HOLY FAMILY NURSING AND MIDWIFERY TRAINING COLLEGE,

BEREKUM

A CLIENT/FAMILY CENTERED NURSING CARE STUDY ON

SICKLE CELL ANAEMIA

BY

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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 GENERAL NURSE

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PREFACE

Many people believed that 'Nursing' started with Florence Nightingale, however nursing itself dates back to the beginning of motherhood when nurses were traditionally females. The history of nursing has its root from the care of infants and children, so all mothers were nurses. The word nursing derives its meaning form the latin word "nutricus" which means nourishing. According to Henderson (1960), nursing is defined as the unique function of the nurse, to assist the individual either sick or well in the performance of those activities contributing to health or its recovery or to a peaceful death that he or she would have performed unaided if he or she has the necessary strength, will or knowledge.

The history of nursing first started to become more defined with Christianity when Christians cared for the sick, fed the hungry and buried the dead. Hence, it was said that the history of nursing is tied to the church. Florence nightingale came in the scene in 1860, when it became more obvious that love and nurturing alone were not enough to cure diseases. She fulfilled her dream concerning nursing by establishing the Nightingale Training School for Nurses. It was the first formal, fully organized training program for nurses.

In this 21st century, many nursing schools were established to help build on the previous skills and experiences that were acquired through long years of housekeeping, assisting in child bearing and care of sick relatives. Nursing practice was based on intuitions, observations and experiences and was focused towards diseases and illness in the olden days. However, today, there is increasing recognition of people's need for health care. This has placed nursing at a level where much emphasis is placed on research and the use of scientific data at the bedside.

The patient family care study has to do with rendering nursing care to a patient and his/her family. It is made up of the interaction between the patient/family and health team with a specified time frame until the termination of the patient care.

The study is based on the nursing process which has the assessment, analysis, planning, implementation and evaluation to be its components which follows a systematic method and it works consistently.

The study forms part of the academic requirement on obtaining the Registered General Nursing Certificate awarded by the Nursing and Midwifery Council of Ghana.

Patients name is not mentioned in the study for confidentiality's sake, it is rather the initials that are used. The study is programmed to aid the student nurse to practically apply the nursing process in the care of the patient and apply the knowledge acquired in medicine, surgery, pharmacology, basic nursing, anatomy and all other field of health in the care of the patient. It also helps to enlighten and broadens the knowledge of the student nurse in terms of a particular disease condition and its management, the confidence level too is boosted in order for the student nurse to discharge his/her duties.

Finally, a cordial relationship is established between the nurse and patient /family as well as other members of the health team.

ACKNOWLEDGEMENT

This case study would not have been successful without the help of some individuals and groups. I therefore deem it necessary to express my sincere heartfelt gratitude to them for their earnest contribution in diverse ways.

My first thanks go to God almighty for protecting and guiding me throughout the writing of this script.

I am also grateful to Master A.F, the subject of this study and his family for their understanding, cooperation and all the necessary information given to me at the hospital and during my home visits.

The next gratitude goes to my supervisor, for his constant assistance and relentlessness in seeing to it that the care study comes out as a success.

I would also want to express my warmest heartfelt appreciation for the nurse-in-charge of the Males' Medical ward and the entire staff of the Presbyterian hospital, Dormaa for the great deal you all took in helping me to arrive at the finishing point of the case study.

Last but not least, I am grateful to my family, most especially my parents, my classmates and authors and publishers whose books have been of great use and those who have contributed in diverse ways to make the writing of my case study, a successful one. God richly bless you all.

TABLE OF CONTENT

LIST OF TABLES

INTRODUCTION

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

This care study is written on Master A.F a 17-year-old man who comes from Dormaa in the Bono region of Ghana but resides in Amasu. Master A.F was admitted to the Male Medical ward of the Presbyterian hospital, Dormaa on 26th August, 2023 at 11:00am with the diagnosis of sickle cell anemia. He was brought on admission through the emergency unit. I interacted with him the very day he was admitted. He spent five days at the hospital and throughout his stay in the hospital, his treatment and care were geared towards complete recovery.

The following investigation/test were ordered and carried out;

1. Full Blood Count

2. Urine examination

Treatment given to Master B.J.Y during his period of hospitalization and discharge were;

1. To transfuse one unit of packed cells
2. IV cefuroxime 750mg tds x 24hrs
3. IV Gentamicin 80mg bds x 24hrs
4. Tablet Paracetamol 1g tds x 5/7
5. IV DNS 1L x 24hrs

6. Folic acid 5mg x 30
7. Caps zincovit 10d x 30
8. Ringers lactate 500mls x 24hrs
9. Tab Cefuroxime 500mg bds x 7/7

With proper care and attention, he got well and was discharged on 30th August, 2023, without any complication. After he was discharged, I made three follow up visits until I handed him over to the nurse at the Amasu Health Center.

This script is written, organized and compiled into six (6) chapters for easy reading and understanding.

Chapter one deals with the assessment of patient and family. It includes patient's particulars, family medical and socio-economic history, lifestyle and hobbies, past and present medical history. Others are admission of patient, patient concept of illness, literature review as well as data validation.

Chapter two is concerned with the analysis of data collected about patient and comparing this data with standards. This chapter also involves the identification of patient and family strengths, their health problems and formulating diagnosis for them.

The third chapter is mainly about planning the care for patient and family where a nursing care plan is drawn and used in the management of the patient.

Chapter four is concerned with the implementation of patient and family care plan. The summary of actual nursing care, preparation of patient for discharge and follow-up visits are involved.

The fifth chapter deals with the evaluation of care rendered to patient and family. It involves the statement of evaluation, amendment of nursing care plans for partially met or unmet objectives and the termination of care.

The last chapter, which happens to be chapter six is the summary and conclusive part of the care rendered to the patient.

CHAPTER ONE

ASSESSMENT OF PATIENT AND FAMILY

1.0 Introduction

Assessment is the systematic collection of data to determine the patient health status and any actual or potential health problems. (Hinkle & Cheever, 2018) Assessment is the process of gathering and discussing information from multiple and diverse sources in order to develop a deep understanding of what students know, understand and can do with their knowledge as a result of their educational experience; the process culminates when assessment results are used to improve subsequent learning. The nursing assessment includes gathering information concerning the patient's particulars, family medical/surgical history, family socio-economic history, patient's developmental history, patient's present medical/surgical history and patient past medical/ surgical history], patient lifestyle and hobbies literature review and validation of data.

1.1 Patient's Particulars

Particulars are defined as an officially recorded detailed information about a person

(Mclntosh,2013). The name of the patient is Master A.F, a seventeen-year-old boy, born on 28th

November, 2006 to Mr. A.A. and Mrs. K.C. He is a Ghanaian and comes from Dormaa in the Bono region of Ghana but resides in Amasu. Master A.F. is a Christian who worships with the Methodist church of Ghana. He is dark in complexion, measures 1.6m tall and weighs 31kg. He has three siblings which consist of two boys and a girl. He is the third born of his parents. He has friends at school. His father is his next of kin. He is a student of Dormaa Senior High School and in his first year. The languages he speaks are Twi and English.

Master A.F. is registered under the National Health Insurance Scheme. He has no physical disabilities.

1.2 Family's Medical History

Health history is a series of questions used to provide an overview of the patient's current health status (Hinkle & Cheever, 2018). According to Master A.F. both of his grandparents are alive and healthy. Master A.F. claims that his parents and three siblings are well and alive. There are no known hereditary disorders in the family, such as epilepsy, asthma, diabetes, mental illness or hypertension. However, there is a history of the sickle cell trait from the paternal and maternal sides of the family. According to the father and elder sister, they visit the hospital whenever any ailment arises and buys medicine from the counter only when it is prescribed by a doctor. Based on this information, I encouraged them to seek for medical attention as they have been doing always without any hesitance.

1.3 Family Socio-Economic History

According to Webster (2020) Family socio- economic history is the position of an individual on socio- economic scale that measures such factors as education, income and occupation. It gives more information about the patients' environment, housing types, parents occupation and marital status, number of individuals living in the house and sleeping arrangements, religious affiliations. There is such a wonderful and loving relationship existing between Master A.F and his family especially his mother. Master A.F is active when it comes to religious activities and also a member of the Youth ministry in his church. He engages in religious activities almost throughout the week.

Master A.F. is totally dependent on his parents since he is still a student, and his parents are always ready to give him their massive support in order to ensure that he does not lack

anything he wants. Both parents of Master A.F. are all farmers. His family members are all Christians too. The family of Master A.F. socially are not known to engage in any form of alcoholism, smoking or notorious activities. Patient's family belongs to the middle -class group of the society and support themselves with income from their farming business. Estimate of their income is nine hundred Ghana cedis per month. Some family members as stated by the parents of Master A.F. are also owners of their small businesses. According to the parents, members of the family are not allowed to consume snails which is a taboo to do so according to their tradition. Members of the family are all registered and depend on National Health Insurance Scheme as their source of medical care.

1.4 Patient's Developmental History

Growth is the gradual increase in the size of the body and its organs (Tailor, 2019). Maturation is the change in the function of an organism, starting from the molecular level and involves various organs, both metabolically and physically changing from a simple to more complex level. (Tailor, 2019)

Development is the biological and psychological changes that occur in human beings between birth and the end of adolescence, as the individual progresses from dependency to increasing autonomy (Tailor,2019). The developmental history of patient was told by the mother. Mrs. K.C, mother of patient mentioned that she went through a nine-month pregnancy successfully with no pregnancy-related complication and had to go through normal vaginal delivery at Amasu Health Center. with the assistance of the midwives at the clinic. He was born without any congenital abnormalities such as cleft lip or palate or hydrocephalus. He was immunized against childhood vaccine preventable diseases, as established by a BCG scar on his right shoulder. Master A.F. was breastfed exclusively for six months before being made to eat complementary foods. He went through the normal stages of development, he started sitting

up at the 7th month, crawling in the 10th month, talking, walking and running within the ages of one and three.

Around the age of thirteen, Master A.F. began to develop secondary sexual characteristics such as a broadening of the chest, deepening of voice, and the growth of pubic hairs. He is SHS one at Dormaa Senior High School. From my conversation with the patient he really enjoys being in school and normally has no problems when it comes to him understanding what is being taught in the classroom. Erik Erikson (1902–1994) focused on the role of cultural and socioeconomic influences in behavior. Erickson was interested in the development of the ego, self-awareness, organized, and logical aspect of the personality. He outlined eight stages of ego formation that span a person's lifetime. Each stage is marked by a specific conflict, or crisis, pertaining to the individual's biological maturity and what society expects of a person at that age. Patient is now in his adolescence age group, where there is conflict between identity and role confusion (12 to 18 years), According to Erik Erickson's psychosocial development, which encompasses eight stages. This stage is critical in developing a sense of personal identity, which will continue to influence behavior and development for the rest of a person's life. Teenagers must develop a feeling of self and individuality. Failure leads to role confusion and a weakened sense of self, but success leads to the ability to stay loyal to oneself. I am certain that the patient has formed successful social ties, because according to him, he has formed strong social bond with his family, friend and classmates which places him in Erickson's identity dimension of psychosocial development.

