HOLY FAMILY NURSING AND MIDWIFERY TRAINING COLLEGE BEREKUM

A PATIENT/FAMILY CENTERED CARE STUDY ON ACUTE GASTROENTERITIS

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A PATIENT/FAMILY CENTERED CARE STUDY ON ACUTE GASTROENTERITIS SUBMITTED TO THE NURSING AND MIDWIFERY COUNCIL OF GHANA IN PARTIAL FULFILLMENT FOR THE AWARD OF THE LICENSE TO PRACTICE AS A REGISTERED GENERAL NURSE.

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PREFACE

Over the years, due to the advancement of technology in our modern times, nursing as a profession has seen notable development in its practice. This has resulted in holistic, and comprehensive care of patients via the application of the nursing process. The Patient/Family care study, which is based on the nursing process approach, forms part of the academic requirements for the award of Registered Diploma Nursing certificate to practice nursing. It requires students to carry out a total nursing care to patient and family from the time of admission to time of discharge of the patient and beyond in a follow up care at home. It takes into consideration the physical, psychological, social and spiritual needs of the patient and family. The Patient/Family care study gives an opportunity for the patient and family to gain insight and comprehend their condition, hence, aids in improving and promoting their health status by practicing measures explained to them during their health education through the interaction with the student nurse. The patient/Family care study also equips the final year student nurse with more theoretical and practical skills on the condition and gives him or her opportunity to practice the skills and knowledge attained during his or her training to give a comprehensive care using the nursing process approach. Finally, the family and patient care study also serves as an evaluation tool used by the Nursing and Midwifery Council of Ghana for the assessment of the student nurse in partial fulfillment of the requirements for the reward of a Registered General Nursing certificate. The study used initials of names in order to maintain confidentiality.

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This care study would not have been a reality and a success without the assistance of some devoted persons who offered their precious time, interest and encouragement during this project.

My profound gratitude goes to Mr. K.O and his entire family who allowed me to use him for the care study and their awesome cooperation and tolerance during interactions and for given me all the needed information willingly, both at the ward and at home.

My deepest appreciation also goes to my supervisor, Eric Obeng for the advice, patience and for taking his time to go through my work. Special thanks to the entire teaching and non-teaching staff of Holy Family Nursing and Midwifery Training College, Berekum, for their support, not forgetting the Principal of the institution, Monica Nkrumah.

In this context, I wish to express my heartfelt gratitude to the doctors, nurses and other paramedical staff of St. Theresa's Hospital, Nkoranza, for their immense support, especially the in-charge and entire staff of Male Medical Ward.

Again, I am also grateful to my lovely mother Mrs. Opoku Rita, my Anty Gmajome Georgina and my sister Suzanna Addai for their support financially, spiritually and psychological throughout my education.

Finally, my thanks go to the authors from whose book's information was extracted. May God richly bless you all.

INTRODUCTION

The Patient/Family is study are detailed written report of actual nursing care rendered to a patient. Mr. K.O is 81-year-old man with the diagnosis of Gastroenteritis. My interaction with the patient began on the 12th November 2021 at the Male's Ward of St. Theresa's Hospital-Nkoranza where he came to seek medical care for the symptoms he was experiencing.

On admission, patient complained of abdominal pains, high body temperature, Vomiting and diarrheoa. His vital signs on admission was checked and recorded as;

- Temperature 38.0°C
- Pulse 119bpm
- Respiration 23cpm
- Blood pressure 71/50mmHg
- Spo_2 97%.

The following diagnostic investigations were carried out on Mr. K.O.:

- Full blood count
- Typhoid rapid diagnostic test
- Electrolyte test
- Stool routine examination
- Urine routine examination

He was managed with the follow medications;

- Intravenous fluid 0.9% sodium chloride 1.0L for 24hours.
- Intravenous fluid 5%dextrose in 0.9% sodium chloride 1.0L
- Intravenous ciprofloxacin 400mg, 12hourly for 24hours

- Intravenous metronidazole 500mg, 8hourly for 24hours
- Intravenous paracetamol 1000mg, 8hour for 24hours
- Injection hyoscine butyl bromide, 40mg then 20mg 12hourly for 24hours
- With proper nursing and medical management patient was discharged home on the 15th November, 2021. Mr. K.O spent four (4) days on admission and was discharged home after medical interventions had resolved the signs and symptoms, and he was observed to be stable and fit to go home.

Three consecutive home visits were made to Mr. K.O's home to assess his home environment upon which health education was given and to determine if patient's state of health was good and if the family was conforming to health education given during the interaction. The nursing process was used in granting nursing care to my patient and the family and the care was finally terminated on 29th November, 2021.

This script has been organized in six chapters;

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 the care for patient and family where a nursing care plan is drawn and was used in the management of Mr. K.O.

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

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CHAPTER ONE

ASSESSMENT OF PATIENT/FAMILY

1.0 Introduction

The nursing assessment, the first step of the nursing process, involves the systematic and continuous collection of data, documentation and communication of the data collected (Toney-Bustler& Unison-Pace, 2021). It seeks to gather data about a patient's physiological, psychological, social and spiritual status. Key issues, or foci, may be evident early in the assessment and allow the nurse to begin the diagnostic process. Expert nurses can quickly identify clusters of clinical cues from assessment data and seamlessly progress to nursing diagnoses (Herdman, 2013). Nursing assessment is used to identify current and future patient care needs. It incorporates the recognition of normal versus abnormal body physiology. Prompt recognition of pertinent changes along with the skill of critical thinking allows the nurse to identify and prioritize appropriate intervention.

1.1 Patient's Particulars/Biographic Data

Biographic data usually includes information that identifies the patient and significant others. Biographical data include the patient's name, address, phone number, contact person, age/birth date, place of birth, gender, race, religion, marital status, educational level, occupation, and social security number/health insurance. They also include the person who provided the history and her or his reliability as well as the person who referred the patient (Dillon, Chikotas, & Curry, 2007).

The patient's name had been abbreviated to Mr. K.O to maintain confidentiality, as it was promised to the patient before the study commenced. Mr. K.O is an 81-year-old male who was

born on the 2nd of February, 1940 at Drumakuma in the Bono East of Ghana and belongs to the "Bretuo Abusua"

1.2 Family's Medical History

The family history provides clues to genetically linked or familial diseases that may be risk factors for the patient (Dillon, Chikotas,& Curry, 2007).

Mr. K.O is currently not having any knowledge on observed or told-about chronic illness that runs through his family, from both parents' lineage. There are reported incidents of ailments in the family that were mostly treated and managed by the herbalists, clinicians or with the over-the-counter medications. No clinician ever explained to them any condition that is likely running in the family. He has heard from distant family members reporting on conditions/ailments like diabetes, hypertension, asthma and the likes, but not convinced that they run through his immediate family lineage. Mr. K.O also specified that there is no allergy in the family.

1.3 Family's Socio-Economic History

This is the information gained about a particular family by a nurse or physician by asking specific questions to suitable information with the aim of obtaining information useful in formulating a diagnosis and providing medical care to a patient (Klemperer, 2007).

The family has a good relationship with each other. Support system is by helping each other when the need arises. Their main source of finance in times of difficulty is through the contribution from the family members who are working and can support when necessary. The family's main medical financing support comes from the National Health Insurance Scheme. Most of the family members are Christians and according to the patient's, very few are fully dedicated to church activities. Income level of the family can be judged as average because most of the family members are working one way or the other, and most of them are faring well in

their personal and private lives. Like most of families in this part of the world, their norms and values go along w

1.4 Patient's Developmental History

Development can be defined as systematic changes and continuities in the individual that occur between conception and death, or from "womb to tomb." Development entails many changes; by describing these changes as systematic, we imply that they are orderly, patterned, and relatively enduring (Sigelman& Ridder, 2012).

As much as patient could remember, he was born per spontaneous delivery at Drumakuma in the Bono East of Ghana. He was delivered by a traditional birth attendant that was in their town. He does not know anything about his immunization. According to the patient he had a very normal developmental milestone but does not remember much about when he started crawling, sitting, standing and walking. He was breastfed for a year and then weaned. He was not born with any abnormalities and did not incur any physical impairment during his growing up.

In lights of numerous theories used in describing human development and growth, one that I am particularly accustomed to and of the view that it can be used in accessing patient's developmental history is the "Erikson psychosocial stages" of human development. Erikson believed that humans everywhere experience eight major psychosocial stages, or conflicts, during their lives. Whether the conflict of a particular stage is successfully resolved or not, the individual is pushed by both biological maturation and social demands into the next stage. However, the unsuccessful resolution of a conflict will influence how subsequent stages play out. The stages of his psychosocial stages are as follows:

- Trusts versus mistrust (birth to 1year) – infants must learn to trust their caregivers to meet their needs.

- Autonomy versus shame (1-3years) – children must learn to be autonomous; to assert their wills and do t
- Initiative verses guilt (3-6 years)- where preschoolers develop initiatives by devising and carrying out bold plans, but they must learn not to impinge on the rights of others.
- Industry verse inferiority (6-12 years) – where children must master important social and academic skills and keep up with the peers; otherwise, they will feel inferior.
- Identity verses role confusion (12-20years) – here, adolescents ask who they are and must establish social and vocational identities otherwise they will remain confused about the roles they should play as adults.
- Intimacy versus isolation (20-40years)- young adults seek to form a shared identity with another person, but may fear intimacy and experience loneliness and isolation.
- Generativity versus stagnation (40-65 years) – middle aged adults must feel that they are producing something that will outlive them, either as parents or as workers, otherwise, they will become stagnant and self-centered.
- Integrity versus despair (above 65years) – where older adults must come to view their lives as meaningful to face death without worries and regrets.

Mr. K.O. by age 81years is classified under the eighth stage that is “Integrity versus Despair (65 to death)”. This is final psychosocial stage and it occurs during old age; it is focused on reflecting back on life. At this point in development, people look back on the events of their lives and determine if they are happy with the life that they lived or if they regret the things they did or did not do. Erikson's theory differed from many others because it addressed development throughout the entire lifespan, including old age. Older adults need to look back on life and feel a sense of fulfilment. Success at this stage leads to feelings of wisdom, while failure results in regret, bitterness, and despair. At this stage, people reflect back on the events of their lives and

take stock. Those who look back on a life they feel was well-lived will feel satisfied and ready to face the end of

It was realized that, patient was in the integrity stage of the psychosocial development because during my conversation with him he talked about his past; that if not for his hard work and determination his children would not have been at where they currently. He felt happy and was saying if he was to die now, he knows his soul will have a peaceful rest because he has been able to raise his children well. With this I was convinced that patient was in the Integrity stage.

