A TECHNICAL REPORT ON

STUDENTS' INDUSTRIAL WORK EXPERIENCE SCHE ME (SIWES)

CONDUCTED AT:

UNIVERSITY OF ILORIN TEACHIN G HOSPITAL (UITH)

OLD JEBBA ROAD, OKE-OSE, ILORIN, KWARA STATE

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SUBMITTED TO:

DEPARTMENT OF NUTRITION & DIETETICS
INSTITUTE OF APPLIED SCIENCE,
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IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF NATIONA L DIPLOMA (ND) IN NUTRITION AND DIETETICS

DEDICATION

The report of this Students Industrial Work Experience Scheme (SIWES) is d edicated to God almighty, the lord of the universe for his grace and mercy towards the completion of the SIWES programme.

I also dedicate this report to my parents; **MR & MRS. YEKINI** for their moral, Spiritual and financial supports.

ACKNOWLEDGEMENT

All adorations unto the Almighty God for the preservation of my soul and for the great things He has done in my life from childhood till this moment.

I'm grateful to my parents; **Mr. and Mrs. YEKINI** for their love, care, encoura gement and financial supports. May the good Lord keep them alive to witness the successful completion of my programme.

My special thanks to the Department and the entire staff of Nutrition & Diet etics of Kwara State Polytechnic for providing an enabling environment for knowle dge to thrive.

Of importance, I deeply appreciate **UITH** SIWES Supervisor for the ultimate guidance, teaching, motivation provided towards the successful completion of the SIWES. The gratitude is duly extended to entire Staff of the Organization for their i mmense contribution.

REPORT OVERVIEW

This is a technical report for the Students' Industrial Work Experience (SIWES) programme conducted at ***UNIVERSITY OF ILORIN TEACHING HOSPITAL*** *located at* ***OLD JEBBA ROAD, OKE-OSE, ILORIN, KWARA STATE*** *within the period of Four months. The report comprises the background of SIWES, the description of the organization, its aims and objectives, the experiences gained as an industrial training student and the summary, conclusions and recommendations. It has a total of 5 chapters with sub-chapters. It also includes pages, such as the title page, report overview and table of contents, Summary of activities carried out, Problems encountered and recommendations on the improvement of scheme.*

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CHAPTER ONE

1.0 INTRODUCTION TO SIWES

The Student Industrial Work Experience Scheme (SIWES) is an accepted skills program which forms part of the approved academic standards in the degree program for Nigerian Universities. In 1974, the Federal Government of Nigeria introduced the national policy on Industrial training, called the Students, Industrial Work Experience Scheme (SIWES). This program is under the umbrella of the Ministry of Education through the Industrial Training Fund (ITF), it was designed to help students acquire the necessary practical education/ experience in their fields of study and other related professions.

This is an effort which was created in order to bridge the existing gap between the theory taught in the classroom and practice of science, agriculture, medicine, engineering, technology and other professional program in the Nigerian tertiary institutions. This program is aimed at exposing the students to the use of various machines, equipments, and professional work methods and ways of safeguarding the work areas in industries as well as other organizations and parastatals. The program was established basically to impact elaborate practical understanding to students with respect to their various disciplines. It is also intended that the student through a process of relation to academic knowledge and practical industrial application would understand the underlying principles and become better focused and acquire the practical applications towards excellence in his or her discipline.

The Students Industrial Work Experience Scheme (SIWES) program involves the student, the Universities and the industries. This training is funded by the Federal Government of Nigeria and jointly coordinated by the Industrial Training Fund (ITF) and the National Universities Commission (NUC).

1.1 INTRODUCTION TO UNIVERSITY OF ILORIN TEACHING HOSPITAL (UITH)

The University of Ilorin Teaching Hospital (UITH) is a premier tertiary healthcare institution located in Ilorin, Kwara State, Nigeria. Established in 1980, UITH is affiliated with the University of Ilorin and serves as a teaching hospital for the university's College of Health Sciences. The hospital provides a wide range of medical services, including preventive, curative, and rehabilitative care to patients from all over Nigeria and beyond.

Services and Facilities

UITH offers various medical services, including:

- General and specialized outpatient services
- Inpatient services
- Emergency services
- Surgical services
- Diagnostic imaging and laboratory services
- Pharmaceutical services The hospital is equipped with modern facilities, including operating theaters, intensive care units, and diagnostic equipment such as MRI and CT scanner

Plate 1: Picture of university of Ilorin teaching hospitals, oke ose (UITH)

1.2 It has several departments, which are:

1. Accident and emergency
2. Anaesthesia
3. Behavioural Sciences
4. Chemical Pathology & Immunology
5. Ear, Nose &Throat
6. Epid &Community Health
7. Family Medicine
8. Health Information Management
9. Haematology &Blood Transfusion
10. Internal Medicine
11. Microbiology &Parasitology
12. Morbid Anatomy & Pathology
13. Medical Social Services
14. Nursing Services
15. Obstetrics & Gynaecology
16. Ophthalmology

17. Pharmacy
18. Paediatrics & Child Health
19. Physiotherapy
20. Radiology
21. Surgery
22. Nutrition & Dietetics

1.3 OBJECTIVES OF THE PROGRAM TO STUDENTS

- Provides avenues for students to acquire industrial skills and experience during their course of study.
- Prepare students for industrial work situations they are likely to meet after graduation.
- Expose students to work methods and techniques in handling equipment and machineries that may not be available in the university.
- Provide student with the opportunity to apply their educational knowledge in real work situations, thereby bridging the gap between theory and practice.
- To make the transition from the schooling to world of work easier through enhancing students contact for later job placement.