1.5 Patient's Lifestyle and Hobbies

Life style is defined as the typical life of an individual or group (Marriam-Webster, 2022, March 19). Master A.F. usually goes to bed at 09:30pm. Before sleeping he does well to pray

first and by 6:30am he is sure to be awake. He brushes his teeth after waking up in the morning and baths afterwards with warm water most of the times in order to prevent crisis. He empties his bowels and bladder whenever he feels the urge to do so. He goes to school from Monday to Friday.

He usually goes to school by himself. He usually takes porridge with bread and egg as his breakfast before going to school. He is provided lunch in school each and every day. He closes from school at 3:30pm and gets home by 4:00pm. Upon arrival he attends to his home given assignment from school and if there are no assignments, he watches TV. He takes his supper latest by 5:30pm. For him, his favorite meal is boiled yam with garden egg stew and fish. He admitted that he is not a fun of smoking and taking of alcohol too. On weekends, he usually listens to music and watches TV. He goes to church on Sunday with his family, he also said that he loves to hang out with his mother on Sundays after church. Patient also stated that he is allergic to pepper. Also, he eats three square meals per day, namely breakfast, lunch, and supper. According to him, he is mostly stressed when he runs a lot of errands and also when he engages in lots of academic work without rest. When he is stressed, he listens to music and watches movies to relieve himself of stress. He loves it when he is surrounded by family and friends.

1.6 Patient's Past Medical History

Past medical history is a record of past medical problems and treatments that a person has had (Marriam-Webster, 2022, March 19). Master A.F. never had, poliomyelitis, TB, whooping cough, diphtheria, measles or tetanus as a child, he has no allergies when it comes to medications or insects. He is a known sickle cell patient. General body weakness, pyrexia, headache and joint pains are some of the health problems he usually encounters whenever he

is exposed to extreme cold weather. His parents take him to Amasu Health Center for healthcare whenever he reports that he is unwell.

Master A.F. has never been involved in a serious accident before, notwithstanding he has on several occasions been admitted to the hospital with sickle cell anemia.

1.7 Patient's Present Medical/Surgical History

The history of the present illness or problem includes such information as the date and manner (sudden or gradual) in which the problem occurred, the setting in which the problem occurred, and the course of the illness including self-treatment, specific symptoms are also described in detail (Hinkle & Cheever, 2018). Patient was apparently well until the early hours of 26th August, 2023 when he started experiencing chest pains, headache, and general body weakness. He informed his mother and was rushed to the emergency unit of Presbyterian hospital, Dormaa. They arrived at the emergency unit at 11:25am, he was under detention and observation at the emergency unit where he was reviewed by the doctor on duty and was diagnosed of Sickle cell anaemia in a known sickle cell patient. He presented with chest pain and also dyspnoea and therefore oxygen therapy was set up for him. A couple of physical examinations were done alongside some laboratory investigations too.

1.8 Admission of the Patient

Admission of a patient is defined as when an illness or injury requires an immediate health care (Hornby, 2019).

He was admitted to the Male Medical ward of Presbyterian Hospital, Dormaa on 26th August, 2023 at 11:00am through the Emergency unit per ambulatory, accompanied by a nurse and his relatives. Patient had been on detention and observation at the males ward on

26 th August, 2023 with the diagnosis of sickle cell anaemia in an already known sickle cell disease. His hospital ID, (AAA 2085) was keyed into the computer system of the hospital (LHIMS). After a few seconds the patient's identity was confirmed. The patient was then placed and made comfortable in a cardiac bed. Name, sex, age, hospital ID number and occupation were all recorded in the admission and discharge book. Vital signs were checked and recorded accurately as follows:

1. Temperature 35.6˚c

2. Pulse 54bpm

3. Respiration 22cpm

4. Blood Pressure 94/54mmHg

5. SPO2 89%

Master A.F. was examined from head to toe and the examination revealed dyspnea, chest pain, general body weakness and also inability to walk without assistance. He was reassured of a competent healthcare to allay his anxiety. Patient as well as his parents who were with him were introduced to the staff present as at that time. The hospital's policies on visiting hours which are 5:00am to 6:00am and 4:00pm to 5:00pm, time for morning rounds by doctors were also made known to them and bill payment were discussed.

The following treatment plan were ordered:

1. To transfuse one unit of packed cells

2. IV Cefuroxime 750mg tds x 24hours

3. IV Gentamicin 80mg bds x 24 hours

4. Tablet Paracetamol Ig tds

5. IVF DNS 1L X 24hrs

6. Folic acid 5mg x 30

7. Tab Cefuroxime 500mg bds x 7/7

8. Caps Zincovit 10d x 30

9. Dextrose normal saline

10. Ringers Lactate

Patient had the following laboratory investigations ordered:

1. Full Blood Count
2. Urine examination

Master A.F. got to know me after I introduced myself as a final-year student of Holy Family Nursing and Midwifery Training College, Berekum who would want to use him and his family for my care study. The patient as well as his family were told that the care study is a requirement for the award of a license to practice as a Registered General Nurse by the

Nursing and Midwifery Council of Ghana. During our conversation I made sure to explain to them what was involved in the care study especially on the issue of keeping whatever information provided to me confidential.

I later on explained to them that I will be visiting them at least three times as part of what the study demands. They gave their consent and permitted me to use them for the case study after they had understood clearly all the full details given to them about the study. We began with the discharge planning with the involvement of the relative and they were made to understand that there would still be continuity of care even after he was well and discharged to the house. A brief and concise education was given to the patient as to why he was showing the signs and symptoms associated with his condition and whatsoever care and treatment he was to expect from the healthcare team. I picked Master A.F. for my care study because I wanted to have more knowledge about the disease condition that is, it's diagnosis, treatment regimen, and the specific nursing management and nurse them holistically until they are discharged home and continue thereafter, in the course of that, I will study his condition to write the care study.

1.9 Patient's Concept of Illness

Master A.F. believes and understands clearly that his condition is an abnormality in the blood and therefore did not attribute it to any spiritual cause. He believes that he will be relieved as time went on because he periodically experiences similar signs and symptoms and gets relieved.

1.10 Literature Review

This part covers all the documented information about Master A.F.'s condition. Literature review of a condition gives all the detailed information about the patient's condition. It talks about the established and laid down facts about the disease condition, which aids in giving appropriate medical and nursing diagnosis and also helps in the management of that particular disease.

Anatomic and Physiologic Overview of the Hematologic System.

The hematologic system consists of the blood and the sites where blood is produced, including the bone marrow and the reticuloendothelial system (RES). Blood is a specialized tissue that differs from other tissues in that, it exists in a fluid state. Blood is composed of plasma and various types of cells. Plasma is the fluid portion of blood; it contains various proteins, such as albumin, globulin, fibrinogen, and other factors necessary for clotting, as well as electrolytes, waste products, and nutrients. About 55% of blood volume is plasma (Hinkle & Cheever, 2018).

Blood

Blood is a fluid connective tissue composed of a liquid extracellular matrix called blood plasma that dissolves and suspends various cells and cell fragments (Tortora & Derrickson, 2009). It circulates constantly around the body, allowing constant communication between tissues distant from each other. It transports oxygen, nutrients, hormones, heat, protective substances and clotting factors. Blood is composed of a clear, straw-colored, watery fluid called plasma in which several different types of blood cell are suspended. Plasma normally constitutes 55% of the volume of blood and the cell fraction 45%. The cellular content of

blood is made up of three types: erythrocytes (red cells), platelets(thrombocytes) leukocytes (white cells). Blood cells are synthesized mainly in red bone marrow. Some lymphocytes, additionally, are produced in lymphoid tissue. In the bone marrow, all blood cells originate from pluripotent (that is, capable of developing into one of a number of cell types) stem cells and go through several developmental stages before entering the blood. Different types of blood cell follow separate lines of development. The process of blood formation is called haemopoeisis.

Functions of blood, Blood, which is a liquid connective tissue, has three general functions (Tortora & Derrickson, 2009):

1.Transportation blood transports oxygen from the lungs to the cells of the body and carbon dioxide from the body cells to the lungs for exhalation.

It carries nutrients from the gastrointestinal tract to body cells and hormones from endocrine glands to other body cells. Blood also trans- ports heat and waste products to various organs for elimination from the body.

2. **Regulation**. Circulating blood helps maintain homeostasis of all body fluids. Blood helps regulate pH through the use of buffers (chemicals that convert strong acids or bases into weak ones). It also helps adjust body temperature through the heat- absorbing and coolant properties of the water in blood plasma and its variable rate of flow through the skin, where excess heat can be lost from the blood to the environment. In addition, blood osmotic pressure influences the water content of cells, mainly through interactions of dissolved ions and proteins.

3. **Protection**. Blood can clot (become gel-like), which protects against its excessive loss from the cardiovascular system after an injury. In addition, its white blood cells protect

against disease by carrying on phagocytosis. Several types of blood proteins, including antibodies, interferons, and complement, help protect against disease in a variety of ways.