1.5 Patient's Lifestyle and Hobbies

All Mr. K.O does in the house is to wake up, eat, talk to some of his old friends in the community and go back to sleep. He does not have a fixed time to go to bed or wake up from bed. He normally sleeps by 10pm and wakes up around 4am. He sometimes follows his family (children and grandchildren) to farm but could see that they do not like it when he opts to go with them. He bathes twice daily and mostly with warm water. Oral hygiene is once daily in the morning. He has a normal bowel movement of at least once a day. Sundays are for church activities only. He has no difficulty in eating, grooming and walking. He takes in all food kinds. He has not had any allergic reaction to any particular food, substance or material of any sort apart from mangoes in his lifetime. He likes to watch children play. According to him, there is a special delight in that. His hobbies include telling stories to the grandchildren. He goes to social activities like funerals, weddings and naming ceremonies on behalf of the family. Mr. K.O is a very sociable person who is open to all.

1.6 Past Medical History

The past health history assesses childhood illnesses, hospitalizations, surgeries, serious injuries, adult medical problems (including serious or chronic illnesses), immunizations, allergies, medications, recent travel, and military service. The purpose is to identify any health factors

from the past that may have a direct relationship to your patient's current health status (Dillon, Chikotas, & Curr

The folder pulled for patient when he first visited this facility gives records that client has been managed and treated for several ailments: malaria (with the highest frequency), anemia, diarrhea, gastritis, gastroenteritis and the likes. There are two records of hernia repair that are two years apart. The first was done on 9th September, 2013, and the second was on November 16, 2015. In both cases, patient did not experience any complication. However, client claims he usually send the children and grandchildren to buy over the counter medications for most of his ailment, as a first line of treatment. If for some reasons those medications are able to curb his ailment, he does not bother to visit the hospital. He honestly admitted that most of his visits to the hospital were largely influenced (forced) by his children, especially, this time of old age.

1.7 Patient's Present Medical History

The patient started experiencing abdominal pains with associated vomiting and passing of watery stools on the 11th November, 2021, around 8pm. He was sent to St. Theresa's hospital early morning of the day due to the feeling of general weakness. On arriving to the facility at around 5:15am, on the 12th November, 2021, patient was directed to the emergency ward as the outpatient was not in operation at that time. On triaging at the emergency ward, patient's baseline (summary) findings were as below:

Temperature	:	38.0^{o}C
Pulse	:	119bpm
Respiration	:	23cpm
Blood pressure	:	71/50mmHg

Spo_2 : 97%

Serum glucose : 5.1mmol/L

Patient complained of abdominal pains, vomiting and passing of watery stools on arrival.

Based on the baseline findings and the presenting complains of the patient, the attending prescriber diagnosed him as having gastroenteritis and then made the below medical care plan

- To do full blood count
- To do typhoid rapid diagnostic test
- To do electrolyte test
- To do stool routine examination
- To do urine routine examination
- Intravenous fluid ringer's lactate. 1.0L for first two hours, then
- Intravenous fluid 0.9% sodium chloride 1.0L for next 2 hours.
- To monitor urine output.

All appropriate samples for the requested labs were obtained from Mr. K.O. patient stayed at the emergency ward for approximately 5 hours, where the intravenous fluid therapy was initiated while waiting for patient's lab results.

After the laboratory investigations came in, patient was admitted to male medical ward on the following medical care plan;

- Intravenous fluid 0.9% sodium chloride 1.0L for 24hours.
- Intravenous fluid 5%dextrose in 0.9% sodium chloride 1.0L
- Intravenous ciprofloxacin 400mg, 12hourly for 24hours

- Intravenous metronidazole 500mg, 8hourly for 24hours
- Intravenous paracetamol 1000mg, 8hour for 24hours
- Injection hyoscine butyl bromide, 40mg then 20mg 12hourly for 24hours.
- Close monitoring and observation.

1.8 Admission of Patient

Admission of a patient means allowing and facilitating a patient to stay in the hospital unit or ward for observation, investigations and treatment of the disease he or she is suffering from (Potter & Perry, 2016)

Mr. K.O was admitted to the Male Medical ward of St. Theresa's Hospital, Nkoranza through the Emergency Unit by Dr Allotey on 12th November, 2021. He was brought the ward per wheel chair, accompanied by a staff nurse and a relative with a diagnosis of Gastroenteritis. On arrival, he complained of abdominal pains with associated vomiting and passing of watery stools. On examination, Mr., K.O. was fully conscious, awake, oriented to time, person, place and events, was anicteric, not pale, hydration was satisfactory with capillary refill of less than 3second, no abnormal breathing patterns and patient not with any sign of respiratory distress. Also, there was iv cannula gauge 18 in-situ, and connected to 450mls of Ringers lactate. He was put into a well laid simple unoccupied bed. Vital signs were checked and recorded as follows:

Temperature	:	37.4^{o}C
Pulse	:	102bpm
Respiration	:	20cpm
Blood pressure	:	134/75mmHg

Spo_2 : 97%

Pain assessment (0-10 scaling): 5

Patient's relatives were introduced to the staff nurses present and were assured of the competence of the health workers (nurses, doctors) who were going to take care of his throughout his stay at the hospital. The following information was obtained: patient's name, age, religion, address and allergies. The particulars taken were then entered into the admission and discharge book and in the daily ward state. Patient's relatives were oriented to the ward annexes and the activities that goes on in the ward like visiting hours, time for medication and the time for checking vital signs. They were informed to bring items Mr. K.O will need whiles he is on admission such as plates, cup, bowl, spoon, tissue paper, bathing soap, tooth brush and tooth paste, towel, sponge, bucket, adult diapers and comb. I introduced myself to patient and his relatives as a final year student nurse of Holy Family Nursing and Midwifery Training College, Berekum, who would like to take his family and himself for my care study. Mr. K.O. and his 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 his 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 and will visit their home while still on admission and he is been discharged home. Mr. K.O. and his family agreed to my request and promised to offer me the necessary information and assistance. I however, congratulated them on such a decision since doing so revealed a mark of a welcoming gesture. Hospital policies regarding visiting periods, payment of bills and the time vital signs will be checked were explained.

Discharge planning was initiated with the relatives; thus, they will continue the care (by

administering medication, making sure client sleeps in a treated mosquito net at home once he is well and discha

- Intravenous fluid 0.9% sodium chloride 1.0L for 24hours.
- Intravenous fluid 5%dextrose in 0.9% sodium chloride 1.0L
- Intravenous ciprofloxacin 400mg, 12hourly for 24hours
- Intravenous metronidazole 500mg, 8hourly for 24hours
- Intravenous paracetamol 1000mg, 8hour for 24hours
- Injection hyoscine butyl bromide, 40mg then 20mg 12hourly for 24hours

The following diagnostic investigations were already requested and done for the patient at the emergency unit;

- Full blood count
- Typhoid rapid diagnostic test
- Electrolyte test
- Stool routine examination
- Urine routine examination

I was much interested in how the gastroenteritis will be managed practically in the ward and that made me to confront the patient and his family to ask for the permission to use them for my care study. Initially, there was some kind of resistance from both the patient and his family but once the care study process was explained, they gladly accepted it.

1.9 Patient's Concept of Illness

Patient/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 hos

Mr. K. O did not attribute his current medical status to any supernatural causes. He believes as human as we are, we are prone to ailments, and this current medical status is one of such. He is of the belief that the advances made in medicine now as compared to his prime time will help us to manage and treat him.

1.10 Literature Review on Acute Gastroenteritis

Introduction

Acute infectious syndrome of the stomach lining and the intestine (Encyclopædia Britannica, 2013). It is the inflammation of the gastrointestinal tract (GIT), involving both the stomach and the small intestines and accompanied by sudden episodes of abdominal pains, nausea, vomiting and passing of watery stools (Cheshire, Long, & Chew, 2012). Gastroenteritis is a self-limiting disease that is also called intestinal flu, traveler's, diarrhea, viral enteritis, or food poisoning (Sommers, Johnson, & Berry, 2007). Gastroenteritis is a diarrheal disease (Sattar & Singh, 2021) . Most cases of gastroenteritis are self-limiting (Sharon L, Dirksen, Heitkemper, & Bucher, 2014) .

Incidence

Gastroenteritis occurs in all persons of all ages and sex. More than 200,000 pediatric hospitalizations occur each year in the United States, and as many as 10,000 people die each year (Sommers, Johnson, & Berry, 2007). According to the World Health Organization {WHO}, (2007), Diarrhoea disease is the second leading cause of death in children under five years old. It is both preventable and treatable. Each year diarrhea diseases kills around 525 000 children under five. Globally, there are nearly 1.7 billion cases of childhood diarrheal disease every year.

Diarrhea is a leading cause of malnutrition in children under five years old. Using data from the National Center

TABLE: 1 TYPES OF GASTROENTERITIS AND THE CORRESPONDING AETIOLOGY/CAUSES

CATEGORY	SUBCATEGORY	ETIOLOGY
INFECTIOUS CAUSES	VIRAL ORIGIN (50 - 70%)	Norovirus
		Caliciviruses
		Rotavirus
		Adenovirus
		Parvovirus
		Astrovirus
		Coronavirus
		Pestivirus
		Torovirus
	bacterial (15 - 20%)	salmonella - appears as the second most common agent among outbreaks with known pathogens.
		clostridium difficile
		Shigella
		clostridium jejuni
		Yersinian enterocolitica
		Escherichia coli
		vibrio cholera
		Aeromonas
		clostridium perfringens

		Listeria
		Providencia
		vibrio parahaemolyticus
		vibrio vulnificus
	parasitic (10 -15%)	giardia lamblia
		Amoebiasis
		Cryptosporidium
		Cyclospora
Non-infectious	food poisoning	paralytic shellfish poisoning
		neurologic shellfish poisoning
		diarrheal shellfish poisoning
		amnesic shellfish poisoning
	drug-associated	antibiotics, due to alteration of normal flora
		Laxatives
		Colchicine
		Quinidine
		Cholinergic
		Sorbitol
		proton pump inhibitors

Source: summarized from (Diskin & Gutirttez-Alvarez, 2019)

Mode of Transmission

It is transmitted mainly through the fecal-oral route with ingestion of contaminated food and or

water (Sommers, Johnson, & Beery, 2007).

Pathophysiology

The gut bacteria cause diarrhea by different mechanisms including adherence, mucosal invasion, and toxin production. Knowledge of pathophysiology and the mechanism of these pathogenic strategies also help in the evaluation and management of the disease. One of the main functions of the small intestine is to absorb fluids. With the disorder of the small intestine, the fluid does not get absorbed properly, and the action of different toxins causes the intestinal lining to start excreting fluid which results in relatively loose or watery stools.

