



University of Malawi
KAMUZU COLLEGE OF NURSING

**BACHELOR OF SCIENCE IN NURSING
AND MIDWIFERY PROGRAMME**

COMMUNITY AND MENTAL HEALTH DEPARTMENT

COMMUNITY HEALTH NURSING SCIENCE 1 MODULE

MODULE CODE: COM 102

University of Malawi
KAMUZU COLLEGE OF NURSING

COMMUNITY HEALTH NURSING SCIENCE I MODULE

TITLE: COMMUNITY HEALTH NURSING SCIENCE I MODULE

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ABBREVIATIONS

AIDS	Acquired Immuno Deficiency Syndrome
BSC	Bachelor of Science
CHN	Community Health Nursing
DFID	Department for International Development (British)
EHP	Essential Health Package
HIV	Human Immuno Deficiency Virus
H S A	Health Surveillance Assistants
KCN	Kamuzu College of Nursing
MCH	Maternal Child Health
PHC-	Primary Health Care
PSI	Population Services International
RN	Registered Nurse
SWAp	Sector Wide Approach (Ministry of Health)
TBA	Traditional Birth Attendant
TH	Traditional Healer
UNAIDS	Joint United Nations Programme on HIV and AIDS
USAID	United States Aid for International Development
WFP	World Food Programme
WHO	World Health Organisation
PoW	Programme of Work (MoH)
MoH	Ministry of Health

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MODULE OVERVIEW

Module description

This module provides you with knowledge and understanding of community health nursing as a component of the health care delivery system. The module focuses on factors that influence health across the life span. You will also acquire knowledge and skills to be applied in client education in a variety of health care settings.

How to use this module

This module serves as an important source of information that a learner will need for effective nursing care.

For effective use of this module, the following suggestions will be of help:

- ◆ The units are interrelated and make sure that you have competently mastered the concepts of each unit before moving to the next one.
- ◆ Do all the activities in the order they are presented
- ◆ Where possible discuss the activities with colleagues or your teacher
- ◆ Make sure you read all the required books
- ◆ The references quoted in this module are supposed to be read as support for the module

How the module fits into the programme

This module provides a beginning understanding of community health nursing. It forms part of the comprehensive preparation of a professional nurse who will be able to provide care to individuals, families, groups and communities.

LEARNING OUTCOMES AND ASSESSMENT CRITERIA

LEARNING OUTCOMES	ASSESSMENT CRITERIA
When you finish the module you will	To demonstrate that you have achieved the learning outcome you will
Describe community health nursing as a discipline in the health care delivery system.	Define community Define community health Define community health nursing Describe health care delivery system Describe evolution of community health nursing Describe the community health nursing process Outline role of community health nurse as a member of the health care system
Describe the health care delivery system in Malawi	Describe the levels of health care delivery system Outline the national and international policies/organizations that influence the health care delivery system Explain the objectives and activities of national and international organizations that influence health
Explain the primary health care concept	Define Primary Health Care Outline the historical development of PHC Describe the elements of PHC Describe the principles of PHC Describe PHC Approach in Malawi
Explain health promotion concept and client education	Describe health promotion Explain factors that influence health and health care

	<p>Identify strategies for health promotion</p> <p>Utilize principles of education in client teaching</p>
Discuss Environmental Health and Sanitation	<p>Describe Environmental Health and Sanitation</p> <p>Identify factors that influence environmental health and sanitation</p>
Discuss factors that influence nutrition in health and illness.	<p>Describe concepts used in nutrition</p> <p>Describe nutrition assessment across the life span</p> <p>Identify nutrition requirements across the life span</p> <p>identify factors that influence nutrition in health</p> <p>Describe the management of nutritional problems in the community</p>

Mode of Assessment

Presentations, Reports, Tests	40%
Examinations	60%

LEARNING CONTRACT

I will complete this module within the specified period in order to gain the appropriate knowledge, skills and attitudes. I am aware that I have to achieve the stipulated outcomes in readiness for clinical placement and assessments.