Definition of Sickle Cell Disease

Sickle cell anaemia is a severe haemolytic anaemia that results from inheritance of the sickle haemoglobin gene. This gene causes the haemoglobin molecule to be defective. The sickle haemoglobin (HbS) acquires a crystal-like formation when exposed to low oxygen tension (Hinkle & Cheever, 2018). The RBCs of a person with sickle-cell disease (SCD) contain HbS, an abnormal kind of haemoglobin. When Hb-S gives up oxygen to the interstitial fluid, it forms long, stiff, rod-like structures that bend the erythrocyte into a sickle shape. The sickled cells rupture easily. Even though erythropoiesis is stimulated by the loss of the cells, it cannot keep pace with haemolysis. Signs and symptoms of SCD are caused by the sickling of red blood cells. When red blood cells sickle, they break down prematurely (sickled cells die in about 10 to 20 days). This leads to anaemia, which can cause shortness of breath, fatigue, paleness, and delayed growth and development in children. The rapid breakdown and loss of blood cells may also cause jaundice, yellowing of the eyes and skin. Sickled cells do not move easily through blood vessels and they tend to stick together and form clumps that cause blockages in blood vessels. This deprives body organs of sufficient oxygen and causes pain, for example, in bones and the abdomen; serious infections; and organ damage, especially in the lungs, brain, spleen, and kidneys. Other symptoms of SCD include fever, rapid heart rate, swelling and inflammation of the hands and/or feel, leg ulcers, eye damage, excessive thirst, frequent urination, and painful and prolonged erections in males. Almost all individuals with SCD have painful episodes that can last from hours to days. Some people have one episode every few years; others have several episodes a year. The episodes may range from mild to those that require hospitalization. Any activity that reduces the amount of

oxygen in the blood, such as vigorous exercise, may produce a sickle cell crisis (worsening of the anaemia, pain in the abdomen and long bones of the limbs, fever, and shortness of breath). Sickle-cell disease is inherited. (Tortora & Derrickson, 2009), The inheritance pattern is autosomal recessive (both parents must at least have the sickle cell trait). If both parents have the sickle cell trait, there is a 25% chance that each child will have SCD, a 25% chance that each child will have neither the trait nor the disease, and a 50% chance that each child will have the trait. Therefore, a child may be asymptomatic (except under rare circumstances) with the trait or have varying degrees of symptoms with the disease (Swearingen, 2016). In the homozygous state (sickle cell anaemia), both genes are abnormal (HbSS), whereas in the heterozygous state (sickle cell trait, HbAS), only one chromosome carries the gene. As the synthesis of HbF is normal, the disease usually does not manifest itself until the HbF decreases to adult levels at about 6 months of age (Kumar & Clark, 2017). People with two sickle-cell genes have severe anaemia; those with only one defective gene have the sickle cell trait.

Incidence

In the United States, sickle cell anaemia is most often found in those of African or Eastern

Mediterranean heritage. Worldwide, many persons residing in Asia, the Caribbean, the Middle East, and Central America are affected. Nearly 10% of African Americans have the sickle cell trait; 1 of every 500 African American infants born has inherited the two sets of abnormal genes needed to have the disease according to (Williams & Hopper, 2015). The sickle gene is most common in Africans (up to 25% gene frequency in some populations) but is also found in India, the Middle East and Southern Europe (Kumar & Clark, 2017).

Types of Haemoglobin

1. Normal haemoglobin A

2. Foetal haemoglobin F

3. Abnormal haemoglobin S and C

With inheritance of haemoglobin AA is normal, with haemoglobin AS or AC the individual is said to have sickle cell traits and is a carrier but with haemoglobin SS or SC is sickle cell disease (Hinkle & Cheever, 2018)

CAUSES

Sickle cell anaemia results from the homozygous inheritance of haemoglobin producing gene which causes substitution of amino acid valine for glutamic acid in the beta haemoglobin chain. Heterozygous inheritance of this gene results in the sickle cell trait, a condition with minimal or no symptoms. The patient with sickle cell traits is a carrier; the individual can pass the sickle cell gene to his/her offspring. Vaso-occlusive crisis in sickle cell anaemia is caused by lowering oxygen tension in the blood to get access to the tissues give rise to severe pain in the limb and joints. It is mostly precipitated by cold weather, pregnancy, alcoholism, infection such as malaria, the use if anaesthetic agents, fatigue, stress, strenuous physical exercise, poor nutrition effect from high altitude above 15,000 feet above sea level, dehydration and acidosis (Brenda G.B et al, 2004)

Pathophysiology

Sickle cell anaemia is a severe haemolytic anaemia that occurs as a result of the sickle haemoglobin gene. The defects occur when there is a single amino acid substitution in the beta chain of haemoglobin. The normal haemoglobin A contains two alpha and two beta chains. The sickle haemoglobin (HbS) acquires a crystal-like formation when exposed to low oxygen tension. The oxygen level in the venous blood can be low enough to cause this change; consequently, the erythrocyte containing HbS loses its round, pliable, biconcave disk shape and becomes deformed, rigid and sickled shape. These rigid erythrocytes can adhere to the endothelium of small vessels; when they adhere to each other, blood flow to a region or an organ maybe reduced. If ischemia or infarction results, the patient may have pain, fever, swelling and the like. The sickling process takes time; if the erythrocyte is again exposed to

adequate amounts of oxygen (e.g., when it travels through the pulmonary circulation) before the membrane becomes too rigid, it can revert to a normal shape. For this reason, the 'sickling crisis are intermittent. Oxygen delivery can be impaired by an increased blood viscosity, with or without occlusion due to adhesion of the sickled cells; in such a situation, the effects are seen in the larger vessels, such as arterioles. Cold can also aggravate the sickling process, because vasoconstriction slows the blood flow (Hinkle & Cheever, 2018).

Clinical Manifestation/ Features of Sickle Cell Anaemia

According to Phipps,(2010) the clinical features of sickle cell disease include the following;

1. There may be anaemia
2. There is chest pain and shortness of breath
3. In severe cases, there is enlargement of the liver and spleen, especially in children
4. Client may have fever
5. Severe abdominal pain maybe experienced
6. There may be severe joint pains
7. Patient may experience loss of appetite
8. There is headache
9. Protrusion of the abdomen, especially in children
10. Swelling of toes and fingers

Diagnostic Investigation

According to Phipps, (2010) the diagnostic investigations of sickle cell disease includes the following;

1. Full blood count
2. Sickling test
3. Findings of haemolysis (Jaundice, elevated serum bilirubin level)
4. Physical examination
5. Family history
6. X- ray will indicate abnormal changes in bone
7. Electrophoresis of haemoglobin identifies the presence of abnormal haemoglobin

Medical Treatment of Sickle Cell Anaemia

There is no cure available for sickle cell anaemia. The main aim of treatment is to alleviate symptoms and control painful crisis (Hinkle & Cheever, 2018).

1. Blood transfusion helps in reducing severe episode of anaemia and pain. It also has a potential to decrease haemoglobin S formation.
2. Folic acid supplement aids given prevent anaemia
3. Antibiotics such as ampicillin, ciprofloxacin are given to treat infections
4. Analgesics like diclofenac, morphine, or ibuprofen can be given to alleviate pain

5. Corticosteroids

6. Intravenous fluids, glucose 5% in sodium chloride 0.9% 2-4 litres daily for adults and glucose 4.3% in sodium chloride 0.18% 150ml/kg daily intravenous for children.
7. Non- steroidal anti-inflammatory drugs (NSAIDs)

Complication

According to Hinkle and Cheever, (2018) the complications of sickle cell anaemia are as follows;

1. Heart failure; chronic (long term) anaemia in SCD lowers the ability of blood to carry oxygen. This makes the work of the heart harder to make up for lower oxygen levels in blood
2. Stroke; sickled cells tend to stick together, and they cannot move easily through the blood vessels. This can lead to a clot forming and moving to the brain causing stroke
3. Impotence; up to 35% of men with SCD are affected by painful, prolonged erection termed ischemic priapism. A priapic episode may result in fibrosis and permanent erectile dysfunction.

4. Dehydration; sickle cell dehydration is due to cellular loss of K+ and Cl. K+ loss in sickle cell can take place through the combined effect of oxidative damage and deformation of the red blood cell membrane.
5. Osteomyelitis; individuals with SCD are prone to infections of the bone and the bone marrow areas of infarction and necrosis.
6. Persistent jaundice; sickle cell does not live as long as normal red blood cells and therefore, they die faster than the liver can filter them out. Bilirubin, which cause the

yellow colorization from the broken-down cells builds up in the system causing jaundice.

7. Hepatomegaly; is largely due to extramedullary haematopoiesis in responds to the chronic anaemia.
8. Splenomegaly; red blood cells can become clogged in the spleen and get trapped. These stuck cells cause the spleen to grow up with blood in it. Trapped blood in the spleen keeps blood from flowing to other parts of the body.

Nursing Management

The major goals of the nurse when it comes to the patient is to relief pain, decrease the incidence of crisis, enhance the sense of self- esteem, to prevent further complication through assessment and early intervention of threatening symptoms. Some of the nursing management includes;

Reassurance

The patient is reassured to allay fear and anxiety and also to know that he/she is in the competent hands of the health team. Reassure patient that the signs and symptoms will be relieved. Again, all procedures performed on the patient should be well explained the patient and family to gain their consent and cooperation. (Halter, M. 2022)

Nutrition

Ensure that the patient consumes a balanced diet rich in folic acid such as green leafy vegetables, carbohydrate for energy, vitamin to boost the immune system, protein to repair worn out tissues. Ensure that the clients' mouth is well cleaned before serving her meals in order to boost appetite. (Jessica C Frost, 2021)

Provision of Comfort

Apply warm compresses, warm thermal blankets and warming pads to painful area of patient to relief pain. Do not apply cold to painful areas. (Scott Curtis, 2021)

Personal Hygiene

Personal hygiene should be ensured from hair to toe through the washing of client's hair with soap, to prevent lice infestation, pediculosis and ringworm. Ensure that patient maintains personal hygiene by assisting patient to bath twice daily in order to prevent body odour. Prevent halitosis and infection in the oral canal by maintaining adequate oral hygiene. Hands and feet must be properly cared for. (UNICEF &WHO, 2021)

Elimination

Serve client with bed pan and urinal on request. Observe amount, odour and colour of stool and urine. If client has urinary retention, warm application on the perineal regions are done and nearby taps are opened so that the sound and sight of the dripping water psychologically

induces urination in the patient. Ensure that the meal of the patient is contains adequate roughage to prevent constipation. (Kozak A, Freitag S, 2017)

Education

Educate patient on how to prevent crisis. Advice and encourage the patient to avoid tight-fitting clothing that constricts circulation. Urge the patient to avoid strenuous exercise which increases oxygen demand and cold temperatures and smoking, which causes vasoconstriction. Encourage patient to take in plenty water to prevent dehydration and reduce blood viscosity. Patient is advised to avoid alcoholic beverages because it triggers the crisis. Educate the patient for prompt treatment signs of infection and intake of fruits and vegetables and foods rich in vitamin, iron and proteins. (The Joanna Briggs Institue, 2017)

Exercise

Patient should be encouraged to undertake mild to moderate active exercises. This helps to promote circulation, prevent thrombosis, embolism, joint stiffness, pneumonia and muscle wasting. Patient is made to sit in bed, walk around his bed and occasionally walk about in the ward. Deep breathing and coughing exercises also helps in expansion of the lungs. The patient can as well be made to do range of motion exercises such as flexion and extension of the joint.

(JAMA, 2018)

Rest and Sleep

Rest and sleep are both ensured to enhance speedy recovery, reduce metabolic activity, conserve energy and relax client. Some of the nursing interventions that was put in place to enhance rest and sleep of the patient includes;

A comfortable bed free from creases and crumps.