1.4. OBJECTIVES OF THE DIETETICS DEPARTMENT AT UITH

- Educating patients about healthy eating habits.
- Monitoring and assessing patients' nutritional needs.
- Collaborating with medical teams to support patient recovery.
- Conducting research on nutrition and its impact on health.
- Developing and implementing dietary policies and guidelines.
- Providing nutritional counseling and support for patients and their families

CHAPTER TWO

2.0 HISTORICAL BACKGROUND OF SIWES

The Students' Industrial Work Experience scheme (SIWES) was initiated in 1973 by the industrial Training Fund (ITF). This is in response to the mandate given to the ITF, through Decree 47 of 1971, charging it with the responsibility of promoting and encouraging the acquisition of skills in industry and commerce with the view to generating a pool of trained indigenous manpower sufficient to meet the needs of the economy.

Students Industrial Work Experience Scheme (SIWES) was established by Industrial Training Fund (ITF) to solve the problem of lack of adequate practical skills preparatory for employment in industries by Nigeria graduates of tertiary institutions. This program promotes the theoretical education, laboratory and even the workshop practice engaged in by students in tertiary institution. It is an effort to bridge the gap existing between theory and practical of engineering, technology, science, agriculture, management and other professional educational programs in the Nigerian tertiary institution. It is a part of government's plan to improve the skill of students in the higher institution of learning thereby exposing students to machines and equipment, professional work methods and ways

of safe guarding the work area and workers in the industries and other organization.
The scheme exposes students to industry based skills necessary for a smooth transition from the classroom to the world of work. It affords students of tertiary institution the opportunity of being familiar and exposed to the needed experience in handling machines and equipment which are usually not available in the educational institution.
Participation in SIWES has become a necessary pre-condition for the award of Diploma and Degree certificates in specific disciplines in most institutions of higher learning in the country, in accordance with the education policy of government.
The program is operated by Industrial Training Fund (ITF), the coordinating agencies are NUC, NCCE, NBTE, employers of labour and the institution funded by the federal government of Nigeria. The beneficiaries are undergraduate students of the following; Agriculture, Engineering, Technology, Environmental, Science, Education, Medical Science and Pure and Applied Sciences. Duration for polytechnics and colleges of education is four (4) months and six (6) months for the universities.
The Governing Council of the Board
A Governing Council of thirteen members drawn from the public and private sectors will be appointed by the Federal Government to manage the Fund. This is to reflect the co-operative spirit of the enterprise, the need for private employers, organized labour, and the providers and users of training to co-operate in identifying training needs and devising training policy and system.
As part of its responsibilities, the ITF provides Direct Training, Vocational and Apprentice Training, Research and Consultancy Service, Reimbursement of up to 50% Levy paid by employers of labour registered with it, and administers the Students Industrial Work Experience Scheme (SIWES). It also provides human resource development information and training technology service to industry and commerce to enhance their manpower capacity and in-house training delivery effort.
The main thrust of ITF programmes and services is to stimulate human performance, improve productivity, and induce value-added production in industry and commerce. Through its SIWES and Vocational and Apprentice Training Programmes, the Fund also builds capacity for graduates and youth self-employment, in the context of Small Scale Industrialization, in the economy.
The Industrial Training Fund is a grade ‘A’ Parastatal operating under the aegis of the Federal Ministry of Industry, Trade and Investment. It has been operating for 46 years as a specialist agency that promotes and encourages the acquisition of industrial and commercial skills required for national economic development.

Vision Statement

To be the foremost Skills Training Development Organization in Nigeria and one of the best in the world.

Mission Statement

To set and regulate standards and offer direct training intervention in industrial and commercial skills training and development, using a corps of highly competent professional

staff, modern techniques and technology.

2.0 HISTORICAL BACKGROUND OF UNIVERSITY OF ILORIN TEACHING HOSPITAL

The University of Ilorin Teaching Hospital (UITH) belongs to the second generation of Teaching Hospitals which were established by law on the 2nd May 1980. It took off in July1980 and started operation using as its temporary site, the then General Hospital and Maternity Hospital Ilorin which were owned by the Kwara State Government.
The permanent site of the hospital was declared opened by His Excellency, President of the Federal Republic of Nigeria,Chief Olusegun Obasanjo in May 2007 while complete movement took place in April 2010.
University of Ilorin Teaching Hospital provides general medicine, surgery, gynecology treatment, pediatrics care, orthopedics, dietetics, eye care, dental care and other clinical services.

