, hand them over patient to his family and finally terminate care.

6.2 Conclusion.

The care study for Mr. E.K.B. and his family ended successfully and it has increased and given me much knowledge on the causes, signs and symptoms, diagnosis, treatment, complications and the possible prevention of pneumonia. The study has equally assisted me to transfer the theoretical knowledge into practice and I have gained enough knowledge in the practical aspect. This study enables patients to have increased time with clinical team members and also help patients gain better understanding of their condition and management. It has also helped me to establish a good interpersonal relationship and skills with the patient and her family which enhanced his recovery. I therefore recommend that every health institution should employ the use of the nursing process, so as to enable them provide individualized, holistic and

comprehensive nursing care to help decrease re-occurrences of diseases in our hospitals as well as reducing mortality rate. I also recommend that every student nurse should be given the opportunity to embark on the patient/family care study to enable them obtain more insight on the condition under study. I suggest that house number and folder number should be excluded in the writing of the care study. This could lead to breach of privacy and confidentiality as the patient location is revealed to anyone who reads the work for information or any other reason.

APPENDIX

***Table 7*: Vital signs of Mr. E.K.B. throughout the period of hospitalization**

Date	Time	Temperature (^{0}C)	Pulse (bpm)	Respiration (cpm)	Blood Pressure (mmHg)	SPO2 (%)
21/08/23	2:34pm	38.9	129	32	125/80	99
	2:34pm	36.2	80	30	110/80	98
	6:00pm	35.4	100	28	110/90	99
	10:00pm	36.2	100	28	110/80	97
22/08/23	6:00am	36.0	98	26	110/90	98
	10:00am	35.6	95	24	110/80	96
	2:00pm	37.0	70	20	120/70	94
	6:00pm	36.2	80	19	110/90	96
	10:00pm	36.6	88	20	109/90	95
23/08/23	6:00am	36.8	99	20	120/90	96
	10:00am	36.2	90	21	110/80	95
	2:00pm	35.6	88	20	110/80	97
	6:00pm	36.7	92	22	120/90	94
	10:00pm	36.0	88	21	110/70	96
24/08/23	6:00am	36.0	84	21	110/90	97
	10:00am	35.9	88	22	110/80	95
	2:00pm	35.9	88	22	115/72	94
	6:00pm	36.0	95	20	120/80	96
	10:00pm	35.0	97	19	121/90	92
25/08/23	6:00am	35.9	90	18	110/70	97

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