Restriction of visitors at the patient's bed side (Journal of Applied Physiology, 2019)

Observation

The client's vital signs such as temperature, pulse, respiration and blood pressure (BP) are monitored every four (4) hours to assess improvement or retrogression in client's condition.

Signs and symptoms such as pain, fever, headache, fatigue complications such as splenic infarction or sequestration, renal failure and acute chest syndrome should be observed for prompt and early treatment or management. Client's level of pain, the quality (sharp, dull, burning), the frequency and factors that aggravate or alleviate the pain should be monitored to help manage and prevent pain or crises.

The abdomen should be assessed for pain and tenderness because of possibility of splenic infarction. The client should be assessed for signs of dehydration by history of fluid intake and careful examination of mucous membrane, skin turgor, and urine output and serum creatinine and blood urea nitrogen values. Client should be observed for signs of infection such as fever due to increased susceptibility for immediate combustion.

The extent of anemia is measured by the hemoglobin level and the haematocrit and the ability of the bone marrow to replenish. Red blood cells as measured by the reticulocyte

count should be monitored and compared with client's baseline values. Intravenous infusion in situ should be monitored to ensure that it is dripping at the prescribed rate. This will help prevent system overload. The patency of the infusion catheter should be ensured fluid intake and output should be monitored by charting to assess fluid and electrolyte status of the client. (Br J Anaesth, 2018)

Protection from Injuries

Due to restlessness, client should be nursed on a low bed or bed with side rails. Chipped bedpans should not be served to client as it can cause injury. All sharps examples, needles, blade, knife etc. should be kept away from patient vicinity to prevent accident. The floor of the ward should always be kept dry to prevent slipping and falling of client. Good visibility should be ensured by nursing client in a bright environment. Tourniquets should be removed after use to prevent obstruction of blood to the body. (Journal of Applied Physiology, 2019)

Education

The client is put in a comfortable position; the nurse also makes herself comfortable by the client's bedside.

Establish a good rapport with client which must be maintained throughout the education.

Assess client and family's knowledge regarding his disease. It is necessary to determine what the client does and does not know before teaching can be planned and build on client's previous knowledge. (Fundamentals of Nursing, 2018)

Teach victims of sickle cell disease to avoid situations that causes such as, infection, dehydration, cold weather, strenuous exercise etc. Crises can often be avoided if the client understands factors that promote crises and can learn to avoid them. They should be educated on the basis of sickle cell disease, sickle cell crises, and genetic impact. Knowledge of the disease helps ensure client compliance with the medical regimen and adherence to preventive measures. (Health Science Report, 2018)

Provide resources for family planning and genetic counseling. Persons and groups with in depth knowledge of family-planning methods help the client identify family-planning methods that conform to the client's cultural and religious values.

Teach client the importance of drinking 4 to 6litres of fluid daily. Dehydration is a primary cause of red blood cell sickling. If client understands this, compliance is more likely. Client and family are educated on the need to inform all health care providers that the client has sickle cell disease before he undergoes any treatment. Client's family is encouraged to take client to the appropriate support groups such as the National Association for Sickle Cell Disease. They are also encouraged to provide the patient with foods which contain adequate amount of folic acid like green leafy vegetables to prevent him from becoming anemic, and to attend the sickle cell clinic regularly. (Fundamentals of Nursing, 2018)

Client should be educated on his medication, the desired effect and the adverse effect.

The client should be allowed to ask questions for clarification by answering question in simple language. Ask client to give you feedback on education given. Thank patient for co-operation.

Pain Management

Client is put in a well prepared bed free from creases and crumbs. Client should be made to assume a position comfortable to him. Adequate rest and sleep should be ensured. Clients

level of pain, the frequency and quality and factors that precipitate pain should be monitored to help manage the pain. Factors that precipitate or aggravate pain should be prevented. Prescribed analgesics such as paracetamol, morphine, should be administered. (Prof. Nagamani T, 2022)

Chemotherapy / Drugs

Drugs are served as prescribed by the physician ensuring it is the right patient, right medication, right dose, right route, right time and the client's right to know his treatment and to refuse treatment. Educate client on the desire and adverse effect of the medications. (Martyn JA, Paliadelis P, Perry C, 2019)

Prevention of Sickle Cell Disease

Primary prevention:

1. Genetic counseling and discussion of the genetic implications of sickle cell disease before marriage.
2. Factual information about his disease and its cause should be provided.
3. Sexually active adolescents should receive contraceptive information. (J Community Genet,2020)

Secondary Prevention:

1. Early detection of sickle cell disease by screening.
2. Precipitating factors such infection, dehydration, exposure to cold weather should be avoided.

3. Parents and client should be taught how to recognize the signs of mild crises such as fever, anorexia, irritability, pain or swelling in the abdomen, joints and extremities.

4. Client / family should be taught the signs of severe crisis such as pallor, lethargy and restlessness, difficulty in awakening, severe pain, high or moderate fever that persist for two (2) days.
5. Patient's diet should be well balanced, rich in proteins, vitamin C and D iron and etc.

6. Encourage intake of copious fluids.

7. Client should be taught stress coping mechanism.

8. Client should be encouraged to take their medication regularly e.g haematinics.

9. Client should avoid self-medication and drugs that cause hemolysis. e.g. aspirin.

10. Client should be advised on periodic check-up. (Scientific World Journal, 2020)

Tertiary Prevention:

1. Family/relatives should be taught that client has the same needs as normal healthy people.
2. Children should be allowed to continue education.

3. Adults should be helped to go back to work if crisis subsides. (Journal of Medicine, 2017)

1.11 Validation of Data

Validation is the act of checking or providing the validity or accuracy of data or something (Simpson, 2017). This helps to keep the data from bias, errors and misinterpretations. This information was collected through observation and interviewing Master A.F. and his family, laboratory investigation and clinical manifestation did coincide with recommended textbooks and other medical publications.

CHAPTER TWO

ANALYSIS OF DATA

2.0 Introduction

Analysis of data is the process of inspecting, cleansing, transforming and modelling data with the goal of discovering useful information, informing conclusions and supporting decision making (Ainsworth, Penne, 2019). This aspect of the care study deals with the critical examination and interpretation of the data collected during the assessment of the patient. It is the phase in which conclusions are made regarding the patient's health status. Patient's health concerns and strengths are identified as well as standards are applied and compared with patterns. The data collected and the analysis made help to arrive at the nursing diagnosis. It also helps to draw patients care plan. Analysis of data is guided by the following headings: comparison of data with standards, patient/ family strength, health problems and nursing diagnoses.

2.1 Comparison of Data with Standard

This is comparing the data collected with that of the standards which includes diagnostic investigations, causes, clinical features, treatment and complication in relation to the information gathered from the literature review to help in establishing a more reliable diagnosis of the patient's condition and to formulate a potent treatment for the patient.

2.2 Diagnostic Tests/ Investigation

Diagnostic tests are approaches used in clinical practice to identify with high accuracy the disease of a particular patient and thus to provide early treatment (Sorana D. Bolboaca,2019).

The following investigations were carried out on Master A.F. to aid in his diagnosis and treatment;

1. Full blood count
2. Urine examination

Table1: Comparison of Test Done on Patient to Literature

Test in literature review	**Test conducted on patient**
1. Full blood count	1. Full blood count was done
2.Sickling test	2.Sickling test was not done
3.Findings of haemolysis	3.Findings of haemolysis was done
4.Physical examination	4. Physical examination was done
5.Family history	5.Family history was taken
6.X ray	6.X ray was not taken
7.Haemoglobin electrophoresis	7. Haemoglobin electrophoresis was not done

From the table above, full blood count and family history which are part of the literature review were ordered to help in managing the patient's condition. Other test which was not

part of the literature review such as urine examination was also done to rule out urinary tract infection. Sickling test and haemoglobin electrophoresis were not done because the patient was a known sickle cell disease patient.

Table 2: Results of Diagnostic Investigations Carried out on patient

The following tables illustrate the comparison of data collected with standard values.

Date	Specimen	Investigation	Results	Normal value	Interpretation	Remarks
26/08/23	Blood	Haemoglobin level estimation	5.0g/DL	Female; 12-16g/dl Male: 12.5-18g/dl children: 14-18g/dl	Client is anaemic	Haem transfusion was done
		Platelet count	376 *10^3/UL	140.0- 440.0 *10^9/L	Above normal	No treatment given
		White blood cell count	7.41 IU/L	3.0-8.0 10^3/uL	Normal	No treatment was given
		Red blood cell count	2.47IU/L	2.5-5.50 10^6/uL	Below normal indicates haemolysis	Folic acid 5mg x 30 was given to stimulate normal erythropoiesis

26/08/23	Urine	Routine examination				
		Appearance	Clear	Clear	Normal	No treatment given
		Blood	Absent	Absent	Normal	No treatment given
		Colour	Amber	Amber	Normal	No treatment given

2.3 Causes of the Illness

With respect to the literature review, patient's condition is hereditary and was passed on to him by his parents. The exact cause of the crisis could not be known, but it could be attributed to the excessive exercise or reduced haemoglobin in blood and infections.

2.4 Clinical Features

The following clinical manifestation presented by Master A.F. are compared with textbook manifestation

Table 3; Comparison of Clinical Features Exhibited by Client with That of Literature Review

Clinical Features According to Literature Review	**Clinical Features Exhibited by Client.**
1.There may be anaemia	1. Anaemia was present
2.There is chest pain and shortness of breath	2. Chest pain and shortness of breath was present
3.Enlargement of the liver and spleen	3. There was no enlargement of the liver and spleen
4.Client may have Fever	4. Client had no fever.
5.Severe abdominal pain	5. Severe abdominal pain was not present
6.There may be severe joint pains	6. Client experienced joint pains
7. Patient may experience loss of appetite	7. Patient experienced loss of appetite
8. There is headache	8. Client had no headache

9.Portrusion of the abdomen	9. Client did not experience protrusion of the abdomen
10. Swelling of the toes and fingers	10. Client had no swollen hands and feet.

From the comparison of table three above, Master A.F. exhibited some of the signs and symptoms mentioned in the literature review like abdominal pains, protrusion of the abdomen especially in children and enlargement of the liver and spleen because patient reported early for treatment and was given the right nursing and medical management

2.5 Treatment given to Master A.F.

Treatment refers to the method of dealing with a disease (Weller, 2014). Treatment given to Master A.F. during his period of hospitalization were;

1.To transfuse one unit of packed cells

2. IV Cefuroxime 750mg tds x 24hrs

3. IV Gentamicin 80mg bds x 24hrs

4. Tablet Paracetamol 1g tds x 5/7

5. IV DNS 1L x 24hrs

6. folic acid 5mg x 30

7. Caps Zincovit 10d x 30

8. Ringers Lactate

9. Dextrose normal saline

10. Tab Cefuroxime 5000mg bds 7/7

Table 4: comparison of patient's medical treatment with literature review

Medical Treatment In Literature Review	**Treatment given to patient**
Blood transfusion	Blood transfusion was given
Folic acid supplement	Folic acid and Zincovit were prescribed
Antibiotics	Cefuroxime and Gentamicin were prescribed
Analgesics	Paracetamol
Corticosteroids	Not prescribed
Iv fluids	DNS, Ringers Lactate, Normal Saline
NSAIDs	Not prescribed

From the comparison of the table above not all the drugs in literature review such as corticosteroids and NSAID's were prescribed for the patient. Patient received right treatment.

