HOLY FAMILY NURSING AND MIDWIFERY TRAINING COLLEGE

BEREKUM

A PATIENT/FAMILY CARE STUDY ON DIABETES MELLITUS

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A PATIENT/FAMILY CENTERED CARE STUDY ON DIABETES MELLITUS 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

Nursing started with the use of traditional medicine and other practices which were not guided or proved by theories or technology. The above trend of nursing was practiced by many great legends in nursing which include Florence Nightingale and Virginia Henderson.

But currently, it is ensured that patients are nursed with a system in which theoretically and technologically based care are adopted. Hence, care study is adopted in a sense that patients are nursed using the nursing process which comprises of assessment, diagnosis, planning, implementation and evaluation as a criteria and principle in nursing.

Patient / Family care study is a detailed written account of the comprehensive nursing care given to a particular patient within a specific period of time.

The main objective of the study is to meet the physical, psychological, spiritual and socio-economic needs of the patient. The nursing process approach has been adopted in Ghana since 1980 to promote an individualized total patient care.

The care is designed to promote, maintain and prolong life as well as alleviating discomfort and meet patient's psychological needs.

The care study offers the student nurse an opportunity to acquire much knowledge about the condition being catered for and to put into practice the knowledge acquired throughout the three years of training in giving of effective nursing care to patient and family.

It also offers the student nurse an opportunity to practice the nursing process of giving quality care to patients based on the specific health needs.

In this work, patient/family initials are used instead of full names to maintain confidentiality.

The nursing process which comprises of assessment, diagnosis, planning, implementation and evaluation.

Finally, it forms part of the final assessment of the student nurse at the end of the three years training programmed by the Nursing and Midwifery Council of Ghana for the license to practice as a Registered General Nurse in the country.

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May God richly bless you all.

INTRODUCTION

I met a 52-year-old Mrs. P.A on the 9th November 2022 when she was admitted to the Female Medical Ward through the Accident and Emergency unit of Bono Regional Hospital at 8:30am. Mrs. P.A presented the following signs and symptoms on admission: dizziness, headache, sweating, general body weakness and anxiety. A comprehensive care plan was drawn to meet patient's health needs and appropriate nursing orders implemented to ensure early recovery of the patient. She was nursed at the hospital for five days with the co-operation and support from patient, family and other health care givers in the hospital setting, Mrs. P. A responded well to treatment and subsequently, she was discharged on the 13th November 2022.On discharge, Mrs. P. A looked cheerful and her condition had improved remarkably. Patient and her family were happy that she had recovered without any complications. Home visits were embarked on to look out for possible risk of developing the illness and measures put in place to prevent reoccurrence. One pre – visit was made to her home and after her discharge, two follow – up visit was made to observe and offer suggestion where necessary. The first home visit was on 10th of November, 2022 while patient was still at the ward. The second home visit was also embarked on after the patient was discharged and that was on 20th of November, 2022.The third home visit was on 30th November, 2022, after which I terminated care by finally handing her over to the public health nurse of their area on the 30th of November, 2022.

This study has been arranged into six chapters in line with the nursing process under the following headings:

1. Chapter one: assessment of patient and family, admission of patient, patient's concept of illness and literature review of Diabetes Mellitus.
2. Chapter two: analysis of data collected and the comparison of the data with the standard data and then nursing diagnoses made from Patient's health problems which were identified.
3. Chapter three: nursing care plan which solves the patient's health problems identified.

4. Chapter four: implementation of patient and family care plan, summary of actual nursing care, subsequent home visits and follow-ups for continuity of care.
5. Chapter five: evaluation of care rendered to patient and family.
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CHAPTER ONE

ASSESSMENT OF PATIENT/FAMILY

1.0 Introduction

Assessment involves the gathering of information about the health status of the patient or patient, analysis and synthesis of the data and the making of a clinical nursing judgment. (Weller B. F., 2018)

Collection of data in this study was done through interviews, observation, physical examination, past medical records and laboratory investigations. The data collections help the nurse to plan successfully an effective nursing care with patient and family. The data collected is also validated to keep them free from errors.

1.1 Patient's Particulars

Patient particulars or biography data are the information collected from the patient at the first visit, which forms a picture of the patient as a unique individual. It includes the person's name, date of birth, age, gender, occupation, hometown, nationality, marital status and the sources of data (Giddens, 2020).

Mrs. P. A is a 52-year-old woman who hails from Wenchi in the Bono Region and a Ghanaian by nationality. She was born at Wenchi on 3rd December, 1970 and reside in Sunyani-Kuotokrom. She is an Akan by tribe and speaks Bono and English. She is a Christian who worship at the Assemblies of God Church at Sunyani-Kuotokrom. Mrs. P.A is a married woman with four children, three males and a female. Patient is chocolate in complexion and stands about 1.55metres tall. She weighs 52kg. Mrs. P. A ended her education at Primary six. Her next of kin is Ms. G. A who is her daughter. Ms. G.A is also a hairdresser at Penkwase.

1.2 Patient's Family Medical /Socio Economic History

Medical/ Surgical History involves a brief history about patient's family health related issues and the type of medical care they adopt. Information is obtained on both patient paternal and maternal side of family. (Hinkle & Cheever, 2018)

Through nurse-patient relationship, it was made known that hereditary disease such as D.M was known in the patient's family. The patient made it known that her father, Mr. K.M was a diabetic together with her other two siblings. Occasionally, family members suffer from minor illness including headache, cold or body pains which are usually treated with over-the-counter drugs. She further added that, they only come to the hospital when the medications they purchase (over-the-counter) do not relieve them of their symptoms.

Mrs. P.A lives with her husband. She is a farmer who works on foodstuffs like cocoyam, maize, plantain from which she uses to support her family and sometimes gets financial assistance from her husband and eldest child. She is not a subscriber of NHIS, she had financial assistance from her husband and eldest child which made it easier for her to pay her hospital bills.

1.3 Patient's Developmental History

Development is a process that creates growth, progress, positive change or the addition of physical, economic, environmental, social and demographic components. It is also meaning transformation or improvement (Society for International Development, 2021). Growth is defined as an irreversible constant increase in in the size of an organ or even an individual cell (Bisareli, 2021). Maturation is the process of development in which an individual matures or reaches full functionality. (Weller B. F., 2018)

Mrs. P.A was born in Wenchi on 3rd December, 1970 at home through spontaneous vaginal delivery by the help of a traditional birth attendant (TBA) without any complications. She was breastfed for six months but not exclusively. She was on supplementary feeds such as porridge with milk by mother. Patient said she was not immunized against all the childhood disease that

examples are poliomyelitis, diphtheria, measles, yellow fever, whooping cough and tuberculosis.

Erik Erikson (1902 to 1994**)** focused on cultural and societal influences as determinants of behaviour. Erikson's theory of psychosocial development in 1964 describes the human life cycle as a series of eight ego developmental stage from birth to death. The theory focuses on psychological task that are accomplished throughout the life cycle.

The stages that make up his theory are as follows:

1. Trust vs. Mistrust (Infancy from birth to 18 months)
2. Autonomy vs. Shame and Doubt (Toddler years from 18 months to three years)
3. Initiative vs. Guilt (Preschool years from three to five)
4. Industry vs. Inferiority (Middle school years from six to 11)
5. Identity vs. Confusion (Teen years from 12 to 18)
6. Intimacy vs. Isolation (Young adult years from 18 to 40)
7. Generativity vs. Stagnation (Middle age from 40 to 65)
8. Integrity vs. Despair (Older adulthood from 65 to death)

The patient falls within the 7^{th} stage thus generativity versus stagnation of Erik Erickson's psychosocial theory.

When people reach their 40s, they enter the time known as middle adulthood, which extends to mid-60s. The social task of middle adulthood is generative versus stagnation. Generativity and Stagnation involves finding your life's work and contributing to the development of others through activities such as volunteering, mentoring and raising children. During this stage, middle-aged adults begin contributing to the next generation, often through childbirth and caring for others. Those who do not master this task may experience stagnation and feel as though they are not leaving a mark on the world in a meaningful way (Erikson, 1902 -1994). According to Mrs. P.A, she went through the normal developmental milestone and child's

developmental characteristics. According to patient, she was told by her mother that, about eight months she was sitting, crawling at nine months and could walk at eleven months and could eat all meals prepared at home and as a result was weaned.

She had a formal education but ended in primary six. She got married to Mr. K.A at the age of 25 years. Patient has no known allergies.

1.4 Patient's Life Style and Hobbies

Lifestyle is the pattern of daily living that an individual develops (Weller B. F., 2018).

Hobby is a regular activity done for enjoyment, typically during one's leisure time, not professionally and not for pay (Stebbins, 2018).

Mrs. P. A was very interactive and humble as observed during my interactions with her. What makes Mrs. P.A happy is by having conversation with her friends and relatives. Mrs. P.A sleeps around 8:30pm and wakes up at 5:00am in the morning. She normally empties her bowel twice daily, morning and evening before bathing. She takes care of her personal hygiene after which she takes her breakfast, which is usually Tom brown and bread. She normally takes fufu (without cassava) with fish soup in the evening around 6:00pm. Patient hobbies are, playing ludu, watching of movies. She attends funeral during the weekends especially Saturday. She goes to church on Sundays. She is a leader of the Women's Fellowship in her church. During interactions with Mrs. P. A, she stated that she interacts freely with everyone.

1.5 Patient's Past Medical History/Obstetric History

Past medical history is a record of past medical problems and treatments that a person has had. (Marriam-Webster, March 19, 2022)

According to Mrs. P.A, back in 2012 one morning she had sudden severe headache, dizziness, fatigue, malaise and a frequent of urination. According to patient, that was the first time she had been admitted for treatment. Though she has fallen sick several occasions but had nerve been admitted into a hospital since then.

According to Mrs P.A, all her deliveries were spontaneous vaginal deliveries assisted by a midwife at the hospital with no complications. She has no history of abortions or miscarriages. She has no obstetrical abnormalities.

1.6 Patient's Present Medical History

The history of the present illness or problem includes such information as the date and manner (sudden or gradual) in which the problem occurred, the setting in which the problem occurred, and the course of the illness including self-treatment, specific symptoms are also described in detail (Hinkle & Cheever, 2018)

According to Mrs. P.A, it was Wednesday,9th November 2022 morning that she started experiencing severe headache which was sudden, fatigue, malaise, sweating and an increase in urination. She did not inform her husband about her condition until it became severe.