VISION STATEMENT
To transform University of llorin Teaching Hospital to the hub quality and standard healthcare service delivery in Africa
MISSION STATEMENT
This is to be attained through provision of quality and standard healthcare delivery that is second to none in Africa by the year 2019, and one of the global healthcare service institutions by the year 2021

Special facilities

- VIP Ward

It is a ward with, exclusive and luxuriously furnished private rooms with dedicated facilities, staff and unique procedures.

- Amenity ward within the VIP Ward

For the comfort of the higher middle income clients requiring in-patient care during pregnancy

- Family Executive Care Unit (FECU)

This is Retainership facility for family & corporate organizations.

- Intensive Care Unit (ICU)

It is a specialized hospital facility where critically ill-patients are treated. The UITH ICU has ventilators, constant Oxygen, monitors and specially trained team of ICU experts.

- Accident & Emergency Unit (A&E)

It is the most strategically located Emergency Unit between ABUTH, Zaria and UCH, Ibadan i.e. the North & the South. It offers a wide range of medical and surgical interventions.

- Emergency Paediatric Unit (EPU)
- Renal Care Centre: It is equipped with 3 dialysis machines and possessing one of the latest technologies in Haemodialysis.
- Cardia Pulmonary Assessment Unit

Equipped with Echocardiography, treadmill, ECG and spirometry.

- Fetal Monitoring Unit

Based in the labour and delivery Unit and fitted with Ultra sound machine and cardiotocograph which allows for foetal assessment in pregnancy.

- Neonatal Intensive Care Unit (NICU)

It is a level Iib type of NICU and it operates on the basis of appropriate technology. UITH NICU has pioneered many innovative equipment in the care of the newborn. Pre-term babies from 700 grams are conveniently managed in this unit.

- Establishment of Fertility Centre (IVF)

The Unit is establishment with the Primary aim of providing succor to couple having challenges with conception. The Unit will provide services such as intrauterine, Invitro fertilization (IVF) intracytoplamic soerin hyection (ICSI) cryopreservation of semen, cryopreservation of Embryo, semen analysis, Laparascopic surgery and Endocrinological Analysis, amongst others.

- Trauma centre

A philanthropist and legal luminary, Mallam Yusuf Alli recently donated a Trauma centre to the hospital.

The centre which is a 10 bedded Trauma centre equipped with (2) two ventilators and individual patient Monitors, was Commissioned on September 21st, 2012 and it became operational on November 4th, 2012. The centre has been well utilized for critical Trauma and Neo surgical cases.

DIETETICS UNIT

The department of nutrition and dietetics is responsible for ensuring dietary management of patient and rendering of voluntary counselling on roles of nutrition to the wellbeing of individual. The department covers the kitchen section of the hospital and procurement of food and non food materials used in the kitchen. Also, the department works with other department such as: , Paediatrics ward, Male surgical ward, Female Surgical ward,Surgical Out Patients , Medical Out Patients , Orthopaedics, Antenatal Care .

The clinic days in the dietetics department are Monday Tuesdays, Wednesdays Thursday and Fridays, the preparation of different kind of therapeutic diet such as gluten free diet , low fat diet , low sodium diet ,diabetes diet ,renal diet are prepared for the in-patient