Table 5: Pharmacology of Drugs Administered to Patient

Date	**Drug**	**Dosage and Route of Administration in Literature Review**	**Dosage and Route of Administration Given to Client**	**Classification**	**Desired Effect**	**Actual Action Observed**	**Side Effects/ Remarks.**
26/08/23	Cefuroxime	Adult: 750mg/kg. Children: 50mg/kg Route Intravenous or Intramuscular Oral	750mg Route; Iv 500mg bds x 7/7 Through oral route	Cephalosporins Antibiotic	It works by killing and preventing bacteria growth.	Client's infection was controlled.	Drowsiness, bleeding, confusion, seizures, nausea and vomiting. None was observed.
26/08/23	Paracetamol	Maximum 4g per day Route Oral, rectal and IV	1g tds x 5/7 Route	Analgesic/ antipyretic	Has a central analgesic effect that is mediated through activation of descending	Patient had a reduction in pain	Dark urine, skin

Date	Drug	Dosage and route of administration in Literature Review	Dosage and route of administration given to Client	Classification	Desired effect	Actual action observed	Side effects/remarks
					Serotonergic pathways.		Reactions, liver damage following overdose. None of these effects was observed on patient.

Date	Drug	Dosage and route of administration in Literature Review	Dosage and route of administration given to client	Classification	Desired effect	Actual action observed	Side effects/remarks
27/08/23	Gentamicin	Dosage 80mg Route; intravenous Intramascular	80mg once daily Route; intravenous	Aminoglycoside antibiotic	It works by killing and preventing bacteria growth.	Patient's infection was controlled.	Nausea, vomiting, dizziness, diarrhea, hearing loss. None was observed on client.

Date	Drug	Dosage and route of administration in literature review	Dosage and route of administration given to client	Classification	Desired effects	Actual action observed	Side effects/remarks
27/08/23	Dextrose normal saline	Dosage depends on patient's condition. Route; intravenous	5% in sodium chloride (0.9%) x 1 Route ; intravenous	Glucose, sodium and chloride replacement	To restore normal glucose, sodium and chloride level.	Patient's glucose, sodium and chloride level was maintained.	Aggravation of heat, edema, hypothermia. None was observed on client
28/08/23	Ringers lactate	Dosage depends on patient's condition Route ;intravenous	I liter x 8 hours Route; intravenous	Sodium and chloride replacement	To restore normal sodium and chloride level	Patient's sodium and chloride level was maintained	Allergic reaction like itching, dyspnea. None was observed on client.

Date	drug	Dosage and route of administration in literature review	Dosage and route of administration given to client	Classification	Desired effect	Actual action observed	side effects/remark
28/08/23	Folic acid	I month-12years; 2.5-5mg daily 12-18years;5-10mg daily orally	5 mg daily x 30 days orally	Haemopoieitin (vitamin B9, complex group)	It stimulates normal erythropoiesis and increase red blood cell.	There was an increase in red blood cell production.	Bronchospasm, malaise, pruritus rush. None was observed on client.
Date	**Drug**	**Dosage and route of administration in literature review**	**Dosage and route of administration given to client**	**Classification**	**Desired effect**	**Actual action observed**	**Side effects/remarks**
28/08/23	Zincovit	Dose of zincovit tablet is a single tablet in a day.	1 od x 30	Multivitamins with minerals	It helps in increased calcium absorption and strengthening bone. It is also used in blood formation and prevent mineral deficiency.	There was in increase in calcium absorption and blood formation.	Confusion, drowsiness, increased urination, sleeping disturbances, fatigue. None was observed on client.

28/08/23	Intravenous DNS	500mls intravenous	1L x 24 hours intravenous	Dextrose, sodium chloride	It is used to replace blood and fluid loss, dehydration, carbohydrate depletion	Patient's blood and fluid was restored.	Fever, chills, tremors, hypotension. None was observed on client.

2.6 Complications

With reference to the complications listed in the literature review such as hepatomegaly, splenomegaly etc., Master A.F. exhibited no complications throughout the period of hospitalization which resulted in his speedy recovery. Patient did not develop any complications because of the early seeking of medical help and the immediate treatment given to him throughout his period of hospitalization.

2.7 Patient / Family Strengths

Niemiec (2018), defined strength as positive personality qualities that can reflect personal identity, produce positive outcomes and contribute to the greater good. The strength of the patient and family will help the nurse to be able to plan an effective nursing care on the patient.

Specific strengths

1. Patient was able to locate the site of pain

2. Patient was able to express aggravating factors of his breathing difficulty.

3. Patient could follow instructions and participate in his care to enable him to walk without assistance.

4. Patient could report loss of appetite.

5. Patient was able to have an uninterrupted sleep for about 2 hours during the night.

6. Patient can show frequency and intensity of headache.

2.3 Patient/Family Health Problems

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

1. Patient complained of chest pain. (26/08/23)

2. Patient complained of shortness of breath. (26/08/23)

3. Patient could not walk without assistance. (26/08/23)

4. Patient complained of loss of appetite. (26/08/23)

5. Patient could not sleep at night. (26/08/23)

6. Patient complained of headache. (26/08/23)

2.8 Nursing Diagnosis

Nursing diagnosis is a statement of a health care plan problem or the potential for one in the health status of the patient for which the nurse is competent to intervene and treat (NANDA, 2020). This is a component of nursing care which involves formulation of diagnosis from the patients' potential and actual problems which were gathered during the assessment phase. Below are some nursing diagnoses that were made for my patient;

1. Impaired body comfort related to chest pain. (27/08/23)

2. Ineffective breathing pattern related to difficulty in breathing. (27/08/23)

3. Impaired physical mobility related to activity intolerance. (28/08/23)

4. Imbalanced nutrition less than body requirements related to loss of appetite. (28/08/23)

5. Insomnia related to frequent cough. (28/08/23)

6. Impaired comfort (headache) related to reduced blood perfusion to the brain tissues. (28/08/23)

CHAPTER THREE

PLANNING 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, 2014).

Planning for the patient/family is the third stage of the nursing process. It involves the developing of plans designed to produce, correct and prevent the health problems identified during the analysis face. Before one can achieve and implement an effective nursing care plan, the nurse has to draw a care plan with the patient and his family on the various nursing actions. This tends to serve as a basis for the continuity of care for the patient and family in the hospital and at home. In planning, objectives are set and prioritized in short and long-term goals. Goals are developed upon and a plan of care is drawn to resolve the nursing diagnosis within a given period of time

3.1 Objective/ Outcome Criteria

A nursing outcome refers to a measurable behavior or perception demonstrated by an individual, a family, a group, or a community that is responsive to nursing intervention (Herdman & Kamitsuru, 2018).

1. Patient would be relieved of chest pain within 48 hours of hospitalization as evidenced by;

a. Patient verbalizing that he is relieved of chest pain

b. Nurse observing a cheerful facial expression.

2.Patient's breathing pattern will improve within 24hours as evidenced by;

a. Patient verbalizing that he experiences no shortness of breath.

b. Nurse observing that patient breathes without the use of accessory muscles.

3. Patient will be able to walk without assistance within 48 hours of hospitalization as evidenced by;

a. Patient verbalizing that he is able to walk.

b. Nurse observing that patient can walk without assistance.

4. Patient would be able to attain and maintain adequate nutrition within 48 hours of hospitalization as evidenced by;

a. Patient verbalizing that he has gained appetite for food.

b. Nurse observing that patient takes in at least two thirds of 500ml of porridge served.

5. Patient will resume his normal sleep pattern within 24 hours as evidenced by;

a. Patient verbalizing that he had an uninterrupted sleep.

b. Nurse observing that patient had uninterrupted sleep for not less than six hours.

6. Patient's headache would subside within 24 hours as evidenced by;

a. Patient verbalizing that he is relieved of headache.

b. Nurse observing a cheerful facial expression.

Nursing Care Plan

Table six: Nursing Care Plan for Master A.F

Date/ Time	Nursing Diagnosis	Objective/Outcome Criteria	Nursing Orders	Nursing Intervention	Date/ Time	Evaluation	Signature
26/08/23 11:56am	Impaired body comfort related to chest pain.	Patient would be relieved of chest pain within 48 hours of hospitalization as evidenced by; 1. Patient verbalizing that he is relieved of chest pain	1. Reassure client and family. 2. Assess level of pain with pain rating scale	1. Client and family were reassured that their ward is in the hands of competent staffs that will see to it that all pain measures will be put in place to relieve pain. 2. Client's pain was assessed for its severity with the pain rating scale.	27/08/23 11:56am	Goal fully met as client verbalized the absence of pain.	A.G.A

		2. Nurse observing a cheerful facial expression	3. Monitor and record vital sings. 4. Keep environment stress free. 5.Ensure adequate IV hydration of patient 3. Serve prescribed analgesics.	3. Vital signs were monitored and recorded. 4.Environment was kept stress free by a. Doing simple daily task b. Providing relaxation techniques. c. Surrounding client with family and friends. d. Listening to client and hearing him out. 4. Patient was hydrated with intravenous fluids. (400mls) 5. Pain medication (Paracetamaol 1g)was administered as prescribed to help relieve pain.		2. Nurse observed no signs of pain on patient's face.	