She was then brought to the Bono Regional Hospital early in the morning around 8:30am, where she was admitted at the Female's ward.

1.7 Admission of The Patient

Admission of a patient into the hospital ward is a change of environment with its attendant problems. Patient is usually hospitalized in the same department from which they are discharge (Nurseinfo.in, 2021)

Mrs. P.A was admitted to the Female Medical Ward of Bono Regional Hospital on 9th November 2022 at 8:30am. On admission, she presented with dizziness, headache, sweating, general body weakness and anxiety. She was accompanied by her husband. Patient fasten blood sugar was checked which was 31.2mmol/L. They were welcomed to the ward. The patient was identified and confirmation was done by calling her name. She was very anxious and in view of that she was reassured of quality nursing and medical care. Patient was placed in an already prepared bed. Vital signs tray was set and vital signs were checked and recorded as;

Temperature 36.9^{o}C

Pulse 89 beats per minute (bpm)

Respiration 26 cycles per minute (cpm)

Blood Pressure 120/90 millimeters of mercury (mmHg)

SPO_2 90

Patient blood sugar, weight and height were checked and recorded as;

Fasten blood sugar 31.2mmol/L

Weight 52kg

Height 1.55meters

An immediate intervention was given with respect to her high fasten blood sugar (31.2mmol) by administering 10 units of soluble insulin (Human Actrapid) subcutaneous and 10units of insulin intravenously according to the hospital sliding scale protocol. The daily routines on the ward like meal time and treatment periods were explained to relative as well as items needed for the care of the patient such as bucket, towel, tooth brush and comb. I made patient and her husband aware of visiting hours which starts in the morning at 5:30am to 6:00am, afternoon 12:00pm to 2:00pm and in the evening 4:00pm to 6:00pm.

Plans of discharge were made known to them as they were told that, patient will be discharged home to continue treatment after she gains an improvement in her condition.

Patient's valuables were taken, documented and kept inside a bed side locker.

She was to be managed on the following drugs:

1. Intravenous Normal Saline 3litters x 48hours
2. Insulin 20units of intermediate-acting insulin
3. Tablet Metformin 1g bd x 30 days
4. Tablet Gliclazide 160mg bd x 30 days.

The following investigations were requested to be done;

1. Urine for routine examination.

2. Blood for;

3. Full blood count

4. Hemoglobin level estimation

5. Random blood sugar.

Blood and urine samples were taken and sent to the laboratory for the various investigations to be carried out. Patient's name and information collected was documented in the admission and discharge book and as well as in the computer in which patient records are kept. Patient was not under the National Health Insurance Scheme (NHIS) hence a brief explanation was done in order to help the patient relative to prepare themselves financially.

I then introduced myself again to patient and relative as a student of Nursing and Midwifery Training College Berekum and sought for her consent to provide a comprehensive care to her after which a written report of the care will be submitted to my school. I further explained that the care study is a requirement by the Nursing and Midwifery Council of Ghana in order to be awarded license to practice as a nurse. I promised patient and relative that, all information that will be made available to me will be kept confidential. Also, patient was made aware that she could withdraw at any time if she is not comfortable continuing the interaction. She agreed and gave me her verbal consent. Patient promised to give me her maximum cooperation. I then thanked her for accepting to be patient for the care study. She was further introduced to the other staff on the ward. My reason for choosing this condition was for the fact that, it is an interesting condition which will help me learn more. I assured patient and relative of confidentiality of the information obtained through our interaction by using initials to represent their names. Patient relatives cooperated fully during the care.

1.8 Patient's Concept of Illness

This talks about patient's idea or perception about her condition (Weller B. F., 2018)

According to Mrs. P.A, she does not know the exact cause of the disease condition. However, she explained further that her father had this condition together with her two other siblings which was concluded that it was hereditary. She did not attribute it to spiritual forces. She saw it as a condition that can affect anyone.

1.9 Literature Review on Diabetes Mellitus

Definition

Diabetes mellitus is a metabolic disorder characterized by elevated levels of blood glucose (hyperglycaemia) resulting from defects in insulin action, or both. Diabetes is also associated with an increase occurrence of macro vascular disease, including coronary artery disease (myocardial infarction), cerebrovascular disease (stoke), and peripheral vascular disease. (Hinkle & Cheever, 2018)

Incidence of Diabetes Mellitus

The incidence is classified according to the types. In type 1 diabetes mellitus, approximately 50-60% of patients get the condition before 20years of age. Type 2 diabetes mellitus is much common than type 1, accounting for 80-90% of all cases. It occurs after the age of 40years with an insidious onset. It is common in women over 65years and men 60years. (Hinkle & Cheever, 2018)

Types of Diabetes Mellitus

Based on aetiology, two main categories of diabetes are recognized, namely primary (idiopathic) diabetes and secondary diabetes.

A. **Primary (Idiopathic) Diabetes Mellitus**

The great majority of cases seen belong to this group which consist of two main clinical types;

1. **Type 1 diabetes** also known as insulin dependent diabetes mellitus (IDDM) or juvenile-onset diabetes. The body's immune system attacks the insulin producing cells of the pancreas, and more than 90% of them are permanently destroyed. The pancreas, therefore produces little

or no insulin. Scientists believe that an environmental factor possibly a viral infection or a nutritional factor during childhood or early adulthood causes the immune system to destroy the insulin producing cells of the pancreas.

2. **Type 2 diabetes** (non-insulin dependent diabetes mellitus (NIDDM) or maturity onset diabetes: The pancreas often continues to produce insulin, sometimes even at higher-than-normal levels, especially early in disease. However, the body develop resistance to the effects of insulin, so there is not enough insulin to meet the body's needs. As type 2 diabetes progresses, the insulin-producing ability of the pancreas decreases. (By Erika F. Brutsaert, MD, Albert Einstein college of Medicine).

A. **Secondary Diabetes Mellitus**

A minority of cases of diabetes mellitus occurs as a result of a recognizable pathological process or secondary to treatment of some other conditions.

1. **Gestational diabetes,** which occurs temporarily during pregnancy in individuals who have an inherited liability to develop the disorder.

2. **Iatrogenic diabetes,** in those genetically susceptible, may be precipitated by various forms of therapy, notably corticosteroids and thiamine diuretics

Aetiology/ Predisposing Factors of Diabetes Mellitus

Although the precise aetiology is still uncertain, several contributing factors are known to be involved.

Modifiable Factors

These are factors that predispose one to the condition and with proper lifestyle the occurrence of the condition can be managed. These are factors include;

1. **Obesity:** The majority of the middle-aged diabetic patients are obese. Most of evidence support the view that obesity is diabetogenic in those genetically predisposed to the disorder

and that the rising incidence in older people in related to the increasing prevalence of obesity in the population as a whole.

2. **Diet:** Overeating, especially when combined with under activity is associated with a rise in the incidence of diabetes mellitus in the middle age and elderly.

3. **Stress:** this stimulates secretion of epinephrine, norepinephrine and glucocorticoids and these neurotransmitters increases glucose level in the blood.

4. **Autoimmunity:** diabetes mellitus co exists with other autoimmune disease such as pernicious anaemia.

5. **Infections:** there is some evidence that viral infections may be involved in the aetiology of diabetes mellitus. Example is coxsackie B4 infection, and bacterial infections such as staphylococcus infections, in particular, are frequently associated with the development of clinical diabetes.

Non – Modifiable Factor

Other disease can predispose one to the condition or even the treatment of such disease, can results in contracting the condition, some of these diseases include:

1. Liver disease particularly cirrhosis and hepatitis, may be associated with impaired glucose tolerance.

2. Pancreatic disease such as pancreatitis, Hemochromatosis and carcinoma causes destruction of the pancreas and lead to impaired secretion and release of insulin.

3. Administration of growth hormone can produce permanent diabetes and about 30% of patient with acromegaly are diabetes.

4. Age: The disease may appear at any time but 80% of cases occur after the age of 50years and highest incidence of new patients is in 60-70 age groups.

5. Sex: There are rather young male diabetic than female; middle age women are more often affected. Repeated pregnancy may add to the likelihood of developing diabetes in middle age.

6. Heredity in diabetes mellitus a familial tendency exists and twins are more often both diabetic when they are identical than when they are non -identical. Genetic factors are probably more important in those who develop diabetes mellitus after the age of 40years and evidence of dominant inheritance has been obtained in this condition

Pathophysiology of Diabetes Mellitus

Insulin is secreted by the beta cells, which are one of the four types of cells in the islets of Langerhans in the pancreas. When a person eats a meal, insulin secretion increases and moves glucose from the blood into muscles, liver and fat cells. The insulin transports and metabolizes glucose for energy, stimulate storage of glucose in the liver and muscles, in the form of glycogen It enhances storage of dietary fat in the form of adipose tissue and accelerates transport of amino acids into cells. Insulin also functions to inhibit breakdown of stored glucose, protein and fat.

During fasting periods, the pancreas releases insulin in small amounts and another pancreatic hormone, glucagon is released when blood glucose level decrease and stimulate the liver to produce glucose through breakdown of glycogen (glycogenolysis). The insulin and glucagon together maintain a constant level of glucose in the blood.

When there is inadequate secretion of insulin, it leads to elevated blood glucose level. The glucose does not move into the cells to provide energy to the cells. The liver then produces glucose through the breakdown of non-carbohydrate substances including amino acids (gluconeogenesis). The insulin and glucagon together maintain a constant level of glucose in the blood. When stores fats are broken down, ketosis eventually occurs.

Rising levels of glucose in the circulation results in an increased plasma osmolality. Glycosuria generally occurs when concentration of glucose spills over into the renal tubules. Large amount of water and sodium are excreted in urine thereby increasing volumes of urine (polyuria) leading to dehydration and this increases the patient’s thirst as the body tries to compensate for

the fluid loss. As a result, there is decrease total body weight through loss of water and breakdown of fat and protein stored. (Hinkle & Cheever, 2018)

Signs And Symptoms of Diabetes Mellitus

According to Hinkle and Cheever, the following are signs and symptoms associated with Type 2 diabetes mellitus;

1. Polyuria
2. Polydipsia
3. Polyphagia
4. Recurrent infections
5. Glucosuria
6. Fatigue Blurred vision
7. General Malaise
8. Vomiting
10. Confusion
11. Nausea
12. Abdominal pain
13. Kussmaul breathing

Diagnostic Investigation of Diabetes Mellitus

An abnormally high blood glucose level is the basic criterion for the diagnosis of Diabetes mellitus.