ORGANOGRAM OF UITH

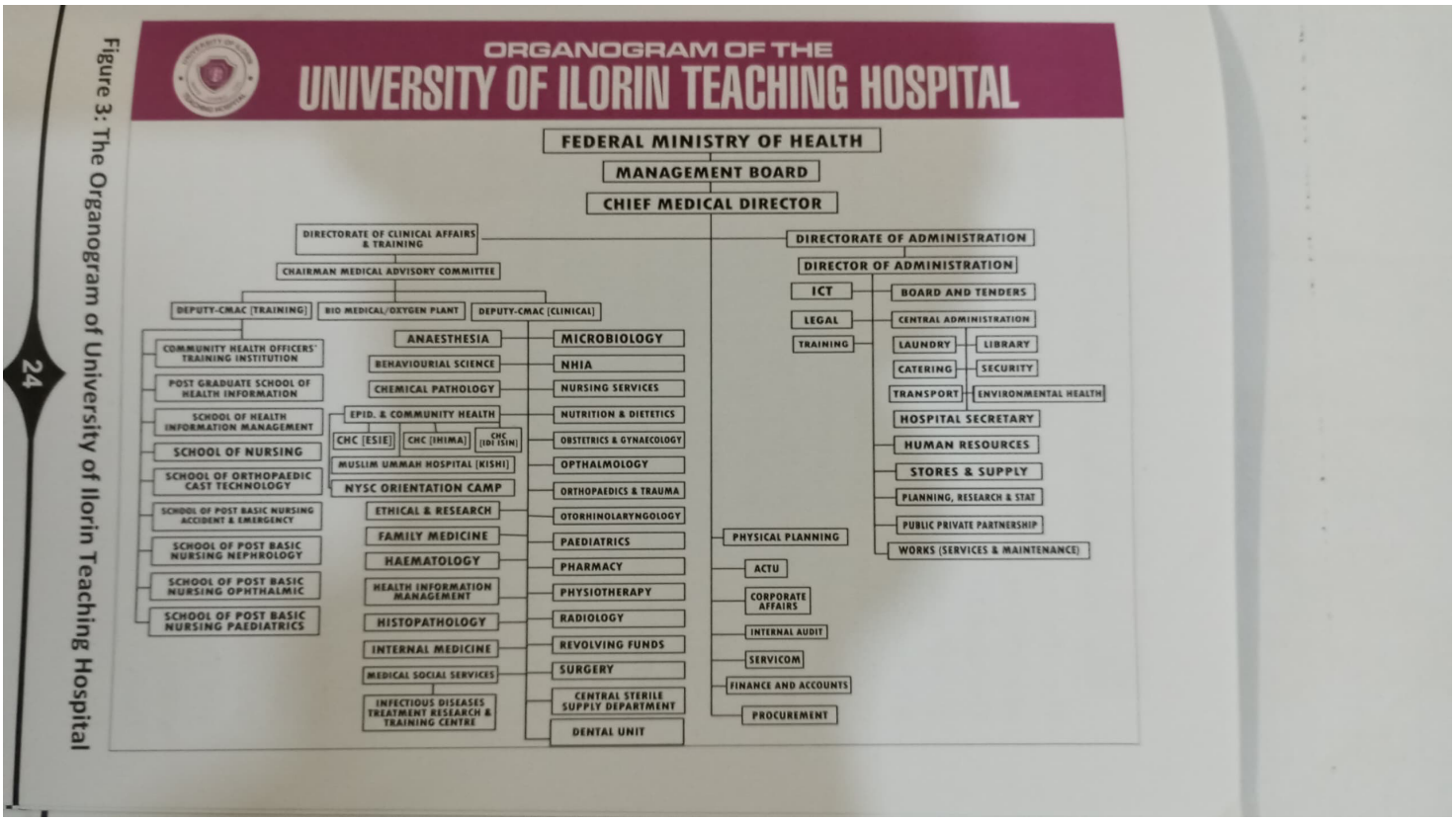

Figure 3: The Organogram of University of Ilorin Teaching Hospital

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ACTIVITIES CARRIED OUT AT UITH university of Ilorin teaching hospital,

I worked at the dietetics department by going on ward rounds with the Dietitian to see patients and also giving health talks at different departments. A brief orientation was done by the head of the department and introduction to every member of the department

I assumed work and I was shown various kitchen equipment by the kitchen staff .

I assisted the kitchens staff in the preparation of fortified pap for patient with severe acute malnutrition.

2 KITCHEN UNIT

Kitchen is a unit under the department of nutrition and food service establishment in the hospital. It is a place where different variety of meals are prepared and served to the patients in the hospital.

The kitchen has various room;

- The store where wet and dry ingredients are kept
- The store where cooking utensils are kept
- The kitchen where cooking and preparations of meals are made

2.1 EQUIPMENTS USED IN THE KITCHEN

- Gas cooker
- Spoons and other cutleries
- Pot
- Warmers/ coolers
- Refrigerators
- Chopping boards
- Plates
- Bowls
- Turning sticks

2.3 PREPARATION OF FORTIFIED PAP

Fortified pap is usually used for malnourished children to correct deficiencies; it is nutrient dense and rich in fat, proteins and micronutrients. Fortified pap is given 2 hourly to the malnourished child.

INGREDIENTS USED FOR PREPARING FORTIFIED PAP

- Soya beans paste (200g)
- Palm oil (1 tablespoon)
- vegetable oil (1 tablespoon)
- Guinea corn paste (300g)
- Sugar 2 table spoon (30g)
- water 750ml
- fish paste (45g)

PROCEDURE

1. In a clean pot, add one and a half cup of water and boil
2. In the boiled water, add soya beans paste and stir consistently till lumps disappear and cook for 10 minutes
3. In a clean bowl add guinea corn paste and mix with a little water , set the mix Guinea corn aside
4. In the boiling soya beans, add 1 tablespoons of palm oil and 1 tablespoons of vegetable oil, stir and allow to cook for another 5 minutes
5. Add the mix guinea corn and stir consistently to avoid lumps formation
6. Add fish paste and stir consistently

7. Add sugar continue stirring
8. If thick add water to attain a lighter pap, after 5 minutes the fortified pap is ready and can be served to the patient.

STUDENT MAKING FORTIFIED PAP

1.1 INSTRUMENTS/MATERIALS USED IN THE DIETETICS DEPARTMENT

STANDIOMETER: It is an instrument used for measuring the height and weight. The calibration is on 0.5.Before measuring the height; the upper part must be pulled up before the latter are pulled to ensure the right readings.