Student Name:

Student's Signature :

Date:.....

UNIT 1

INTRODUCTION TO COMMUNITY HEALTH NURSING

Introduction

This unit introduces the student to health care delivery system and roles of community health as a component of a general health care delivery system. The unit will also introduce you to policies guiding the delivery of care and organizations that contribute to health care services in Malawi.

Hints

Attend all class and lab sessions for you to understand health care delivery system

Visits to various organizations will give you a better understanding of contributions of these organizations to the health care delivery.

Learning outcomes

- Describe community health Nursing as a discipline
- Describe the evolution of community health and community health nursing
- Discuss the factors that influence health and health care
- Describe the health care delivery system
- Describe the policies and organizations that influence the health care delivery system.

Definition of concepts

Community Health: is the identification of needs and the protection and improvement of collective health within a geographically defined area.

Community Health Nursing:-A field of nursing combining nursing science with public health science to formulate a practice that is community based and population focused. It is the Science and Art of giving comprehensive care to individuals, families and communities

Comprehensive care:- Promotive, Preventive, Curative and Rehabilitative care given to Individuals, families groups and communities.

Community-is people living together in a geographical location who share common interests, values and norms.

EVOLUTION OF COMMUNITY HEALTH NURSING

There are four main stages which mark the beginning and development of PHN/CHN.

STAGE 1: THE EARLY HOME CARE NURSING

Before mid 1800 illness was tendered by family members and friends in the homes.

Main focus of care was to reduce suffering and to promote healing.

Community Health according to the Bible

The Bible cites several examples of women visiting the sick. It defines a woman of noble character as the one who “Opens her arms to the poor and extends her hands to the needy”. Phoebe is an example of a woman who was a helper of many. (Proverbs 31 Verse 20, Romans 16 Verse 2: Deut. 14; 3-21 : Lev 13;1-46).

International Evolution of Community Health

The early roots of home care nursing began with religious groups and charitable groups. The Elizabeth Poor Law in 1601, provided medical and nursing care to the sick and disabled.

In 1601, St Frances de Sales of France, Madam de Chartel and other wealthy women co founded the friendly visitor volunteers organization to care for the sick and poor in their own homes.

In 1617, St Vincent de Paul started the Sisters of Charity who dedicated their work among the poor and sick. Emphasis on care was placed on client’s ability to determine causes and find solutions to their problems. This was a foundation of modern CHN.

THE ERA OF FLORENCE NIGHTINGALE 1820-1860

Refer to Module 5, Nursing Science 1

STAGE 2: THE DISTRICT NURSING STAGE MID 1800 -1900

In 1859, William Rathbone started the formal organization of Visiting Nursing or district nursing. He hired Mary Robinson to take care of his sick wife.

In consultation with Florence Nightingale in 1861, William Rathbone opened a visiting nursing service for the sick in Liverpool.

In 1877, Frances Root was the first CHN who started visiting and serving the poor in New York city, Boston and Philadelphia. Main focus was to give advice on hygiene.

STAGE 3: PUBLIC HEALTH NURSING 1900 - 1970

At the beginning of the new century district nursing broadened to include the general public and not just the poor sick. Public health nursing is defined as the synthesis of nursing theory and public health theory which emphasizes the following:-
Preventing disease and disability and promoting and protecting the health of the community as a whole

In 1903, John Hopkins Hospital hired Reba Therin, a nurse to ensure that TB patients followed prescribed regimens of rest, fresh air, and proper diet to prevent and control transmission

This development gave nurses more independence. Their knowledge and skills expanded in specialized areas such as school health and MCH.

Lillian Wald was the first “Public Health Nurse” who demonstrated that nursing could reduce illness.