1. Classical clinical symptom (such as polyuria, polydipsia and unexplained weight loss)
2. Random blood sugar
3. Fasting blood sugar

4. 2- hour post load glucose

5. Blood urea and nitrogen and serum creatinine level

6. Urine testing; a positive response indicates that the urine glucose exceeds 0.55-1.11mmol/l (glycosuria)

7. Body mass index to determine if patient is obese. (Hinkle & Cheever, 2018)

Management of Diabetes Mellitus

Aims of Treatment

According to Hinkle and Cheever, the following are management of diabetes mellitus;

The ideal treatment for diabetes mellitus would allow the patient to:

1. Live a complete normal life

2. Remain not only symptom free but in positive good health

3. Achieve a normal metabolic state

4. Prevent the complication associated with long term diabetes mellitus

Types of Treatment

Three methods of treatment are available for diabetic patient

1. Oral anti-diabetic drugs

2. Insulin therapy

3. Diet and lifestyle modifications

Oral Anti-Diabetic Drugs

1. Sulfonylureas: stimulate insulin secretion. examples, tolbutamide, tolazamide, acetohexamide, chlorpropamide., glyburide, glipizide, glimepiride

2. Meglitinide, stimulate insulin secretion examples rapalinid, nateglinide.

3. Biguanides, decrease hepatic glucose production examples, metformin, Glucophage XR and phenformin.

4. Alpha-Glucosidase inhibitors: inhibit the activities of the enzyme Alpha-Glucosidase, which is responsible for the breakdown of carbohydrate molecules into short sugar chains. Examples, acarbose, miglitol

5. Thiazolidinedione's; decrease peripheral insulin resistance example, rosiglitazone, pioglitazone

6. Combination; glyburide + metformin

Insulin: A Hormone for Regulating Blood Glucose Levels

1. Rapid acting: on set<0.5hours, peak0.5-2.5 hour's duration: 3 – 4hrs. Examples: insulin analogues-lispro, aspart, glulisine and soluble insulin

2. Short –acting onset: 0.5 – 1 hours., peak: 1-4 hours, duration: 4-8 hrs. Example; insulin regular, insulin lispro, insulin aspart.

3. Intermediate acting: onset: 1-3hrs, peak; 3-8 hours, durations: 7- 14hrs examples, lent, neutral protamine hagedorn (NPH) etc.

4. Long-acting: onset 2-4 hours peak: 6 -12 hours, duration: 12-30 hrs. Examples, ultralente, insulin glaring, bovine ultralente and insulin analogues glargine

5. Mixes: Examples, NPH / regular: 70/30, 50/50 and NPH/lispro: 75/25

Side Effects of Insulin Therapy

1. Hypoglycaemia due to intake of insulin without meals

2. Weight gain as a result of urge for food and overeating

3. Peripheral edema (insulin treatment causes salt and water retention in a short term).

4. Insulin antibodies (animal insulin)

5. Injection site reaction.

Diet And Lifestyle Modification

Basically, there are two types of diet; for diabetic patients.

1. Measured, in which the amount of food to be eaten at each time of the day is specified. The food may be measured either by weighing with scales or by using household measures. Measured diets are required for two groups of patients:

a. Those who require insulin or oral hypoglycemic agents.

b. Those that are overweighed and require a strict reducing regime.

2. Unmeasured, in which the patient is supplied with foods grouped in categories. Here, insulin or oral hypoglycemic agents are not required and marked obesity is not present, it may not be necessary for the patient to follow such an accurate diet.

The following foods can be eaten by a diabetic patient. All meats, fish, eggs, cheese, light soups, tea, cabbage, vegetables, mushrooms, lemon juice, water, soda water, pepper, etc.

The following foods should be avoided, sugar, glucose, tinned fruits, sweats, salad cream, chocolate, nuts, soft drinks, cakes, sweets biscuits, pies, thick sauces, all fried foods and alcohol drinks unless permission has been given by the doctor.

Diabetes mellitus risks can be reduced in many cases by making changes in diet and increasing physical activities with the goal of keeping both short term and long-term blood glucose levels within acceptable bounds. Lifestyle modification are recommended to control blood pressure in patient with hypertension, maintaining a healthy weight, getting at least 3 times exercise a week, having a modest fat intake, eating sufficient fiber and avoid smoking.

Nursing Management of Diabetes Mellitus

Rest and Sleep

1. The patient needs enough and uninterrupted rest and sleep in order to allow the body to respond properly to the therapeutic regimen

2. Placing patient in comfortable position

3. Limit the number of visitors to the patient

4. Nurse the patient in a well-ventilated room

5. Organize nurses' activities not to interrupt patient sleep

6. Provide warm baths or beverages to the patient and ensure that client bed is warm

Observations

1. Monitor fluid intake and output chart accordingly.

2. Monitor and record patient's vital signs (temperature, pulse, respiration, blood pressure.

3. Weight and record at regular intervals (4 hourly).

4. Observe patient closely for signs of cyanosis.

5. Monitor the side and therapeutic effects of drug administered.

Nutrition

1. Serve diet high in complex carbohydrate, high fiber and low in fat

2. Low calorie and sugar-free drinks are useful for patient with diabetes.

3. Restrict of sodium intake in hypertensive diabetic patients.

4. Client is encouraged to take more vegetables and fruits in other to boost the immune system since they are more prone to infections.

5. Unsaturated fat should replace saturated fats

Chemotherapy

1. All prescribed drugs should be administered according to the ten rights.

2. There should be connection between the administration of a drug and the client's meals and activities.

3. Monitor for the desired therapeutic effect and adverse effect of drugs administered.

4. Educate patient on the side effects of the drugs and if they occur

5. Educate patient how to administer insulin

Weight Management

Weight loss can be achieved through

1. A reduction in energy (reducing calorie) intake

2. and an increase in energy expenditure through physical activity

3. there should be frequent body weight check.

Exercise / Activity

1. People with diabetes need to exercise to prevent or reduces the risk for cardiovascular and peripheral vascular complications

2. It also assists in weight control.

3. People with diabetes mellitus need to exercise at the same time (preferably when blood glucose levels are at their peaks) and in the same duration each day.

4.Encourage regular daily exercise, rather than sporadic exercise

5. Encourage a slow, gradual increase in the exercise period e.g., walking.

Personal Hygiene

1. Assist client in taking care of physical appearance such as bathing at least 2 times daily, caring for the mouth, teeth and nails.

2. Always wash hands thoroughly before and after carrying out any procedure on the client uto prevent spread of infections.

3.They are advised to keep their environment clean to avoid injuries and other diseases

Complications of Diabetes Mellitus

Diabetic complications can be limited and sometimes prevented altogether if good management occurs at an early stage. These complications include;

1. **Diabetic hypoglycemia:** occurs when amounts of glucose in the blood become very low (falls below 2.7 to 3.4 mmol/l) due to either too much insulin or oral hypoglycemic agents, too little food or excessive physical activities.

2. **Diabetic ketoacidosis**: This occurs when there is insufficient or no insulin. This result in the breakdown of fat stored to release energy with an acid by-product production called ketones which accumulates causing diabetic ketoacidosis.

3. **Hyperglycemic hyperosmolar non-ketotic syndrome:** This occurs when the blood glucose levels rise very high and the body tries to get rid of it, glucose will be detected in urine (glucosuria) the patient is also very thirsty, weak and dehydrated. If not treated early,can lead to seizures, coma and finally death.

4. Diabetic hyperglycemia: occurs when blood glucose rises above 11.1mmol/l.

5. Damage to retina from diabetes (diabetic retinopathy) and cataracts is the leading cause of blindness.

6. Damage to the kidneys from diabetes (diabetic nephropathy) is a leading cause of kidney failure.

7. Damage to the nerves in the autonomic nervous system can lead to paralysis of the stomach (gastro- paresis), chronic diarrhoea and inability to control heart rate and blood pressure.

8. Diabetes accelerates atherosclerosis (the formation of fatty plagues inside the arteries), which can lead to blockage or a clot (thrombus) leading to heart attack, stroke etc.

9. Increase risk of heart diseases, peripheral vascular disease, and cerebrospinal disease.

10. Diabetic wound. (Hinkle & Cheever, 2018)

Health Education

People with diabetes mellitus have a chronic lifelong disease and are ultimately responsible for the self -management of health care. Education given to patient help avoid severe hypoglycemic or acute hyperglycemic complications. Education needed includes;

1. Basic definition, simple pathophysiology, signs and symptoms, and prevention of the condition.

2. To achieve a state of health and an acceptable level of function, the person must learn to coordinate the treatment regimen of diet, activity and medication into a daily routine of work, and recreation to achieve and maintain normal physiological blood glucose levels.

3. Adequate knowledge and skill to be able to make informed decision about health problems are required.

4. The patient who is place on insulin must be taught how to measure the dosage of the insulin accurately, how to give their own injection and also the side effects of the insulin

5. The patient is also educated on where to get the insulin and oral anti-diabetic agents and how to store them as well as side effects of the drugs.

6. Educate patient on the effect of insulin and exercise (decrease blood glucose levels) and the effect of food and stress (increases blood glucose levels) as well as how to measure or monitor blood glucose level.

7. The patient is taught how to care for his feet, and how to treat any infected lesions.

Prognosis of Diabetes Mellitus

The prognosis of diabetes mellitus has improved steadily since the introduction of insulin, but even with its use, the average expectation of life is still rather less than non-diabetic. It may be difficult to estimate the prognosis of an individual patient because so many variables' factors have to be considered. Thus, duration of disease, financial status of patient and the body built of the patient can all account for the prognosis of the disease.

