HOLY FAMILY NURSING AND MIDWIFERY TRAINING COLLEGE, BEREKUM

A PATIENT/FAMILY CENTERED CARE STUDY MALARIA

SAM SOLOMON

4120210142

A PATIENT/FAMILY CENTERED CARE STUDY ON MALARIA SUBMITTED TO THE NURSING AND MIWIFERY COUNSIL OF GHANA IN PARTIAL FULFILMENT FOR THE AWARD OF THE LICENSE TO PRACTICE AS A REGISTERED GENERAL NURSE

AUGUST, 2023

PREFACE

The scope of nursing keeps changing with each day. Nurses, in the past, were seen or perceived as submissive and physicians' assistants. The reason for this perception was somehow due to ingrained social values rather than any inherent characteristics of the nursing practice.

In the olden days, nursing practice was based on intuitions, observations and experience and was focused towards disease and illness. Today, however, 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.

Nursing continue to gain autonomy and respect as team members of the health care depend on their professional body of knowledge which was not done in the past. In addition, it is worth mentioning that nursing now employs the use of computers to ensure effectiveness and efficiency and to reduce the workload of nurses. The introduction of the patient's right has enlightened patients on what they are to expect from nurses and health care givers at large. This, in effect, has helped to upgrade the standards of nursing through competency and rendering of quality individualized holistic care to the patient.

The patient family care study entails rendering care to a patient and his/her family. It involves the interaction between the patient/family and health team within a specific time frame until patient's care is terminated.

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 its 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.

For confidentiality sake patient's name will be in initials. The study is designed to enable 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 fields of health in the care of the patient.

It help broadens the knowledge of the student nurse in terms of a particular disease condition and its management, and build the confidence of the student nurse in the discharge of his/her duties.

Finally, it builds a good cordial relationship between the nurse and patient /family as well as other members of the health team. To ensure confidentiality and anonymity, patient/family initials were used:

ACKNOWLEDGEMENT

The writing of this patient and family care study would not have been successful without the help of some individuals and groups. I therefore find it necessary to express my sincere gratitude to them for their contribution in diverse ways.

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

I also wish to extend my gratitude to Miss A.K.A and her family for their co-operation that helped me to write this script.

My next gratitude goes to my dear parents, Mr. George Sam and Mrs. Monica Mensah and my lovely siblings, Derrick Sam, Bright Sam, Alex Nana Sam, Gifty Sam, Ebenezer Sam and Kelvin Sam for the financial, emotional, psychological and spiritual support throughout my education.

I am thankful to Livingstone Kwakye and Adelaide Opoku Yeboah who help me in a way to complete the writing of this script. My heartfelt gratitude also goes to RGN23 class and all my friends not forgetting my roommates and loved ones, most especially Maxwell, Derrick, Belinda, Vanessa, Cindy and Henry, May the good Lord bless them all.

My next gratitude goes to all the staff of Nursing and Midwifery Training College, Berekum especially my supervisor, Mrs. Antoinette Effum for her relentless efforts to making this study a great and easy one for me.

I wish also to express a heartfelt appreciation for the medical officer of the Paediatric ward, the nurse-in-charge and the entire staff of Holy Family Hospital, Berekum. May God bless you all for your guidance and support.

I am grateful to my family, my loved ones, my classmates, entire students of Holy Family NMTC, Berekum and authors and publishers whose books have been used and those who have contributed in diverse ways to make the writing of my care study, a successful one, I say God bless you all.

Finally, I say a big thank you to the authors from whose books information was extracted.

INTRODUCTION

This script entails a patient/family care study written on Miss A.K.A., a 3-year old girl. The family stays at Senase, a town in the Berekum-East Municipality in the Bono Region. She was admitted

on 9th November, 2022 at 1:30pm with the diagnosis of Malaria. She spent four days at the hospital and throughout her stay in the hospital, she had treatment and care geared towards complete recovery. Patient was brought into the paediatric ward per mothers back accompanied by two relatives through Emergency ward with complains of general body weakness, fever, loss of appetite, nausea and vomiting. Vital signs were checked and recorded as follows;

Temperature - 38.7^0C

Pulse - 136bpm

Respiration - 34cpm

Oxygen saturation - 96%

The following laboratory test were ordered and carried out on Miss A.K.A, blood film for malaria parasites and full blood count. Suppository Paracetamol 125 mg, IV Artesunate 30mg were administered. Dextrose Normal Saline 500mls was set up for her. With proper medical and nursing care, Miss A.K.A was discharged on 13TH November, 2022 without any severe complication. Three home visits were embarked on and patient was handed over to community health nurse.

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. Assessment in this chapter gives a general overview of the patient's particulars, family medical and surgical history, family socio-economic history, patient's developmental history, patient's concept of illness, obstetric history, patient's lifestyle and hobbies and patient's past and present medical and surgical history, admission of patient, literature review and validation of data.

Chapter two entails data analysis. Analysis of data is the statistic that measures difference among group means and uses a statistical technique to equate the groups under study in relation to another given variable. Here, there is a comparison between the results of the investigations carried out and the normal values to detect any abnormality from normal.

Chapter three deals with the planning of care for patient and family where a nursing care plan is drawn and was used in the management of Miss A.K.A.

Chapter four of this study is the implementation phase of the nursing process involves carrying out the proposed plan of nursing care. It involves a summary of the actual nursing interventions rendered, preparation of patient for discharge and follow-up visits.

The fifth chapter is about the evaluation of care rendered to patient and family. The chapter also gives information about the amendment of nursing goals and the termination of the care rendered to patient and family.

The final chapter is the summary and conclusive part of the care rendered to the patient.

TABLE OF CONTENT

PREFACE ii
ACKNOWLEDGEMENT iv
INTRODUCTION v
TABLE OF CONTENT. viii
LIST OF TABLES xi
CHAPTER ONE 1
ASSESSMENT OF PATIENT/FAMILY 1
1.0 Introduction 1
1.1 Patient's Particulars 1
1.2 Family's medical history 2
1.3 Family socio-economic History 2
1.4 Patients Developmental History 3
1.5 Patient's lifestyle and hobbies 5
1.6 Patient's past medical history 6
1.7 Patient present medical history 7
1.8 Admission of patient 7
1.9 Patient's concept about the illness. 9
1.10 Literature review. 10
1.11 Validation of Data 25
CHAPTER TWO 26
ANALYSIS OF DATA 26
2.0 Introduction 26
2.1 Comparison of data with standards. 26
2.2 Causes of patient's condition. 32
2.3 Treatment given to Miss A.K.A. 33
2.4 Complications exhibited by Miss A.K.A. 39
2.5 Patient/Family's Health Problems 39
2.6 Patient/Family strengths 39
2.7 Nursing Diagnoses 40

CHAPTER THREE....41
PLANNING FOR THE PATIENT/FAMILY CARE....41
3.0 Introduction....41
3.1 Patient/Family Care Objective/Outcome Criteria....41
CHAPTER FOUR....52
IMPLEMENTATION OF PATIENT'S/FAMILY CARE....52
4.0 Introduction....52
4.1 Summary of Actual Nursing Care Rendered to Patient and Family....52
4.2 First Day of Admission (9th November, 2022)....52
4.3 Second Day of Admission (10th November, 2022)....55
4.4 Third Day of Admission (11th November, 2022)....56
4.5 Fourth Day of Admission (12th December, 2022)....58
4.5 Fifth Day of Admission (13th December, 2022)....59
4.6 Preparation of Patient/Family for Discharged....60
4.7 Follow Up/Home Visit/Continuity of Care....61
4.8 First Home Visit (11/11/2022)....61
4.9 Second Home Visit (17/11/2022)....63
4.10 Review (21st November, 2022)....64
4.11 Third Home Visit (24TH November, 2022)....64
CHAPTER FIVE....66
EVALUATION OF CARE RENDERED TO PATIENT AND FAMILY....66
5.0 Introduction....66
5.1 Statement of Evaluation....66
5.2 Amendment of the Nursing Care Plan....68
5.3 Termination of Care....68
CHAPTER SIX....70
SUMMARY AND CONCLUSION....70
6.0 Introduction....70
6.1 Summary of care rendered....70
6.2 Conclusion....72
APPENDIX....73

BIBLIOGRAPHY 74

LIST OF TABLES

Table 1: Diagnostic investigations/tests in literature review compared with those carried out on patient…….....29

Table 2: Diagnostic investigation/tests in literature review compared with those carried out on patient…….31

Table 3: Clinical Manifestations Compared with those in Literature Review……...32

Table 4: Comparison of treatment given to Miss A.K.A with that of the literature review…..…32

Table 5: Pharmacology of Drugs/Conservative Treatment Given To MISS. A.K.A……33

Table 6: Nursing Care Plan for Miss A.K.A and Family……..43

Table 7: Vital Signs……..73

CHAPTER ONE

ASSESSMENT OF PATIENT/FAMILY

1.0 Introduction

Assessment is the critical analysis and valuation or judgment of the status or quality of a particular condition, situation or other subject of appraisal. In the nursing process, assessment involves the gathering of information about the health status of the patient/family, analysis and synthesis of the data, and the making of a clinical nursing judgment (weller, 2014). Assessment is the first stage in the nursing process. It covers the data collected from the patient and relatives, through observation, physical examination, interviews, laboratory investigations and other relevant records.

The chapter gives the general background information about the patient/family as well as the community in which they live. It consists of the patient's particulars, family medical/surgical history, family socio-economic history, patient developmental history, patient's lifestyle and hobbies, patient's past medical/surgical history, patient present medical/surgical history, admission process of the patient and family, patient/family concept of her illness, literature review on the condition and validation of data based on the data collected, the patient's actual and potential health needs are obtained and analyzed and necessary intervention provided.

1.1 Patient's Particulars

Particulars refer to a fact or detail which are written down and kept as record. (collins, n.d.). They include patients name, age, weight, height, patient's parent's name etc.

Miss A.K.A., the patient for the study is a 3-year old girl, born to Master J.K and Madam E.T. On 9th September, 2019 at Berekum Holy family Hospital in the Bono Region. She stays with the parent at Senease in a house numbered SE 145. She is from Senease, a town in the Berekum-East Municipality in the Bono Region. She is a Christian and goes to Sunday school at Revelation Power Chapel at Senease. She speaks Twi and English. She is dark in complexion and weight of 11.6kg. She is a student at Hill View Academy at Senease. She is in nursery. Patient's hospital folder number is BE-A01-AAH0839.She has no physical impairment. She is a beneficiary of the National Health Insurance Scheme (NHIS) with the NHIS number, 26229027. Her next of kin is Madam V.K.

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. Attention is focused on the impact of psychosocial, ethnic, and cultural background on a person's health (Hinkle, & Cheever, 2014). Information is obtained on both paternal and maternal sides of family According to the grandmother; there is no known history of any hereditary disease in the family. Unfortunately patient has lost her grandfather a natural death. Moreover, patient's parents said that occasionally, the family members do experience minor ailments like headache, fever and common cold which they treat by over the-Counter medication and when it does not resolve they seek treatment from the Holy Family Hospital Berekum. They also use traditional and herbal medicine in treating diseases.

1.3 Family socio-economic History

Socio-economic history presents a profile of the patient/family's social and personal world It includes, social cohesion/family relationship, support systems, source of medical care/financing

(NHIS), parent employment, occupational hazard and income levels and wealth of family as well as traditions, norms, values, taboos and cultural practices. (Park, 2013).

According to Miss A.K.A's parents, they are living harmoniously with each other as well as the people in the community. They also said that the relationships among their family members are very cordial and friendly. Patient's mother is a farmer and the father is a driver both at Senease. Most of the family members are farmers, they cultivate foodstuffs like cassava, yam, plantain and others. They earn less income from the surplus of food crops such as the cassava and the plantain they sell. The family is able to meet their basic needs and some of their wants. Annually, the family earns (Ghc2000-3000). Most of the family members have registered with the National Health Insurance Scheme (NHIS), which enable them to get free medical treatment. Besides, patient's family conforms to the traditions and taboos governing the community. These taboos include not going to farm on sacred days (Fridays).