Inoculum size is one of the important virulence factors that cause pathology. For *Shigella* and enterohemorrhagic *Escherichia coli* (EHEC), at a minimum of 10–100 bacteria can cause infection, while one hundred thousand or one million of *Vibrio cholerae* bacteria are required to cause infection. For this reason, infective doses of different pathogens differ in a great range and depend on the host as well as bacteria.

Adherence is another virulence factor for enteric pathogens. Some bacteria need to adhere themselves to the mucosal lining of the gastrointestinal tract initially. They produce various adhesins and other cell-surface proteins which help them to attach to intestinal cells. *V. cholerae*, for example, adheres to the brush border of small-intestinal enterocytes via specific surface adhesins, including the toxin-coregulated pilus and other accessory colonization factors. Enterotoxigenic *E. coli*, which causes watery diarrhea, produces an adherence protein called colonization factor antigen. This is necessary for colonization of the upper small intestine by the organism before the production of enterotoxin, causing disease.

Both cytotoxin production and bacterial invasion and destruction of intestinal mucosal cells can

cause dysentery. *Shigella* and enteroinvasive *E. coli* infections are characterized by the organisms' invasion of m

Toxin production is another important virulence factor. These toxins include enterotoxins, which cause watery diarrhea by acting directly on secretory mechanisms in the intestinal mucosa, and cytotoxins, which destroy mucosal cells and associated inflammatory diarrhea (HUYEN, et al., 2018) & (Sattar & Singh, 2021).

Timeline (Incubation Period)

- Bacillus cereus (toxin) 1 – 6 hours
- Campylobacter species (bacteria) 1 – 10 days
- Clostridium perfringens (toxin) 6 – 24 hours
- Novo virus 24 – 48 hours
- Salmonella species (bacteria) 6 – 72 hours
- Staphylococcus aureus (toxin) 0.5 – 8 hours

Cases are usually infectious for at least 48 hours after symptoms ceases. Symptoms of viral gastroenteritis usually last between 24 and 48 hours, but can sometimes be long

Clinical Features

Source: (Diskin & Gutirttez-Alvarez, 2019)

- Fever- The presence of high fever (with or without chills) generally suggests that an invasive organism is the cause of diarrhea, although many extraintestinal illnesses can present with both fever and diarrhea, especially in children.
- Vomiting - a symptom common to a host of illnesses, implies proximal bowel involvement, especially with preformed neurotoxin, as elaborated by S aureus and B

cereus.

- Abdominal Pain or cramps - The location and character of pain may be indicative of the area of infection because colonic involvement is usually associated with tenesmus and pain in either of the lower quadrants or the lower back, whereas jejunoileal infection may result in periumbilical pain. Cramps may be caused by an electrolyte imbalance. Pain, especially in patients older than 50 years, should raise the suspicion of an ischemic process.
- Diarrhea – note the following
    a. Frequency, amount, color, consistency (i.e., watery, semisolid, odor), and presence of blood and/or mucus are factors that can help to determine the causative agent.
    b. Large volumes of stool are usually associated with enteric infection, whereas colonic infection results in several small stools.
    c. The presence of blood may indicate colonic ulceration (bacterial infection, inflammatory disease, ischemia).
    d. White bulky feces that float (high fat content) are due to a small bowel pathology that leads to malabsorption.
    e. Copious (rice water) diarrhea is a hallmark of cholera.
- Less frequently reported signs and symptoms - loss of appetite, nausea, flatulence, headache, dehydration (Schmutz, Bless, Mausezahl, Jost, & Mausezahl-Feuz, 2017)

Complications Of Gastroenteritis

Source**:** (Diskin & Gutirttez-Alvarez, 2019)

- Dehydration

- Malabsorption
- Transient lactose intolerance
- Chronic diarrhea
- Systemic infection (meningitis, arthritis, pneumonia) especially with Salmonella infections
- Sepsis (Salmonella, Yersinia, Campylobacter organisms)
- Hemolytic-uremic syndrome (much more common in children, especially with E coli O157:H7)
- Toxic megacolon
- Reactive arthritides (Salmonella, Shigella, Yersinia, Campylobacter, Giardia organisms)
- Persistent diarrhea
- Thrombotic thrombocytopenic purpura or TTP (E coli O157:H7)
- Guillain-Barré syndrome (Campylobacter organisms)

Diagnostic Investigation

Source: (Diskin & Gutirttez-Alvarez, 2019) & (MINISTERY OF HEALTH, 2010)

1. Most often, diagnosis is clinical.
2. Stool cultures and studies: note the following
    a. The presence of blood or leukocytes in stool is a strong indicator of inflammatory diarrhoea.
    b. Stool studies can be performed efficiently and inexpensively by using a Wright stain or methylene blue and directly observing for leukocytes and performing an occult blood test.

c. Faecal leukocytes are present in 80-90% of all patients with Salmonella or Shigella infections but are less common with other infecting organisms such as Campylobacter and Yersinia. They may also be present in ulcerative colitis and Crohn disease but are usually absent in viral infections, Giardia infection, enterogenic E coli infection, and toxigenic bacterial food poisoning.

d. A stool culture is not necessary or cost-effective in most cases of diarrhoea unless an unusual bacterial cause is suspected and it may be needed for epidemiological purposes.

e. A lower threshold for performing stool cultures and examination for ova and parasites is indicated in immunocompromised, immunosuppressed patients and those who have recently travelled to remote locations or developing nations.

f. Fever, bloody stools, leukocytes in stool, pain resembling that associated with appendicitis (Yersinia), and diarrheal illness associated with partially cooked hamburger (cytotoxigenic E coli O157:H7) are all indications for culture. If possible, the laboratory should be informed of suspected organisms.

g. Frequently, stool cultures are obtained inappropriately in the United States. Consider whether obtaining a culture would change the therapy.

h. Specific indications for stool cultures include bloody stools, stools that test positive for occult blood or leukocytes, prolonged course of diarrhoea that has not been treated with antibiotics, immunocompromised host, or for epidemiologic purposes, such as cases involving food handlers.

i. Routine stool cultures identify only Campylobacter, Shigella, Salmonella, Aeromonas, and Yersinia species.

3. Blood film for malaria parasites as a differential diagnosis (malaria)
4. Full blood count
5. Level of Electrolytes
6. Renal function test

Routine laboratory tests (complete blood cell [CBC] count, levels of electrolytes, renal function studies) may not be helpful or indicated in making a diagnosis. These tests may be useful as indicators of severity of disease,

7. Abdominal imaging (x-ray or ultrasound) is indicated only when bowel obstruction or perforation is suspected.
8. Sigmoidoscopy may be indicated if pseudomembranous colitis or inflammatory bowel disease is suspected. Sigmoidoscopy is useful in obtaining tissue for culture in patients with acquired immunodeficiency syndrome (AIDS) who have undiagnosed diarrhoea or wasting syndrome.

Medical Treatment Of Gastroenteritis

Most gastroenteritis is self-limiting (SOMMERS, JOHNSON, & BEERY, 2007). The ultimate goal of therapy are as follows:

1. Rehydrate orally (PO) or intravenously (IV) as needed –
    - Administration of 1-2 L dextrose 5% in 0.5 isotonic sodium chloride solution with 50 mEq NaHCO and 10-20 mEq KCl over 30-45 minutes may be necessary in patients who are severely dehydrated.
    - Clinical assessment and serum electrolyte concentrations should guide therapy.
    - To give fluids more rapidly, KCl may be given orally or in the second- or third-liter bag or as a supplemental IV of 20 mEq KCl in 100 mL of isotonic sodium chloride solution over 1 hour. Ensure normal renal function prior to KCl administration.

- Rehydrate patients until mental status and signs of perfusion and pulse are normal (caution in elde
- For pediatric patients, administer 20 mL/kg of isotonic sodium chloride solution initially for resuscitation. Repeat as necessary and add KCl as indicated.
- Indications for IV rehydration include severe intractable vomiting, altered consciousness, severe dehydration, ileus, excessive cholera like stools, and time or environment not conducive to oral rehydration therapy (ORT).

2. Treat causes and or symptoms (e.g., fever, pain) as indicated.
    - Antiemetics may be useful in the treatment of nausea and vomiting in adults. They are usually not recommended in children. E.g., promethazine, prochlorperazine.
    - Antidiarrheals: These agents have traditionally been discouraged because of concerns with causing bacteremia; however, they appear to have a role in the symptomatic treatment of mild-to-moderate diarrhea, especially with non-bloody and traveler's diarrhea. The most common agents include bismuth subsalicylate (Pepto-Bismol and Loperamide (Imodium).
    - Antibiotics: to treat the causative organism possibly causing the condition. Therapy must cover all likely pathogens in the context of the clinical setting. e.g., ciprofloxacin, trimethoprim-sulfamethoxazole, rifaximin.
    - Analgesics- to curb mostly the abdominal pain e.g., paracetamol.
3. Identify complications.
4. Prevent the spread of infections.
5. Identify public health concerns and treat certain

Nursing Management

The ultimate goal of care for gastroenteritis includes the following:

- Maintenance of fluid and electrolyte balance
- Gain of appetite
- Maintenance of desired body weight
- Alleviation of symptoms
- Resumption of usual daily activities
- Knowledge of self- management.

Observations

- Monitor vital signs (Temperature, pulse, respiration, and blood pressure.)
- Observe for signs of dehydration. Example sunken eyes, loss of weight, dry skin and mucus membrane and fever.
- Observe the color, smell and amount of vomitus.
- Observe/ monitor client for pharmacological effect of the drugs administered.
- Check patient's weight daily to detect impending dehydration.
- Monitor intake and output.
- Monitor amount, flow rate and patency of intravenous fluids to avoid circulatory over load.
- Observe the character, consistency and amount of stool.
- Observe for hypovolemic shock.

Rest and Sleep/Comfort

Rest and sleep are ensured by:

- Putting patient into a comfortable bed free from crump's and creases
- Open nearby windows to ensure good ventilation
- Ensure that the room is quite
- Give warm baths and drinks
- Minimize or restrict visitors
- Administer prescribed analgesic and sedatives
- Group all nursing activities to prevent distracting the patient
- Provide emotional support
- Provide diversional therapy
- Preventing visitors when patient is resting

Personal Hygiene

- Advise client to wash all fruits and vegetables before eating
- Encourage patient to always wash hands with soap and water when he visits the toilet or urinal
- Encourage client to cook food properly before eating.
- Ensure clean clothing on patient.
- Teach patient on the need to bath either twice or at least once a day
- Ensure well clean and trimmed nails.