Prevention

From a public health standpoint, the only cost-effective way of dealing with diabetes is to prevent it. Diabetes mellitus especially type 2 diabetes is associated with an affluent lifestyle and is likely to rise in genetically predisposed individuals who eat too much and exercise too little. Effective health education has shown promising results in the primary prevention of diabetes mellitus, while screening for diabetes (particularly in high-risk groups such as the first-degree relatives of known cases and more vigorous and early treatment of impaired glucose tolerance could reduce the incidence of serious vascular disease in these patients. In any event,

the public should be educated primarily against an overall excess of calorie and also to encourage sufficient exercise. (Hinkle & Cheever, 2018)

1.10 Validation of Data

According to Hinkle and Cheever, Validation is to state officially that something is useful and of acceptable standard. Mrs. P. A's present condition started with severe sudden headache, sweating, fatigue, malaise and increase in patient urine output as evidenced by diagnostic investigations. The clinical features presented by the patient and diagnostic investigations conducted on her confirmed that she was suffering from diabetes mellitus.

Information was also taken from the patient, existing medical records and information also from the home visit I made. I also questioned patient's family members to confirm responses patient gave me during the assessment. When the data collected were compared with information from the Literature Review, it was clear that the patient was suffering from Diabetes Mellitus. I can now conclude that the data collected is free from errors and misinterpretation, for that reason fit for the study.

CHAPTER TWO

ANALYSIS OF DATA

2.0 Introduction

Analysis refers to the act of determining the component part of a substance (Weller B. F., 2018). Data is a collection of facts (Weller B. F., 2018). The data collected to be analysed is both subjective and objective. The subjective data was obtained from patient and relatives. These include sensation, feelings, values, beliefs, attitude and perception of personal health status and life situation. Analysis of data is the second phase of the nursing process. It contains information on the comparison of data gathered with standards. Based on the analysis, the nurse is able to identify the problems of the patient, her strengths, make her nursing diagnoses, objectives and give appropriate interventions.

It comprises of:

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

2.1 Comparison of Data with Standards

This is where data collected on the health of the patient is compared with those in the literature review. Nurses draw on knowledge and experience to compare patient data to standard norms and identify significant and relevant cues. This was done to confirm and establish proper diagnosis, appropriate treatment to be given and to monitor the progress of treatment. The nurse uses a wide range of standards, such as interviews, normal vital signs, laboratory values and comparing them.

2.1.1 Diagnostic Investigations/Test

Investigation is a procedure performed to establish a diagnosis, to monitor a person's health, disease or the effectiveness of treatment (Weller B. F., 2018).

The following diagnostic investigations carried out on Mrs. P.A was compared with the investigations listed in the literature review

Table 1 Comparison of Diagnostic Test Carried on Patient with Those Outlined in Literature

Diagnostic Investigations on Literature Review	Diagnostic Investigation Carried on Mrs. P. A
1.A thorough health history taking	1. Health history was done for patient
2.Complete physical examination	2. Physical examination was done for patient
3.Haemoglobin estimation	3. Haemoglobin estimation was done for patient
4.Random or fasting blood sugar	4. Patient random or fasting was checked
5. Urinalysis	5. Patient urine was checked

With reference the table above, some of the diagnostic measures such as physical examination, Haemoglobin estimation and urinalysis were conducted on patient to help confirm his diagnosis

Table 2. Diagnostic Investigations Carried Out and Their Results

DATE	SPECIMEN	INVESTIGATION	CLIENT'S RESULT	NORMAL VALUES	INTERPRETATION	REMARKS
9/11/ 22	Blood	Haemoglobin level estimation	12.4g/dl	▪ **Female**: 12-16g/dl ▪ **Males**:13-18g/dl ▪ **Children**(2-6years) 11.5-13.5g/dl	Normal	No treatment was prescribed
9/11/ 22	Blood	Fasting Blood sugar	31.2mmol/l	Before breakfast (fasting), blood sugar should be 3.4-6.4mmol/L After breakfast blood sugar should range between 6.4-11.1mmol/L	Far above normal indicating hyperglycaemia	10 units of soluble insulin subcutaneous stat and 10 units of insulin intravenously administered
10/11/ 22	Urine	Urine routine examination	Colour: straw appearance: clear no pus cells, protein present, no bilirubin and ketones present.	Colour: umber appearance: clear no pus cells, no protein, no bilirubin no ketones	Proteinuria	Dietary management

2.1.2 Causes of Patient's Illness

With reference to the data collected in literature review. The patient seems to have been predisposed to conditions such as stress, age greater than 45 years. But patient made it clear that her father, together with her two other siblings have suffered from this condition. Which shows that the condition is hereditary.

2.1.3 Clinical Features

Table 3 Below Shows Signs and Symptoms Exhibited by The Patient in Relation to The Clinical Features Stated in The Literature Review.

CLINICAL FEATURES IN LITERATURE REVIEW	CLINICAL FEATURES PRESENTED BY MRS. P. A
1. Polyuria	1. Patient experienced polyuria
2. Polydipsia	2. Patient had polydipsia
3. Polyphagia	3. Patient had polyphagia
4. Recurrent infections	4. There were no infections
5. Glucosuria	5. Patient had glucosuria
6. Fatigue	6. Patient complained of tiredness
7. Blurred vision	7. Patient had no visual disturbances
8. General Malaise	8. Patient complained of general body weakness
9. Vomiting	9. Patient did not experience vomiting
10. Confusion	10. Patient has a sound mind and is aware of her environment
11. Abdominal pain	11. Patient did not complain of abdominal pains
12. Kussmaul breathing	12. There was no Kaussmaul respiration

Based on the clinical features manifested by patient in comparison to those stated in the literature review, it could be deduced that patient was rightly diagnosed as she exhibited most of those in the literature review.

2.1.4 Specific Medical Treatment of the Patient

Mrs. P.A was given treatment in line with the medical treatment for patients with diabetes mellitus as outlined in the literature review. Her treatment includes:

1. Tablet metformin 1g bd x 30days
2. Normal saline 3litres x 48hours
3. Tab Gliclazide 160mg bd x 30days
4. Soluble insulin

Table 4 Comparison of Specific Treatment Given to Patient to That of Literature Review

DRUG IN LITERATURE REVIEW	**DRUGS GIVEN TO PATIENT**
1. Antidiabetics	1. Insulin, metformin, Gliclazide was administered
2. IV fluids	2. Normal saline was set up

Table 5 Pharmacology of Drugs Prescribed and Administered

DATE	DRUG	STANDARD DOSAGE/ ROUTE IN LITERATURE	DOSAGE/ ROUTE OF ADMINISTRATION TO PATIENT	CLASSIFICATION	DESIRED EFFECTS	ACTUAL ACTION OBSERVED	SIDE EFFECTS	REMEDIES
09/11/22	Injection of soluble insulin	Dose: Depends on the blood glucose level Route: Subcutaneous (SC) Intramuscular (IM)	10 IU subcutaneously and 10 IV intravenously	Antidiabetic agent (pancreatic hormone)	Regulate blood glucose level and correct hyperglycaemia	Reduced blood glucose level	Rash, lipodystrophy, hypoglycaemia, Somogyi	None was observed.
10/11/22	Normal Saline	Dose: 1000ml daily Route: Intravenously (IV)	3Liters intravenously	Isotonic solution of sodium chloride	Correct fluid and electrolyte imbalance and increase blood volume	Patients' blood sugar concentration was diluted	Pulmonary oedema, hypernatremia, elevated temperature, circulatory overload	None observed

10/11/22	Tablet Metformin	Dose: 500mg bd x daily or 850mg daily Route: Orally	1g bd x 30days orally	Oral anti-diabetic, Biguanides	It works by decreasing the amount of glucose that the liver produces and the intestines absorb. It also reduces appetite.	Stable	Heart burn, agitation, diarrhoea, vertigo, thrombocytopenia, rash	None was observed
10/11/22	Tablet Gliclazide	Dose: 40mg to 320mg daily Route: Oral	160mg bd x 30-day s orally	Sulfonylureas	It activates the pancreas (beta cells) to secrete more insulin and also supports the body in utilizing insulin more effectively.	Patient responded to treatment	Nausea, vomiting, diarrhoea and stomach ache or indigestion	None was observed.

2.1.5 Complications

With reference to the complication in the literature review, patient had hyperglycaemia. It was successfully treated with subcutaneous and intravenous administration of soluble normal saline and antibiotics

2.2 Patient Health Problems

Weller (2022), defines problems as any health care conditions that requires diagnostic therapeutic or educational action. It also refers in nursing to any unmet or partially met basic human need. The following health problems were identified with Mrs. P.A after a careful and thorough assessment. The problems were arranged according to priority.

1. Patient complained of pain (headache) (9th November, 2022)
2. Patient complained of dizziness (9th November, 2022)
3. Patient complained of frequent urination (10th November, 2022
4. Patient had difficulty in sleeping (10th November, 2022)
5. Patient had generalized body weakness (11th November, 2022)
6. Patient had little knowledge about her condition (12th November, 2022)

2.3 Patient /Family Strength

Strength as defined by Weller (2022) is the ability of a muscle or a person to produce or resist a physical or psychological force, this is explained as the ability of the patient or her family to help or participate in the care for the achievement of set goals. Characteristics that both patient and family members have that facilitate the nursing care.

Strength refers to the physical power and energy that makes an individual determined in dealing with difficult or unpleasant situations.

The patient exhibited the following strength;

1. Patient was able to tolerate analgesic drugs

2. Patient was able to carry out her own activities when assisted

3. Patient can tell the number of times she urinates per day

4. The patient was able to sleep for 3 hours at night

5. Patient could walk when assisted

6.Patient was willing to know more about her condition.

2.4 Nursing Diagnosis

A nursing diagnosis according to North American Nursing Diagnosis Association (2022) is a clinical judgement concerning a human response to health condition process or vulnerability for the response by an individual, family, group, or community. It is a clear concise and definite statement of the patient health status that can be influenced by nursing interventions.

1. Impaired body comfort related to headache

2. Risk for fall related to dizziness

3. Potential for fluid volume deficit (dehydration) related to polyuria

4. Disturbed sleep patterns related to frequent urination at night

5. Activity intolerance related to general body weakness

6. Deficient knowledge related to lack of education on the causes, risk factors, signs and symptoms, treatment and management of diabetes mellitus.

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 B. F., 2018). It involves the use of the nursing process which is a systematic method by which the nurse, patient and family work hand in hand to identify actual and potential health needs that should be managed through effective nursing care. This involves identification of problems, formulating nursing diagnosis and setting goals and objectives to achieve health needs of patient which will aid in successful recovery of the patient.