1.4 Patients Developmental History

Development refers to the process of growth and differentiation which involves cognitive, psychosexual and psychosocial processes (Weller, 2014). Maturation is the process of development in which an individual matures or reaches full functionality (Weller, 2014). Growth is the progressive development of a living thing, especially the process by which the body reaches its complete physical development (Weller, 2014). According to Miss A.K.A's mother, she had her first delivery through Cesarean Delivery. She has four (4) children of which they all came through spontaneous vaginal delivery at term without any difficulties or problems during pregnancy, labor, and delivery and throughout the period of breastfeeding the patient. Congenital abnormalities such as hydrocephalus, imperforate hymen, cleft lip and palate were absent when the patient was born. Patient started to sit unsupported at the fourth month, she crawled at the fifth months and started to

walk at tenth months. She started schooling at the age of two years at Hill View Academy. She is currently in Kindergarten. Patient received immunization against the vaccine preventable disease such as poliomyelitis, whooping cough, diphtheria and measles. The scar on the left arm (deltoid) is an evidence of it. According to patient's mother, she went through the average normal developmental milestone and child's development.

According to Erikson's theory of psychosocial development (1959), there are eight distinct stages with each possible results, thus either success or failure personality. These theories are;

1. Trust versus mistrust (birth to 18months)
2. Autonomy versus shame and doubt (18months to 3years)
3. Initiative versus guilt (3 to 6years)
4. Industry versus inferiority (6 to 12years)
5. Identity versus role confusion (12 to 20years)
6. Intimacy versus isolation (20 to 35years)
7. Generativity versus stagnation (35 to 65years)
8. Integrity versus despair (65 to death).

Erikson's third psychosocial crisis, involving Initiative vs. Guilt occurs during childhood between the ages of three and five. Children at this stage assert themselves more frequently through directing play and other social interactions. These are particularly lively, rapid-developing years in a child's life. According to Bee (1992), it is a "time of vigor of action and behaviors that the parent may see

as aggressive". During this period the primary feature involves the child regularly interacting with other children at school. Central to this stage is play, as it provides children with the opportunity to explore the interpersonal skills through initiating activities.

Children begin to plan activities, make up games, and initiate activities with others, if given this opportunity, children develop a sense of initiative and feel secure in their ability to lead others and make decisions. Conversely, if this tendency is squelched, either through criticism or control, children develop a sense of guilt. Too much of guilt can make the child slow to interact with others and may inhibit their creativity.

I realized patient was in the initiative stage of the psychosocial development because, when she was alone for a while, she recite the alphabets and sometimes did recite some poems which she has been taught in school. She recited the poem (A lion) and made a drawing of a bird on a sheet with pencil. I therefore encouraged her to continue with it because it was good and was going to help her.

1.5 Patient's lifestyle and hobbies

Patient lifestyle refers to pattern of daily living that an individual develops. On the initial assessment of a person entering the health care services this is considered in relation to the delivery of care by health care workers in order that the aims and objectives for care can be individualized (Weller, 2014). It provides information about patient pre-occupational activity, personal impression of patient interest.

Miss A.K.A is a sociable person who loves anybody who comes close to her. She usually wakes up at 6:00am, Patient's mothers ensures that She get proper oral care, empties her bowel and takes her bath with warm water around 6:30am. She takes her breakfast which is mostly Milo with bread

and leaves for school around 7:30am with the mother. She usually takes her lunch in school which of the time is rice and stew which has been prepared by the mother. She usually comes home around 4:00pm with her elder siblings. She usually prefers to take Jollof rice and chicken her favorite food as her supper. After supper, she watches Television till she sleeps around 8:00pm.

According to patient's mother, she is not allergic to any food or drug. Patient mother said she hardly sleeps in the afternoon. Patient usually uses verbal and non- verbal communication styles such as, eye movement and gestures when communicating with friends, parent and teachers. She is honest, friendly and fun to be with. My personal impression about patient is that, she is friendly and fun to be with. During weekends, she uses some extra time to play with friends and siblings. On Sundays she goes to church with her family.

1.6 Patient's past medical history

Past medical history is a detailed summary of a person's past health (Hinkle & Cheever, 2014). Among such information are childhood illness, allergies, accident and injury, physical disorder due to illness, mental check-up.

According to patient's mother, she did not have any illness like measles, whooping cough, and diphtheria during infancy till now. Patient normally experience minor ailment like headache, diarrhea, cough and common cold, which are treated with drugs bought from the pharmacy shop and sometimes treated on out-patient (OPD) basis at the hospital. According to patient's parent, she sometimes experiences certain minor injuries which they usually treat with over- the- counter medications. Patient's parent said she is not often sent for medical check-ups unless ailment becomes difficult to treat with over-the- counter drugs. Patient is without any physical impairment caused by illness.

1.7 Patient present medical history

Patient present medical history provides detail information about the patient complaints that led to patient hospitalization which includes the date and manner in which the problem occurred (Hinkle & Cheever, 2014). It gives information about when signs and symptoms started, how often problem occurs and activity which aggravate pain.

Patient was in her usual state of good health until 9th November, 2022, when patient mother noticed that, patient has general body weakness, high body temperature loss of appetite, nausea, vomiting and intermittent episodes of seizures. in the morning. At around 10:00am patient was still not well hence she was brought to the Holy Family Hospital, Berekum. Patient was sent to the Emergency Department(ER) and was diagnosed of Malaria. Patient was given a bed and diazepam 5mg to stabilize the seizures. She was then admitted to the pediatric ward.

1.8 Admission of patient

Admission is the process of allowing and facilitating a patient to stay in hospital or unit for observation, investigation and treatment of the disease he/she is suffering from. Also, as specified by Esena, (2011) admission is "The initiation of care, usually referring to inpatient care".

Patient was admitted into the Pediatric Ward per mothers back in conscious state through the Emergency Department of the Holy Family Hospital, Berekum on 9th November, 2022 at 1:30PM with the diagnosis of Malaria. Mother complain that, patient has general body weakness, high body temperature, loss of appetite, nausea, vomiting and intermittent episodes of seizures. The patient and her mother were welcomed to the ward. An admission bed was made for the patient. On observation patient looked weak. Patient and her relatives were introduced to the staff nurses present and were assured of the competence of health workers (nurses and doctors) who were going to take care of them. The following information was obtained from the patient's mother; patient's

name, age, religion, address and allergies. Particulars taken were then entered into the admission and discharge book and in the daily ward state. Hospital policies regarding visiting periods, payments of bills and the time vital signs will be checked were explained. Patient was made comfortable in bed, her vital signs were checked and recorded as follows;

Temperature - 38.7 degrees Celsius

Pulse - 136 beat per minutes

Respiration - 34 cycles per minutes

Oxygen saturation – 96 %

She weighed 11.6kg on admission. Physical examination of the patient was performed from head to toe. Patient's mother was oriented to time, place and person. She was also oriented to the ward annexes. Her mother was also informed to bring items patient will need whiles he is on admission such as plates, cup, bowl, spoon, toilet tissues, soap, toothpaste and toothbrush and pajamas, towel, sponge, bucket comb or hairbrush. The increased in patient temperature was intervened by tepid sponging. Patient recorded a temperature of 37.2 degrees Celsius after 30 minutes recheck of the temperature. Patient was given IV Artesunate 30mg stat and 500ml of DNS which was ordered.

I reintroduced myself to patient and her mother as a student nurse of Holy Family Nursing and Midwifery Training College, Berekum, who would like to take her and the family for my care study. Miss A.K.A. and her family were informed that the care study is a requirement by the Nursing and Midwifery Council of Ghana in partial fulfilment towards the award of a license to practice as a Registered General Nurse. I explained to the patient and her family the concept of the patient/family care study and assured them of privacy and confidentiality. It was added that a report will be written after the entire event. Miss A.K.A. and her family agreed to my request and

promised to offer me the necessary information and assistance. I thanked them on such a decision since doing so revealed a mark of a welcoming gesture.

Discharge planning was initiated with the relatives; thus, they will continue the care (by administering medication, making sure patient sleeps in a treated mosquito net at home once she is well and discharged home. She was managed on the following prescribed medications:

1. IV Artesunate 30mg, x 0 hour, 12hours, 24hours.
2. Syrup Paracetamol 125mg tds ×5 days.
3. Intravenous Dextrose Normal Saline 500ml for 24hours.
4. Intravenous Metoclopramide 1mg tds for 24hours.

The drugs were obtained from the Hospital in- patient pharmacy and the initial doses were administered. The following diagnostic investigations were requested to be done;

1. Blood film for malaria parasite.
2. Blood for Full Blood Count.
3. Urine R/E

The blood sample was taken and labelled with all requisite information and sent to the laboratory for investigations. Patient was made comfortable in bed while dextrose normal saline 500mls was set up. Miss A.K.A's mother was reassured of the competency of the health team and speedy recovery of her daughter. She was made aware that the admission was temporary, and that it was aimed at giving the client the necessary health care to restore her health. This was done to allay their fears and to relieve them of anxiety. I chose this patient because I wanted to learn more about the condition, Malaria.

1.9 Patient's concept about the illness.

Patient's Family concept of illness is the understanding retained in the mind, from experience, reasoning or imagination about patient illness (Park, 2013). It provides information about patient

perception of his or her illness, cause of illness, concern about illness/fear, expectation about treatment in the hospital, etc.

An interaction with Miss A.k.A's mother, father and other family members revealed that their child's condition was not due to any supernatural forces but believed it to be as a result of mosquito bites which they know to breed in stagnant waters. The mother confirmed that they had not been sleeping under Insecticide Treated Nets (ITN), though they had some at home. They expressed the hope that the condition would improve with the treatment regimen and competent nursing care.

1.10 Literature review.

Review of the Anatomy of the affected Organ

Red Blood Cells (Erythrocytes)

The erythrocyte, commonly known as a red blood cell (or RBC), is by far the most common formed element accounting for about 99% of all blood cells.

A single drop of blood contains millions of erythrocytes and just thousands of leukocytes. Specifically, males have about 5.4 million erythrocytes per microliter (μL) of blood, and females have approximately 4.8 million per μL.

Structure

- Biconcave, anucleate

Component

- Haemoglobin

- Lipids, ATP, Carbonic anhydrase.

Functions

-Transport oxygen from lungs to tissues and carbon dioxide from tissues to lungs as an erythrocyte matures in the red bone marrow; it extrudes its nucleus and most of its other organelles.

During the first day or two that it's in circulation, an immature erythrocyte, known as a **reticulocyte**, will still typically contain remnants of organelles.

Haemoglobin

Haemoglobin is a large molecule made up of proteins and iron. It consists of four folded chains of a protein called globin, designated alpha 1 and 2, and beta 1 and 2.

Each of these globin molecules is bound to a red pigment molecule called heme, which contains an ion of iron (Fe^{2+}).

Definition

Malaria is a life-threatening disease caused by parasites that are transmitted to people through the bites of infected female Anopheles mosquitoes. It is preventable and curable. In 2019, there were an estimated 229 million cases of malaria worldwide. The estimated number of malaria deaths stood at 409 000 in 2019.Children aged under 5 years are the most vulnerable group affected by malaria; in 2019, they accounted for 67% (274 000) of all malaria deaths worldwide. The WHO African Region carries a disproportionately high share of the global malaria burden. In 2019, the region was home to 94% of malaria cases and deaths. Total funding for malaria control and elimination reached an estimated US$ 3 billion in 2019. Contributions from governments of endemic countries amounted to US$ 900 million, representing 31% of total funding. Malaria is caused by Plasmodium parasites. The parasites are spread to people through the bites of infected female Anopheles mosquitoes, called "malaria vectors." There are 5 parasite species that cause malaria in humans, and 2 of these species – P. falciparum and P. vivax – pose the greatest threat. In 2018, P. falciparum accounted for 99.7% of estimated malaria cases in the WHO African Region, 50% of cases in the WHO South-East Asia Region, 71% of cases in the Eastern

Mediterranean and 65% in the Western Pacific. P. vivax is the predominant parasite in the WHO Region of the Americas, representing 75% of malaria cases.