After taking the weight and the height the BMI will be calculated in weight (Kg)/ height^2 (m^2)

A STADIOMETER | HIEGHT MEASURING METER

Table 1: BMI range and categories

BMI (Kg/m^2)	CATEGORY
< 18.5	Underweight
18.5 - 24.9	Normal
25.0 - 29.9	Overweight
30.0 - 34.9	Grade (I) Obesity
35.0 - 39.9	Grade (II) obesity
> 40	Morbid Obesity

SPHYGMOMANOMETER: This is an instrument used to measure/determine the blood pressure of an individual.
3. MUAC Tape: It is used for taking the mid upper arm circumference of children less than 5years old.
4. Measuring tape: It is used in taking waist circumference (WC), hip circumference (HC). For children(less than 5 years old), it is used in taking head circumference (HC), chest circumference (CC), and length.
5. Diet sheets: It contains a list of food items and dietary lifestyle modified based on the patient's condition and the dietary goal the nutritionist/dietitian wants to achieve to improve the nutrition status of the patient(s). It is written in both Yoruba and English language for patients preference
6. SOAPI Sheet: It is a sheet that contains information about the patient.
7. Referral note: This is a note issued by Doctors to Dietitians indicating patient's disease condition (both in- patients or out-patients referral)
8. Follow-up note: This is issued by the Dietitian, and to be brought to the unit by the patient on next appointment. It is written with the diet sheet. It contains the date of next appointment.
9. Receipt: This is an indication that patient has paid and can be attended to in the unit. Patient will be given a tag from the unit indicating the amount to be paid(500naira). Payment is made at the accounting unit and 2 receipts are issued to the patient which one will be returned to the unit.
10. The pulse rate: This refers to the number of time the hearts beats per minute.
How to read;
• Try to locate the radial artery at the wrist
• Place your first finger or your thumb on the patient wrist
• Start the stop watch
• Begin to count per seconds.

• The count per seconds is the number of time the heart beats per minute.

11. Daily Kilocalorie: This is decided based on the following:

• A patient's body mass index (BMI)

• The diagnosis of a patient

• Basal metabolic rate i.e. energy expenditure when at rest

• Activity level i.e. sedentary, semi-active, Active

• Daily Kcal = Activity level x Ideal body weight

12. Daily fluid requirement: normal fluid requirement is 4 litres per day but during dry season, the body needs more fluid to avoid dehydration, so therefore; 5 litres per day, except in cases of water retention; fluid output + 1.5L

PLATE 10: SPHYGMOMANOMETER

PLATE 11: SETHOSCOPE

2 MALNUTRITION

Severe acute malnutrition is defined by a very low weight for height (below -3z scores of the median WHO growth standards), by visible severe wasting, or by the presence of nutritional oedema. Decreasing child mortality and improving maternal health depend heavily on reducing malnutrition, which is responsible, directly or indirectly, for 35% of deaths among children under five.

Protein-energy malnutrition

Undernutrition is sometimes used as a synonym of protein–energy malnutrition (PEM). While other include both micronutrient deficiencies and protein energy malnutrition in its definition. It differs from calorie restriction in that calorie restriction may not result in negative health effects. The term hypo alimentation means underfeeding.

The term "severe malnutrition" or "severe under nutrition" is often used to refer specifically to PEM. PEM is often associated with micronutrient deficiency. Two forms of PEM are kwashiorkor and marasmus, and they commonly coexist.

Kwashiorkor

Kwashiorkor is mainly caused by inadequate protein intake. The main symptoms are edema, wasting, liver enlargement, hypoalbuminaemia, steatosis, and possibly depigmentation of skin and hair. Kwashiorkor is further identified by swelling of the belly, which is deceiving of

actual nutritional status. The term means ‘displaced child’ and is derived from a Ghana language of West Africa, means "the sickness the older one gets when the next baby is born," as this is when the older child is deprived of breast feeding and weaned to a diet composed largely of carbohydrates.

Marasmus

Marasmus (‘to waste away’) is caused by an inadequate intake of protein and energy. The main symptoms are severe wasting, leaving little or no edema, minimal subcutaneous fat, severe muscle wasting, and abnormal serum albumin levels. Marasmus can result from a sustained diet of inadequate energy and protein, and the metabolism adapts to prolong survival. It is traditionally seen in famine, significant food restriction, or more severe cases of anorexia. Conditions are characterized by extreme wasting of the muscles and a gaunt expression.

4.3.3 INDICATORS OF MALNUTRITION

Stunting, wasting, overweight and underweight

The indicators stunting, wasting, overweight and underweight are used to measure nutritional imbalance; such imbalance results in either undernutrition (assessed from stunting, wasting and underweight) or overweight. Child growth is internationally recognized as an important indicator of nutritional status and health in populations.

The percentage of children with a low height-for-age (stunting) reflects the cumulative effects of undernutrition and infections since birth, and even before birth. This measure can therefore be interpreted as an indication of poor environmental conditions or long-term restriction of a child's growth potential. The percentage of children who have low weight-for-age (underweight) can reflect wasting (i.e. low weight-for-height), indicating acute weight loss or stunting, or both. Thus, underweight is a composite indicator that may be difficult to interpret.