3.1 Objectives of Nursing Care Plan

In planning the care for patient, the following objectives were set based on her needs and categorized under short and long term based on the duration within which each goal is expected to be achieved. The short-term objectives are those goals, targeted to be achieved within a relatively short period during hospitalization.

The long-term objective on the other hand, was the ultimate goal of patient recovering as early as possible without complications and returning home in good time to her usual activities of daily living.

3.2 Short Term Objectives

The nursing management goals set to be achieved within a relatively short period for patient

1. Patient will be relieved from pain within 24 hours as evidenced by;

a. Nurse observing patient looking cheerful in bed.

b. Patient verbalizing decrease in pain

2. Patient will be able to walk unassisted within 48 hours as evidenced by;

a. Nurse observing patient not falling and getting injured.

b. Patient verbalizing that she does not feel dizzy.

3. Patient's fluid volume would be maintained throughout the period of hospitalisation as evidenced by;

a. Patient having good skin turgor, normal urine output and moist skin and mucus membranes.

b. Nurse recording a Blood Pressure and pulse within normal range.

4. Patient will regain her normal sleeping pattern within 24 hours as evidenced by;

a. Nurse observing patient having 6 to 8 hours uninterrupted sleep at night.

b. Patient verbalize sound sleep during the night.

5. Patient will be able to perform some activities (bathing, oral care) within 48 hours as evidenced by;

a. Patient performing daily activities without assistance.

b. Nurse observing patient verbalizing she no more feels weak.

6. Patient will be able to demonstrate enough knowledge about her condition within 24 hours as evidenced by;

a. Nurse observing patient mentioning the likely causes, complications and management of diabetes mellitus.

b. Patient responding to any question ask about her condition.

3.2 Long Term Objectives

1. To assist patient fully recover without developing any complication throughout the period of hospital.

2. Patient will be relieved from frequent urination within the period of hospitalization.

TABLE 6: PATIENT AND FAMILY CARE PLAN

DATE/TIME	Nursing Diagnosis	Objective / Outcome Criteria	Nursing Orders	Nursing Intervention	DATE/ TIME	Evaluation	Sign
09/11/22 10:00am	Impaired body comfort related to headache.	Patient will be relieved from pain within 24 hours as evidenced by: a. Nurse observing that patient have a cheerful and relaxed face. b. Patient verbalizing that she no more feel pains.	1. Reassure patient and family of competent nursing care. 2. Monitor patient vital signs and record. 3. Assess the level of pain using pain rating scale. 4. Encourage patient to have adequate rest. 5. Served prescribed analgesics.	1. Patient and family were reassured of competent nursing care. 2. Patient vital signs were checked and recorded and was within the normal range. 3. Patient level of pain was assessed using the pain rating scale of 0-10 and recorded 4. Patient was encouraged to have rest 5. Patient was served with prescribed analgesics.	10/11/22 At 10:00am	Goal fully met as evidenced by nurse observing the patient having a relaxed and cheerful facial expression and the patient verbalizing the absence of pain.	K.B

TABLE 6: PATIENT AND FAMILY CARE PLAN

Date / Time	Nursing Diagnosis	Objective / Outcome Criteria	Nursing Orders	Nursing Intervention	DATE/TIME	Evaluation	Sign
9/11/22 At 10:00am	High risk for fall related to dizziness.	Patient will be prevented from falls and injury within 48 hours evidenced by: a. Nurse observing patient not falling and getting injured. b. Patient verbalizing that he does not feel dizzy.	1. Reassure patient of competent nursing care. 2. Ensure adequate bed rest. 3. Nurse patient on a low bed. 4. Raise side rails of patient bed. 5. Keep the floor of ward dry, to prevent slippery floor.	1. Patient was reassured of competent nursing care. 2. Adequate bed rest was ensured. 3. Patient was nursed on low bed. 4. Side rails of patient bed were raised. 5. The floor of the ward was kept dry to prevent slippery floor.	11/11/22 At 10:00am	Goal fully met as evidence by nurse observing that patient did not fall and get any injury during hospitalization and patient verbalizing that she does not feel dizzy anymore.	K.B

TABLE 6: PATIENT AND FAMILY CARE PLAN

Date / Time	Nursing Diagnosis	Objective / Outcome Criteria	Nursing Orders	Nursing Intervention	DATE/TIME	Evaluation	Sign
10/11/22 At 10:00am	Potential for fluid volume deficit (dehydration) related to polyuria.	Patient's fluid volume would be maintained throughout the period of hospitalisation as evidenced by; a. Patient having good skin turgor, normal urine output and moist skin and mucus membranes. b. Nurse recording a Blood Pressure and pulse within normal range.	1. Reassure patient and relatives. 2. Ask patient to take in more fluid. 3. Observe patient for signs and symptoms of dehydration. 4. Monitor prescribed intravenous fluid. 5. Monitor input and output of fluid.	1. Patient and relatives were educated that dehydration is a sign of diabetes mellitus and it can be relieved with treatment. 2. Patient was served with fluid diet like mashed kenkey and about 2 liters of water to help prevent dehydration. 3. Patient was observed for signs and symptoms of dehydration such as dry mouth, sunken eyes, and poor skin turgor and managed accordingly by administering intravenous fluid such as normal saline. 4. Intravenous fluid prescribed for patient was monitored for number of drops per minute and the site was checked to prevent any complication and fluid overload. 5. The amount of both intravenous infusion and fluid taken in like water and amount of urine passed were recorded in the intake and	13/11/22	Goal fully met as patient had a good skin turgor, normal urine output and moist skin and mucus membranes and nurse recorded a blood pressure and pulse within normal range.	K.B

			6. Monitor weight of patient.	output chart daily to check for balance or deficit. 6. Patient's weight was checked regularly by using the weighing scale to determine an increase or loss in patient's weight.			

TABLE 6: PATIENT AND FAMILY CARE PLAN

Date / Time	Nursing Diagnosis	Objective / Outcome Criteria	Nursing Orders	Nursing Intervention	DATE/ TIME	Evaluation	Sign
10/11/22 10:00am	Disturbed sleep pattern related to frequent urination at night.	Patient will regain her normal sleeping pattern 6 to 8 hours at night as evidenced by: a. Nurse observing patient having 8 hours uninterrupted sleep. b. Patient verbalizing of sound sleep during the night.	1. Reassure patient and relatives of competent nursing. 2. Provide quiet and well-ventilated environment. 3. Perform all nursing activities simultaneously during sleep. 4. Provide a dim light.	1. Patient and relatives were reassured of competent nursing. 2. A quiet and well-ventilated environment was provided. 3. All nursing activities were performed simultaneously, during sleep time. 4. Dim light was Provided.	11/11/22 10:00am	Goal fully met as evidenced by nurse observing patient sleeping calmly without interruption. Patient verbalizing having enough sleep.	K. B

TABLE 6: PATIENT AND FAMILY CARE PLAN

Date / Time	Nursing Diagnosis	Objective / Outcome Criteria	Nursing Orders	Nursing Intervention	DATE/ TIME	Evaluation	Sign
11/11/22 At 12:00pm	Activity intolerance related to general body weakness.	Patient will be able to perform some activities (bathing, oral care) within 48hours as evidenced by; a. Nurse observing patient performing daily activities without assistance. b. Patient verbalizing, she does not feel weak anymore.	1. Reassure patient the ability to carry out her activities daily unassisted. 2. Assist patient with self-care needs. 3. Teach patient on how to perform passive exercise such as, stretching of hands and extremities. 4. Encourage patient to take nutritious diet to regain her energy.	1. Patient was reassured to carry out her daily activities without assistance. 2. Patient was assisted with her self-care needs. 3. Patient was taught on how to perform passive exercise. 4. Patient was encouraged to take nutritious diet to regain her energy such as, Banku.	13/11/22 At 12:00pm	Goal fully met as evidenced by patient carrying out her own daily activities unassisted and performing some passive exercises.	K.B

TABLE 6: PATIENT AND FAMILY CARE PLAN

Date / Time	Nursing Diagnosis	Objective / Outcome Criteria	Nursing Orders	Nursing Intervention	DATE/TIME	Evaluation	Sign
12/11/22 At 10:00am	Knowledge deficit related to lack of education on the disease condition such as, causes, signs and symtoms and preventions	Patient will be able to demonstrate enough knowledge about her condition within 24 hours as evidenced by: a. Nurse observing patient mentioning the likely causes, complications and management of diabetes mellitus. b. Patient being able to respond to questions being asked about her condition.	1. Educate patient on causes, complications and management of diabetes mellitus 2. Allow patient to ask questions for clarification. 3. Ask simple question on the disease condition to determine the understanding level of the patient 4. Educate patient the side effects of drugs used and how to manage them 5. Educate and stress on the need for follow up visits to the hospital.	1. Patient was educated on the causes, complication, and management of diabetes mellitus. 2. Patient was allowed to ask questions for clarification. 3. Patient was asked simple questions to determine her understanding level. 4. Patient was educated on the side effects of drugs used and how to manage them. 5. Patient was educated and stressed on the need for follow-up visits to the hospital.	13/11/22 At 2:00pm	Objective fully met as evidenced by patient demonstrating adequate knowledge on her condition by mentioning some causes, compilations and management of her condition.	K.B

CHAPTER FOUR

IMPLEMENTATION OF PATIENT AND FAMILY CARE PLAN

4.0 Introduction

Implementation refers to the act of putting a plan into action or starting to use something (Walter, 2017). These involve Summary of Actual Nursing Care provided to the patient and the patient relatives from the day of admission to the day of discharge, preparation of patient towards Discharge, Rehabilitation and Fellow –up/Home Visit/continuity of care. This chapter also entails all information about what was done on the patient till the time of discharge and further nursing care rendered to the patient at home

4.1 Summary of Actual Nursing Care

Mrs. P.A arrived at the female's ward at Bono Regional Hospital on the 9th November, 2022 during the morning shift around 8:30am, where I met her with the husband and begun my interactions with her. Nursing care subsequently continued till the Sunday 13th of November, 2022 when discharged.