Disease burden

According to the latest World malaria report, released on 8th December 2022, there were 247 million cases of malaria in 2021 compared to 245 million cases in 2020. The estimated number of malaria deaths stood at 619 000 in 2021, compared with 625 000 deaths in 2020. The WHO African Region continues to carry a disproportionately high share of the global malaria burden. In 2019, 4 countries accounted for just over half of all malaria deaths worldwide: Nigeria (31.3%), the Democratic Republic of the Congo (12.6%), United Republic of Tanzania (4.1%), and Niger (3.9%). Children under 5 years of age are the most vulnerable group affected by malaria; in 2022 they accounted for 69% (276 000) of all malaria deaths worldwide.

Malaria is caused by single celled protozoa belonging to the genus plasmodium which include; Plasmodium falciparum, Plasmodium ovale, Plasmodium malariae and Plasmodium vivax (Hinkle & Cheever, 2014).

Causes of Malaria

Malaria in humans is caused by five related protozoan parasites: Plasmodium falciparum, Plasmodium vivax, Plasmodium ovale, Plasmodium malariae, and Plasmodium knowlesi. The most common worldwide is P. vivax. The deadliest is P. falciparum. . Malaria Parasites are carried from person to person by mosquitoes of the genus Anopheles. When a female anopheles" mosquito pierces the skin to suck blood, it may pick up the parasite from an infected person or conversely, and pass on the parasite to someone who is uninfected (Marshall, 2011).

Vector breeding

The vector breeding of malaria include;

1. Mosquitoes breed in stagnant waters.
2. Mosquitoes such as anopheles gambiae breeds in temporal waters which collects in ponds, pot holes, dugout pits, hoof prints, puddles, rice fields and tidal swamps.

   Anopheles funestus the other important malaria vector in Ghana breeds in semi-permanent waters such as stagnant waters along streams, lakes, rivers etc. They breed all year round.

3. The water conducive for vector breeding must be shallow and devoid of shade.
4. Breeding therefore becomes more pronounced after the rains.

Mode of transmission

Malaria can be transmitted through one of the following means.

1. The infectious stage of the parasite, the sporozoites is transmitted to the host by bite of the infective female anopheles‟ mosquito.
2. Use of contaminated needles and sharps.
3. Congenital malaria (mother to growing feotus through the placenta).
4. Transfusion with blood containing the plasmodium parasite

Incubation Period

The incubation period is the length of time between the infective mosquito bite and the first appearance of clinical signs of which fever is most common. This period is usually not less than 10days. The duration of incubation period varies with the species of parasite.

For plasmodium falciparum, it is usually between 10-14 days.

Classification of malaria

Depending on the patient's immunity level, species of parasite and the presence of any other disease, such as malnutrition and anaemia, malaria can be classified as;

1. Uncomplicated malaria
2. Complicated/severe malaria

Pathophysiology (Life Cycle)

The life cycle of plasmodium occurs in three stages;

1. The parasite in the vector
2. The Exoerythrocytic/Pre-erythrocytic (liver) Stage
3. The Erythrocytic (blood) Stage

The parasite in the Vector: Here female anopheles mosquitoes become infected when they ingest blood from an infected human. The infective stage of parasite is known as the gametocyte. In the mosquito's stomach the gametocytes undergo series of changes known as exflagellation, followed by a process of sexual division. The dividing parasite form an oocyst attached to the gut wall, before releasing many thousands of sporozoites which migrate to the mosquito's salivary glands, from where they are injected when the mosquito next takes a blood meal. (Gill & Parry, 2004).

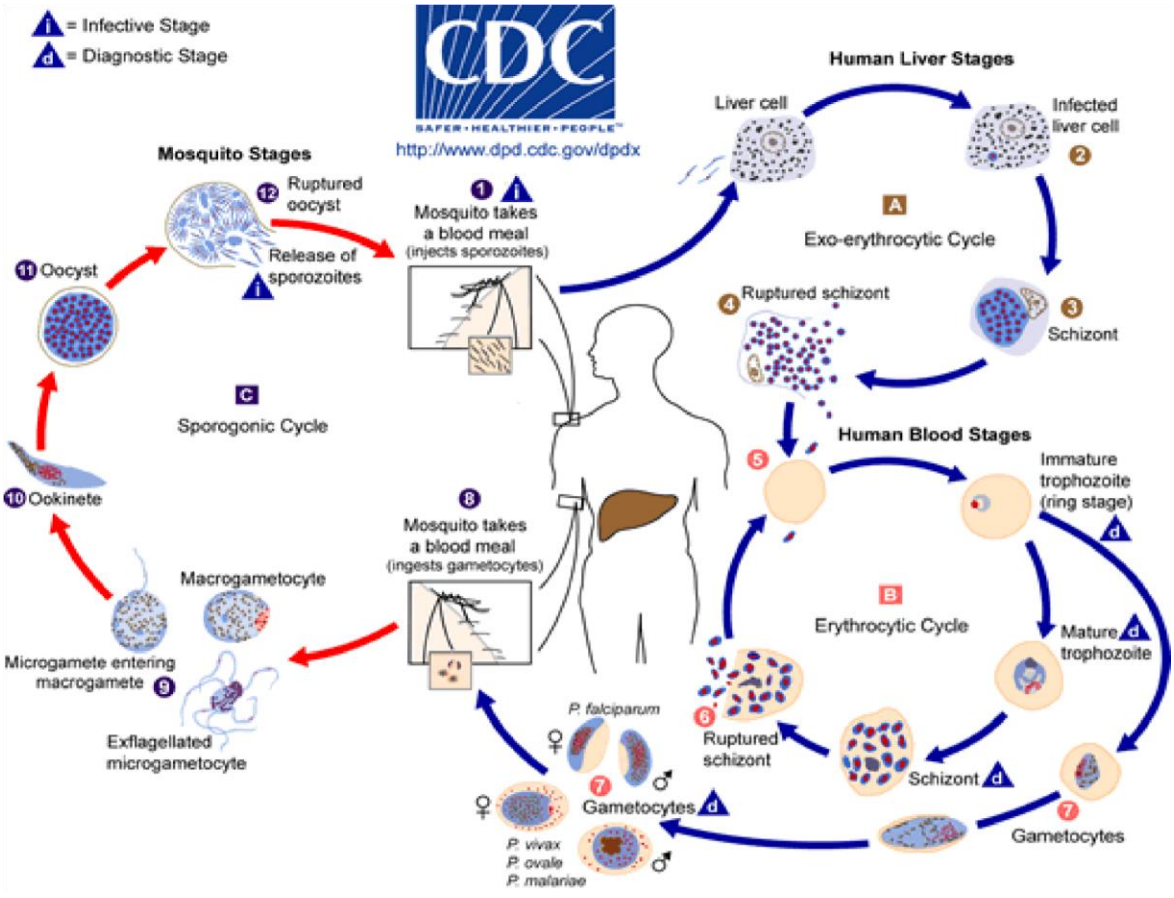
The erythrocytic (liver) Stage: Sporozoites, which are uninucleate and approximately 11 microns long, circulate in the blood stream for a short time before entering hepatocytes. Here, they replicate rapidly by asexual division before bursting out of the hepatocytes to enter the bloodstream. The length of the hepatic phase varies with species and in the plasmodium falciparum it is typically about 6 days, by which time the single sporozoites has divided to form a multi nucleate schizont with up to 30,000 daughter merozoites packing the hepatocyte. A proportion of the sporozoites of

plasmodium vivax and plasmodium ovale may not develop immediately into hepatic schizonts but enter into a dormant phase, known as the hypnozoite, which may go on to form schizonts at intervals many months later. These later infections are known as relapses. Plasmodium falciparum and plasmodium malaria do not have dormant liver stage, though if not adequately treated, the blood stages may persist at undetectable level for long periods. The subsequent reappearances of parasites in the blood stream are known as a recrudescence. (Gill & Parry, 2004).

The Erythrocytic (blood) Stage: Merozoites released from the hepatic schizonts have only a short life before being either cleared or entering host red cells. Once inside the red cell, the parasite again undergo a process of asexual division to form a multinucleate schizont, which then burst releasing daughter merozoites which attach to and enter new red cells, and so repeat the cycle. The whole red cycle takes around 48hours in plasmodium falciparum. These repeated cycles of asexual division lead to rapid exponential growth of the number of infected red cells and during this period that the characteristic symptoms of malaria appear. The time from infection to the appearance of parasites detectable on blood film is known as the pre-patent period and is 9-10 days for plasmodium. The time from infection to the appearance of symptoms is the incubation period, which is typically around 12 days. In non-immune subjects the exponential growth may continue with more and more red cells being destroyed, leading to very high parasitemias, severe anaemia and death. In subjects with some degree of immunity the expansion of parasites is limited by the host immune response and leads to the situation, common in malaria endemic areas, where many individuals have a relatively stable, low level parasitemias, with few or no symptoms. Red cells containing older parasites undergo specific attachment to the endothelial lining of small blood vessels, a process known as cytoadherence. This withdrawal of mature forms out of the peripheral circulation is known as sequestration. It is a characteristic of plasmodium falciparum and does not

occur to any extent with the other malaria parasites that infect humans. Blockage of small blood vessels by sequestrated parasites is believed to be central to many aspects of the pathogenesis of severe malaria.

At the point in the erythrocytic cycle, a portion of the merozoites entering red cells follow a different developmental path rather than dividing to form yet another schizont, develop instead into the sexual stage of the parasite, forming either a male or female gametocyte. The exact stimuli to form gametocytes are not fully understood but it is likely that it is a response to various forms of stress as, typically, large numbers of gametocytes are found in the days following a clinical episode.



PLASMODIUM LIFE CYCLE

Signs and Symptoms

- Cold, sweating and rigors
- Bodily weakness
- Headache
- Nausea
- Abdominal pain
- Poor appetite/ Anorexia
- Anaemia in severe cases (hemolytic)
- Diarrhoea
- High intermittent fever

Diagnosis of Malaria

- Clinical manifestation
- Blood film for malaria parasite (mps)
- White blood cells (WBC) counts to detect the presence of malaria parasite
- Haemoglobin estimation.

Medical Management

1. Fluid management:

Intravenous fluids such as normal saline, ringers' lactate and others are useful. Patient with severe malaria is often relatively rehydrated due to combination of decrease intake of fluid and increase in micturition. Oral rehydration salt (ORS) can also be given.

2. Anti-malaria treatment

Since 2004, it has been Ghana's national policy to use Artemisinin-based combination therapy (ACTs) for the treatment of uncomplicated malaria. This change was necessary because the

malaria parasite, that is, Plasmodium falciparum was becoming resistant to chloroquine and other mono-therapies (Amoo et al, 2014). The ACT products selected for national use are Artesunate-Amodiaquine and Artemether-Lumefantrine tablets. The dosing is done strictly according to weight. Quinine is another accepted antimalarial drug purposely for therapeutic failure of ACT and severe malaria. According to MOH (2009) as contained in the Revised Anti-Malaria Drug Policy for Ghana, the treatment for uncomplicated malaria is as follows:

A. Artesunate-Amodiaquine: This comes in two forms,

1) Artesunate- Amodiaqiune co-blistered formulation:
2) The dose in mg/body weight is Amodiaquine 10mg/kg body weight +Artesunate 4mg/kg body weight, taken as a SINGLE DOSE daily for three (3) days, after meals.
3) Artesunate + Amodiaquine fixed dose combination:
4) Infants- Artesunate/ Amodiaquine is 25mg/67.5mg per body weight.
5) Artesunate Young children- Artesunate/ Amodiaquine is 50mg/135mg per body weight
6) Children- Artesunate/ Amodiaquine is 100mg/270mg per body weight
7) Adolescent and adults / Amodiaquine is 100mg/270mg per body weight

These are taken as a SINGLE DOSE for three (3) days with meals.