Wasting is the most immediate, visible and life-threatening form of malnutrition. It results from the failure to prevent malnutrition among the most vulnerable children.

Children with wasting are too thin and their immune systems are weak, leaving them vulnerable to developmental delays, disease and death. Some children affected by wasting also suffer from nutritional oedema, characterized by a swollen face, feet and limbs.

Wasting and other forms of acute malnutrition are the result of maternal malnutrition, low birth weight, poor feeding and care practices, and infection exacerbated by food insecurity, limited access to safe drinking water, and poverty. Growing evidence suggests that wasting occurs very early in life and disproportionally affects children under 2 years of age.

These indicators are defined as follows:

• stunting - height-for-age <-2 SD of the WHO Child growth standards median;

• wasting - weight-for-height <-2 SD of the WHO Child growth standards median; and

• overweight - weight-for-height >+2 SD of the WHO Child growth standards median.;

• underweight - weight-for-age <-2 standard deviations (SD) of the WHO Child growth standards median;

What are the consequences and implications?

Stunting- Children who suffer from growth retardation as a result of poor diets or recurrent infections tend to be at greater risk for illness and death. Stunting is the result of long-term nutritional deprivation, and often results in delayed mental development, poor school performance and reduced intellectual capacity. In turn, this affects economic productivity at the national level. Women of short stature are at greater risk for obstetric complications because of a smaller pelvis. Also, small women are at greater risk of delivering an infant with low birth weight, contributing to the intergenerational cycle of malnutrition, because infants of low birth weight or retarded intrauterine growth tend be smaller as adults.
Wasting- Wasting in children is a symptom of acute under-nutrition, usually as a consequence of insufficient food intake or a high incidence of infectious diseases, especially diarrhoea. In turn, wasting impairs the functioning of the immune system and can lead to increased severity and duration of, and susceptibility to, infectious diseases, and an increased risk of death.
Overweight- Childhood obesity is associated with a higher probability of obesity in adulthood, which can lead to a variety of disabilities and diseases, such as diabetes and cardiovascular diseases. The risks for most non-communicable diseases (NCDs) resulting from obesity depend partly on the age at onset and the duration of obesity. Obese children and adolescents are likely to suffer from both short-term and long-term health consequences, the most significant being:
• cardiovascular diseases, mainly heart disease and stroke
• diabetes
• musculoskeletal disorders, especially osteoarthritis and
• cancers of the endometrium, breast and colon.
Underweight - Weight is easy to measure; hence, this is the indicator for which most data have been collected in the past. The mortality risk is increased in children who are even mildly underweight, and the risk is even greater in severely underweight children.

Table 3: Cut-off values for public health significance

INDICATOR	Prevalence cut - off values for public health significance
Stunting	<2.5%: very low 2.5 to <10%: low 10 to <20%: medium 20 to <30%: high ≥30%: very high
Wasting	<2.5%: very low 2.5 to <5%: low 5 to <10%: medium

	10 to <15%: high ≥15%: very high
Overweight	<2.5%: very low 2.5 to <5%: low 5 to <10%: medium 10 to <15%: high ≥15%: very high