4.1.1 First Day on Admission (09/11/22)

Admission of a patient into the hospital ward is a change of environment with its attendant problems. Patient is usually hospitalized in the same department from which they are discharge (Nurseinfo.in, 2021)

Mrs. P.A was admitted to the Female Medical Ward of Bono Regional Hospital on 9th November 2022 at 8:30am. On admission, she presented with dizziness, headache, sweating, general body weakness and anxiety. She was accompanied by her husband. Patient fasten blood sugar was checked which was 31.2mmol/L. They were welcomed to the ward. The patient was identified and confirmation was done by calling her name. She was very anxious and in view

of that she was reassured of quality nursing and medical care. Patient was placed in an already prepared bed. Vital signs tray was set and vital signs were checked and recorded as;

Temperature 36.9^{o}C

Pulse 89 beats per minute (bpm)

Respiration 26 cycles per minute (cpm)

Blood Pressure 120/90 millimetres of mercury (mmHg)

SPO_2 90

Patient blood sugar, weight and height were checked and recorded as;

Fasten blood sugar 31.2mmol/L

Weight 52kg

Height 1.55meters

An immediate intervention was given with respect to her high fasten blood sugar (31.2mmol) by administering 10 units of soluble insulin (Human Actrapid) subcutaneous and 10units of insulin intravenously according to the hospital sliding scale protocol. The daily routines on the ward like meal time and treatment periods were explained to relatives as well as items needed for the care of the patient such as bucket, towel, tooth brush and comb. I made patient and her husband aware of visiting hours which starts in the morning at 5:30am to 6:00am, afternoon 12:00pm to 2:00pm and in the evening 4:00pm to 6:00pm.

Plans of discharge were made known to them as they were told that, patient will be discharged home to continue treatment after she gains an improvement in her condition.

Patient's valuables were taken, documented and kept inside a bed side locker.

She was to be managed on the following drugs:

1. Intravenous Normal Saline 3litters x 48hours
2. Insulin 20units of intermediate-acting insulin
3. Tablet Metformin 1g bd x 30 days

4. Tablet Gliclazide 160mg bd x 30 days.

The following investigations were requested to be done;

1. Urine for routine examination.

2. Blood for;

3. Full blood count

4. Hemoglobin level estimation

5. Random blood sugar.

Blood and urine samples were taken and sent to the laboratory for the various investigations to be carried out. Patient's name and information collected was documented in the admission and discharge book and as well as in the computer in which patient records are kept. Patient was not under the National Health Insurance Scheme (NHIS) hence a brief explanation was done in order to help the patient relative to prepare themselves financially. I then introduced myself again to patient and relative as a student of Nursing and Midwifery Training College Berekum and sought for her consent to provide a comprehensive care to her after which a written report of the care will be submitted to my school. I further explained that the care study is a requirement by the Nursing and Midwifery Council of Ghana in order to be awarded license to practice as a nurse. I promised patient and relative that, all information that will be made available to me will be kept confidential. Also, patient was made aware that she could withdraw at any time if she is not comfortable continuing the interaction. She agreed and gave me her verbal consent. Patient promised to give me her maximum cooperation. I then thanked her for accepting to be patient for the care study. She was further introduced to the other staff on the ward. My reason for choosing this condition was for the fact that, it is an interesting condition which will help me learn more. I assured patient and relative of confidentiality of the information obtained through our interaction by using initials to represent their names. Patient relatives cooperated fully during the care.

At 10:00 am, patient's vital signs were checked and documented as shown in the appendix

At 10:00am, patient complain of headache (pain). A nursing diagnosis of impaired body comfort related to headache. An object was set to relieve patient from pain within 24 hours. Nursing interventions implemented included; patient was reassured that the headache will subside after medication has been given. Patient vital signs were checked and recorded to ensure that her temperature, pulse, respiration and blood pressure are getting better. Patient was served with analgesics (paracetamol 1g).

At 10:00am patient complained of dizziness. A nursing diagnosis of risk for fall related to dizziness was set. An object; patient will be able to walk unassisted within 48 hours was set. Nursing interventions implemented included; Patient was reassured of competent nursing care. Patient was given adequate bed rest. Patient was nursed on low bed. Patient bedside rails were raised. Ward floor was kept dry to prevent slippery floor for patient.

At 2:00 pm, patient's vital signs were checked and documented as shown in the appendix.

The patient took Ampesi with Kontomire stew as lunch after which she went to sit outside the ward to converse with other patients.

In the evening at 5:26pm, patient was served with Fufu with garden eggs soup with beef, patient vital signs were checked and recorded as follows;

Temperature	36.3ºC
Pulse	81bpm
Respiration	22cpm
Blood pressure	112/65mmHg
SPO_2	97
Random Blood Sugar	12.3mmol/L

At 6:30pm the prescribed dose of tablet metformin 1g and tablet gliclazide 160mg was served and documented. She took her bath, cleaned her teeth and listened to a radio program at

8:30pm. At 10pm her vital signs were checked and recorded as shown in the appendix. Patient went to bed around 10:10pm.

4.1.2 Second Day on Admission (10/11/22)

Continues assessment of the patient was done on the second day of admission. The vital signs were checked and recorded as:

Temperature	36.2^{o}C
Pulse rate	78 beat per minutes
Respiration	22 cycles per minutes
SPO_2	96

The following were also monitored

Blood pressure	108/68 millimetres of mercury
Fasting blood sugar	10.5 millimole per litter

On the second day of admission, she had an interrupted sleep. She had her bath and brushed her teeth. Patient breakfast which was Hausa Koko and a slice of bread (wheat bread) was served. The prescribed dose of tablet metformin 1g and tablet gliclazide 160mg was served and documented.

At 10:00am, her vital signs were checked and recorded as indicated in the appendix

At 10: 00am, patient complained of frequent urination. A nursing diagnosis Potential for fluid volume deficit (dehydration) related to polyuria was made. An object to help maintain patient's normal fluid volume throughout the period of hospitalization was set. Nursing interventions implemented included; Patient was served with fluid diet like mashed kenkey and about 2 liters of water to help prevent dehydration. Patient was observed for signs and symptoms of dehydration such as dry mouth, sunken eyes, and poor skin turgor and managed accordingly by administering intravenous fluid such as normal saline. Intravenous fluid prescribed for patient was monitored for number of drops per minute and the site was checked to prevent any

complication and fluid overload. The amount of both intravenous infusion and fluid taken in like water and amount of urine passed were recorded in the intake and output chart daily to check for balance or deficit. Patient's weight was checked regularly by using the weighing scale to determine an increase or loss in patient's weight.

At 10: 00am the problem identified was, patient had difficult in sleeping, a nursing diagnosis was, Disturbed sleep pattern related to frequent urination at night. In response to this problem, patient was reassured of competent nursing care. Quiet and well-ventilated environment was ensured. Dim light was provided and all nursing activities were performed simultaneously.

At 2:00pm, her vital signs were checked and recorded as indicated in the appendix. Patient was served with banku and groundnut soup as launch.

At 6:00pm, her vital signs were checked and recorded as:

Temperature	36.3^{o}C
Pulse rate	72 beat per minutes
Respiration	21 cycles per minutes
SPO_2	98

The following were also monitored

Blood pressure	111/70 millimetres of mercury
Random blood sugar	22.3 millimole per litter

With regards to her high sugar (RBS) level, 15 units of soluble insulin were administered and also tablet metformin 1g and tablet gliclazide 160mg was served and documented.

At 6:30 she took Ampesi and Light soup as supper. She had a warm bath and went back to rest on her comfortable bed. At 10pm, patient's vital signs checked and recorded as shown in the appendix. She was made comfortable to sleep.

4.1.3 Third Day on Admission (11/11/22)

The vital signs assessed on this day were as follows;

Temperature	36.6^{o}c
Pulse rate	72 beat per minute
Respiration	22 cycle per minute
SPO_2	97

The following were also monitored

Blood pressure	112/60 millimetres of mercury
Fasting blood sugar	9.0 millimole per litter

Patient drugs were served at 7:00am. Patient had her breakfast which was tom brown and a slice of bread. Prescribed dose of tablet metformin 1g and tablet gliclazide 160mg was served and documented. Patient bed was straightened and made comfortable for resting.

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

At 12:00pm, Problem identified was activity intolerance. A nursing diagnosis, Activity intolerance related to general body weakness. An object; patient will be able to perform some activities (bathing, oral care) within 48 hours. In response to this, patient was reassured of competent nursing care. Patient was assisted with self-care needs. Patient was taught how to perform passive exercise. Patient was encouraged to take nutritious diet to regain her energy. Patient level of weakness was assessed. Every procedure was explained to patient. Patients' relatives were allowed to ask doubtful questions.

At 2:00pm, her vital signs were checked and recorded as indicated in the appendix. Patient was served with rice and kontomire stew as launch.

At 5:30pm, patient had rice with light soup and fish for supper. At 6pm, her vital signs were checked and recorded as

Temperature	36.4^{o}c
Pulse rate	90 beat per minute
Respiration	20 cycle per minute

SPO_2 96

The following were also monitored

Blood pressure 111/68 millimetres of mercury

Random blood sugar 16.1 millimole per litter

With regards to the high sugar level (16.1mmol/L), 6units of insulin was given and the prescribed dose of tablet metformin 1g and tablet gliclazide 160mg was served and documented. At 10pm, patient's vital signs were checked and recorded as show in the appendix. She was made comfortable to sleep.

4.1.4 Fourth Day on Admission (12/11/22)

The patient vital signs on the fourth day were;

Temperature 36.2^{o}c

Pulse rate 78 beat per minute

Respiration 22 cycle per minute

SPO_2 97

The following were also monitored

Blood pressure 110/65 millimetres of mercury

Fasting Blood Sugar 10.2 millimole per litters

The patient ate wheat porridge and bread for breakfast. The prescribed dose of tablet metformin 1g and tablet gliclazide 160mg was served and documented.

At 10:00 am, patient's vital signs were checked and documented as shown in the appendix

At 10:00am, Patient assessment revealed, knowledge deficit related to lack of education on the disease condition. In response to this problem, patient and family were educated on the causes, complication and management of Diabetes mellitus. Patient was allowed to ask questions for clarification. Simple questions were asked to determine patient understanding level. They were also educated on and stressed on the need for follow up visits to the hospital.

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

Patient took Ampesi and garden eggs stew as lunch.