Maximum daily dose of Artesunate /Amodiaquine is 200mg/600mg.

B. Dihydroatemisinin Piperaquine (DHAP): It is an alternate ACT for Artesunate-Amodiaquine intolerance.

Dihydroatemisinin 40mg/kg body weight + Piperaquine 320mg/kg body weight, taken as SINGLE DOSE daily for three days before or after meals.

C. Alternatively IM Arthemeter or rectal or IV Artesunate can be used.

Children and adult: intramuscular Arthemeter 3.2mg per kg body weight for loading dose, followed 8hours later by 1.6mg/kg body weight ONCE DAILY for 5days.

D. Arthemeter- Lumefantrine: It is reserved for clients who do not tolerate Artesunate-Amodiaquine.

Arthemeter 20mg/kg body weight +Lumefantrine 120mg/kg body weight, taken as TWO DIVIDED DOSES daily for three (3) days, after meals.

Drug is not recommended for infants under 5kg or under 6 months.

E. Treatment with oral Quinine as follows:

Child dose: 10mg quinine per kg body weight 8hourly for 7days

Adult (=60kg) dose: 600mg quinine per body weight 8hourly for 7days.

The recommended drug of choice for the treatment of severe malaria as contained in the Anti-malaria Drug Policy for Ghana is IV or IM Quinine.

Children and adult: intramuscular Quinine 10mg (0.2ml) per kg of body weight every 8hour

3. Management of anaemia

Many people develop anaemia from severe malaria. Many children with haemoglobin Concentration between 4 and 6g/dl, without signs of severe malaria do well with oral anti malaria and hematinic.eg. Nexcofer and folic acid. In severe cases blood transfusion is recommended.

4. **Management of Convulsion**

Diazepam is given in dose of 0.3mg per kg (up to a maximum of 10mg in both older children and adults). Paraldehyde is an anti-convulsant with less risk of respiratory distress, but its use has declines and not available in many settings. Others include; phenobarbitone, phenytoin, etc.

5. The use of antibiotics

Pathological bacteria are isolated in significant minority of patient with severe malaria. A reasonable compromise is to target antibiotic to those at high risk of malaria.

Nursing Intervention (Management)

1. Psychological preparation

Patient and family are reassured that, they are in the hands of competent health professionals who are ready to help their child recover very soon. This is done to relax patient and family to allay fear and anxiety and also gain their co-operation. Patient and family are encouraged to voice their fears and all misconceptions are cleared.

2. Position

This is done to make patient comfortable and ensure her safety in bed. The patient is allowed or assisted to assume a comfortable position that is not contra-indicated to her health but makes her feel comfortable. Position of the patient would be changed regularly to prevent bedsores.

3. Rest and sleep

The nurse ensures that patient has enough rest and sleep to conserve energy, promote relaxation and help in the healing process of the patient. Complete bed rest is provided for patient in the phase of high temperature, malaise and anaemia. Patient is given a warm bath and put in a well-ventilated room to promote bed rest. The bed must be free from cramps and creases. Noise on the ward and the number of visitors to the ward should be minimized to enable patient have enough sleep. Light is turned off or dim light is maintained according to patient preference to promote rest and sleep.

In situation of fever, tepid sponging is done for the patient to reduce the temperature in order to promote rest and sleep. For restless children, bed with side rails or well-padded cot is provided to prevent falling of the patient to promote rest and sleep.

4. Observation

Constantly monitor the vital signs (temperature, pulse, respiration and oxygen saturation) to know whether patient's condition is deteriorating or improving and the findings recorded to serve as a baseline. Signs of dehydration such as depressed fontanelles, sunken eyes in infants are observed. Observe the infusion set site for patency and accurate fluid intake and output chart is also maintained. Signs of anaemia such as low haemoglobin level (below 10g/dl) are monitored. In case of blood transfusion or intravenous fluid (IV infusion) sign of circulatory overload, rate of flow and reaction are observed.

Observe for any possible complication like, respiratory distress and report if any abnormality is seen. The patient level of consciousness is observed, that is whether patient is oriented to time, place and also the desired and side effect of drug. In cases where there is fever, definitely there will be chills, therefore more clothes are added to keep patient warm, nearby windows are closed and fans turned off. Abnormal behavior in the patient such as convulsion in children is observed.

5. Personal hygiene

Good personal hygiene is ensured from hair to toe by washing patient's hair with shampoo and water, and cutting of fingernails and toenails to prevent harbouring of dirt and microbes. Patient's mouth is cared for with toothbrush at least twice daily to prevent infection and stimulate appetite. Patient could be given bed bath or assisted bed bath to remove dirt and microbes from the skin, to improve circulation and also patient's comfort. At least, the bath should be twice daily and pressure areas like the occiput, sacrum and shoulders are treated by applying soap into the palm and

massaging in a circular motion to improve circulation. Patient's bed linens are changed frequently when soiled or dirty to make patient comfortable.

6. Nutrition

Patient is given a well-balanced diet, vitamins to improve the immune system, carbohydrate for energy and protein to build worn-out tissues. Food should be served in bits and dirty rags and bedpans should be removed from the scene. The food patient like should be served and should be attractive enough to increase his appetite.

7. Exercise

Patient is encouraged to do active and passive exercises. It is to improve circulation, prevent muscle wasting. Exercises also help peristalsis and help remove toxins from the body.

8. Elimination

Bowel and bladder elimination, patient is served with bedpan and urinal on demand or bedpan round. Moreover, fluid and roughage intake is encouraged depending on patient's condition. If elimination fails, a nearby tap is turned on to psyche-up the patient to urinate. Warm compresses can be applied on the lower abdomen to relax the muscle and aid elimination. If all these nursing measures fail, catheter is finally passed.

9. Education

Patient and relatives should be educated on the causes, signs and symptoms complications and side effect of drugs of patient's condition in order to get insight into patient's condition. Patient should be encouraged to attend review after discharge. Relatives should be encouraged to give their maximum support to the patient. Patient's relatives should be encouraged to maintain good personal and environmental hygiene to prevent infection and to promote health. Balance diet, rest

and sleep and elimination should be ensured. Patient and relatives should be educated on the drug regimen and some common side effects of the drug. They are also advised to report any complications associated with the drug. Education should be given on the measures to prevent malaria which is caused by mosquito bite. These are as follows; clearing of bushes around their house to prevent breeding of mosquitoes, burning of solid rubbish and burning of empty cans, avoiding choked gutters and stagnant waters, use of mosquito repellent and netting of windows and doors, sleeping under insecticide treated net and protective clothing.

PREVENTION OF MALARIA

1. PRIMARY LEVEL

1. Ensure good environmental sanitation
2. Weeding the environment
3. Draining all stagnant water
4. Desilting gutters
5. Proper means for storing and disposing refuse
6. Regular spraying of breeding places of mosquitoes
7. Use mosquito repellent and coils
8. Sleep under mosquito treated nets
9. Use mosquito-proof doors and windows
10. Encourage chemoprophylaxis, example pyremithamine sulfadoxine

2. SECONDARY LEVEL

1. Early detection of malaria is by screening for those who have malaria and tracing their contacts.
2. Keeping surveillance

3. Treat victims who have malaria.

3. TERTIARY LEVEL

Rehabilitation; rehabilitation is a goal-oriented and often time-limited process, which enables individuals with impairments, activity intolerance and participation restrictions to identify and reach their optimal physical, mental and/or social functional level through a patient focused partnership with family, providers and community. Example getting adults back to work, children being taught by the hospital school teachers.

Complications of Malaria

According to Taylor (2019), complication is an accident of second disease process arising during the course of or following the primary condition which may be fetal.

The complications of malaria include;

1. Cerebral malaria-: It occurs when the parasite – filled blood cells block small blood vessels to the person's brain. It swells and damages the brain.

2. Coma-: It is as a result of the plasmodium parasite and toxins multiplying in the blood causing septicaemia which leads to coma

3. Convulsion-: It occurs when the patient experience prolonged high body temperature

4. Renal failure-: it occurs as a result of hypovolemic shock and when nutrients and oxygen to the kidneys will be impaired

5. Hepatic failure (hepatic dysfunction)-: it occurs as a result of the plasmodium destroying the blood stored in the liver in destroying the liver cells as well

6. Shock (circulatory collapse)-: when the malaria parasite destroys the red blood cells it causes haemolytic anaemia that is frequent break down of the red blood cells and this will impair the oxygen concentration in the blood and to other organs which results in shock. (google, 2018)

These complications mostly comes about when early treatment is not given.

1.11 Validation of Data

Validation of data is the extent to which a method of data collection possesses the quality of being true as far as it can be judged (Weller, 2014).

The information given by the mother was found to be true. To confirm this, Patient grandmother was also interviewed and the given answers did not vary from what patient mother told me.

The clinical features presented by patient and diagnostic investigation conducted, with the data collected from his mother with much emphasis on the literature review, confirmed that she was suffering from malaria. All data collected were valid and free from errors or basis.

CHAPTER TWO

ANALYSIS OF DATA

2.0 Introduction

Analysis of data is a systematic examination and evaluation of data or information, by breaking it into its component parts to uncover their interrelationship, thus providing basis for problem solving and decision making (Weller, 2014). Data analysis has multiple facets and approaches, encompassing diverse techniques, under a variety of names in different business, science, and social domain.

This section of the client/family care study involves the examination of data and grouping it into constituent parts. This helps the nurse to identify client's problems and also nursing diagnosis formulation. Analysis helps to prioritize client's problems and carefully institute plans to help solve the health problems of client and her family.

2.1 Comparison of data with standards.

This is comparing the data collected with that of the standards. Areas to be compared include; complications, diagnostic investigations, causes, clinical manifestations, treatment and complications during the nursing processes of Miss A.K.A.

A. Diagnostic Investigations/Tests

It is simply defined as identification of a condition, disease, disorder, or problem by systematic analysis of the background or history, examination of the signs or symptoms, research or test results, and investigation of the assumed or probable causes.

The following investigations were carried out on MISS A.K.A. to aid in the diagnosis and treatment;

1. Blood film for malaria parasite

2. Full Blood Count

3. Urine R/E

Table 8: Diagnostic investigations/tests in literature review compared with those carried out on patient.

Diagnostic test outlined in literature review	Clinical Manifestations exhibited by patient
With reference from literature on the clinical manifestations of malaria such as, High intermittent fever Body weakness Headache Nausea and vomiting Diarrhoea Anorexia	Patient presented with high intermittent fever, bodily weakness, anorexia and vomiting.
Blood film for malaria parasite estimation (MPs)	Blood film was taken for malaria parasite estimation (MPs)
Full blood count	Blood samples was taken for full blood count.
Haemoglobin level estimation	Haemoglobin level estimation test was done for patient

The entire test ordered on Miss. A.K.A. except for urine R/E were found in the literature review which indicated that the right diagnostic investigations were used. Investigations were done to rule out abnormalities in the blood such as unusually high or low numbers of blood cells. Urine R/E was conducted to rule out urinary tract infections.

Table 9: Diagnostic investigation/tests in literature review compared with those carried out on patient.

Date	Specimen	Investigation	Results	Normal Ranges	Interpretation	Remarks
09/11/22	Blood	Blood film for malarial parasites (MPs)	(++)Positive	No malarial parasites should be present.	Positive means presence of malaria parasite.	I.V Artesunate was given.
09/11/22	Blood	Hemoglobin level estimation.	13.3g/Dl	12.5 – 18.5g/dl for **males** 12.0 -16.0g/dl for **females.** 9.5- 13g/dl for **children**	Hemoglobin was within normal values.	No treatment given
09/11/22	Blood	White blood cells count	8.49 x 10^9/L	5.0 – 12 x 10^9/ L	Result was within normal range.	No treatment given.
09/11/22	Blood	Red Blood Cell (RBC) count	4.82x 10^{12}/ L	4.00 – 6.00^{12}/L	Results was within normal range	No treatment given.
09/11/22	Urine	Appearance	Light amber	Amber	Urine colour is normal	No treatment given

From the diagnostic investigations on the table above, it indicated that the patient has malaria.