Date /Time	Nursing Diagnosis	Objective/Outcome Criteria	Nursing Orders	Nursing Intervention	Date/ Time	Evaluation	Sign.
26/08/23 11:20am	Impaired physical mobility related to activity intolerance.	Patient will be able to walk within 48 hours as evidenced by; 1.Patient verbalizing that he is able to walk without assistance 2.Nurse observing that patient can walk without assistance.	1. Reassure client. 2. Assist client to walk. 3. Assist patient to perform range of motion exercise. 4. Ensure a complete bed rest. 5. Provide safe environment for client. 6. Helping client to get out of the edge of the bed.	1. Patient was reassured that appropriate measures will be taken to help him walk well. 2.Patient was assisted to walk by the use of a walker 3. Patient was assisted to perform range of motion exercise. 4. Patient was asked to stay in bed unless he needed to undertake something essential that required him not to be in bed.. 5. Environment was made safe for client to prevent falls and injury. 6. Client was assisted to get out of bed.	28/08/23 11:20am	Goal fully met as patient verbalized that he is able to walk without assistance and nurse observed that patient was able to walk well without assistance.	A.G.A

Date/ Time	Nursing Diagnosis	Objective/ Outcome Criteria	Nursing Orders	Nursing Intervention	Date/ Time	Evaluation	Sign.
26/08/23 11:56am	Imbalanced nutrition less than body requirements related to loss of appetite.	Patient would be able to regain his normal eating habit in 48hours as evidenced by: a. Patient verbalizing that he has gained appetite for food. b. Nurse observing that patient takes in at least two thirds of 500ml of porridge served.	1.Reassure patient and family 2. Assess nutritional status of patient. 3. Maintain patient's oral hygiene twice a day. 4. Serve client with meals of his choice	1.Patient was reassured that appropriate measures will be taken to help him regain a normal eating habit. 2. Nutritional status of patient was assessed by measuring the weight and height of client, performing a physical and mental examination, taking note of food allergies and analyzing his dietary information. 3. Patient's oral hygiene was maintained twice daily. 4. Client was served with meals of his choice. For instance, client required to served with boiled yam with sauce and it was served while he was in bed and assisted to eat.	28/08/23 11:56 am	Goal fully met as patient verbalized that he has gained appetite for food and nurse observing that patient was able to eat at least two thirds of meal served.	**A.G.A**

			5.Remove all nauseating objects from environment. 6.Serve meals in an appetizing manner	5.Nauseating objects were removed from environment 6. Meals were served in an appetizing manner.			

Date/ Time	Nursing Diagnosis	Objective/ Outcome Criteria	Nursing Orders	Nursing Intervention	Date/ Time	Evaluation	Sign.
26/08/23 12:00pm	Insomnia related to frequent cough	Patient would be able to resume his normal sleeping pattern within 24 hours as evidenced by; a. Patient verbalizing that he had uninterrupted sleep. b. Nurse observing that patient had uninterrupted sleep	1. Reassure patient and family. 2.Provide comfortable bed 3.Help Patient to assume a comfortable position to enhance sleep	1. Patient was reassured that measures are being put in place to help him have a sound sleep. 2. Comfortable bed was made for patient by using clean sheets free from creases and crumbs. 3. Patient was positioned(lateral) in a way to ensure adequate relaxation.	27/08/23 12:40pm	Goal was fully met as 1.Patient verbalized that he had uninterrupted sleep and nurse observed that patient had uninterrupted sleep for not	**A.G.A.**

		for not less than 6 hours.	4. Organize nursing care to minimize sleep interruption. 5. Regulate how patient receive visitors to ensure good sleep. 6. Administer prescribed cough syrup to relief cough	4. All nursing activities were done at a go, this promoted minimal interruption in sleep. 5. Visitors were not allowed to see patient when he was asleep. 6. Prescribed mucolytic (Carbocisteine) 250mg was served to relief cough		less than 6 hours.	

Date/ Time	Nursing Diagnosis	Objective/ Outcome Criteria	Nursing Orders	Nursing Intervention	Date/ Time	Evaluation	Sign.
27/08/23 8:00am	Impaired comfort (headache) related to increased intracranial pressure.	Patient's headache will subside within 24 hours as evidenced by; a. Patient verbalizing that he is relieved of headache. b. Nurse observing that .patient have a cheerful facial expression and looked relaxed in bed	1.Reassure patient 2. Assess level of pain. 3. Apply warm compress to the head 4.Ensure complete bed rest. 5. Encourage patient to take in fluids adequately. Serve prescribed analgesics	1. Patient was reassured that measures will be taken to help him to be relieved of headache. 2. Patient pain was assessed using the numerical rating scale. (0-10) 3.Application of warm compresses were ensured. 4.Patient was encouraged to take enough rest 5. Patient was encouraged to take in copious fluids like water adequately. 6. Prescribed medication of tab paracetamol 1g was served.	28/08/23 8:00am	Goal fully met as patient verbalized that he has been relieved of headache and nurse observed that patient had cheerful expression and was relaxed in bed.	**A.G.A**

CHAPTER FOUR

IMPLEMENTATION OF PATIENT/FAMILY CARE PLAN

4.0 Introduction

Implementation as the giving of care in relation to defined nursing interventions and goals (Weller, 2014). This chapter forms part of the patient/family care study. It gives a vivid account of the actual nursing care that was given to the patient/family from the day of admission until discharge based on the health problems identified. It also deals with follow up visits/home visits to ensure continuity of care. Implementation is not complete until documentation of each intervention, the time it occurred, patient's response and any other pertinent information has been made. Implementation of patient and family care plan starts from the day of admission until time of discharge. It includes the routine nursing cares such as checking of vital signs, assisting patient to bath, mouth care and bed making.

4.1 Summary of the Actual Nursing Care Rendered to Patient/Family

The nursing care of Master A.F. started on the 26th August, 2023 in the males ward and continued until discharged on 30th August, 2023. The nursing care rendered to my patient was aimed at his physical, psychological and spiritual needs. For organizational purpose, the summary of actual nursing care rendered to the patient/family has been outlined on daily basis.

First Day of Admission

On 28th August, 2023 at 11:00am, Master A.F was brought to the Male's Ward accompanied by his parents and a nurse from the Emergency Unit. They were warmly welcomed to the ward and offered seats to make themselves comfortable. Patient's hospital ID (AAA 2085) number was

keyed into the computer system of the hospital (LHIMS). After a few seconds the patients' identity was confirmed. The patient was then placed and made comfortable in a bed. Name, sex, age, hospital ID number and occupation were all recorded in the admission and discharge book. The nurse who accompanied the patient stated that, a unit of blood had already been served for the patient whiles at the emergency unit and therefore the unit of blood which was found on the treatment plan was the second one ordered by the emergency doctor to be given to the patient at the male ward. Vital signs were checked and recorded accurately as follows:

1. Temperature 35.6^{o}C
2. Pulse - 54bpm
3. Respiration - 22cpm
4. Blood Pressure 94/54mm/Hg
5. SPO2 – 89%

Master A.F was examined from head to toe and the examination revealed chest pain, general body weakness, shortness of breath, headache and also inability to walk without assistance. He was reassured of a competent healthcare to allay his anxiety. Patient as well as his parents who were with him were introduced to the staff present as at that time. The hospital's policies on visiting hours which are 5:00am to 6:00am and 4:00pm to 5:00pm, time for morning rounds by doctors were also made known to them and bill payment were discussed.

The following treatment plan were ordered:

1. To transfuse one unit of packed cells

2. Intravenous Cefuroxime 750mg tds x 24 hours

3. Intravenous infusion Gentamicin 80mg bds x 24 hours

4. Tablet paracetamol 1g tds

5. Intravenous infusion DNS 1L x 24hours

6. Folic acid 5mg x 30

7. Tablet cefuroxime 500mg bds x 7/7

8. Capsules zincovit 10d x 30

9. Ringers Lactate 500mls x 24hrs

Patient had the following laboratory investigations ordered:

1. Full Blood Count

2. Urine examination

Master A.F got to know me after I introduced myself as a final year student of Holy Family Nursing and Midwifery Training College who would want to take him and his family for my care study. The patient as well as his family were told that the care study is a requirement for the award of a Diploma in Registered General Nursing by the Nursing and Midwifery Council of Ghana. During our conversation I made sure to explain to them what was involved in the case study especially on the issue of keeping whatever information provided to me confidential. I latter on explained to them that I will be visiting them at least three times as part of what the study demands. They gave their consent and permitted me to use them for the case study after they had understood clearly all the full details given to them about the study. We began with the discharge planning with the involvement of the relative and they were made to understand that

there would still be continuity of care even after he was well and discharged to the house. A brief and concise education was given to the patient as to why he was showing the signs and symptoms associated with his condition and whatsoever care and treatment he was to expect from the healthcare team. I decided to use Master A.F for the study because I really want to know and understand what his condition (Sickle cell anaemia) entails; d, diagnosis, treatment regimen and the specific nursing management and nurse them holistically until they are discharged home and continue thereafter, in the course of that, I will study his condition to write the care study.

On admission at 11:10am patient complained of chest pain hence, a nursing diagnosis of Impaired body comfort related to chest pain was formulated. An objective was set to relieve patient of joint pain within 48 hours. The following nursing interventions were then implemented; Patient was reassured that appropriate measures will be taken to help him to be relieved of chest pain, patient's pain was assessed using the numerical pain rating scale, patient was hydrated with intravenous fluid of normal saline 4L, prescribed medication of intravenous infusion paracetamol 1mg was administered.

Patient complained of shortness of breath at 11:20 am and nursing diagnosis of Ineffective breathing pattern related to difficulty in breathing was formulated. An objective was set to relieve patient of dyspnea within 24 hours. The following nursing interventions were then implemented; Patient was placed in a comfortable position (fowler's), adequate ventilation was ensured, patient was encouraged to put on light clothes, patient's oxygen saturation level was monitored every hour. Emotional support was given to patient and patient was reassured to help regain a normal breathing pattern.

At 11:36am, patient complained of headache hence a nursing diagnosis of impaired comfort was formulated. (Headache) related to reduced blood perfusion to the brain tissues was formulated. An objective was set to relieve patient of headache within 24 hours. The following nursing interventions were then implemented; Patient was reassured that appropriate measures will be taken to help him relieved of the headache, patients pain was assess using the numerical pain rating scale (0-10), application of warm compresses were ensured, patient was asked to stay put in bed unless he needed to undertake something very essential that required him to not be in bed, patient was encouraged to take in copious such as water fluids adequately to correct dehydration and prescribed medication of intravenous infusion paracetamol 1g was served.

At 5:00pm, patient took his supper and was bathed by his mother in bed afterwards. At 6:00pm, vital signs were checked and recorded as indicated in the appendix. At 10:00pm, vital signs were checked and recorded, due to medications that were administered. Patient slept around 12:00am.

Second Day of Admission (27th August, 2023)

Patient woke up at 2:00am. Around 5:30am he was assisted in carrying out his personal hygiene needs. At 7:00am I went to the ward to continue with my nursing care for Master A.F, his morning vital signs had already been checked at 6am and recorded as indicated in the appendix.