Nutrition

Mostly the acute phase involves nil per os (NPO) because of nausea and vomiting. Maintain adequate nutrition by;

- Increasing the fluid intake to compensate fluid loss through vomiting.
- After acute phase, serve meals with some decorations to make it appetizing.
- Vary diets and ask for choice of food to allow patient enjoy desired food.
- Advise client to avoid milk and milk products since it a predisposing factor and also avoid highly seasoned foods.
- Maintain a desire body weight by giving adequate diet rich in carbohydrate, protein and vitamins
- Avoid foods that make patient nauseate. Example. fatty foods.
- Nauseating objects such as bedpans urinals removed from patient bed side.

Medication/Drug Administration

- Administer prescribed drugs example analgesic and antibiotic using the right dose, time and patient.
- Observe for drug action.
- Stop and report any severe side effects.

Health Education/ Prevention

- Advise client to avoid or limit the intake of NSAIDS such as aspirin.
- Advise client to limit the intake of alcohol and caffeine.
- Advice client on foods that easily irritate him.

- Teach client and family on the need to cook food properly before eating.
- Educate client and relatives to always remember to wash hands before meals and after visiting the toilet or urinal.
- Educate patient on the need for follow-ups.
- Teach client methods of water purification.
- Educate client to avoid the intake of unpasteurized milk.
- Dairy products like eggs, left at room temperature provide a medium for bacteria growth.
- Disinfect patient stool and vomitus before disposal.
- Soiled cloth and linen should be also be disinfected.
- Patient and family is educated on the condition, nature, causes, signs, symptoms and prevention.

1.11 Validation of Data

Validation is the action of checking or providing the accuracy of something. (Hornby, 2012).

The data collected from patient's and family were compared to all the data collected from the other healthcare team members as well as laboratory investigations and the literature review. Also, patient's data was verified during my visit to his home. There were no discrepancies in the data collected. Therefore, the data is valid.

CHAPTER TWO

ANALYSIS OF DATA

2.0 Introduction

This is the second step in nursing process and simply means a detailed examination of information gathered from patient in order to understand its nature of determine and its essential features (Mercian-Webster dictionary, 2017).

It involves the drawing of conclusion from the data collected from patient's relatives and patient's folder. It helps the nurse to identify the patient's strength and problems to enable the nurse come out with a strong nursing diagnosis. It involves comparison of data, identifying patient and family strength health problem and writing of nursing diagnosis.

The areas of interest of analysis include;

- Comparison of data gathered with standards.
- Health problems
- Patient/family strengths
- Nursing diagnosis

2.1 Comparison of Data with Standards

This is comparing the data collected with that of the standards from literature. The following data will be compared with standards;

A. Diagnostic test/ investigations

B. Causes

C. Clinical manifestation

D. Treatments

E. complications

A. Diagnostic Investigations

It is a kind of medical procedure performed to detect, diagnose, or monitor diseases process susceptibility and determine a cause of treatment.

Mr. K.O. had the following tests and investigations performed on him.

1. Full blood count
2. Typhoid rapid diagnostic test
3. Electrolyte test
4. Stool routine examination
5. Urine routine examination

TABLE 2: DIAGNOSTIC INVESTIGATIONS

INDICATORS	RESULTS	Normal	interpretation
WBC	4.15 x 10^9 g/L	2.5 - 8.5 10^9 g/L	within range
Blood sodium level	130mmmol/L	136 - 146 mEq/L	below range
Blood potassium level	3.6mmol/L	3.5 - 4.5 mEq/L	within range
Blood chloride level	100	96 -106 mmol/L	within range
Hemoglobin level	10.0 g/Dl	11.5 -16.0 g/dL	below range
Platelet level	193 + 10^9/L	150 - 400 10^9 g/L	within range
Red blood cell	4.0 * 12^9/L	4.0 - 6.0 * 12^9/L	within range
Malaria parasites	No malaria parasites present	No malaria parasite seen	within range
Leukocytes in urine	Negative	Negative	within range
Nitrates in urine	Negative	Negative	within range
Bilirubin in urine	Negative	Negative	within range
Proteins in urine	Trace	Negative	Below range
Glucose in urine	Negative	Negative	within range
Ketones in urine	Negative	Negative	within range
Blood in urine	Negative	Negative	within range
Widal test	Immunoglobulin M – NEGATIVE.	Negative	within range
Stool microscopy	No ova, protozoa or larvae seen	Shigella seen	within range
Stool macroscopy	Semi formed specimen		within range
Renal function test	not ordered by the physician	-	-
Abdominal imaging	not ordered by the physician	-	-
Sigmoidoscopy	not ordered by the physician	-	-

B. Cause of Patient Illness

With reference to the causes of gastroenteritis in the literature review, my patient's condition

was due to pathogenic micro-organism in the gastrointestinal tract through ingestion of contaminated food (. Thi

C. Clinical manifestation

TABLE 3: COMPARISON OF CLINICAL FEATURES

CLINICAL FEATURES IN LITERATURE	**SIGNS AND SYMPTOMS DEMONSTRATED BY THE PATIENT**
Fever	Patient had no fever and chills
Abdominal pain or cramps	Patient complained of abdominal pains or cramps
Diarrhea	Patient had diarrhea stools
Vomiting	Patient complained of vomiting
Loss of appetite	Patient did not complain of loss of appetite. It was observed that client had poor eating habit.
Nausea,	Nausea
Headache,	Patient did not complain of headache
Flatulence	Flatulence was absent
Dehydration	On arrival, client was mildly dehydrated

D. Specific Medical Treatment

- Intravenous fluid ringer's lactate 1.0L for 2 hours
- Intravenous fluid 0.9% sodium chloride 1.0L for the first 2hours
- Intravenous fluid 0.9% sodium chloride 1.0L for 24hours.
- Intravenous fluid 5%dextrose in 0.9% sodium chloride 1.0L.
- Intravenous ciprofloxacin 400mg, 12hourly for 24hours

- Intravenous metronidazole 500mg, 8hourly for 24hours
- Intravenous paracetamol 1000mg, 8hour for 24hours
- Injection hyoscine butyl bromide, 40mg stat.

TABLE 4: PHARMACOLOGY OF DRUGS

DATE	DRUG	DOSAGE AND ROUTE OF ADMINISTRATION	CLASSIFICATION	DESIRED EFFECTS	ACTUAL ACTION OBSERVED	SIDE EFFECTS
12/11/21	Ciprofloxacin	400 mg 12hourly x 24 hours, intravenously.	Antibacterial Fluoroquinolones	Bactericidal; interferes with DNA replication in susceptible gram-negative bacteria preventing cell reproduction.	Curbed the infection	Vomiting, dry mouth, hypotension, headache. None found in my clien
12/11/21	Paracetamol	1g, 8hourly for 24hours intravenously, then 1g 8hourly for 3day orally,	Analgesic, non-opioid	Reduces fever	Temperature of client came to normal	Jaundice, chest pain, he dyspnea, hepatoxicity. None found in my clien
12/11/21	Metronidazole	500mg intravenously, 8hourly for 24hours. then 400mg, 8hourly for 7days.	Antibiotic Antibacterial Amoebicide Antiprotozoal	Bactericidal: Inhibits DNA synthesis in specific (obligate) anaerobes, causing cell death;	Curbed the infection	Dizziness, headache, ve fatigue. None found in my clien
12/11/21	0.9% sodium chloride	1.0L, intravenously for 24hours	Isotonic solution	Replacement of deficiency in sodium and chloride ions in the blood	Client maintained good hydration status	Fluid overload, hyperna pulmonary edema. Non observed in the client.

TABLE 3: PHARMACOLOGY OF DRUGS CONTINUED

DATE	DRUG	DOSAGE AND ROUTE OF ADMINISTRATION	CLASSIFICATION	DESIRED EFFECTS	ACTUAL ACTION OBSERVED	SIDE EFFECTS
12/11/21	Ringers' lactate	1.0L, intravenously for 24hours	Isotonic solution	Replacement of electrolytes in the blood	Client was provided with the needed fluid and electrolytes	Hyperkalemia, pulmona edema, alkalosis. Non observed in the client.
12/11/21	5% dextrose in 0.9% sodium chloride	1.0L, intravenously	Hypertonic solution	Replaces sodium, chloride and calories	Client was provided with the needed fluid and electrolytes	Fluid volume overload, pulmonary edema. Non observed in the client.
12/11/21	Hyoscine butyl bromide	40mg intravenously stat dose.	Antimuscarinic, anticholinergic, antispasmodic	Peripherally acting to treat pain and discomfort caused by spasms.	Client's abdominal cramps were relieved.	

E. Complications of The Condition

With reference to the complications listed in the literature review and the side effects corresponding to each drug as listed in Table 3, the patient did not have any complication or side effects during his stay at the hospital. meanwhile, The patient and family were educated on the complications of the disease and the side effects of the individual drugs, and that if they should see any of them, they should report back to the hospital or to any hospital or clinic near them for review.

2.2 Patient and Family Strength

Strength is the ability the patient has to help him/herself during episode of illness (Mayor 2012). The following are the strength of my patient after identifying his problem

1. Patient can tolerate cold bath.
2. Patient reported of diarrhoea
3. Patient could verbalize colour of vomitus.
4. Patient could verbalize location of pain
5. Patient and family could verbalize that eating without washing hands can cause infections

2.3 Patient/Family Health Problems

These are stressful condition which the client/Family faces as a result of his condition and hospitalization (Mayor,2012).

1. Patient's body temperature was high on arrival for admission.
2. Patient passed diarrhoea stools.
3. Patient complained of vomiting.

4. Patient had abdominal pains
5. Patient and family did not have adequate information about gastroenteritis.

2.4 Nursing Diagnosis

1. Hyperthermia (38.0^{o}C) related to inflammatory process of the stomach and intestinal mucosa.
2. Diarrhoea related to increase peristalsis and malabsorption of the small intestines.
3. Risk for fluid and electrolyte imbalance related to vomiting and diarrhoea
4. Acute abdominal pains related to inflamed stomach and intestinal mucosa.
5. Knowledge deficit about disease condition related to the causes, pathophysiology, signs and symptoms, management and prevention of gastroenteritis.

CHAPTER THREE

PLANNING FOR PATIENT AND FAMILY CARE

3.0 Introduction

Planning is the process in which the nurse and patient together consider the goals to achieve in meeting the patient's identified or potential problems in daily life and produce an individual care plan (Weller, 2014). Planning involves writing of the nursing care plan and it is the third phase of the nursing process. Nursing diagnosis is used to formulate a plan on how the patient will be cared for. Planning includes setting of priorities, goals, objectives/outcome criteria and outlining the care strategies in the nursing care plan. In writing the plan of care, objectives/outcome criteria must tally with nursing diagnosis and must be arranged in order of importance.