2.2 Causes of patient's condition.

With reference to the causes of malaria in the literature review, there was every indication that patient had the disease through the bite of an infected female anopheles mosquito which injected parasite (plasmodium falciparum) into the blood of the patient. On observation during home visit, I realized that, the mosquitoes comes from a bushy area surrounding the house where they mostly dump their refuse. They were not sleeping under treated insecticides net too.

Table 10: Clinical Manifestations Compared with those in Literature Review

Manifestation in the Literature Review	**Clinical manifestations exhibited by patient.**
1. Headache	Patient exhibited no signs of headache
2. Nausea	Patient exhibited signs of nausea
3. Anorexia	Patient exhibited signs of anorexia
4. Fever	Patient exhibited signs of fever.
5. Rigor	Patient exhibited no signs of rigor
6. General body weakness	Patient exhibited signs of body weakness
7. Abdominal pains	Patient exhibited signs of abdominal pains
8. Diarrhoea	Patient exhibited no signs of diarrhea
9. Anaemia	Patient exhibited no signs of anaemia

According to the table, Patient presented with most of the clinical manifestations in the literature review which provided an immediate clue to earlier diagnosis.

2.3 Treatment given to Miss A.K.A.

According to Weller, (2014) Treatment refers to the mode of dealing with a patient or disease. Based on the clinical manifestations presented by Miss A.K.A. and the laboratory investigations conducted the following treatment were prescribed and administered to her.

1. Intravenous Artesunate 30mg/kg x 0 hour, 12hours,24hours
2. Tab Artemether + Lumefantherine 20/120mg bd for 3 days
3. Suppository Paracetamol 125mg tds for 5 days
4. Intravenous Metoclopromide 1mg tds for 24hours
5. Intravenous Dextrose Normal Saline 500mls for 24hours.

Table 11: Comparison of treatment given to Miss A.K.A with that of the literature review.

Drugs in Literature Review	**Drugs given to the Patient**
1. Anti-malaria: 1. Artesunate 2. Artemether Lumefantrine	**1. Anti-malaria** 1. IV Artesunate was administered 2. Tablet Artemether Lumefantrine was administered. **Purpose**: Used for the treatment and prevention of malaria infections.
2. Antipyretics and Analgesics: 1. Paracetamol 2. Ibuprofen	**2. Antipyretics and Analgesics** 1. Paracetamol was administered. 2. Ibuprofen was not given **Purpose :** Used in the management of pain and control of pyrex

3. Haematinics: 1. Iron (III) polymaltose complex suspension 2. Blood transfusion	**3. Haematinics** 1. Iron (III) polymaltose complex suspension was not given 2. Patient did not receive blood. **Purpose:** Used to treat or prevent low blood levels of iron.
4. Anticonvulsants: 1. Diazepam 2. Phenobarbitone	**4. Anticonvulsants** 1. Diazepam was administered 2. Phenobarbitone was not administered. **Purpose:** Used to treat seizures and other seizure related conditions.
5. Antibiotics: (cephalosporin) 1. Injection Cefuroxime	**5. Antibiotics** 1. Cefuroxime was not given **Purpose:** Used to treat or prevent some bacterial infections
6. Fluid management 1. Normal saline. 2. Ringers lactate 3. Dextrose water 4. Oral Rehydration Salt	**6. Fluid management** 1. Normal saline was not given 2. Fluid Ringers lactate was not given 3. Dextrose water was administered. 4. Oral Rehydration Salt was not given**.** **Purpose:** Used to improve impaired organ perfusion and correct metabolic acidosis.

Antiemetic's 1. Metoclopramide	**Antiemetic's** 1. Metoclopramide was administered. **Purpose:** Used for the prevention or treatment of nausea a Vomiting.

The treatments given to patient were IV Artesunate, Artemether Lumefantrine, Paracetamol and metoclopramide, which were in line with the treatment in the literature review which shows that the patient received the right treatment which prevented complications from the condition.

Table 12: Pharmacology of Drugs/Conservative Treatment Given To MISS. A.K.A.

DATE	DRUG	DOSAGE/ ROUTE OF ADMINISTRATION IN (LITERATURE)	DOSAGE/ ROUTE OF ADMINISTRATION GIVEN TO PATIENT	CLASSIFICATION	DESIRED EFFECT	ACTUAL ACTION OBSERVED	SIDE EFFECT/ REMEDIES	REMARKS
09/11/22	I.V Artesunate	**Children under 20kg:** 2.4mg/kg **<u>Adult and children 20kg and above</u>:** 3 mg/kg given Intravenously or intramuscularly 1 dose on admission (0), then (12hrs) and (24hrs),	Artesunate 30mg x 0hour,12hours, 24hours **Route**: Intravenouslly	Anti-malaria	To eradicate the causative organism (plasmodium falciparum) in the blood.	Patient was relieved of signs and symptoms such as nausea and loss of appetite	Dizziness, pyrexia, headache.	Patient presented no adverse effect.

		then once daily until the patient is able to tolerate. Route: intravenous						
09/11/22	Paracetamol	120mg-125mg/5ml per body weight tid x 3days. **Route:** Oral, Rectal, I.V.	Syrup Paracetamol 5mls tid x 5 days **Route**: Orally	Analgesic, anti-inflammatory and anti- pyretic.	To relieve pain and fever by inhibiting prostaglandin synthesis in the nervous system.	Pain and fever reduced gradually.	Dark urine, clay- colored stools, breathing difficulties and liver toxicity.	Patient observed no adverse effect.
09/11/22	Tablet Artemether Lumefantrine	Paediatric dose: 1-2 tablets per body weight bd x 3days. Adult dose: 4 tablets bd x 3days **Route:** Oral	Tablet Artemether Lumefantrine 20/120mg bd x 3days **Route:** Orally	Anti-malaria	To eradicate the causative organism (plasmodium falciparum) in the blood.	Patient was relieved of signs and symptoms such as nausea and vomiting.	Abdominal pains, headache, dizziness and palpitations	Patient presented no adverse effect.

DATE	DRUG	DOSAGE/ ROUTE OF ADMINISTRATION (LITERATURE)	DOSAGE/ ROUTE OF ADMINISTRATION GIVEN TO PATIENT	CLASSIFICATION	DESIRED EFFECT	ACTUAL ACTION OBSERVED	SIDE EFFECT/ REMEDIES	REMARKS
10/11/22	Oral metoclopramide.	Paediatric dose:1mg/kg tds for 24 hours. Adult dose: 10mg tds x 3days. **Route:** Oral	Oral metoclopramide 1mg/kg tds for 24 hours. **Route:** Orally	Antiemetic's	Treating nausea and vomiting	Nausea and vomiting was controlled.	Chills, dizziness, headache, clay colored stool.	No side effect was experienced

2.4 Complications exhibited by Miss A.K.A.

According to Taylor (2019), complication is an accident of second disease arising during the course of or following the primary conditionwhich may be fetal. With reference to the literature review, the complications of malaria include anaemia, cerebral malaria, convulsion, acute renal failure, hepatitis B and splenomegaly. However, patient did not develop any complications. Patient's mother was educated on the need to serve healthy and nutritious diet to the child to prevent any complications.

2.5 Patient/Family's Health Problems

A health problem is defined as a situation that cause difficulties or a disorder with your health or with part of your body (Longman, 2019). From the data collected during assessment, the following health problems were noticed on patient;

1. Patient has high body temperature. (09/11/22)
2. Mother complains of patient having insomnia. (11/11/22)
3. Mother complains of patient having loss of appetite. (10/11/22)
4. Mother is anxious of the outcome of the disease. (09/11/22).

2.6 Patient/Family strengths

Patient and family strengths refers to the resources that can enable them to cope with stressful conditions leading to patient's recovery. These involve the activities that contribute to the well-being of patient and her family as well as her speedy recovery (Weller, 2014). The patient family strength is the coping strategies that can enable them cope with stressful situations thereby promoting speedy recovery to the patient. The following were the strength of the patient.

1. Patient can tolerate and always ready for tepid bath or sponge bath.
2. Patients could have uninterrupted sleep for three hours at night.
3. Patient could tolerate food in bits.

4. Patient's mother could express her fears and concerns.

2.7 Nursing Diagnoses

North American Nursing Diagnosis Association (NANDA) defined nursing diagnosis as a clinical judgement about individual, family, or community responds to actual or potential health problems/life process (Gale Encyclopedia of nursing and Allied Health, 2019). Nursing diagnosis provide the basis for selection of nursing intervention to achieve outcomes for which the nurse is accountable.

1. Hyperthermia related to infection of blood by plasmodium parasites as evidenced by skin warm to touch and temperature reading 38.7 ^{o}C.

2. Insomnia related to change in environment and headache.

3. Loss of appetite related to feeling of bitterness in the mouth as evidenced by insufficient interest in food.

4. Anxiety (mother) related to change in child's condition as evidenced by mother asking a lot of questions about sever malaria and self-report of anxiety.

CHAPTER THREE

PLANNING FOR THE PATIENT/FAMILY CARE

3.0 Introduction

Planning is the process of setting goals, developing strategies and outlining tasks and scheduled to accomplish the goals (Murcko, 2013). Planning for patient /family care is the third stage of the nursing process. It involves the developing of the plans designed to reduce, correct and prevent the health problems identified during the phase of analysis. In order to achieve and implement effective nursing care plan, nurses have to draw a care plan with the patient and his/her family on the various nursing actions. This will serve as the tool for the nurse to keep record of the patient's health needs and provide the basis for the continuity of care for the patient and family in the hospital and at home.

3.1 Patient/Family Care Objective/Outcome Criteria

The under listed objectives were set to solve the health problems of Patient.

1. Patient's body temperature would fall within 5 hours from 38.7 ^{o}C to the normal range (36.2 ^{o}C -37.2 ^{o}C) as evidenced by;

a. Mother verbalizing child's fever have subsided.

b. Nurse recording an axillary temperature ranging from 36.2 ^{o}C -37.2 ^{o}C

2. Patient would regain normal sleep pattern within (6-8 hours in the night and 3 hours during the day) within 48 hours as evidenced by;

a. Patient sleeping at least 8 hours during the night and 3 hours in the day time.

b Nurse observed patient slept soundly.

3. Patient will regain her normal appetite levels as evidenced by;

a. Patient consuming 150mls of porridge.

b. Nurse observing patient eat enough of her meals served.

4. Mother will be relieved of anxiety throughout the period of hospitalization as evidenced by;

a. Mother verbalizing basic understanding about the disease process, its treatment and prognosis.

b. Nurse observe that mother is calm and have a relaxed facial expression.

Table 13: Nursing Care Plan for Miss A.K.A and Family continue

Date and Time	Nursing Diagnosis	Objective/Outcome Criteria	Nursing orders	Nursing Interventions	Date and Time	Evaluation	Sign
(09/11/22) At 1:45pm	Hyperthermia related to infections of the blood by plasmodium parasites as evidenced by skin warm to touch and temperature reading of 38.7^0C	Patient's body temperature will reduce within 5 hours from 38.7 ^{o}C to the normal range (36.2 ^{o}C -37.2^{o}C) as evidenced; a. Mother verbalizing child's pains have subsided b. nurse recording an axillary temperature	1. Reassure patient and mother that the high body temperature will reduce to normal range. 2. Check vital signs especially temperature 4hourly. 3. Open nearby windows and closed doors to allow for fresh air. 4. Remove excess clothing from patient	1. Patient and mother were reassured that his fever will subside. 2. Patient's vital signs were checked and recorded as 36.4 ^{o}C. 3. Closed and nearby windows and doors were opened for fresh air to enter the room. 4. Patient's clothing's were removed to	(09/11/22) At 6:45pm.	Goal fully met as evidenced by; 1. Mother verbalized child fever has subsided 2. Patient having an axillary temperature of 36.4 ^{o}C	S.S

		ranging from 36.2ºC-37.2ºC	5. Tepid sponge patient. 6. Give liberal fluids. 7. Administer prescribed anti-pyretic drug	prevent excessive heat. 5. Patient was tepid sponged with tepid water for 20minuts. 6. 200mls of cold voltic mineral water was given to patient. 7. 30mg of prescribed IV Artesunate was administered.			