Weight for age is > -3 Z-score

Underweight

Micronutrient Deficiency

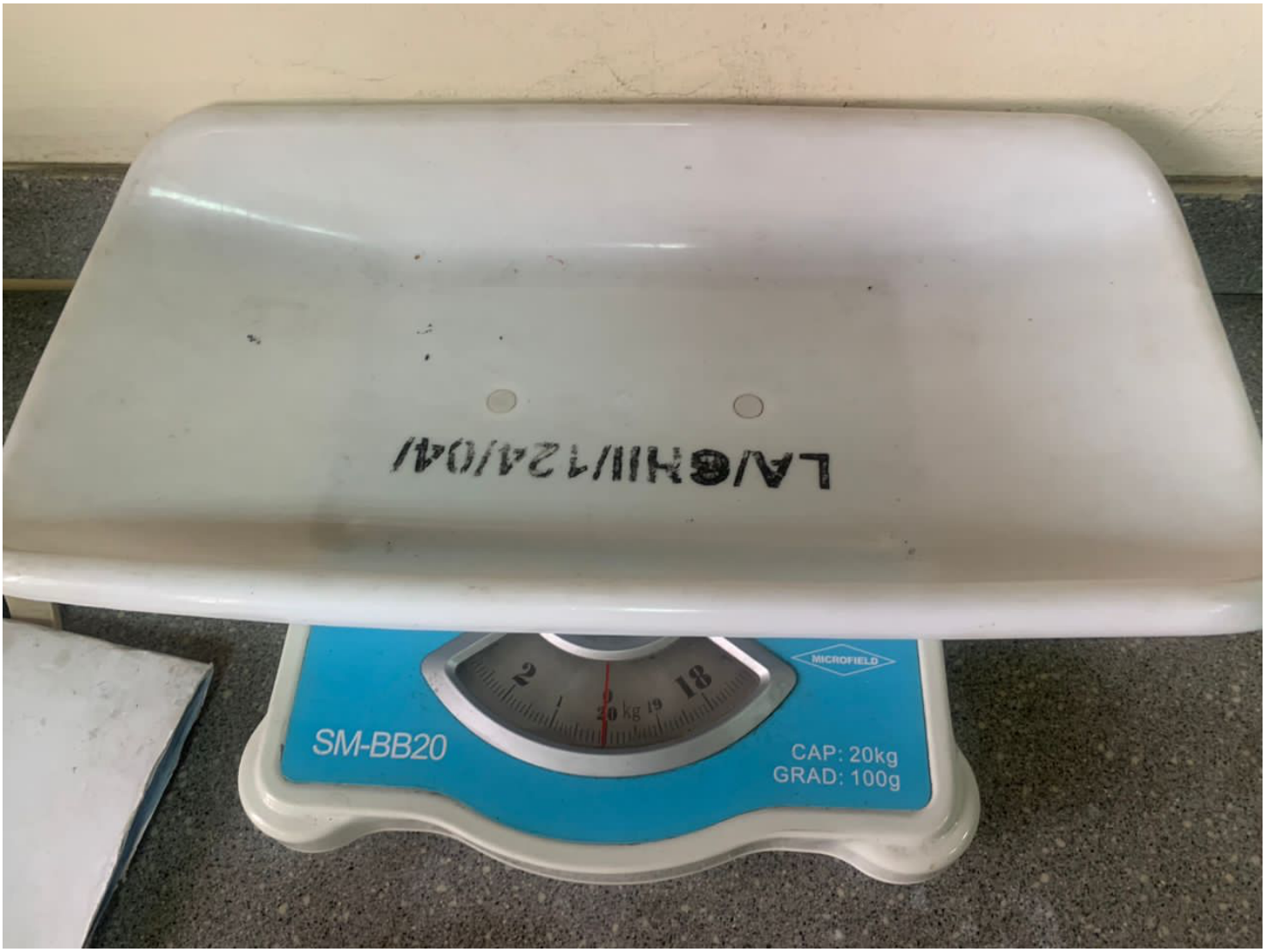
PLAN

Modified diet for severe acute malnutrition

Two hourly feeding of fortified gruel

Increase protein of high biological value (HBV)

Increase dietary sources of macro and micronutrient.



Weighing scale

PLATE 15: MUAC TAPE

DIABETES MELLITUS

Diabetes is a chronic, metabolic disease characterized by elevated levels of blood glucose (or blood sugar), which leads over time to serious damage to the heart, blood vessels, eyes, kidneys and nerves. The most common is type 2 diabetes, usually in adults, which occurs when the body becomes resistant to insulin or doesn't make enough insulin. Type 1 diabetes, once known as juvenile diabetes or insulin-dependent diabetes, is a chronic condition in which the pancreas produces little or no insulin by itself.

4.4.2 TYPES OF DIABETES

The most common types of diabetes are type 1, type 2, and gestational diabetes.

Type 1 diabetes: In type 1 diabetes, the body does not produce insulin. The immune system attacks and destroys the cells in the pancreas that make insulin. Type 1 diabetes is usually diagnosed in children and young adults, although it can appear at any age. People with type 1 diabetes need to take insulin every day to stay alive.

Type 2 diabetes: In type 2 diabetes, the body does not produce or use insulin well. Type 2

diabetes at any age, even during childhood. However, this type of diabetes occurs most often in middle-aged and older people. Type 2 is the most common type of diabetes.

4.4.3 SYMPTOMS OF DIABETES

1. Unintended weight loss
2. Polydipsa (increased urination)
3. Polydipsia (increased hunger)
4. Blurred vision
5. Headache
6. Fatigue
7. Slow healing of cuts.

4.4.4 HEALTH PROBLEMS OF UNCONTROLLED DIABETES

Over time, high blood glucose leads to problems such as:

- heart disease
- stroke
- kidney disease
- eye problems
- dental disease
- nerve damage
- foot ulcer

4.5.1 GESTATIONAL DIABETES

Gestational diabetes mellitus (GDM) is a condition in which a hormone made by the placenta prevents the body from using insulin effectively. Glucose builds up in the blood instead of being absorbed by the cells.

Unlike type 1 diabetes, gestational diabetes is not caused by a lack of insulin, but by other hormones produced during pregnancy that can make insulin less effective, a condition referred to as insulin resistance. Gestational diabetic symptoms disappear following delivery.

4.5.2 CAUSES OF GESTATIONAL DIABETES

Although the cause of GDM is not known, there are some theories as to why the condition occurs.

The placenta supplies a growing foetus with nutrients and water, and also produces a variety of hormones to maintain the pregnancy. Some of these hormones (estrogen, cortisol, and human placental lactogen) can have a blocking effect on insulin. This is called contra-insulin effect, which usually begins about 20 to 24 weeks into the pregnancy.