3.1 Objectives /Outcome Criteria for Patient/Family Care

After priorities of the nursing diagnosis have been established, goals and nursing action appropriate for attaining the goals are identified. The patient and his/her family are included in the establishment of goals for the nursing actions. The goal is the desired outcome of the nursing intervention and the outcome is the expected change in the patient status. Outcome criteria and statements that describe specific, observable and measurable responses of the patient. They determine whether the goals have been achieved and they are essential tools in evaluation.

The following are some of the nursing objectives and outcome criteria formulated for patient/family care;

1. Patient would regain normal body temperature (36.2^{o}C - 37.2^{o}C) within 6hours as evidenced by:
    - Patient verbalizing that his fever has subsided

- Nurse recording normal values (36.2^{o}C - 37.2^{o}C) of the axillary temperature

2. Patient will be relieved of diarrhoea within 8hours as evidenced by:
    - Patient reporting resolution of diarrhoea
    - Nurse observing client passes solid-formed stool.
3. Patient would maintain normal fluid volume throughout the period of hospitalization as evidenced by:
    - Patient verbalizing that his diarrhoea has stopped.
    - Nurse assessing and revealing that client skin turgor, moist skin and mucous membrane and stable weight (60kg).
4. Patient would be relieved of abdominal pain within 8hours as evidenced by:
    - Patient reporting relief of abdominal pain .
    - Nurse observing that client rates pain as “2” or below on numerical pain rating scale out of 10.
5. Patient and Family would gain adequate knowledge on gastroenteritis cause, its treatment and prevention within 24hours as evidence by:
    - Patient’s Family verbalizing knowledge regarding management of the condition.
    - Nurse observing patient and Family answer some questions about the condition.

TABLE 5: NURSING CARE PLAN

Date and Time	Nursing Diagnosis	Objective/Outcome Criteria	Nursing orders	Nursing Interventions	Date and Time	Evaluation	Sign
12/11/21 At 6:00am	Hyperthermia (38.0^{o}C) related to inflammatory process of the stomach and intestinal mucosa	Patient would regain normal body temperature (36.2^{o}C - 37.2^{o}C) within 6hours as evidenced by: • Patient verbalizing that his fever has subsided • Nurse recording normal values (36.2^{o}C - 37.2^{o}C) of the axillary temperature	1. Reassure patient by educating client on the prognosis, treatment plan and offering psychological support. 2. Assess for signs of dehydration as a result of elevated temperature. 3. Monitor client's vital signs closely. 4. Loosen or remove excess clothing and covers. 5. Make available a tepid bath or sponge bath. 6. Adjust environmental factors to help bring down patient temperature.	1. Patient reassured of competent care and made know the various treatment modalities. 2. Signs of dehydration were assessed. There was mild dehydration as evidenced by dry mouth and increased thirst. 3. Patient vital signs were monitored every 30 minutes for the first hour, then, one hourly for rest of the 4hours. 4. Patient cloths and covers were loosened. 5. patient was sponged bath because he was weak to walk to the bath room. 6. Fans were turned on and windows opened to allow fresh and cool air into the room.	12/11/21 At 12:00pm	Goal fully met as evidenced by; • Patient verbalizing that fever has subsided. • Nurse recording and auxiliary temperature of 37.1^{o}C	A.B.R.

TABLE 4: NURSING CARE PLAN CONTINUE

Date and Time	Nursing Diagnosis	Objective/Outcome Criteria	Nursing orders	Nursing Interventions	Date and Time	Evaluation	Sign
			7. Encourage adequate fluid intake. 8. Encourage client to take in cold sips. 9. Administer antipyretic medications as prescribed	7. Patient was encouraged to take in more liberal fluids. 8. Patient was encouraged to take in cold sips. 9. Intravenous paracetamol 1000mg served			A.B.R.

TABLE 4: NURSING CARE PLAN

Date and Time	Nursing Diagnosis	Objective/Outcome Criteria	Nursing orders	Nursing Interventions	Date and Time	Evaluation	Sign
12/11/21 At 6:00am	Diarrhoea related to increase peristalsis and malabsorption of the small intestines.	Patient will be relieved of diarrhoea within 8hours as evidenced by: • Patient reporting resolution of diarrhoea • Nurse observing client passes solid-formed stool	1. Reassure patient by educating him on diarrhea, treatment modalities and provide psychological support. 2. Assess for abdominal discomfort, pain, cramping, stool frequency, urgency and nature that comes with diarrhea. 3. Obtain stool specimen for ordered investigations. 4. Weigh patient daily. 5. Plan with patient to eat natural bulking agents like rice and apples and to avoid stimulants like caffeine and carbonated drinks.	1. Patient was educated on the condition and the treatment modalities. 2. Abdominal pains with no tenderness observed. Patient was passing loosely stools with no blood stains visible. Patient has an average of 3watery stools per every four hours. 3. Stools specimen was obtained for stool routine examination. 4. Patient was weighed daily. 5. Dietary planning was made with patient to take in more bulking agents and avoid stimulants.	12/11/21 At 2:00pm	Goal fully met as evidenced by; • Patient reporting the diarrhoea has resolved • Nurse observed patient pass soiled-formed stool.	A.B.R.

TABLE 4: NURSING CARE PLAN CONTINUE

Date and Time	Nursing Diagnosis	Objective/Outcome Criteria	Nursing orders	Nursing Interventions	Date and Time	Evaluation	Sign
			6. Encourage fluids: 1.5l - 2.0L for 24hours and 200mls for every loose stool. 7. Monitor for input and output. 8. Administer antibiotics to curb the infection.	6. Patient was encouraged to take in more liberal fluids. 1.5L Intravenous fluids (ringers' lactase and 0.9% sodium chloride) administered per 24hours. 7. Fluid input and output were monitored. 8. Antibiotics: ciprofloxacin and metronidazole were administered			A.B.R.

TABLE 4: NURSING CARE PLAN

Date and Time	Nursing Diagnosis	Objective/Outcome Criteria	Nursing orders	Nursing Interventions	Date and Time	Evaluation	Sign
12/11/21 At 8am	Risk for fluid and electrolyte imbalance related to vomiting and diarrhoea	Patient would maintain normal fluid volume throughout the period of hospitalization as evidenced by: • Patient verbalizing that his diarrhoea has stopped • Nurse assessing and revealing that client skin turgor, moist skin and mucous membrane and stable weight (60kg).	1. Reassure patient by educating client of the possible risk and the treatment modalities put in place to curb it. 2. Weigh patient daily. 3. Monitor daily input and output. 4. Monitor vital signs routinely. 5. Monitor and investigate for other complains like sudden chest pains, decreased sensory perception, increased anxiety and dyspnea. 6. Obtain and monitor blood sample for serum electrolytes. 7. Educate patient, family and significant others on dietary sources of the various electrolytes.	1.Patient was reassured by educating him on the possible risk and the treatment modalities for it. 2.Patient was weighed daily. 3.Patient daily input and output monitored. 4.Patient's vital signs routinely monitored. 5.No other complains like sudden chest pains, decreased sensory perception, increased anxiety and dyspnea were lodged. 6.Blood sample for serum electrolytes were monitored and were within normal ranges. 7.Patient, family and significant others were educated on the various dietary sources of electrolytes.	15/11/21 At 10:00am	Goal fully met as evidenced by; • Patient verbalized that diarrhoea has stopped. • Nurse assessed patient's skin to be moist and had a good skin turgor.	A.B.R.

TABLE 4: NURSING CARE PLAN CONTINUE

Date and Time	Nursing Diagnosis	Objective/Outcome Criteria	Nursing orders	Nursing Interventions	Date and Time	Evaluation	Sign
			8. Administer balanced electrolyte solutions.	8. Isotonic solutions: 0.9% sodium chloride and ringers' lactate were administered. A total of 1.5L served per 24 hours.			

TABLE 4: NURSING CARE PLAN

Date and Time	Nursing Diagnosis	Objective/Outcome Criteria	Nursing orders	Nursing Interventions	Date and Time	Evaluation	Sign
12/11/21 At 8:00am	Acute abdominal pains related to inflamed stomach and intestinal mucosa.	Patient would be relieved of abdominal pain within 8hours as evidenced by: • Patient reporting relief of abdominal pain. • Nurse observing that client rates pain as "2" or below on numerical pain rating scale out of 10.	1. Reassure patient. 2. Assess the patient's pain level. Use appropriate pain scales to assess pain levels. 3. Obtained detailed history about the abdominal pains. 4. Assess the patient's coping strategies to cope with abdominal pains.	1. Patient was reassured of competent care from the health team. 2. Pain rating scale (0-10) was used to assess patient's abdominal pains. He rated his abdominal pains as 7. 3. History about the abdominal pain obtained: mostly felt few hours of ingesting food or water. It does not respond to rest or exercise. 4. Patient's coping strategies was assessed. Client does use pain medications bought from over the counter to mostly manage any kind of pain in the house.	12/11/21 At 4:00pm	Goal fully met as evidenced by; • Patient verbalized that abdominal pains has been relieved. • Nurse observed patient rate 2 on the numerical rating scale.	A.B.R.

TABLE 4: NURSING CARE PLAN CONTINUE

Date and Time	Nursing Diagnosis	Objective/Outcome Criteria	Nursing orders	Nursing Interventions	Date and Time	Evaluation	Sign
			5.Provide several relaxation techniques that may decrease abdominal pains. 6.Administer pain medication as ordered.	5. Relaxation techniques like guided visualization, deep breathing exercises and music therapy were introduced to patient. He responded very well and preferred deep breathing exercises. 6. Intravenous paracetamol 1g served at 8 hourly frequency.			

TABLE 4: NURSING CARE PLAN

Date and Time	Nursing Diagnosis	Objective/Outcome Criteria	Nursing orders	Nursing Interventions	Date and Time	Evaluation	Sign
13/11/21 At 8:00am	Knowledge deficit about disease condition related to the causes, pathophysiology, signs and symptoms, management and prevention of gastroenteritis	Patient and Family would gain adequate knowledge on gastroenteritis cause, its treatment and prevention within 24hours as evidence by: • Patient's Family verbalizing knowledge regarding management of the condition. • Nurse observing patient and Family answer some questions about the condition	1.Assess current knowledge base of patient and family on the condition. 2.Assess for readiness of learning new information about the illness. 3.Determine the patient and family's learning style. 4.Educate patient and family on the causes, treatment modalities, prevention and signs and symptoms of gastroenteritis. 5.Provide different learning materials such as videos, paper or demonstrations.	1. Patient and family's current knowledge base were assessed and they had very little knowledge about gastroenteritis. 2. Patient and family were ever ready and keen to learning new information about his condition. 3.The patient wanted a gradual paced learning style but the family was up for any learning method. 4. Patient and family were educated on the causes, treatment modalities, prevention and signs and symptoms of gastroenteritis. 5. Different learning materials such as videos, paper or demonstrations were employed for use in teaching.	14/11/21 8:00am	Goal fully met as evidenced by; 1. Patient verbalizing the accurate information about condition and treatment by discharge. 2. Nurse observed patient and family answered questions asked.	A.B.R.