Table 6b: Nursing Care Plan for Miss A.K.A and Family continue

Date and Time	Nursing Diagnosis	Objective/Outcome Criteria	Nursing orders	Nursing Interventions	Date and Time	Evaluation	Sign
(11/11/22) At 10:00am	Insomnia related to headache and change of environment.	Patient would regain normal sleep pattern within (6-8 hours in the night and 3 hours during the day) within 48 hours as evidenced by; a. Patient sleeping at least 8 hours during the night and 3 hours in the day time.	1. Make a comfortable bed for patient. 2. Dim light in patient's room. 3. Give warm bath to patient. 4. Ensure a noise free environment.	1. Patient was nursed in a bed free from cramps and creases to promote comfort and enhance sleeping. 2. Light on the ward were dimmed in the evening to enable patient sleep. 3. Patient was given a warm bath to relax her and induce sleep. 4. Noise was avoided by restricting visitors.	13/11/22 At **7:**00am	Goal fully met as evidenced by; a. Nurse observe patient slept at least 8 hours during the night and 3 hours during day time. b. Mother verbalizing that patient slept soundly.	S.S

		b. Nurse observed patient slept soundly.	5. Organize all nursing activities at once to avoid interrupting sleep if possible. 6. Provide good ventilation.	5. All nursing activities (checking of vital signs and serving of medications, etc.) were organized to avoid interruption of patient sleep. 6. Nearby windows were opened to provide good ventilation.			

Table 6c: Nursing Care Plan for Miss A.K.A and Family continue

Date and Time	Nursing Diagnosis	Objective/Outcome Criteria	Nursing orders	Nursing Interventions	Date and Time	Evaluation	Sign
10/11/22 At 8:00am	Loss of appetite related to feeling of bitterness in the mouth as evidenced by insufficient interest in food.	Patient will regain her normal appetite within 24hours as evidenced by; a. Patient consuming 150mls of porridge b. Nurse observing patient eat enough of her meals served.	1. Reassure patient and mother that she will regain her normal nutrition pattern. 2. Assess patient's nutritional history. 3. Provide small but frequent nutritious feed to the child.	1. Patient and mother were reassured that after the set orders are put in place, patient will regain his normal feed pattern. 2. Assessment on child's nutritional	11/11/22 At 8:00am.	Goal fully met as evidenced by; a. Patient being able to consume 150mls of porridge. b. Nurse observed that patient ate	S.S

			4. Provide adequate and quiet environment for patient to rest after feeding. 5. Record food intake and output by measuring the exact amount given to the patient and inspecting amount that is eliminated by patient.	history was conducted. 3. Patient was provided with small but well nutritious porridge in the morning and jollof rice at lunch. 4. Patient had 3hours sleep after eating.		enough of her meals served.	

				5. Food intake was recorded as 150mls of porridge in the morning and 30 teaspoons of jollof rice at lunch.			

Table 6d: Nursing Care Plan for Miss A.K.A and Family continue.

Date and Time	Nursing Diagnosis	Objective/Outcome Criteria	Nursing orders	Nursing Interventions	Date and Time	Evaluation	Sign
(09/11/22) At 2:00pm	Anxiety (mother) related to a change in child's condition as evidenced by asking a lot of questions and self-report of anxiety.	Mother will be relieved of anxiety throughout the period of hospitalization as evidenced by; a. Mother being cooperative and assured of competent nursing care.	1. Reassure mother of competent nursing care that will be ensured to alleviate her anxiety. 2. Assess mother's anxiety level. 3. Give mother clear, concise explanation of every procedure.	1. Mother was reassured of competent nursing care that made her trust and relies on the nurse for the child's care. 2. Mother was allowed to express her fears and concerns. 3. Every procedure to be conducted on the patient was explained in detail to the mother to clear her anxiety.	10/11/22 At 2:00pm	Goal fully met as evidenced by; a. Mother cooperated and verbalized measures to care for the child. b. Nurse observed that	S.S

		b. Nurse observing mother in a relaxed and calm state.	4. Give proper orientation to the new environment. 5. Educate mother on treatment modalities and alternative treatment.	4. Mother was oriented to the ward, its surroundings and all the activities which goes on at the ward. 5. Treatment modalities and alternative treatments to child's condition were well explained to patient's mother.		mother is calm and have a relaxed facial expression.	

CHAPTER FOUR

IMPLEMENTATION OF PATIENT'S/FAMILY CARE

4.0 Introduction

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 the actualization of the nursing care plan through nursing intervention (Hinkle & Cheever, 2014)

This stage entails putting into action the stated orders on the nursing care plan to ensure the accomplishment of stated goals and objectives for Miss A.K.A. from the day of admission throughout her stay in the hospital until her discharge.

4.1 Summary of Actual Nursing Care Rendered to Patient and Family

The actual nursing care rendered to patient and her family started on the day of admission 9th November, 2022 to the time care was terminated. The aim of the management was to meet the patient and family's psychological, physiological, emotional and spiritual needs.

4.2 First Day of Admission (9th November, 2022)

Miss A.K.A. was admitted into the Pediatric Ward per mothers back in conscious state through the Emergency Department of the Holy Family Hospital, Berekum on 9th November, 2022 at 1:30PM with the diagnosis of Malaria. Patient mother complain of child having general body weakness, high body temperature, loss of appetite, nausea and vomiting. Patient and her mother were welcomed to the ward. An admission bed was made for the patient. On observation patient looked weak. Patient and her relatives were introduced to the staff nurses present and were assured of the competence of health workers (nurses and doctors) who were going to take care

of her and throughout her stay at the hospital. The following information was obtained from the patient's mother; patient's name, age, religion, address and allergies. Particulars taken were then entered into the admission and discharge book and in the daily ward state. Hospital policies regarding visiting periods, payments of bills and the time vital signs will be checked were explained. Patient was made comfortable in bed, vital signs were checked and recorded as follows;

Temperature - 38.7 degrees Celsius

Pulse - 136 beat per minutes

Respiration - 34 cycles per minutes

Oxygen saturation – 96 %

She weighed 11.6kg on admission. Physical examination of the patient was performed from head to toe. Patient appears to be weak, lethargic and disoriented. Mother was oriented to time, place and person. She was also oriented to the ward annexes. Her mother was also informed to bring items patient will need whiles he is on admission such as plates, cup, bowl, spoon, toilet tissues, soap, toothpaste and toothbrush and pajamas, towel, sponge, bucket comb or hairbrush. The rise in temperature was intervened by tepid sponging. Patient recorded a temperature of 37.8 degrees Celsius after 30 minute. Patient was given IV Artesunate 30mg stat and 500ml of DNS.

I reintroduced myself to the mother as a student nurse of Holy Family Nursing and Midwifery Training College, Berekum, who would like to take her and the family for my care study. Miss A.K.A. and her family were informed that the care study is a requirement by the Nursing and Midwifery Council of Ghana in partial fulfilment towards the award of a license to practice as a

Registered General Nurse. I explained to the patient and her family the concept of the patient/family care study and assured them of privacy and confidentiality. It was added that a report will be written after the entire event. Miss A.K.A. and her family agreed to my request and promised to offer me the necessary information and assistance. I thanked them on such a decision since doing so reveales a mark of a welcoming gesture.

Discharge planning was initiated with the relatives; thus, they will continue the care (by administering medication, making sure patient sleeps in a treated mosquito net at home once she is well and discharged. She was managed on the following medications:

1. IV Artesunate 30mg, x 0 hour, 12hours, 24hours.
2. Syrup Paracetamol 125mg tds ×5 days.
3. Intravenous Dextrose Normal Saline 500ml for 24hours.
4. Intravenous Metoclopramide 1mg tds for 24hours.

The drugs were obtained from the Hospital in- patient pharmacy and the initial doses were administered. The following diagnostic investigations were requested to be done;

1) Blood film for malaria parasite.
2) Full Blood Count.
3) Urine R/E

The sample was taken and labelled with all requisite information and sent to the laboratory for the investigations. Patient was made comfortable in bed.

At 1:45pm, nursing diagnosis of hyperthermia related to infections of the blood by plasmodium parasites as evidenced by skin warm to touch and temperature reading of 38.7^0C was set up. At 2:00pm an objective of patient body temperature will reduce within 4 hours from 38.7^oC to the normal range (36.2^0C-37.2^0C). Nursing interventions implemented included; Patient and mother

were reassured that her fever will subside; Patient's vital signs were checked and recorded as 36.4 ^{o}C. Closed and nearby windows and doors were opened for fresh air to enter the room, Patient's clothing's were removed to allow for fresh air, Patient was tepid sponged with tepid water for 2hours, 200mls of cold voltic mineral water was given to patient, 30mg of prescribed IV Artesunate was administered at 2:15pm. Vital signs were checked and recorded as indicated in the appendix at 2:00pm. Patient was served with rice and beans stew as lunch and she ate ¼ of the food she was served. Patient was feeling fine before she was handed over to the afternoon staffs. Evening vital signs were checked and recorded as shown in the appendix at 6:00pm, due medication of 10mls of syrup paracetamol was administered. Patient took her bath and had her supper. She went to sleep around 8:00pm. Medication of 30mg of IV Artesunate was administered at 12:00am.

4.3 Second Day of Admission (10th November, 2022).

On the second day of admission, I arrived at the ward at 7:30am to continue rendering care for patient. By that time, she has already taken her bath, brushed her teeth and all activities of personal hygiene have been performed. Vital signs were also checked and recorded as indicated in the appendix at 6:00am. Due medication of syrup paracetamol was already administered. The night nurses observed that patient refused every food that was served which was (rice with kontomire stew, yam with egg stew and jollof rice with fish). Patient only took few sips of kalyppo drink and bread after refusing the meals served. Mother was anxious and confused but she was reassured of competent care. The night staff nurses monitored patient throughout the night till morning for any complications, and patient exhibited none.

At 8:00am, a nursing diagnoses of Loss of appetite related to feeling of bitterness in the mouth as evidenced by insufficient interest in food was formulated for patient. An objective of Patient will

regain her normal appetite within 24hours was set. Nursing interventions implemented included; Patient and mother were reassured that after the set orders are put in place thus reassure patient and mother that she will regain her normal nutrition pattern, assess patient's nutritional history, Provide small but frequent nutritious feed to the patient, provide adequate rest for the child after feeding, record food intake and output by measuring the exact amount given to the patient and inspecting amount that is eliminated by patient, patient will regain her normal feeding pattern, Assessment on child's nutritional history was conducted and noted that child had no feeding problem. Patient was provided with small but well nutritious porridge in the morning and rice as lunch. 30mg of IV artesunate was administered at 12:00noon. Vital signs were checked and recorded as indicated in the appendix and 10mls of syrup paracetamol was administered at 2:00pm. Patient exhibited signs of weakness and was only lying on the bed.

At 5:45pm, Patient was served with nutritious 'banku'with groundnut soup for supper and she ate about half of the food, drank 200mls of water and was given water to rinse her mouth. At 6:00pm vital signs were checked and recorded and indicated in the appendix, due medication of 10mls of syrup paracetamol and tablet artemether lumefantrine were administered. She took a warm bath and a comfortable bed was made for her to sleep. She went to bed around 8:00pm.