The patient during assessment was observed to have no problem. She was placed on observation and continuous treatment.

At 5:10pm patient took Fufu and Light soup for supper.

At 6pm, her vital signs were checked and recorded as shown in the appendix. Medications such as tablet metformin 1g and tablet gliclazide 160mg was served. At 10pm, patient's vital signs were checked and recorded as shown in the appendix. She was made comfortable to sleep. She slept around 10:20pm.

4.1.5 Fifth Day on Admission (13/11/22)

The vital signs on the fifth day were;

Temperature	36.4^{o}c
Pulse rate	61 beats per minute
Respiration	20 cycle per minute
SPO_2	97

The following were also monitored

Blood pressure	118/71 millimeters of mercury
Fasting Blood Sugar	6.6 millimole per litters

At 8:15am, During ward rounds, patient was reviewed and no new health complaints were raised by both patient and relative. She was declared fit for discharge due to massive improvement in her condition. Patient was scheduled for review on 21st November, 2022. She was to continue her medications in the house. I called her relatives to inform them of the discharge and they prepared to settle their bills.

At 10:00 am, Patient's vital signs were checked and documented as shown in the appendix.

All prescribed medications were administered and documented at 10:00am. Patient and relatives were educated on the importance of eating a well-balanced diet such as food from carbohydrate, protein and other sources of food nutrients. The need to eat these at the right amounts was as well explained. Patient was also educated on the medication she will be taking home and the need for enough rest. Patient and family were asked to come back to the hospital for review after discharge.

At 2:00 pm, Patient's vital signs were checked and documented as

Temperature	-	36.3°C
Pulse	-	81beats per minute.
Blood pressure	-	117/68 mmHg.
Respiration	-	20cycles per minute.
SPO_2	-	97percent
Random blood sugar		10.1 millimole per litters

Patient's relative was assisted to pack their items. Patient name, age, sex, and date of discharge were entered into the admission and discharge (A and D) book as well as the daily ward's state. Patient thanked the entire staff and said goodbye to other patients who were still on admission. I saw them off at the hospital main gate where they boarded a taxi to set off. I promised to visit them on 20th November, 2022 and I bide them goodbye.

4.2 Preparation of Patient and Family for Discharge and Rehabilitation.

The patient and family were prepared towards discharge and rehabilitation gradually, starting on the day of admission. All the necessary care was given for recovery. Patient and family were educated on the causes, clinical features and prevention of Diabetes mellitus.

They are told to make sure that patient gets enough rest and stressful situation must be avoided. They were also advised against the use of un-prescribed drugs and on patient's nutrition, they

were asked to provide patient with green leafy vegetables like Alefu, Agushie, Dawadawa, beans and fruits. They were also told not to allow patient to take sugar and food high in cholesterols e.g., fat and oil. Continuity of care was stressed on, right from the day of admission and the relatives were also made aware that this will help speed up recovery process for the patient. But they were also made to understand that patient's condition is not curable but can only be managed. The patient and relatives were to report any abnormality observed as quickly as possible at the hospital. Personal and environmental hygiene was also insisted during the education. The need for National Health Insurance Scheme was stressed on to patient.

4.3.0 Home Visits/Follow Up/Continuity of Care

Home visit is defined as providing the services to family at their door step to maintain the health and to reduce mortality and morbidity in family (Tuitui & Suwal, A Textbook of Community Health Nursing, 2017)

Follow-up visit is very important as far as patient's care is concerned. This is the part the nurse visits the patient and family in their home to acquire information about patient's social status and environmental health. A home visit is a family-nurse contact which allows the health worker to assess the home and family situation in other to provide the necessary nursing care and health-related activities (Tuitui & Suwal, A Textbook of Community Health Nursing, 2017)

4.3.1 First Home Visit (10/11/22)

The first home visit was made on Saturday, November 10, 2022, while the patient was still in the hospital. A prearranged trip was made from Bono Regional Hospital to the patient's home at Sunyani-Kuotokrom. The goal of this visit was to learn more about the patient's home and the surrounding area, confirm the information I had been given, and discover risk factors for her disease.

While she was still being admitted, I notified the patient and her daughter of my intention to go to their house. The patient agreed and I was accompanied by her daughter to their house. Around 2:04pm, we departed Bono Regional Hospital, and at 2:41pm, we deplaned at Sunyani-Kuotokrom. When I first arrived at the house, I took a brief look at the neighborhood and the gutter outside and thought they were both well kept. Her daughter welcomes me the other family members as I walk in, and I was then given seat. I therefore introduced myself to them and told them the purpose for my visit.

The patient leaves in a family house owned by her husband at Sunyani-Kuotokrom. The house is built with bricks cement and roofed with aluminum sheet. The house is divided into sections of which patient and her husband share one well-ventilated bedroom. Her daughter one bedroom and the rest of her sons also share one bedroom which they all share one big hall, a kitchen and a veranda. They have three washrooms with each having both bathroom and toilet. They have access to electricity and their source of drinking water is pipe borne which is in their house. Garbage is often gathered into a big bucket with a lid and emptied every day at the public pit.

Other members of the family at home were introduced to me. I later educate them to keep food items covered and avoid transmission of infections by houseflies and other insects. They were also educated on the need to keep their environment clean by sweeping every morning and disposing of refuse every morning and they should always sleep under mosquito net to prevent malaria. They were advised to keep things on their proper places and also the need to maintain personal hygiene to prevent spread of infection. They were allowed to ask questions and answers were provided to their satisfaction. I then informed them on the improved health status of Mrs. P. A, then asked permission to leave at 3:20pm.

4.3.2 Second Home Visit (20/11/22)

My second home visit was on 20th of November, 2022 at 1: 24pm. The aim was to find out how Mrs. P.A was fairing at home. I asked about her health and she responded positively with excitement and her relatives attested that she eats very well. Generally, I was pleased on everything I saw since they have adhered to the health education given to them about their environmental and personal hygiene as well as nutritious diet because I saw patient's daughter serving her a plate of plantain with kontomire stew and egg. I reminded them of the need to prevent her from stressful activities, avoid taking un-prescribed drugs and also do exercise she can tolerate.

I encouraged her on continuing with the medication and the diet regimen. Review of education was done and I recommended them for adhering to the health education given to them before discharged. The environment was clean and I emphasized on the need to avoid injuries. I thank them for their cooperation and promised them another visit then asked permission to leave at 2:30pm. I promised them a final visit and took my leave.

4.3.3 Review (21/11/ 2022)

Mrs. P.A accompanied by her daughter came to the Bono Regional Hospital for review in the morning, on their arrival, I went with patient's daughter to activate her name on the hospital system from the records. Upon my interaction with patient, I observed that her condition had really improved. Patient and her daughter were escorted to the consulting room. Upon assessment it was confirmed that the condition had improved. Her vital signs were checked and recorded as; Temperature: 36.4^{o}c, BP 120/76mmHg, Respiration:22cpm and the Pulse: 84bpm and random blood sugar 9.8mmo/l. Tablet Metformin 1g bd x 20 days, Tablet Gliclazide 160mg bd x 30 days, Tablet Ibuprofen 400mg tds x 5. I collected the drugs from the hospital pharmacy for them and then escorted them and bid them goodbye.

4.3.4 Third Home Visit (30/11/22)

My third home visit was on the 30 November, 2022. This was my intended last day of visiting them. I went with a community health nurse as I promised them for continuity of care. Patient was doing very well; she said there were no complains. I introduced the community health nurse to them to continue to give care to her. I pleaded with them to cooperate with her as they did with me and to call on her anytime the need arises. I inform them this was going to be my last time of visiting them. They thanked and promised to adhere to my advice. I thanked them also for their kindness and cooperation during my nursing care and bid them.

CHAPTER FIVE

EVALUATION OF CARE RENDERED TO PATIENT/FAMILY

5.0 Introduction

Evaluation is a critical appraisal or assessment; judgment of the value, worth, character or effectiveness of that which is been assessed in health care field. This includes; assessment of the patient's position on the health continuum, and of the effectiveness of patient's care activities in bringing about a change in the patient position (Weller B. F., 2018). This chapter examines the importance of the nursing care that was rendered to the patient and her family and also talks about the intervention rendered to the patient and her family and their response to the interventions.

5.1 Statement of Evaluation

In order to render a comprehensive and an accurate management to Mrs. P.A, a patient nursing care plan was formulated and objectives sets to be achieved within a specific period of time. Below are the objectives set and statement of the level of achievement of each objective.

5.1.1 Patient was relieved of pain (10/11/2022)

On the 9th November, 2022, patient complains that she was having mild pain (headache). An objective was set to enable the patient to relieve from pain within 24hours. Some of the nursing interventions include; patient and relatives were reassured of competent nursing care. Patient vital signs were checked and recorded. Patient was served with prescribed medication (Paracetamol 1g x daily). Goals were fully met as evidenced by nurse observing patient having a relaxed and cheerful facial expression and patient verbalizing the absence of pain.

5.1.2 Patient was protected from falling and getting injured (11//03/2022)

On the 9th November, patient complained of feeling dizzy which was leading her to falling. An objective was set to prevent the patient from falling and getting injured within 48 hours. Some nursing interventions were done which include; patient and relatives were reassured of competence nursing care, adequate bed rest was ensured to prevent falling, side rails of the patient bed were raised, the floor of the ward was kept dry to prevent the patient from falling. On the 11th November, 2022, goal was fully met as patient verbalizing that she does not feel dizzy anymore.

5.1.3 Patient fluid volume was restored to normal (13/11/22)

Mrs. P.A complained that she urinates frequently on the 10th November,2022. A nursing diagnosis of Potential for fluid volume deficit (dehydration) related to polyuria was made. An object to help Patient have normal fluid volume throughout the period of hospitalization were set. Nursing interventions implemented included; Patient was served with fluid diet like mashed kenkey and about 2 liters of water to help prevent dehydration. Patient was observed for signs and symptoms of dehydration such as dry mouth, sunken eyes, and poor skin turgor and managed accordingly by administering intravenous fluid such as normal saline. Intravenous fluid prescribed for patient was monitored for number of drops per minute and the site was checked to prevent any complication and fluid overload. The amount of both

intravenous infusion and fluid taken in like water and amount of urine passed were recorded in the intake and output chart daily to check for balance or deficit. Patient's weight was checked regularly by using the weighing scale to determine an increase or loss in patient's weight. On 13th November, 2022, evaluation was made and goal was fully met as patient had a good skin turgor, normal urine output and moist skin and mucus membranes and nurse recorded a blood pressure and pulse within normal range.