TABLE 4: NURSING CARE PLAN CONTINUE

Date and Time	Nursing Diagnosis	Objective/Outcome Criteria	Nursing orders	Nursing Interventions	Date and Time	Evaluation	Sign
			6. Encourage patient and family to ask questions. 7. Create a learning friendly environment. 8. Adjust pace and teaching methods to client's style. 9.Give praise and encouragement during learning sessions. 10. Inquire feedback about the learning process. 11. Encourage patient to talk to others with similar experiences/condition.	6. Patient and family were encouraged to ask questions 7. Learning friendly environment such as one with less noise and interference was created to aid in teaching and learning. 8. Gradual paced teaching methods was adopted to help patient get the best out of the learning process. 9. Praise and encouragement were given during learning sessions. 10. Patient gave feedback that he was grasping the concept very well. 11. Patient was encouraged to talk to others with similar experiences/condition. Arrangements were made to make it happen.			

TABLE 4: NURSING CARE PLAN CONTINUE

Date and Time	Nursing Diagnosis	Objective/Outcome Criteria	Nursing orders	Nursing Interventions	Date and Time	Evaluation	Sign
			12. Provide for patient and family where and how to appropriately obtain new information about this current condition and any other condition.	12. Patient and family were shown other ways to appropriately obtain new information about any condition, such as walking into any health facility or listening to accredited health talks on various medias.			

CHAPTER FOUR

IMPLEMENTATION OF PATIENT AND FAMILY CARE PLAN

4.0 Introduction.

The implementation phase of the nursing process involves carrying out the proposed plan of nursing care. The nurse assumes responsibility for the implementation and coordinates the activities of all those involved in implementation, including the patient and family, other members of the nursing team and other members of the health care team, so that the schedule of activities facilitates the patient's recovery (Smeltzer, Bare, Hinkle, & Cheever, 2014). This chapter is the fourth phase of the patient and family care study and it involves a summary of the actual nursing interventions rendered. This is where the objectives set and nursing orders given are really put in to practice with the purpose of aiding in patient recovery and getting over a health problem. It formally begins after the nurse develops a plan of care. It also includes the nursing care rendered on daily basis, preparation of patient and family towards discharge, continuity of care or home visits and rehabilitation. It also involves putting the nursing care plan which includes both medical and nursing interventions into action in order to obtain the desired outcome criteria of the patient.

4.1 Summary of Actual Nursing Care Rendered to Patient and Family

The actual nursing care rendered to patient and his family started on the day of admission 12th November, 2021 to the time care was terminated. The aim of the management was to meet the patient and family's psychological, physiological, emotional, spiritual needs, avoid complications and to ensure early recovery of patient.

First Day of Admission – (12th November, 2021).

Admission of a patient means allowing and facilitating a patient to stay in the hospital unit or ward for observation, investigations and treatment of the disease he or she is suffering from (Potter & Perry, 2016)

On 12th November, 2021, Mr. K.O was admitted to the Male Medical ward of St. Theresa's Hospital, Nkoranza through the Emergency Unit by Dr Allotey. He was brought to the ward per wheel chair, accompanied by a staff nurse and a relative with a diagnosis of Gastroenteritis. On arrival, he complained of abdominal pains with associated vomiting and passing of watery stools.

With these observations, the following nursing diagnosis were formulated on the first day of admission;

1. Hyperthermia (38.0℃) related to inflammatory process of the stomach and intestinal mucosa.
2. Diarrhoea related to increase peristalsis and malabsorption of the small intestines
3. Acute abdominal pains related to inflamed stomach and intestinal mucosa
4. Risk for fluid electrolyte imbalance related to vomiting and diarrhea.

With these nursing diagnoses in mind, nursing interventions were planned according to the resources available at the hospital and at the client and family's disposal.

At 6:00am patient had fever (38.0°C). Therefore a nursing diagnosis of Hyperthermia (38.0℃) related to inflammatory process of the stomach intestinal mucosa was formulated. An objective was set to regain normal body temperature (36.2℃-37.2℃) within 6hours of hospitalization. The following intervention were made; patient reassured of competent care and made know the

various treatment modalities, Signs of dehydration were assessed, there was mild dehydration as evidenced by di

At 6:00am, due to the diarrhoea stools patient passed, a nursing diagnosis of Diarrhea related increase peristalsis and malabsorption of the small intestines was formulated. An objective was set to relieved diarrhoea within 8hours of hospitalization. Nursing interventions carried out included: Patient was educated on the condition and the treatment modalities, Abdominal pains with no tenderness observed, Patient was passing loosely stools with no blood stains visible, Patient has an average of 3watery stools per every four hours, Stools specimen was obtained for stool routine examination, Patient was weighed daily, dietary planning was made with patient to take in more bulking agents and avoid stimulants and Patient was encouraged to take in more liberal fluids. 1.5L Intravenous fluids (ringers' lactase and 0.9%)

At 8:00am, patient complained of abdominal pains, therefore a nursing diagnosis of Acute abdominal pains related to inflamed stomach and intestinal mucosa was formulated. An objective of Patient would be relieved of abdominal pain within 8hours as evidenced by: Patient reporting relief of abdominal pain and Nurse observing that client rates pain as "2" or below on numerical pain rating scale out of 10. Nursing interventions implemented includes; Patient was reassured of competent care from the health team, Pain rating scale (0-10) was used to assess patient's abdominal pains. He rated his abdominal pains as 7, History about the abdominal pain obtained: mostly felt few hours of ingesting food or water, It does not respond to rest or exercise, Patient's coping strategies was assessed, patient does use pain medications bought from over the counter to mostly manage any kind of pain in the house, Relaxation techniques like guided visualization, deep breathing exercises and music therapy were introduced to patient. He responded very well and preferred deep breathing exercises and Intravenous paracetamol 1g served at 8 hourly frequency.

Due to the patient's complain of vomiting, a nursing diagnosis of Risk for fluid and electrolyte imbalance related to vomiting was made. An objective of Patient would maintain normal fluid volume throughout the period of hospitalization as evidenced by: Patient verbalizing that his diarrhoea has stopped and Nurse assessing and revealing that client skin turgor, moist skin and mucous membrane and stable weight (60kg) was set. Nursing interventions implemented includes; Patient was reassured by educating him on the possible risk and the treatment modalities for it, Patient was weighed daily, Patient daily input and output monitored, Patient's vital signs routinely monitored, No other complains like sudden chest pains, decreased sensory perception, increased anxiety and dyspnea were lodged, Blood sample for serum electrolytes were monitored and were within normal ranges, Patient, family and significant others were educated on the various dietary sources of electrolytes and Isotonic solutions: 0.9% sodium chloride and ringers' lactate were administered. A total of 1.5L served per 24 hours.

At 12:00pm, the objective to regain patient's body temperature was evaluated and goal was fully met as; Patient verbalizing that fever has subsided and Nurse recording and auxillary temperature of 37.1^{o}C.

At 2:00pm, the objective to relieve patient of diarrhoea stools was evaluated and goal was fully met as evidenced by; Patient reporting the diarrhoea has resolved and Nurse observed patient pass soiled-formed stool.

At 4:00pm, the objective to relieve patient of abdominal pains was evaluated an goal was fully met as evidenced by; Patient verbalized that abdominal pains has been relieved and Nurse observed patient rate 2 on the numerical rating scale

At 6:00pm, patient was served with rice and kontomire stew with fish and vital signs was

checked and recorded at the appendix. I had a conversation with him for about 30minutes and made him comfort

Second Day of Admission – (13th November, 2021)

During the morning taking over of the ward, it was communicated that client had had an almost uninterrupted sleep the night before. He did not make any abdominal pains complains throughout the night. The body temperature had been within the normal ranges. The facial expression of the client revealed satisfaction with the progress of treatment and coupled with the verbal expression of the client that "I am feeling better today" when asked, gave a feedback that client was doing very well. He was assisted to attend to his personal hygiene needs.

During morning ward rounds, patient made no new complains but said the watery stools have reduced drastically in frequency (about 1-2 times in every 12hours) and was more formed than the previous day. The attending physician ordered for intravenous ciprofloxacin 400mg,12hourly for another 24hours, intravenous metronidazole 500mg, 8hourly for 24hours, 5% dextrose in 0.9% in sodium chloride 1.5L, oral paracetamol 100omg, 8hourly for 3days and intravenous fluids (Ringers' lactate 1000mls). Patient was able to take liquid breakfast that is tea and bread which was requested by the patient. All due medications were served and patient tolerated all medications. He was observed for signs of adverse reaction. No drug interaction reaction observed nor drug side effects observed. He was assisted to turn in bed periodically to make him comfortable in bed. There was the need for the client and the family to understand the present ailment, hence;

At 8:00am, during my conversation with patient and family, it was realized that they lack adequate knowledge about the disease condition. Therefore a nursing diagnosis of Knowledge deficit about disease condition related to the causes, pathophysiology, signs and symptoms,

management and prevention of gastroenteritis was formulated. An objective was set that Patient and Family wou

At 2:00pm, patient's vital signs were checked and recorded as indicated in the appendix. Due medications were administered. At 2:30pm patient was served with rice and tomatoes stew with egg prepared by his relative.

At 6:00pm, due medication was administered. Vital signs were checked and recorded and indicated in the appendix. Patient was served with banku and okro stew for supper. He was assisted to perform his personal hygiene. Patient slept at 9:00pm.

Third Day of Admission (14th November, 2021)

On the third day of admission, Mr. K.O. woke up around 4:30am, On this day he did not make any new complaint.

Patient was having fully formed stools with normal frequency (twice daily). Temperature had not fluctuated since it reduced to normal range some few hours into his admission. Patient had uninterrupted sleep throughout. He had his bath and brush his teeth and was served with oats with milk and bread as his breakfast.

Due medication was served and vital signs was checked and recorded in the appendix.

At 8:00am, the objective set on 13th November, 2021 that patient and family will gain adequate knowledge about disease condition was evaluated and goal was fully met as; Patient and family answered questions on gastroenteritis correctly.

At 10:00am, patient's vital signs were checked and recorded at the appendix. Due medication was administered.

At 1:00pm, I went for my first home visit as I had already arranged with them on the second day.

At 2:00pm, patient's vital signs were checked and recorded at the appendix. Due medication was administered. Patient was served with mashed kenkey and bread for lunch.

At 5:30pm, patient was assisted to perform his personal hygiene. He was served with ampesi and garden eggs stew for supper.