. Patient was in a good state of health and was handed over to the night staff nurses. Patient and mother were informed that I will be going to their home for my first home visit so the mother gave me her elder daughter's number to call when I get to the station.

4.4 Third Day of Admission (11th November, 2022)

Miss A.K.A woke up at 5:45am according to night nurses who handed over to me. On the third day of admission, at 7:00am, I went to the ward to continue with my nursing care for patient. Her

morning vital signs had already been checked at 6am and recorded as in appendix. The night nurse reported that IV Artesunate 30mg have been administered. During the In-patient review in the morning, Dr.S attended to Miss A.K.A and the plan was to continue her medications. Patient had her breakfast which was porridge and bread. Her 10:00am vital signs were checked and recorded as in appendix. Information from the night nurses indicated that patient was unable to have adequate sleep throughout the night. Interaction with patient mother reveals that it is true and hence, at 11:00am, the nursing diagnosis of Insomnia related to change of environment and headache was formulated. Objective was; patient would regain normal sleep pattern within 48 hours was made to help manage the insomnia. The following interventions were carried out to achieve the said objective; Patient was nursed in a bed free from creases and crumps to promote comfort and enhance sleeping, Lights on the ward were dimmed in the evening to enable patient sleep, patient was given a warm bath to relax her and induce sleep, Noise was avoided by restricting visitors and keeping volume of nearby television set low, All nursing activities were organized to avoid interruption of patient sleep, Nearby windows were opened during the day time to provide good ventilation.

At 2pm, patient vital signs were checked and recorded as in appendix. Her due medications were served and recorded. Patient was served with plain rice with vegetable stew for her lunch.

At 2:30pm the objective of Patient will regain her normal appetite within 24hours set on 10th November, 2022 was fully met as evidenced by Patient consuming 150mls of porridge, 30 teaspoons of rice for lunch and ‘banku’ and groundnut soup for supper and Nurse observed that patient ate enough of her meal served.

At 6:00pm, patient’s vital signs were checked and recorded as shown in the appendix. His due medications were administered and due documentation were made. Patient was served with

boiled ripe plantain with kontomire stew for her supper. She was assisted to performe her personal hygiene after meal.

At 10:00 pm Patient vital signs were checked and recorded as in appendix and her due medications were served.

4.5 Fourth Day of Admission (12th December, 2022).

Patient woke up in the morning around 6:00am emptied her bowel and was looking well. She was assisted to maintain her personal hygiene. She was groomed neatly and her bed was laid to improve her comfort. Vital signs had already been monitored as indicated in the appendix. Due medication of syrup paracetamol was administered. It was reported by the night staffs that, patient slept well and did not complain of any pain. At 8:00am, patient was served tea with bread for breakfast and she ate to her satisfaction. She was then reviewed by the House Officers during ward rounds and Mother had no complains and the Medical Officer ask for treatment to be continued without any new medication added to her treatment. They were told of a possible discharge the next day if there are no further complains from her. Conversation with Patient Mother revealed that she was pleased with the attention and care rendered to her child. 2pm Vital signs were checked and recorded as indicated in appendix, Due medication and all nursing actions were carried out and documented for referenced. She took rice and kontomire stew as lunch. She took her bath at 5:00pm and was served with fufu and light soup and fish for supper. 6pm vital signs were checked and recorded as indicated in the appendix, Due medication was administered and documented for reference purposes and quality of care.

10pm vital signs were checked and recorded as in appendix. Due medication were served, patient was made comfortable in bed.

4.5 Fifth Day of Admission (13th December, 2022).

I arrived at the ward at 7:00am on this day to find Patient looking cheerful. Reports from the night nurse indicated how well both patient and mother slept throughout the night. I was told she has already been assisted by her mother to maintain personal hygiene. Vital signs checked and recorded as follows;

Temperature - 36.2^0C

Pulse - 94bpm

Respiration - 24cpm.

During morning rounds at 9:00am, she was discharged. The doctor ordered that patient should be discharged home with tablet folic acid and syrup paracetamol. Education was given to mother on the need to complete the medication given to Patient on diet and proper sanitation and the need to report any observed sickness anytime to prevent future complications. The date for review was communicated to them. The folder was sent to the billing officer for billing though my patient was insured with the National Health Insurance Scheme. Her particulars were entered on the admission and discharge book and daily ward state. The folder was later taken to the medical records and around 11:30am, Patient and the relatives were ready to go home. I helped them carry their belongings to a taxi that was waiting for them outside and bade them goodbye.

At 11:41am, the set objective Mother will be relieved of anxiety throughout the period of hospitalization was fully met as evidenced by; Mother being cooperative and assured of competent nursing care and Nurse observed mother in a relaxed and calm state.

After Patient have been discharged, the side locker and the bed were disinfected. All dirty bed linens and materials were removed. This was done to ensure cleanliness at the ward and to prevent cross infections.

4.6 Preparation of Patient/Family for Discharged

Preparation of patient/family for discharge started on the day of admission 9th November, 2022. The aim was to make them comfortable and understand that the hospital was a temporary place for health care and patient would be discharged home to continue treatment when her condition improves. Preparation of patient and family for discharge and rehabilitation is necessary and important in comprehensive nursing care to ensure an adequate self-care at home. During the preparation, they were also made aware of patient's condition and how best it could be managed. I educated patient and relatives on the causes of the condition such as a bite of an infected female anopheles mosquito, signs and symptoms such as fever, chills, headache and anorexia, management such as rest and sleep and preventive measures such as sleeping under treated mosquito net.

Mother was advised on the importance of review and was asked to come for review on 21st November, 2022 and also to report promptly to the hospital for proper management if any changes occurs in patient's condition before the review date is due.

Patient was discharged during ward rounds. Patient's mother was informed of her discharge, and bills were fully settled.

Prior to discharge, they were reassured that I would visit them at home. Intakes of fruits were encouraged. They were educated on the condition, the causes, signs and symptoms as well as the complications. Patient's mother was also educated to make sure patient sleep in a treated mosquito net, make sure the bushy area around their house is cleared, and ensure proper disposal

of waste. They were also educated on the need to observe the dosage, time and importance of taking the prescribed drugs. They were helped to pack their belongings and her remaining drugs given on discharge were given to patient's parents. The discharge procedure was documented in the admission and discharge book and in the daily ward state as well as in the nurses' notes. Miss A.K.A's mother thanked the staffs and bade them goodbye. Patient and her relatives were then seen outside the hospital where they boarded a car home.

4.7 Follow Up/Home Visit/Continuity of Care

Home visit means visiting the family at their place to assess the health needs, to provide services such as preventive, promotive, curative or rehabilitative services at their door step by the community health nurse or health workers (Sujatha, 2014). The purpose of home visit is to find out needs of patient/family and community in relation to health, socio-economic and cultural aspects, to provide teaching regarding the prevention and control of diseases, to assess the living condition of the patient/family, and to establish a close relationship between the nurses and the patient/family.

4.8 First Home Visit (11/11/2022)

My first home visit to my patient's house at Senease was made on 11th November, 2022, at 10:30am when she was still on admission. Senease, a town in the Bono region, it is about 10minutes drive from Berekum. The main aim for the visit was to familiarize myself with the patient's environment as well as the family members, to confirm information given by patient about the family and their home environment and to find out their health need and assist towards effective solutions to any health problems that may be identified.

I set off based on the directions given to me by Patient's mother around 10:30am and she gave me her younger sister's number to call when I alight at Senase. It was about 10minutes' drive

from Berekum. I reached Senase around 10:40am and I called the number my patient mother gave me. She directed me to wait for her at the Senase community health center located at the road side in the center of the community. She told me I will be led by a young girl called princess, eleven years of age to the house. Few minutes later, the young girl arrived and identified herself as princess. We walked for 4 minutes and finally reached the house numbered SE 145 around 10:50am. I was welcomed into their house, offered a seat, a sachet of water. I introduced myself as a student of Holy Family Nursing and Midwifery Training College, Berekum who had taken her sister's daughter to render comprehensive nursing care till she was discharged and also visit them at home environment. I told her the purpose of the visit was to help me interact with the other members of the family and give them the necessary support to promote health. They lived in a single room. It was built with cement and blocks, roofed with iron sheet and windows are made with nets and louver blades. There was a structure made with wood at the left side of the house and that was their kitchen. Their bathroom and toilet were at the back of the house. Their main source of light was electricity and their source of water was acquired from a standing pipe borne behind the house.

Upon entering the house, observation was made on the environment and it was clean. Their house was surrounded by bushes where they dump their refuse. Their windows were closed and nets were dirty and torn. I educated the sister to weed around the bushy area, they should also open the windows for ventilation and the nets should be cleaned and get a new one. Proper hand washing with soap after eating and visiting the toilet was also stressed. Patient condition was explained thus causes, clinical manifestation, management and prevention were explained to them. They were also encouraged to continue good refuse disposal to prevent environmental

pollution and breeding of mosquitoes. They were encouraged to ask questions and answers were provided in simple terms to enhance their understanding.

Permission was sought to leave at 2:00pm promising her of another visit after Patient have been discharged. I informed my patient's mother on the education that has been given to her younger sister such as, cleaning of nets, opening of windows to allow fresh air enter the room, clearing the bushy areas, proper waste disposal and sleeping under treated mosquito nets.

4.9 Second Home Visit (17/11/2022)

On Thursday 17th of November, 2022 which was four days after patient's discharge, I paid Miss A.K.A. and her family a visit at their home as planned. The purpose of this visit was to ascertain whether the education given to her family during the period of hospitalization and first home visit had been adhered to and also to remind them of the review date.

I arrived at the house around 3:30pm and was happy when I saw the bush around the house cleared. Upon entering the house, I saw Miss A.K.A playing with her friends, her mother and grandmother were seated in front of their house. They were ready to receive me. I was offered seat and water. After asking of their present condition, they said they were very healthy by God's grace. Patient was called, she was healthy and strong. I was asked to wait in the room. I used this opportunity to observe the room and the environment. The room was well tidied as the louvers were neatly wiped off dust and the curtains nicely hanged with no clothes hanging on them. I also looked through the windows, assessed the environment and it was clean. When all the family members were seated, I told them of my mission for coming to the house, thus, to know how Miss A.K.A. was responding to the care being given in the house and also to emphasize on the need to keep their environment clean, and moreover, reminding them of the review date. I congratulated them for keeping the environment, the nets and the louvers clean. Emphasis was

made on the need for Miss A.K.A. to take a well-balanced diet and foods which contain iron such as beans, green leafy vegetables and fruits. They were also told to allow her to rest during the day. Lastly, I reminded them of the review date which was Monday the 21st of November, 2022 and its importance.

At about 5:00pm, I sought permission to leave and told them that I would be officially visiting them for the last time where I would terminate the care given.

I bade them fare well and they expressed their gratitude for the help they had gotten so far from me and accompanied me to the road side before they departed.

4.10 Review (21st November, 2022)

On 21st November, 2022 patient and mother were met at the Out Patient Department of Holy Family Hospital, Berekum. Patient looked well and cheerful. I accompanied them to go for the patient's folder. Vital signs were checked and recorded as; temperature 36.9ºC, pulse 98bpm, respiration 23cpm and oxygen saturation 98%. Patient was seen in the consulting room. Upon examination, patient looked cheerful and healthy. Mother made no new complains. Mother was educated to serve balanced and nutritious diet to patient, she was also educated to wash hands with soap and water when feeding patient and encouraged to continue sleeping under well treated mosquito net. I reminded patient and mother of my third visit which will be my last visit and to terminate care. Patient and mother were seen off at the taxi station to board a car back home.