At 7:40am, assessment revealed that patient had difficulty sleeping therefore a nursing diagnosis of Insomnia related to frequent cough was formulated. An objective was set to help patient resume his normal sleeping pattern within 24 hours. The following interventions were implemented; patient was reassured that measures are being put in place to help him have a

sound sleep. Comfortable bed was made for patient by using clean sheets free from creases and crumbs, patient was positioned in a way to ensure adequate relaxation, all nursing activities were done at a go, this promoted minimal interruption in sleep, visitors were not allowed to see patient when he was asleep, prescribed mucolytic (Carbocisteine) 250mg was prescribed. Patient was reviewed that morning at 9:00am and the plan was that the patient should continue his treatment with the addition of Carbocisteine 250mg because the patient presented with cough that morning. Patient took porridge and bread as breakfast around 10:00am.

At 11:20am, evaluation of set objective on 26th August, 2023 to help patient's headache subside was done and goal was fully met as patient verbalized that he is relieved of headache and nurse observed that patient had a cheerful facial expression and relaxed in bed.

At 11:25am, evaluation of set objective on 26th August, 2023 to help patient regain his normal breathing pattern was done and goal was fully met as patient verbalized that he no longer has shortness of breath and nurse observed that patient breathed without difficulty.

At 1:00pm, patient was served with his lunch which was jollof rice.

At 2:00pm, his vital signs were checked and recorded as indicated in the appendix.

Patient was encouraged to take his super at 5:00pm.

At 6:00pm vital signs were checked and recorded as indicated in the appendix.

At 10:00pm, vital signs were checked and recorded. Patient slept around 10:30pm.

Third Day Of Admission (28thAugust, 2023)

On the third day of admission, patient woke up at 5:20am, he was assisted in brushing his teeth, had his bath and emptied his bowel. Report from the night nurses read that he was able to sleep well upon the measures put in place. Vital signs checked and recorded at 6:00am as indicated in the appendix.

At 7:40am evaluation of set objective on 26th August 2023 to help patient resume his normal sleeping pattern was done and nurse observed that patient had uninterrupted sleep for not less than 6 hours.

At 8:00am, patient complained of loss of appetite hence the nursing diagnosis of Imbalanced nutrition (less than body requirement) related to loss of appetite was formulated. An objective was set for patient to be able to attain and maintain adequate nutrition within 48 hours of hospitalization. The following interventions were implemented; Patient was reassured that measures will be taken to restore adequate essential nutrients, the nutritional status of patient was assessed by observing clients eating habit, patient brushed his teeth twice daily, meals were planned with patient by taking into account his preferences, patient was educated on the need to take in nutritionally rich diets, procedure was documented in nurse's notes. Patient was reviewed that morning at 9:00am and the plan was that the patient should continue his treatment.

He took tea with bread as breakfast at 8:10am.

At 9:22am patient was reviewed and plan was to continue all medications

.At 11:10am, evaluation of set objective on 26th August, 2023 to relieve patient of joint pain was done and goal was fully met as patient verbalized that he is relieved of joint pain and nurse observed that patient had a cheerful facial expression.

At 1:00pm, patient took his lunch which is boiled yam with groundnut soup plus some bananas.

At 2:00pm, his vital signs were checked and recorded as indicated in the appendix. Patient was made comfortable in bed and he slept around 10:30pm.

Fourth Day of Admission (29th August, 2023)

On the fourth day of admission, patient woke up at 5:30am. He performed his personal hygiene with the assistance of his mother. The night nurses reported that patient was able to sleep well upon the measures put in place. Vital signs checked and recorded at 6:00am as indicated in the appendix.

Patient took his breakfast at 8:40am which was 'hausa' porridge with bread. During the ward rounds, patient did not complain about any problem so the doctor ordered us to continue with treatment. All medications were served at due times.

At 1:40pm, patient took his lunch which was jollof rice with some vegetables and pineapple.

At 2:00pm, his vital signs were checked and recorded as indicated in the appendix.

At 10:00pm, vital signs were checked and recorded. Patient was made comfortable in bed and he slept around 10:30pm.

Fifth Day of Admission (30th August, 2023)

I went to continue the nursing care rendered to patient at 7:35am. Patient woke up feeling a lot better. Report from the night nurses indicated that the Patient was able to sleep well. I greeted Master A.F, he responded with a cheerful facial expression. He had wishes of going home with him yesterday. His mother who is always by his side too was much elated because they were about leaving the hospital to their home. I was happy myself to see and hear Master A.F talking about the food he plans of eating on his arrival to their home. He Indeed looked lively. His early morning vital signs had already been checked and recorded at 6:00am as indicated in the appendix.

Patient took hausa porridge and bread in the morning at 8:30.

During the ward rounds, patient was discharged his condition was stable and he had no complains. Patient was prescribed Tablet Folic acid 5g daily for 30 days was to be taken home. His mother was informed and the bills were assessed to be paid. Payment was made for medications which were not covered by National Health Insurance Scheme. Patient and relative were 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. He was educated on the disease condition (sickle cell anemia). He was told to always stay hydrated and avoid excess cold weathers. Patient was made aware of the indications of the

drugs given, side effects and adverse effects. He was encouraged to adhere to the main Out Patient Department. Education on the need for review was done to ensure patient reports on the said date. The need to continue with medications were emphasized. Patient's belongings were packed. Necessary documents were recorded into the admission and discharge book as well as the ward state. Patient and the family bid the ward inmates and staff goodbye. I decontaminated the bed he was admitted on after his departure.

4.2 PREPARATION OF PATIENT/FAMILY FOR DISCHARGE AND REHABILITATION

Preparation for discharge commenced from the time of admission at the hospital, at 11:00am 26th August,2023 to 30th August, 2023, which happened to be the last day. Information was provided to both patient and family that staying in the hospital was for a short period of time. Patient and family were educated on the causes, clinical features, treatment and management of sickle cell anemia were reemphasized. This was aimed at helping the patient and relatives in the provision of adequate care. Patient was educated to avoid over the counter medications. Patient was encouraged to take in food rich in the essential food nutrients. Patient and his family were also educated on the need to practice personal hygiene in order to improve immunity. The need to continue with 4told about the next two home visits which will be carried out to check on his state of health. Patient belongings were packed. Necessary documents were recorded into the admission and discharge book as well as the ward state.

4.3 First Home Visit (28th August,2023)

My first home visit was made on the 28th August, 2023 while patient was on admission. Arrangement was made to visit Amasu where the patient resides with his parents and siblings. The main reason of this visit was to know the patient's residence and the environment in which he lives, in order to verify the information provided to me and also to identify any nearest health facility at the area for possible referral, where I got to introduce myself to the nurse at the Health Centre of Amasu. I made her to know of my intention to hand over the patient to her when I terminate my care. Patient and relative were informed about my intention to visit their home whiles he was still on admission. Master A.F's mother gave me direction on the day before visitation to their home and later on gave me the contact of her daughter who happens to be the first born so that she will continue to give me direction when I arrive in Amasu on the said date. I left Dormaa around 10am and alighted at the patient's residence around 11:05am. I used a taxi as a medium of transportation, I was informed by the sister that, after I alight in Amasu I should ask of Abrefa Sawmill industry and that their house is not far from the there.

After my arrival, she directed me to take a couple of steps ahead after which she caught up with me on the way and sent me to their house. She took me to their living room, called her dad and they both welcomed me and since they had already met me at the hospital, there was a little need for a thorough introduction of myself. I was asked of my mission by his father and I explained every detail of my reasons stated above. The house is a self-contained one with 3 rooms. The house is built with blocks, painted yellow and blue, roofed with aluminium sheets, has windows which were nicely half way opened with their curtains raised. Their source of water is pipe-borne water in the house and they have electricity. They have a plastic container used to store water which was well covered with a lid. They have bath and toilet in the house. They have a dustbin

provided to them by the Zoomlion which is well covered and emptied every morning into zoomlion containers. The environment was neat and conducive. The patient lives in the house with his parents and three siblings. Observations made in patient's room revealed a clan and well organized room, a ceiling fan, bed a good source of light. I reassured his relatives of competent nursing care. I had an extensive interaction with patient relatives and through that I was able to confirm most of the information I have been given back in the hospital.no identifiable factor to patient's condition was made during the visit. They thanked me and assured me that they will maintain a clean environment. I left the residence of the patient at 2:20pm and got to the hospital at 3:30pm. Comments made on the condition of the house, education and recommendations were repeated to Master A.F and his mother and they also promised to do everything in their power to ensure that what I told them would be enforced.

4.3.2 Second Home Visit (9th September, 2023)

This visit was made on 9th September, 2023. I made this visit to find out how patient was doing and to see if he was following his treatment regimen. On assessment patient windows were opened as they were during my first home visit. The environment was neat and they were commended. His medications were inspected and he was taking them as prescribed. The importance of raking drug the benefits of keeping the appointment. Patient and family were thanked for their cooperation and permission was sought to leave. I promised them of another visit which will be the last one. Patient's elder sister accompanied me to the station as ordered was reinforced to patient and family. Education on good nutrition was stressed on to help protect

patient and family from any diseases. I reminded them of the review they were supposed to come for and after which I took a taxi and continued my journey home.

4.3.3 Review (21st September,2023)

On 21st September,2023 patient came to the Out Patient Department of Dormaa Hospital at 9:34am with his mother I was called by his mother after their arrival by the time I caught up with them they had already activated their card at the hospital system's office. The vital signs were checked and recorded as follows;

Temperature-37.0℃

Pulse-92bpm

Respiration-20cpm

Blood pressure-110/60mmHg

SPO2-96%

Patient was attended to by a medical officer. Patient did not make any complains. He was looking much better especially when his haemoglobin recorded 9.5g/DI. He was advised not to delay to the hospital if he should encounter any health problem. Patient and mother were educated on the importance of good nutrition, adhering to his medications and measures to prevent crisis. Patient and mother were assured of their third home visit.

4.3.4 Third Home Visit (4th October, 2023)

I made my third home visit on 4th October, 2023 with a nurse at the community Health Centre of Amasu, that is patient's place of residence. My main aim was to see how patient was coping in the house even after his discharge and to see the general condition of the family and then to terminate my care. I was welcomed, offered a seat and given water upon my arrival. I went ahead to tell patient and family that I was terminating my care and then told them that I was handing over patient to the nurse. I therefore introduced the nurse to patient and family. I equally encouraged patient to continue seeing that his health is important both to is family and the world at large so he should desist from anything that will contribute to him being anemic with his condition. On observation, their environment was cleaned as I saw during my previous home visits.

I also made then understand that whenever he starts to notice any abnormal signs, he should do well to visit the hospital at once without delay. I thanked the patient and the family for the opportunity they gave to me to render care to Master A.F. They also thanked me and then I asked for permission to leave.

CHAPTER FIVE

EVALUATION OF CARE RENDERED TO PATIENT/FAMILY

5.0 Introduction

Evaluation in simple terms is the outcome of nursing actions against the anticipated goals and it is the final step in the nursing process (Hinkle & Cheever,2018).