At 6:00pm, patient's vital signs were checked and recorded and as indicated in the appendix. Patient went to bed at 8:45pm.

Fourth Day of Admission – Day of Discharge (15th November, 2021)

Mr. K. O's health was stable now. It was also documented in his folder (nurse's notes) by the night nurses that client had been sleeping uninterruptedly for the past two days. He was having stable vital signs and his abdominal pains has been relieved. His vital signs were checked and recorded as indicated in the appendix.

The attending doctor on his usual rounds discharged the client around 9:20am on client's already existing oral medications.

At 10:00am, the objective set on 12th November, 2021 to maintain patient's normal fluid volume was evaluated and goal was fully met as evidenced by; Patient verbalized that diarrhoea has stopped and Nurse assessed patient's skin to be moist and had a good skin turgor.

The client was to be brought back for review on Monday, 22nd November, 2021 at the Out-Patient Department. I reviewed the health education we had on gastroenteritis with the client and the family. I also stressed on the family helping the client eat adequate diet and maintaining good personal hygiene. Mr. K.O was discharged from the hospital per the hospital's protocol. I helped them pack their belongings in the ward and escorted them to the hospital's gate. I reminded them

of the review date and the importance of adhering to it. IV cannula in situ was removed from patient's vein.

4.2 Preparation of Patient and Family for Discharge and Rehabilitation

Preparation for discharge and rehabilitation started at the time of admission of my client. Mr. K.O and the family were made aware that my interaction with them would one day come to an end, that would be when Mr. K.O was discharged from the hospital. The preparation's intention was to include the family and the resources available to the family and the hospital in achieving an optimal health for Mr. K.O. The preparation constituted many teachings about the condition of my client; the cause, predisposing factors, signs and symptoms, therapeutic measures, prevention and complications associated with gastroenteritis.

Mr. K. O's family were made to understand that the health of Mr. K.O was to some extent dependent on them. If he would have good health or not, the actions of the family were very important in deciding that. Therefore, all their actions toward Mr. K.O should be geared towards providing what was best for him; optimal health, adequate diet and the likes. In ensuring that Mr. K.O gets optimal health, prevention of all sickness or diseases should be the number one priority, and they can do this by practicing regular hand washing, eating adequate food, sleeping under insecticide treated mosquito nets, eating food while it is still warm and going for regular check-ups in the hospital.

As part of the preparation towards the discharge of my client, I had the opportunity to visit Mr. K.O 's house. It was on Tuesday, 14^{h} November, 2021, I had finished my shift at around 2:20pm and one of the family members had visited and was going back home. I used that opportunity to visit the house to see my client's primary environment. Before we set off, I explained my intentions why I was joining him to see the house, that it was to help see the available resources in the immediate environment of Mr. K.O that could be tapped or altered to help my client

achieve full health recovery when he comes back to the house. From the hospital to the house was about 10-15 m

4.3 Follow up/ Home Visits/ Continuity of care

4.3.1 First Home Visit – 14th November, 2021

One family member of Mr. K.O came to visiting him on 14th of November, 2021 and was going home after around 1:00pm. I had closed from work that day so I used that opportunity to visit his house at A-line Nkoranza, and see the natural environment to which Mr. K.O would be nursed after discharge from the hospital. Both the client and the family member gave an immediate positive response when I sought for their permission.

The main aim of the visit was to acquaint myself with the client's home environment, to familiarize myself with the other family members, to confirm information given to me about the family and their home environment, to find out their health needs and assist towards effective solutions to any health problems that may be identified and to find a healthcare provider I would hand over client to during the termination for care.

Mr. K.O was particularly happy with my decision to involve myself into his health affairs. His house was at "A-line" in Nkoranza –Bono region . On reaching the house, I was offered a seat by the accompanying family member (lady by the name madam S.O). I explained that, I am a student nurse, writing a care study on Mr. K.O 's condition so I wanted to see his home and environment to help me get firsthand information in the planning of care for him.

The house was painted brown and white, the compound was cemented which was neatly kept. The house was a compound house and I was able to count about 5 separate rooms. They share one kitchen and two bath houses. They used uncovered bucket as a receiver for waste materials and sent it to the public refuse dump when it was full. They obtained water from a tap in the

middle of the house as a source of drinking water. They had access to electricity and they used a public toilet loc

I asked Madam S.O if there was any hospital, clinic or CHPS compound in their area but she told me there was not but there was a staff Nurse who lived in their house. I went to him and introduced myself as a student Nurse who was conducting her care study on Mr. K.O and was looking for a Nurse to hand over patient to after care has been terminated. Nurse K.P agreed to my proposal and was willing to care for Mr. K.O after care was terminated. I thanked him and we exchanged contacted.

I later sought permission to leave and told them that I would be visiting again. I was seen off at the roadside. I finally left at 2:30pm.

4.3.2 Second Home Visit- 21st November, 2021.

On the 21st November, 2021, I made my second home visit to "A-line" at Nkoranza around 11:00am. I visited him to find out how he and the family were faring. I met Mr. K.O and madam S.O in the house.

Mr. K.O looked very well from the looks on his face. I explained to them that I came to find out how they were faring and how far they had used the knowledge gained from the health education and also how they were preparing toward review. Most of the health education had been put into action. Avoidance of spicy foods, maintaining of good personal hygiene and the likes were some of the implemented actions. I commended them for implementing the ideas they had from the health education.

Mr. K.O told me he was feeling much better. I encouraged him to continue with the good work done and to avoid taking medications that are not prescribed. I reminded them of the date for the review which was the next day. I told the client to bring the remaining drugs to certify that he

was taking the treatment as advised. Client had no complaints and prognosis was good. We chatted for some tim

4.3.3 The Review Day- 22nd November, 2021

I met with Mr. K.O at St. Theresa's hospital 10:00am for the review check-up. His vital signs were checked and recorded as

- Temperature = 36.9°C
- Pulse = 96bpm
- Respiration = 28cpm
- Blood pressure = 120/90mmhg.

Mr. K.O was seen by a doctor at the Out-Patient Department of St. Theresa's Hospital, Nkoranza. After the doctor had finished physically examining him, he said my client was recovering very well and that he should continue his medications that were in the house. The doctor asked Mr. K.O if he had had any side effects or complications after his discharge and he responded no. The doctor then educated Mr. K.O further on gastroenteritis, the need for adequate diet and general personal hygiene which he included that it is one most influential factor in the prevention of almost all ailment. No other medication was added for the client this time. He was also informed to visit any nearest hospital should incase he develops any complications like vomiting, diarrhoea, dehydration, etc. at home.

4.3.4 Third Home Visit – 29th November, 2021.

I went for my last home visit of 29th November, 2021. I went to the patient's house to review how he and his family were doing. I went there around 4:00pm. When I got to the house, Mr. K.O and his family welcomed me warmly and gave me a seat under the shade of a tree that was in front of the house. Upon reception and exchange of greetings, enquiry was made about the general

condition of the client. No new complaint was made as client's condition looked improved. Health education on

CHAPTER FIVE

EVALUATION OF CARE RENDERED TO PATIENT AND FAMILY

5.0 Introduction

Evaluation is the final step of the nursing process which allows the nurse to determine the patient's response to the nursing interventions and the extent to which the objectives have been achieved. The plan of nursing care is the basis for evaluation (Smeltzer, Bare, 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 patient and family.

5.1 Statement of Evaluation

During Mr. K.O's period of hospitalization with the diagnosis of acute gastroenteritis at the St. Theresa's Hospital, Nkoranza five health problems were recorded and objectives were set for them. Below is the summary of the interventions carried out and to what extent the goals were met.

1. **Patient regained his normal body temperature (36.2^{o}C- 37.2^{o}C) (12th November, 2021)**

On 12th November, 2021, at 6:00am, due to patient's high body temperature, a nursing diagnosis of Hyperthermia (38.0^{o}C) related to inflammatory process of the stomach and intestinal mucosa was formulated. An objective was set to regain normal body temperature (36.2℃-37.2℃) within 6hours of hospitalization. The following intervention were made; patient reassured of competent care and made know the various treatment modalities, Signs of dehydration were assessed, there

was mild dehydration as evidenced by dry mouth and increased thirst, patient vital signs were monitored every 3

On 12th November, 2021, at 12:00pm, the objective to regain patient's body temperature was evaluated and goal was fully met as; Patient verbalizing that fever has subsided and Nurse recording auxiliary temperature of 37.1°C.

2. **Patient was relieved of passing diarrhoea stools (12th November, 2021)**

On 12th November, 2021, at 6:00am, due to the diarrhoea stools patient passed, a nursing diagnosis of Diarrhea related increase peristalsis and malabsorption of the small intestines was formulated. An objective was set to relieved diarrhea within 8hours of hospitalization. Nursing interventions carried out included: Patient was educated on the condition and the treatment modalities, Abdominal pains with no tenderness observed, Patient was passing loosely stools with no blood stains visible, Patient has an average of 3watery stools per every four hours, Stools specimen was obtained for stool routine examination, Patient was weighed daily, dietary planning was made with patient to take in more bulking agents and avoid stimulants and Patient was encouraged to take in more liberal fluids. 1.5L Intravenous fluids (ringers' lactase and 0.9%).

On 12th November, 2021, at 2:00pm, the objective to relieve patient of diarrhoea stools was evaluated and goal was fully met as evidenced by; Patient reporting the diarrhoea has resolved and Nurse observed patient pass soiled-formed stool.

3. **Patient maintained normal fluid volume throughout the period of hospitalization (12th November, 2021).**

On 12th November, 2021 at 8:00am, due to the patient's complain of vomiting, a nursing diagnosis of Risk for fluid and electrolyte imbalance related to vomiting was made. An objective

of Patient would maintain normal fluid volume throughout the period of hospitalization as evidenced by: Patient

On 15th November, 2021, at 10:00am the objective set on 12th November, 2021 to maintain patient's normal fluid volume was evaluated and goal was fully met as evidenced by; Patient verbalized that diarrhoea has stopped and Nurse assessed patient's skin to be moist and had a good skin turgor.

4. **Patient was relieved of abdominal pains (12th November, 2021)**

On 12th November, 2021, at 8:00am, patient complained of abdominal pains, therefore a nursing diagnosis of Acute abdominal pains related to inflamed stomach and intestinal mucosa was made. An objective of Patient would be relieved of abdominal pain within 8hours as evidenced by: Patient reporting relief of abdominal pain and Nurse observing that client rates pain as "2" or below on numerical pain rating scale out of 10. Nursing interventions implemented includes; Patient was reassured of competent care from the health team, Pain rating scale (0-10) was used to assess patient's abdominal pains. He rated his abdominal pains as 7, History about the abdominal pain obtained: mostly felt few hours of ingesting food or water, It does not respond to rest or exercise, Patient's coping strategies was assessed, patient does use pain medications bought from over the counter to mostly manage any kind of pain in the house, Relaxation techniques like guided visualization, deep breathing exercises and music therapy were introduced to patient. He responded very well and preferred deep breathing exercises and Intravenous paracetamol 1g served at 8 hourly frequency.