5.1.4 Patient regained her normal sleeping pattern (11/11/2022)

On the 10th November, 2022 at 10:00am Mrs. P.A complained of difficulty in sleeping. An objective was set for her to be relieved of the frequent urination to have a normal sleeping pattern within 24hours. The patient and relatives were reassured that the frequent urination will be decreased for her to regain her normal sleeping pattern, quiet and well-ventilated environment was provided. All nursing activities were performed simultaneously during sleep, dim light was provided. Goal was fully met on the 11th November,2022 at 8:00am, patient was observed sleeping calmly without interruption.

5.1.5 Patient was able to perform her daily activities (13/03/2022)

On the 11th November,2022, Mrs. P.A complained that she was not able to perform her daily self-care activities. An objective was set to make the patient perform her self-care activities within 48hours. Nursing interventions implemented were; patient was reassured of regaining her ability to carry out her own self-care activities unassisted, patient was encouraged to take nutritious diet to regain her energy, patient was taught on how to perform passive exercise. On 13th of November, 2022 goal was fully met as patient carried out her own daily activities unassisted.

5.1.6 Patient was relaxed and had knowledge about her disease condition (13/11/2022)

On the 12th November,2022, I noticed that the patient was anxious because she did not know the causes, complications, and preventive measures of the disease condition. An objective was

set to ensure that the patient and her family gain adequate knowledge about the causes, complications and preventive measures of her condition within 24 hours and ensure that the family become relaxed to allay anxiety. The following nursing intervention was carried out; patient and family were educated on the causes, complications and management of diabetes mellitus, patient and family were allowed to ask questions for clarification, patient was asked a simple question to determine her understanding level. On the 13th November, 2022, (10:00am), goals were fully met as patient and his family gained adequate knowledge to ask questions about diabetes and clarifies their doubts.

5.1.7 Day of Discharge 13/11/2022

The patient woke up at about 5:50am. She emptied her bowel, brushed her teeth and took her bath.

Vital Signs as at 6am were

Temperature	37.1°c
Pulse rate	61 beats per minute
Respiration	20 cycle per minute
SPO_2	98

The following were also monitored

Blood pressure	118/71 millimeters of mercury
Fasting Blood Sugar	6.6 millimole per litters

At 8:15am, During ward rounds, patient was reviewed and no new health complaints were raised by both patient and relative. She was declared fit for discharge due to massive improvement in her condition. Patient was scheduled for review on 21st November, 2022. She was to continue her medications in the house. I called her relatives to inform them of the discharge and they prepared to settle their bills.

At 2:00 pm, Patient's vital signs were checked and documented as

Temperature - 36.4°C

Pulse - 72 beats per minute.

Respiration - 20 cycles per minute.

SPO_2 - 97 percent

The following were also monitored

Blood pressure - 117/68 mmHg

Random blood sugar 10.1 millimole per litters

Patient's relative was assisted to pack their items. Patient name, age, sex, and date of discharge were entered into the admission and discharge (A and D) book as well as the daily ward's state. Patient thanked the entire staff and said goodbye to other patients who were still on admission. I saw them off at the hospital main gate where they boarded a taxi to set off. I promised to visit them on 20th November, 2022 and I bide them goodbye.

5.2 Amendment of Care

All the above goals set for Mrs P.A and family were fully met at the stipulated time as such there was no need for amendment of care.

5.3 Termination of Care

The termination of nurse-patient relationship for Mrs. P.A and family started on the 9th of November 2022, which was the day of admission and ended on the last day I went for home visit which was on the 30th November, 2022. It was gradually and factually carried out so that, the care given to them is temporal to avoid over reliance on the health care staff. During the first interaction, the patient and family were made to understand that the hospital was a temporal place meant for treatment and rehabilitation thus, patient was informed that as soon as her condition stabilizes, she would be discharged home.

During the last home visit to patient's home, it was observed that patient was active. The patient and family were encouraged and reminded of all instructions given to them. The

therapeutic relationship was called to an end without patient and family exhibiting emotional upset, they were all knew that our relationship will come to an end as soon as patient recovers.

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. Conclusion is something that you decide when you have thought about all the information connected with the situation (Weller B. , 2018).

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

6.1 Summary of Care Rendered to Patient and Family

Mrs. P.A a 52-year-old woman who was admitted to the Female medical ward of Bono Regional Hospital on November 9th, 2022 with the diagnosis diabetes mellitus. Nursing assessment was carried out and a number of health problems were identified and addressed in order of priority. The nursing process was employed to care for the patient who responded to treatment favourably and discharged home within one week of care without developing complications. Three follow up visits were made to the patient's home to assist with the continuity of care.

Patient care was finally terminated and handed over to a community health nurse for continuity of care. The patient and family were full of appreciation for the care rendered to them.

6.2 Conclusion/Recommendation

The care study has been a very interesting, educative and challenging experienced to me. It has broadened my knowledge on Diabetes Mellitus especially Type II. This study has enabled me to understand what is meant by total and comprehensive nursing care to an individual.

Also, it is my recommendation that all students should be given the opportunity to embark on the patient/family care study so as to implement the nursing process in order to render individualized comprehensive care to patients/families.

In conclusion, I recommend that all patients should be given individualized, holistic, comprehensive and competent nursing care to help decrease re-occurrences of diseases in our hospitals as well as reducing mortality rate in our various communities.

Lastly, the knowledge I have acquired will enable me to care for patients with Diabetes Mellitus and other diseases when the need arises in my duty especially as I will certified as a Registered Nurse.

APPENDIX

Table 7: Vital Signs Chart of Mrs. P.A

Date	Time	Temperature (^{O}C)	Blood Pressure(mmHg)	Pulse (bpm)	Respiration (cpm)	SPO_2 (%)
9/11/2022	8:30am	36.9	120/90	89	26	90
	10:30 am	36.4	120/86	86	22	92
	2:00pm	36.1	111/64	80	20	96
	6:00pm	36.3	112/65	81	22	97
	10:00pm	36.2	115/70	82	23	98
10/11/2022	6:00am	36.2	106/68	78	22	96
	10:00am	37.1	108/64	72	24	96
	2:00pm	36.4	112/68	69	22	97
	6:00pm	36.3	111/70	72	21	98
	10:00pm	36.6	113/69	71	20	97
11/11/2022	6:00am	36.5	112/60	72	22	97
	10:00am	37.2	115/70	78	21	98
	2:00pm	36.7	105/68	69	21	97
	6:00pm	36.4	111/68	78	20	97
	10:00pm	37.1	114/65	75	21	98
12/11/2022	6:20am	36.2	110/65	78	22	97
	10:00am	36.6	108/68	72	21	98
	2:00pm	37.2	115/62	72	21	96
	6:00pm	36.8	112/72	75	20	97
	10:00pm	37.1	116/62	69	21	98

13/11/2022	6:00am	36.4	118/71	61	20	98
	10:00am	36.8	115/65	65	21	97
	2:00pm	36.3	117/68	72	20	97

APPENDIX

Table 8: Random Blood Sugar Monitoring

DATE	TIME	INVESTIGATION	RESULT	NORMAL VALUE	INTERPRETATION	REMARKS
9/11/22	8:30am	Fasting blood sugar	31.2mmol/L	3.4-6.4mmol/L	Above normal range	10 units of soluble insulin subcutaneously and 10units of soluble insulin intravenously stat
	10:00am	Random blood sugar	12.2mmol/L	6.4-11.1mmol/L	Above normal range	Nothing was given
	2:00pm	Random blood sugar	11.3mmol/L	6.4-11.1mmol/L	Normal range	Nothing was given
	6:00pm	Random blood sugar	12.3mmol/L	6.4-11.1mmol/L	Above normal range	Tablet metformin 1g Tab Gliclazide 160mg
	10:00pm	Random blood sugar	11.0mmol/L	6.4-11.1mmol/L	Normal range	Nothing was given
10/11/22	6:00am	Fasting blood sugar	10.5mmol/L	3.4-6.4mmol/L	Above normal range	Tablet metformin 1g Tab Gliclazide 160mg
	2:00pm	Random blood sugar	11.5mmol/L	6.4-11.1mmol/L	Normal range	Nothing was given
	6:00pm	Random blood sugar	22.3mmol/L	6.4-11.1mmol/L	Above normal range	15units of insulin subcutaneously and Tablet metformin 1g Tab Gliclazide 160mg
	10:00pm	Random blood sugar	11.3mmol/L	Normal range	Nothing was given	Nothing was given

11/11/22	6:00am	Fasting blood sugar	9.0mmol/L	3.4-6.4mmol/L	Above normal range	Tablet metformin 1g Tab Gliclazide 160mg
	2:00pm	Random blood sugar	11.0mmol/L	6.4-11.1mmol/L	Normal range	Nothing was given
	6:00pm	Random blood sugar	16.1mmol/L	6.4-11.1mmol/L	Above normal range	6 units of insulin subcutaneously Tablet metformin 1g Tab Gliclazide 160mg
	10:00pm	Random blood sugar	10.4mmol/L	6.4-11.1mmol/L	Normal range	Nothing was given
12/11/22	6:00am	Fasting blood sugar	10.2mmol/L	3.4-6.4mmol/L	Normal range	Tablet metformin 1g Tab Gliclazide 160mg
	2:00pm	Random blood sugar	10.2mmol/L	6.4-11.1mmol/L	Normal range	Nothing was given
	6:00pm	Random blood sugar	11.2mmol/L	6.4-11.1mmol/L	Normal range	Tablet metformin 1g Tab Gliclazide 160mg
	10:00pm	Random blood sugar	10.2mmol/L	6.4-11.1mmol/L	Normal range	Nothing was given
13/11/22	6:00am	Fasting blood sugar	6.6mmol/L	3.4-6.4mmol/L	Normal range	Tablet metformin 1g Tab Gliclazide 160mg
	2:00pm	Random blood sugar	10.1mmol/L	6.4-11.1mmol/L	Normal range	Nothing was given

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