5.1 Statements of Evaluation.

After a thorough assessment and interaction with Miss A.E and relatives, six problems were identified which were resolved and relieved through nursing orders that were carried out. The outlined evaluations are as follows;

1. **Patient was relieved for chest pain**

At 11:00am on 26th August,2023 which happened to be the day of admission, patient complained of chest pain, hence, nursing diagnosis of impaired body comfort related to chest pain was formulated. An objective was set to relieve patient of chest pain within 48 hours. The following nursing interventions were then implemented; Patient was reassured that appropriate measures will be taken to help relieved of the chest pain, patient pain was assessed using the numerical pain rating scale (0-10), patient was hydrated with intravenous fluid of normal saline 4L, prescribed medication of Intravenous paracetamol 1mg was administered.

On 27th August, 2023 at 11:56am, evaluation of set objective on 26th August,2023 to relieve patient of chest pain was done and goal was fully met as patient verbalized that he is relieved of chest pain and nurse observed that patient had a cheerful facial expression.

2. **Patient regained her normal breathing pattern**

On 26th August, 2023 at 11:25am, assessment revealed that patient experience shortness of breath therefore a nursing diagnosis of ineffective breathing pattern related to difficulty in breathing was formulated. The following interventions were implemented; oxygen was administered, patient was reassured that appropriate measures will be taken to help him regain his normal breathing pattern, patient's oxygen saturation level was assessed every hour, breathing pattern was assessed during periods of activities and emotional support was provided to patient.

On 27th August, 2023 at 11:25am, evaluation on the set objective on 26th August,2023 to help patient regain his normal breathing pattern was achieved and goal fully met as patient verbalizing that he no longer has shortness of breath and nurse observing that patient was breathing without difficulty.

3. **Patient was able to walk without assistance.**

On 26th August,2023 at 11am, assessment revealed that patient could not walk without assistance therefore a nursing diagnosis of impaired physical mobility related to activity intolerance was formulated. The following interventions were implemented; patient was assisted to perform range of motion exercise, patient was reassured that appropriate measures will be taken to help him walk without assistance, patient was encouraged to have enough bed rest, safe environment was provided for patient to prevent falls and patient was also provided with emotional support.

On 28th August,2023 at 11 am, evaluation on the set objective on 26th August, 2023 to help patient walk without assistance was achieved and goal fully met as patient verbalizing that he is bake to walk without assistance and nurse observed that patient is able to walk without assistance.

4. **Patient attained and maintained his nutritional level**

On 27th August, 2023 at 8am, patient complained of loss of appetite hence a nursing diagnosis of imbalanced nutrition less than body requirements related to loss of appetite was formulated. An objective was set to help patient attain and maintain his nutritional level within 48 hours of hospitalization. The following interventions were implemented; patient was reassured to help him attain and maintain his nutritional level, the nutritional level of patient was assessed by observing client eating habits, patient's oral hygiene was maintained at least twice a day, meals were planned with patient and dietician by taking his preferences into consideration, nauseating objects were removed from environment of patient to stimulate appetite, procedure was documented in nurses' notes.

On 29th August,2023 at 8am, evaluation on the set objective on 27th August, 2023to help patient meet his nutritional needs was achieved and goal fully met as patient verbalizing that he has gained appetite for food and nurse observing that patient was able to eat at least two thirds of meal served.

5. **Patient regained his normal sleeping pattern.**

On 26th August, 2023 at 8pm, patient complained of difficulty I sleeping at night, hence the nursing diagnosis of insomnia related to frequent cough was formulated. An objective was set for patient to resume his normal sleeping pattern within 24 hours. The following interventions were implemented; patient was reassured that measures are being put in place to help him have a sound sleep, comfortable bed was made for patient by using clean sheets free from creases and cramps, patient was positioned in a way to ensure adequate relaxation, all nursing activities were

done at a go, this promoted minimal interruption in sleep, visitors were not allowed to see patient when he was asleep, prescribed mucolytic (carboncisteine 250mg) was served to relief cough.

On 27th August,2023 at 8pm, evaluation of the set objective on 26th August, 2023 to help patient resume his normal sleeping pattern was done and goal was fully met as patient verbalized that he had uninterrupted sleep and nurse observed that patient had uninterrupted sleep for not less than 6 hours.

6. Patient was relieved from headache.

On 27th August,2023 at 8:00am patient complained of headache hence a nursing diagnosis of impaired comfort (headache) related to reduced blood perfusion to the brain tissues was formulated. An objective was set to relieve patient of headache within 24 hours. The following nursing interventions were then implemented; Patient was reassured that appropriate measures will be taken to help him relieved of headache, patient's pain was assesses using numerical pain rating scale (0-10), application of warm compress were ensured, patient was asked to stay put in bed unless he needed to undertake something very essential that required him to not be in bed, patient was encouraged to take in copious fluids such as water adequately to correct dehydration and prescribed medication of iv paracetamol 1g was served.

On 28th August, 2023 at 8:00am, evaluation of set objective on 27th August, 2023 to help patient's headache subside was done and goal was fully met as patient verbalized that he is relieved of headache and nurse observed that patient and a cheerful facial expression and relaxed in bed.

5.2 Amendment of Nursing Care plan for partially met and unmet outcome criteria.

The care plan was not amended because based on individualized care plan, all goals that were set were fully achieved with the support that came from members of the health team and cooperation of the patient/family.

5.3 Termination of Care

My last home visit to patient and his family on 4th October,2023. The reason of the visit was to determine whether my client's had improved after review and to finally terminate care. I encouraged patient to continue to see to it that his health is important both to his family and the world at large so he should see to desisting himself from anything that will make him prone to being anemic with his condition. On observation, their environment was clean as I saw during my previous home visits.

The windows were nicely opened as well as curtains too were nicely folded. I also made them understand that whenever he starts to notice any abnormal sigh he should do well to visit the hospital at once without delay. I informed the parents to continue the care as I handed over their son, Master A.F to them. I thanked the family for the opportunity they gave me to render care to Master A.F. the patient and family also thanked me as I asked for permission to leave.

CHAPTER SIX

SUMMARY AND CONCLUSION

6.0 Introduction

Summary is a brief account giving the main point to a health problem (Hornby, 2019). This is the last stage of the patient and family care study and it contains a summary of all the care rendered to Master A.F and family throughout the period of hospitalization to the time the care was terminated.

6.1 Summary

Master A.F, a 17year old boy was admitted to the Male Medical ward through the Accident and Emergency Unit of Presbyterian Hospital, Dormaa on the 26th August, 2023 at 11:25am with the diagnosis of sickle cell anemia in known sickle cell disease. On admission, he presented with chest pain and dyspnea and therefore oxygen therapy was set up for him. Patient was educated on sickle cell disease and its management. Patient was also assisted in maintaining his personal hygiene, rest and sleep, nutrition, and exercises were also ensured. During Master A.F's stay at the ward, six health problems were identified and they were all managed through nursing interventions such as pain assessment, intravenous hydration, application of warm compresses, checking of vital signs, providing emotional support, oral hygiene, planning of activities in order not to disturb patient, education of patient and family on condition and many more.

The following drugs were used in the treatment of the condition:

1.To transfuse one unit of packed cells

2. IV Cefuroxime 750mg tds x 24hrs

3. IV Gentamicin 80mg bds x 24hrs

4. Tablet paracetamol 1g tds x 5/7

5. IV DNS 1L X 24hrs

6. Folic acid 5mg x 30

7. Caps zincovit 10d x 30

8. Ringers lactate 500mls x 24hrs

9. Tab cefuroxime 500mg bds x 7/7

Patient was discharged on the 30th August, 2023 after recovering successfully. On 21st September, 2023 patient reported for review. This was to purposefully find out if patient was going by the advice and all the education given to improve his health and standard of living. Three home visits were made. On 28th August, 2023 whiles the patient was still on admission, the first home visit was done. On 9th September, 2023 the second home visit was embarked on as well. The last home visit was done on the 4th October,2023. The care of Master A.F and his family were terminated on the last visitation day.

6.2 Conclusion/Recommendation

According to Hornby (2010), conclusion is the end or finishing something. In conclusion, the patient and family care study has broadened my knowledge on sickle cell disease in relation to

holistic nursing care of the patient and family. It has improved my interpersonal relationship with my patient and his guardian. I am therefore convinced that the knowledge I have acquired through this patient and family care study has really prepared me adequately to give holistic and comprehensive care to any patient who would be put in my care using the nursing process approach. I recommend that all patients should be nursed using the nursing process approach so as to ensure effective care and recovery of patients.

APPENDIX

Table 7 Vital Signs Chart of Master A.F

Date	Time	Blood pressure(mmHg)	Respiration (cpm)	Pulse (bpm)	Temperature (^oC)	SPO_2(%)
26/08/23	11:00am	94/54	22	54	35.6	89
	2:00pm	110/60	26	95	37.9	90
	6:00pm	130/50	24	114	37.0	96
	10pm	120/70	18	98	37.2	93
27/08/23	6am	110/60	25	91	37.2	99
	10am	110/70	26	103	37.1	98
	2pm	104/70	28	131	37.0	90
	6pm	110/50	22	131	37.2	96
	10pm	110/50	21	95	36.4	95
28/08/23	6am	100/60	22	92	37.2	99
	10am	120/60	24	94	37.6	90
	2pm	120/50	28	112	37.0	94
	6pm	110/50	25	112	37.1	90
	10pm	120/60	25	100	35.8	98
29/08/23	6am	110/60	20	115	37.0	91
	10am	130/70	22	107	37.2	90
	2pm	100/60	19	87	36.7	90
	6pm	100/60	20	115	37.0	91

	10pm	110/60	26	87	37.1	93
30/08/23	6am	120/70	19	93	37.0	95
	10am	130/60	32	111	37.3	94

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SIGNATORIES

THE STUDENT NURSE

AME: AKUETTEH GEORGINA AKWELEY

IGNATURE.....

)ATE..... 7th June, 2024.....

. THE WARD INCHARGE, MALES WARD OF DORMAA PRESBY HOSPITAL

NAME: MR. AYITEY EMMANUEL

SIGNATURE.....

DATE..... 12/06/2024 .....

ACADEMIC COORDINATOR NURSING HOLY FAMILY NURSING AND MIDWIFERY TRAINING COLLEGE BEREKUM

3. **THE SUPERVISOR, HOLY FAMILY NURSING AND MIDWIFERY TRAINING COLLEGE, BEREKUM**

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DATE..... 14TH JUNE, 2024

4. **THE PRINCIPAL, HOLY FAMILY NURSING AND MIDWIFERY TRAINING COLLEGE, BEREKUM.**

NAME: MONICA NKRUMAH

SIGNATURE.....

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