As the placenta grows, more of these hormones are produced, and the risk of insulin resistance becomes greater. Normally, the pancreas is able to make additional insulin to overcome insulin resistance, but when the production of insulin is not enough to overcome the effect of the placental hormones, gestational diabetes results.

4.5.3 RISK FACTORS OF GESTATIONAL DIABTETES

1. Overweight

2. Family history of diabetes
3. Pre-diabetes also known as impaired glucose tolerance.

4.5.4 TREATMENT OF GESTATIONAL DIABETES

Specific treatment for gestational diabetes will be determined by your doctor based on:
• age, overall health, and medical history
• Extent of the disease
• tolerance for specific medications, procedures, or therapies
• Expectations for the course of the disease
• opinion or preference.
Treatment for gestational diabetes focuses on keeping blood glucose levels in the normal range. Treatment may include:
• Special diet
• Exercise
• Daily blood glucose monitoring
• Insulin injections
• Possible complications for the baby

Unlike type 1 diabetes, gestational diabetes generally occurs too late to cause birth defects. Birth defects usually originate sometime during the first trimester (before the 13th week) of pregnancy. The insulin resistance from the contra-insulin hormones produced by the placenta does not usually occur until approximately the 24th week. Women with gestational diabetes mellitus generally have normal blood sugar levels during the critical first trimester. The complications of GDM are usually manageable and preventable. The key to prevention is careful control of blood sugar levels just as soon as the diagnosis of diabetes is made. Infants of mothers with gestational diabetes are vulnerable to several chemical imbalances, such as low serum calcium and low serum magnesium levels, but, in general, there are two major problems of gestational diabetes: macrosomia and hypoglycaemia:
Macrosomia: Macrosomia refers to a baby who is considerably larger than normal. All of the nutrients the foetus receives come directly from the mother's blood. If the maternal blood has too much glucose, the pancreas of the foetus senses the high glucose levels and produces more insulin in an attempt to use this glucose. The foetus converts the extra glucose to fat. Even when the mother has gestational diabetes, the foetus is able to produce all the insulin it needs. The combination of high blood glucose levels from the mother and high insulin levels in the foetus results in large deposits of fat which causes the foetus to grow excessively large.
Hypoglycaemia: Hypoglycaemia refers to low blood sugar in the baby immediately after delivery. This problem occurs if the mother's blood sugar levels have been consistently high, causing the foetus to have a high level of insulin in its circulation. After delivery, the baby continues to have a high insulin level, but it no longer has the high level of sugar from its mother, resulting in the newborn's blood sugar level becoming very low. The baby's blood

sugar level is checked after birth, and if the level is too low, it may be necessary to give the baby glucose intravenously.
Blood glucose is monitored very closely during labour. Insulin may be given to keep the mother's blood sugar in a normal range to prevent the baby's blood sugar from dropping excessively after delivery.

MNT/PLAN

1. Modified diet for Gestational Diabetes, initiate DASH
2. Increase foods with low glycemic response and low glycemic load to delay transit time of glucose into the blood
3. MUFA/PUFA (4:1) 60% of total fat to aid synthesis of Co.Q10 and eicosanoids for proper endothelial function
4. Decrease dietary saturated fat ≤ 7% of total fat, dietary cholesterol ≤ 180mg/dl to attain/ maintain ideal blood lipid level
5. Decrease CRAP to attain normoglycemia and prevent further complications
6. Decrease dietary Sodium ≤ 1500mg daily for arterial blood pressure regulation and prevent further complications.

Problem encountered during my (SIWES)

"During my SIWES (Students' Industrial Work Experience Scheme) program, I encountered two major challenges:

1. *Environmental concern*: The Dietetics building is located near the mortuary, which resulted in a persistent unpleasant odor that polluted the environment.
2. *Transportation issue*: The increase in petrol prices led to a scarcity of vehicles, making it difficult for me to commute to work on time. Occasionally, I struggled to meet the 7:00 a.m. resumption time.

Recommendations

• I recommend to the Hospital Management Board to employ more dietitians because most times the dietitians on ground are not enough to cover all the patients in the ward.

• More competent staffs should be employed to reduce work load.

•The equipment and tools used in the dietetics kitchen should be replaced as most of them are worn out.

• I recommend that the government and health workers should enlighten the public more on health and nutrition.

• Kitchen staffs should be educated on the role of dietitians in the kitchen.

CONCLUSION

• Nutrition is of immense health issue and the cost benefits of good malnutrition advocacy through security and advocacy should be preached to both the rich and the poor.

• The student's industrial work experience scheme (SIWES) has given me the opportunity to see how my course (nutrition and dietetics) is organized in practice. It has also afforded me the opportunity of blending theoretical knowledge acquired in the class room with the practical utilization and application of such knowledge. My four month student industrial work experience scheme (siwes) has also given me the opportunity to make use of different equipment which is relevant to nutrition and dietetics.

•This report was written based on my experience during the student's industrial work experience scheme (SIWES). All the experience acquired sharpened my theoretical knowledge and practical exposure about my course of study at the university.