On 12th November, 2021, at 4:00pm, the objective set on 12th November, 2021 to relieve patient of abdominal pains was evaluated and goal was fully met as evidenced by; Patient verbalized that abdominal pains has been relieved and Nurse observed patient rate 2 on the numerical rating

scale.

5. **Patient and relatives had enough knowledge about the disease, gastroenteritis (14th November, 2021)**

On 13th November, 2021, it was realized that they lack adequate knowledge about the disease condition. Therefore, a nursing diagnosis of Knowledge deficit about disease condition related to the causes, pathophysiology, signs and symptoms, management and prevention of gastroenteritis was formulated. An objective was set that Patient and Family would gain adequate knowledge on gastroenteritis cause, its treatment and prevention within 24hours as evidence by: Patient's Family verbalizing knowledge regarding management of the condition and Nurse observing patient and Family answer some questions about the condition was set. Nursing interventions implemented includes; Patient and family's current knowledge base were assessed and they had very little knowledge about gastroenteritis, Patient and family were ever ready and keen to learning new information about his condition, the patient wanted a gradual paced learning style but the family was up for any learning method, Patient and family were educated on the causes, treatment modalities, prevention and signs and symptoms of gastroenteritis, Different learning materials such as videos, paper or demonstrations were employed for use in teaching, Patient and family were encouraged to ask questions, Learning friendly environment such as one with less noise and interference was created to aid in teaching and learning, Gradual paced teaching methods was adopted to help patient get the best out of the learning process, Praise and encouragement were given during learning sessions, Patient gave feedback that he was grasping the concept very well, Patient was encouraged to talk to others with similar experiences/condition. Arrangements were made to make it happen and Patient and family were shown other ways to appropriately obtain new information about any condition, such as walking

into any health facility or listening to accredited health talks on various medias.

On 14th November, 2021, at 8:00am, the objective set on 13th November, 2021 that patient and family will gain adequate knowledge about disease condition was evaluated and goal was fully met as; Patient verbalizing the accurate information about condition and treatment by discharge and Nurse observed patient and family answered questions on gastroenteritis correctly.

5.2 Amendment of Nursing Care

Goals were set to help resolve the five health problems that were identified. Nursing interventions were implemented for the set goals and at the end, all the set goals were fully met. No amendment of nursing care was therefore done.

5.3 Termination of Care

This forms the last aspect of the interaction with client and family. Due to the psychological effects accompanying separation, it could sometimes lead to anxiety and depression. To avoid this, client and family were prepared psychologically from the day of admission to the day of discharge. The termination of the patient and family care begins during the orientation phase of the admission and is an important phase in the therapeutic nurse-patient relationship.

I made my last home visit to the client's house with the main aim of terminating my care with them. I made them aware that the care will be terminated when his health had been restored back to normal. I emphasized on the health education that had already been given and advised him to report any changes to the nearest health facility. I made them aware that it was the last time that I will be visiting them formally but with time, maybe our path might cross again. Patient was handed over to Nurse K.P for continuity of care. Patient was informed that because his health had been restored, the care was officially terminated. They were happy and said that they would

miss my care and would strictly adhere to all instructions given to them. It was a moment to remember when I to

CHAPTER SIX

SUMMARY AND CONCLUSION

6.0 Introduction

Summary is a comprehensive and usually brief abstract, recapitulation or compendium of previously stated facts or statements (Weller, 2014). Conclusion is the last part of something or an opinion reached after some thought (LoveToKnow). 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.

Mr. K.O. a 81-years-old man was admitted to the Males Ward of St. Theresa's Hospital, Nkoranza with the diagnosis of acute gastroenteritis on the 12th November, 2021. He was complained of abdominal pains, vomiting and diarrhea. His vital signs were checked and recorded as;

Temperature	:	37.4°C
Pulse	:	102bpm
Respiration	:	20cpm
Blood pressure	:	134/75mmHg
Spo_2	:	97%

He spent a total of four days at the hospital. During his period of hospitalization five (5) health problem were identified. These were; fever, diarrhoea, vomiting, abdominal pains and inadequate

information on gastroenteritis. Nursing diagnosis was formulated for each of the problems and in order to solve t

- Full blood count
- Typhoid rapid diagnostic test
- Electrolyte test
- Stool routine examination
- Urine routine examination

He was managed with the follow medications;

- Intravenous fluid 0.9% sodium chloride 1.0L for 24hours.
- Intravenous fluid 5%dextrose in 0.9% sodium chloride 1.0L
- Intravenous ciprofloxacin 400mg, 12hourly for 24hours
- Intravenous metronidazole 500mg, 8hourly for 24hours
- Intravenous paracetamol 1000mg, 8hour for 24hours
- Injection hyoscine butyl bromide, 40mg then 20mg 12hourly for 24hours

On 15th November, 2021, patient was discharged during ward rounds. His relatives were directed to go to the billing office to assess their bill. I accompanied patient's daughter to go and pay the assessed bill. Patient was encouraged to continue taking his drugs and was educated on the side effects of the drug and the need to report any illness.

Patient relatives were informed to bring him for review on the 22nd November, 2021. The need to take in medication was emphasized and review date was stressed. Client and relatives were educated on how to keep the home clean and also abide by all the preventive measures already communicated to them. Three (3) home visits were embarked upon. My first home visit was on 14th November, 2021, the main aim of the visit was to acquaint myself with the client's home

environment, to familiarize myself with the other family members, to confirm information given to me about the

6.2 Conclusion.

In conclusion, I have become more conversant with the disease condition as a result of the care study. The literature review from different sources have helped me a lot in understanding the disease condition (gastroenteritis).

I strongly recommend that the writing of the care study should be continued since it improves our communicational and educational skills. Generally, the study on the patient was a successful one. It was successful because of the early recovery and regaining of his strength. Through interactions with my client and family, a lot has been learnt about the nursing process. In one way or the other; it has enabled me to apply the knowledge acquired in the course of my training to nurse my client.

It has widened my knowledge on the condition, both theoretically and practically. The client and family have also benefited as they came to realize their health needs and were prepared to take the necessary measures to meet their health problems. I therefore accept the concept of patient and family care study to be used in order to equip the student nurse to work efficiently for a better nursing during and after training.

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APPENDIX 1

TABLE 6: VITAL SIGNS

DATE	TIME	TEMPERATURE (^{O}C)	PULSE (bpm)	RESPIRATION (cpm)	BLOOD PRESSURE (mmHg)
12/11/2021	6:00am	38.1	119	23	71/50
	10:00pm	37.4	102	20	134/75
	2:00pm	36.6	106	20	132/68
	6:00pm	36.1	118	18	126/66
	10:00pm	36.0	82	24	119/63
13/11/2021	6:00am	35.9	66	19	128/74
	10:00am	35.4	62	18	127/56
	2:00pm	36.8	53	19	110/80
	6:00pm	36.4	88	25	129/70
	10:00pm	37.0	89	24	130/80
14/11/2021	6:00am	36.7	84	20	140/70
	10:00am	37.2	79	22	130/84
	2:00pm	36.4	81	21	132/72
	6:00pm	36.9	84	23	120/70
	10:00pm	37.8	80	24	119/88
15/11/2021	6:00am	36.8	84	22	120/84
	10:00am	37.0	89	24	130/80
Review	10:00am	36.9	98	28	120/90

APPENDIX 2

TABLE 7: INTAKE AND OUTPUT CHART

INTAKE			OUTPUT		
DATE/TIME	**FLUID**	**AMOUNT (mls)**	**DATE/TIME**	**FLUID**	**AMOUNT (mls)**
12/11/21			12/11/21		
6:00am	IV 0.9% Sodium	500	10:00am	Urine	400
	Chloride		3:30pm	Urine	500
8:00am	Hausa porridge	150	4:00pm	Vomitus	100
9:45am	Water	100	5:30am	Urine	700
12:00noon	IV Ringer's Lactate	500			
1:00pm	IV Ringer's Lactate	500			
2:00pm	Water	100			
6:00pm	IV 0.9% Sodium	500			Total output:
	Chloride	Total intake: 2350			1700
13/11/21					
At 6:00am					
Intake: 2350mls					
Output: 1700mls					
Balance: 650mls					

Table 6: Intake and Output Chart continue

INTAKE			OUTPUT		
DATE/TIME	**FLUID**	**Amount (mls)**	**FLUID**	**DATE/TIME**	**Amount (mls)**
13/11/21 6:00am 8:00am 9:00am 2:00pm 4:00pm 6:00pm **14/11/21** 6:00am Total intake: 2480mls Total output: 1850mls Balance: 630mls	 5% dextrose in 0.9% sodium chloride Milo drink (Tea) Water Water Mineral (malt) 5% dextrose in 0.9% sodium chloride	 500 430 500 200 350 500 Total intake: 2480	13/11/21 9:00am 11:30am 2:45pm 5:00pm 8:45pm 3:20am	 Urine Urine Urine Urine Urine Urine	 400 350 300 200 400 200 Total output: 1850

Table 6: Intake and Output Chart continue

INTAKE			OUTPUT		
DATE/TIME	**FLUID**	**Amount (mls)**	**FLUID**	**DATE/TIME**	**Amount (mls)**
14/11/21 8:00am 12:00noon 3:00pm 6:00pm **15/11/21** 6:00am Total intake: 1150mls Total output: 1000mls Balance: 150mls	Rice porridge Mineral (don simon) Water Water	400 200 300 250 Total intake: 1150	**14/11/21** 9:00am 1:00pm 4:00pm 8:00pm	Urine Urine Urine Urine	200 250 300 250 Total output: 1000

SIGNATORIES

THE STUDENT NURSE

NAME: REBECCA BEMAH ACHEAMPONG

SIGNATURE:.....

DATE: 6th/October/2022

THE NURSE-IN-CHARGE OF MALE MEDICAL WARD (ST. THERESA'S HOSPITAL, NKORANZA)

NAME: MR. STEPHEN NKETIA

SIGNATURE:.....

DATE: 06/10/2022

THE SUPERVISOR, NURSING AND MIDWIFERY TRAINING COLLEGE, BEREKUM

NAME: MR. ERIC OBENG

SIGNATURE:.....

DATE: 06/10/2022

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

NAME: MONICA NKRUMAH

SIGNATURE:.....

DATE: 7th/October/2022

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