4.11 Third Home Visit (24TH November, 2022)

On the 24th November, 2022 I made my last visit to patient's house. The main reason was to find out how patient was faring after review, to hand over patient to public health nurse for continuity of care and finally terminate care. After exchange of greetings and a little interaction, patient mother and relatives confirmed they were doing well. I thanked them for their co-operation. I then stressed on the need to treat malaria promptly and also made it known to her family that I

was terminating my care, but I had to leave them in the care of a public health nurse. I went with patient mother to the CHPS compound which was very near to their house. I introduced myself to them and told them the reason for my visit was to leave patient in their care for continuity of care. Since the house was nearby, they promised to visit them often to check on their wellbeing. Patient's mother promised to give them her maximum cooperation. I told them I would visit them unofficially whenever I had the chance. They looked very happy and said they would miss my care and would give Patient the maximum support she needs. They all said a prayer for me, asking GOD to make me prosperous and successful. I asked for the permission to leave and I left the house around 2:30pm.

CHAPTER FIVE

EVALUATION OF CARE RENDERED TO PATIENT AND 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, 2014). This is the last phase of the nursing process. The chapter gives information about the statement of evaluation, amendment of nursing goals and the termination of the care rendered to my patient and family.

5.1 Statement of Evaluation.

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

1. **Patient was relieved from anxiety. (10th November, 2022)**

On 9th November, 2022 at 2:00pm, patient's mother was found to be anxious. Nursing diagnosis of Anxiety (mother) related to change in child's condition as evidenced by asking a lot of questions and self-report of anxiety was formulated. An objective of Mother will be relieved of anxiety throughout the period of hospitalization was set. Nursing interventions implemented included; Mother was reassured of competent nursing care. Mother's anxiety was been assessed and recorded by answering questions asked by the Mother about the child's condition. Every procedure to be conducted on the patient was explained in detail to the mother to alley her anxiety, Mother was oriented to the ward, its surroundings and all the activities which goes on at the ward. Treatment modalities to child's condition were well explained to patient's mother. On 10th November, 2022 at 2:00pm, the set goal was fully met as mother being cooperative and assured of competent nursing care and nurse observed mother with a calm and relaxed face.

2. **Patient's temperature dropped from 38.7ºc to normal range (36.2ºc – 37.2ºc) within five hours. (9th November, 2022)**

On 9th November, 2022 at 11:45am, the problem of high body temperature was identified. Nursing diagnosis of hyperthermia related to infection of blood by plasmodium parasites as evidenced by skin warm to touch and temperature reading 38.7ºC was formulated An objective of Patient's body temperature will reduce within 5hours from 38.7 ºC to the normal range (36.2 ºC -37.2 ºC) was set. Nursing interventions implemented are as follows; Patient and mother were reassured that her fever will subside, Patient's vital signs was checked and recorded as 36.4 ºC, closed and nearby windows and doors were opened for ventilation, Patient's clothing's were removed to prevent excessive heat, Patient was tepid sponged with tepid water for 15minutes, 200mls of cold voltic mineral water was served to patient and 30mg of prescribed IV Artesunate was administered. At 6:45pm on 9th November, 2022 the goal set was fully met as evidenced by mother verbalized child fever have subsided and patient having an axillary temperature of 36.4 ºC.

3. **Patient regained Her appetite. (11th November, 2022)**

On 10th November, 2022 at 8:00am, patient showed no interest in food. Nursing diagnosis of Loss of appetite related to feeling of bitterness in the mouth as evidenced by insufficient interest in food was formulated. An objective of Patient will regain her normal appetite within 24hours was also set. Nursing interventions implemented included; Patient and mother were reassured that after the set orders are put in place, patient will gradually regain her normal appetite levels, assessment on child's nutritional history was conducted, Patient was provided with small but well nutritious porridge in the morning and rice as lunch. Food intake was recorded as 150mls of porridge in the morning and 30 teaspoons of jollof rice. At 8:00am on 11th November, 2022, the

set goal to regain patient's normal feeding pattern was fully met as patient consuming 150mls of porridge and 30 teaspoons of jollof rice and nurse observed that patient ate enough of her meal served.

4. **Patient altered sleeping pattern was restored on (11th November, 2022) within 48 hours.**

On the 11th of November 2023, Patient Mother complain of insomnia. Nursing diagnosis of insomnia related to headache and change of environment was formulated. An objective of Patient would regain normal sleep pattern within (6-8 hours in the night and 3 hours during the day) within 48 hours was set up, Nursing intervention implemented included, Patient was nursed in a bed free from cramps and creases to promote comfort and enhance sleeping, light on the ward were dimmed in the evening to enable patient sleep, Patient was given a warm bath to relax her and induce sleep, noise was avoided by restricting visitors, nursing activities (checking of vital signs and serving of medications, etc.) were organized to avoid interruption of patient sleep.

5.2 Amendment of the Nursing Care Plan

Four patient's strength and family's health problems were identified during interactions with Patient mother throughout the period of hospitalization. Objectives were set to help resolve these problems. Objectives were met within the time period set to be achieved. There were no partially met or unmet objectives.

5.3 Termination of Care

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

Interaction with Miss A.K.A and her family started on the day of admission, 9th November and ended on 13th November, 2022 after my last home visit. This stage was difficult as there has being a good relationship between the patient, her family members and myself, but every nurse-patient relationship needs to be terminated.

On 24th November, 2022, I visited patient and family members at home and finally informed them that, it was going to be my last visit to them but will visit them when the need arises. Patient was then handed over to a public health nurse at the CHPS compound near their house to continue caring for patient. However, patient and family were assured that I will visit them any time I found myself around their town. I educated them to sleep under treated mosquito nets, weed around the house whenever it was bushy and drain all stagnant water in gutter, they were also happy Patient had recovered.

CHAPTER SIX

SUMMARY AND CONCLUSION

6.0 Introduction

Summary is a comprehensive and usually brief abstract, recapitulation, or compendium of previously stated facts or statement. Conclusion is something that you decide when you have thought about all the information connected with the situation. (Weller, 2018).

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

6.1 Summary of care rendered.

Miss A.K.A. was admitted on 9th November, 2022 at the Pediatric ward of Holy Family Hospital, Berekum through the Emergency Department (E/R) with diagnosis of Malaria. She presented with signs and symptoms of general body weakness, high body temperature, loss of appetite, nausea and vomiting. Patient was made comfortable in bed and vital signs were checked and recorded as follows;

Temperature - 38.7 degrees Celsius

Pulse - 136 beat per minutes

Respiration - 34 cycles per minutes

Oxygen saturation – 96 %

She was to be managed on the following prescribed medications:

1) IV Artesunate 30mg x 0 hour, 12 hours, 24 hours.
2) Syrup Paracetamol 125mg tds × 5 days.

3) IV Dextrose Normal Saline 500mls for 24 hours.
4) IV Metoclopramide 1mg tds for 24 hours.

The following diagnostic investigations were requested to be done;

1. Blood film for malaria parasite.
2. Blood for Full Blood Count.
3. Urine R/E

During patient's stay at the ward, four (4) nursing health problems were identified. Objectives were set for these problems and both medical and nursing interventions were given. Patient was nursed on a well-prepared bed which made her comfortable; explanation of every procedure was given to patient mother. Before discharge, education on diet, sanitation review and continuity of drugs intake were emphasized. Three home visit were made. First home visit was on 11th November, 2022. The purpose for the visit was to familiarize myself with the patient's environment as well as the family members, to confirm information given by patient about the family and their home environment and to find out their health need and assist towards effective solutions to any health problems that may be identified.

The second home visit was made on 17th November, 2022 and the reason for the visit was to ascertain whether the education given to Patient and family during the period of hospitalization and first home visit had been adhered to and remind them of the review date. The third home visit was made on 24th November, 2022. The purpose for the third visit was to find out how patient was faring after review, to hand over patient to public health nurse for continuity of care and finally terminate my care.

6.2 Conclusion

In conclusion, my choice of nursing Miss A.K.A. has increased my knowledge on management of malaria of Malaria. It has given me an in-depth knowledge on the causes, signs and symptoms, diagnosis, treatment, complications and possible prevention of the disease condition.

This study has also enabled me gain knowledge on how to practically care for patients with Malaria using the nursing process. This study enabled the patient to spend enough time with clinical team members and also help patient and mother gain better understanding of Malaria and its management. My recommendation is that, all patients should be given individualized, holistic, comprehensive and competent nursing care to help decrease re-occurrence of diseases in our hospitals and communities as well as reducing mortality rate in the country as a whole. I also recommend that every nursing student should be given the opportunity to embark on the patient/family care study to help them obtain more knowledge and understanding on the condition under study. In brief, I really enjoyed every bit of writing this script despite the challenges involved.

APPENDIX

Table 14: Vital Signs

DATE	TIME	TEMPERATURE (^{O}C)	PULSE (bpm)	RESPIRATION (cpm)
09/11/2022	2:00pm	38.7	136	34
	6:00pm	37.2	86	19
	10:00pm	36.4	85	22
10/11/2022	6:00am	37.0	82	21
	10:00am	37.2	98	20
	2:00pm	36.9	88	24
	6:00pm	36.7	87	21
	10:00pm	36.8	100	25
11/11/2022	6:00am	37.0	99	24
	10:00am	37.2	90	22
	2:00pm	36.6	89	25
	6:00pm	37.1	88	27
	10:00pm	36.9	84	19
12/11/2022	6:00am	36.7	80	20
	10:00am	37.0	90	21
	2:00pm	36.5	94	25
	6:00pm	36.8	99	24
	10:00pm	37.0	89	26
13/11/2022	6:00am	36.5	88	23

BIBLIOGRAPHY

Anilkumar, B. (2016, October 13). *Google*. Retrieved from Slideshare.net: http://www.slideshare.net CDC, C. f. (2016). *Google*. Retrieved from cdc.gov: http://www.cdc.org

Collins. (n.d.). *google*. Retrieved from collinsdicyionary.com: http://www.collinsdictionary.com

google. (2018, August 22). Retrieved june 30, 2021, from nhs: http:www.nhs.uk

Marshall, L. A. (2011). *Google*. Retrieved from scgolar.google.com: http://www.scholar.google.com

McLeod, S. (2018, May 3). *Erikerickson's stages of psychosocial development*. Retrieved from simplypsychology.org: http://www.simplypsychology.org/ErikErickson.hmtl

Park, K. (2013). *Park's Textbook of prevention and social medicine.* Banarsick: Banarsick Bhanot publishers.

Swonger, A. K., & Matejski, M. P. (1991). *Nursing Pharmacology.* London: Murray Printing Company.

Hinkle, J. L., & Cheever, K. H. (2014). *Brunner & Suddarth's textbook of medical-surgical Nursing.* London: Wolters Kluwer Health/ Lippinocott Williams & Wilkins.

WHO. (2019). *Who Health Organisation.* Geneva.

Merriam Webster. (2019, August 5). Retrieved from merriam-webster.com dictionary: www.merriam0-webster.com/dictionary/medical%history

Gale Encyclopedia of Nursing and Allied Health. (2019, October 27). *Encyclopedia.com*. Retrieved from encyclopedia.com:

SIGNATORIES

THE STUDENT NURSE

NAME: SAM SOLOMON

SIGNATURE:.....

DATE:.....05/07/2023.....

THE NURSE-IN-CHARGE OF PEADIATRIC WARD OF HOLY FAMILY HOSPITAL)

NAME: ESTHER DUODU EFFAH

SIGNATURE:.....

DATE:.....06-07-2023.....

THE SUPERVISOR, NURSING AND MIDWIFERY TRAINING COLLEGE, BEREKUM

NAME: ANTOINETTE EFFUM.

SIGNATURE:.....

DATE:.....06/07/2023.....

THE PRINCIPAL OF HOLY FAMILY NURSING AND MIDWIFERY TRAINING COLLEGE, BEREKUM

NAME: MONICA NKRUMAH

SIGNATURE:.....

DATE:.....17/07/23.....

PRINCIPAL
HOLY FAMILY NURSING AND MIDWIFERY TRAINING COLLEGE
BEREKUM