Through her efforts improvements were made in:

- Child labour
- Pure food laws
- Tenement housing
- City recreation
- Teaching of mentally handicapped children
- School Health

STAGE 4: COMMUNITY HEALTH NURSING

Between 1960 – early 1970s, more nurses were based in the community. Their practice setting included; community based clinics, doctor’s office, work site and schools.

HISTORY OF COMMUNITY HEALTH NURSING IN MALAWI

- 1976 - The first 3 Malawian nurses went to India to train as Registered nurse -public health nursing
- 1978 - Some nurses were sent to Kenya for RN Public Health Nursing
- 1981 - Ministry of Health through KCN started training RNs in Public Health
- 1987 - The name Public Health Nurse was changed to Community Health Nurse

The Malawi College of Health Sciences started training Enrolled Community Health Nurses

The status now is that all nursing schools have incorporated CHN into the curriculum and KCN has a CHN option for Post Basic Bachelors degree in nursing.



ACTIVITY

Describe in detail the history of Community Health Nursing

THE ROLES OF A COMMUNITY HEALTH NURSE

Explain the roles

1. Practitioner/clinician
2. Manager
3. Researcher
4. Educator



ACTIVITY

Describe in detail each of the roles of community health nurse

COMMUNITY HEALTH NURSING PROCESS

Definition

It is a systematic approach to scientific problem solving which involves collection of data to determine client's problems or needs and formulating a care plan on the basis

of the data collected in order to provide the most appropriate nursing interventions for patients/clients family and community.

The process involves a series of circular dynamic actions or steps.

6 MAJOR STEPS IN COMMUNITY HEALTH NURSING PROCESS

1. Establishment/reinforcement/maintenance of nurse client relationship

Through:-

- (a) Mutual trust.
- (b) Productivity or must show tangible results i.e meaningful relationship
- (c) Open communication
- (d) Confidentiality / confidence

2. Assessment

This is the process of obtaining a database for intervention from individuals, families, groups and community as a whole through

- observation
- interview
- examination

Thereafter analyze the data, interpret to identify strengths and weaknesses. Identify the health deficit which is the nursing diagnosis.

3. State goals/objectives

You develop a negotiating action or goal/objective with the client translating identified needs

4. Planning

- What is going to be done about the problem which you are dealing with.
- You analyze the problem
- You prioritize problems
- Establish goals and objectives for each problem
- Develop intervention activities to meet established goals

- Seek resources in terms of financial material or personnel
- Involve the owner or community when planning and try to be flexible.

5. **Implementation**

2 stages

Intervention

After identifying the problem and planning, you do something to alleviate the problem: curative, preventive, promotive, rehabilitative.

Referral

When the case/problem is beyond your scope refer to other people e.g. school for the blind.

- Referral of client should not be by force but should be done willingly.

6. **Evaluation**

It is a continuous process which is done

by checking if:

- the goals and objectives have been met.
- the problems have been solved
- interventions have been successful

If not you need to reassess , replan, or change the goals and interventions.

FACTORS THAT INFLUENCE HEALTH

Explain the factors

- Physical
- biological
- Social
- Economic
- Cultural
- Political
- spiritual
- Psychological



ACTIVITY

Discuss each of the above factors that affect health

THE HEALTH CARE DELIVERY SYSTEM

Health care in Malawi is provided at three levels by Ministry of Health, Christian Health Association of Malawi and private clinics.

See Diagram depicting levels of health care delivery Stanhope & Lancaster page 7.

Level 1- Primary Level

Community Services

Health promotion, preventive and curative services

Staffing: These services are provided by the following personnel

Volunteers

Village health committee

TBA

Traditional Healers

Community Based Distribution Agents

Health post

Staffing

Health Surveillance Assistant

Sub Health Centre/ Dispensary

Health Centre

Community/Rural Hospital/Primary Health Centre

Level 2- Secondary Level

District Hospital

Level 3 Tertiary Level

Central and specialized hospitals



ACTIVITY

- Visit various health facilities in the health care delivery system.
- Find out type of personnel, their preparation and services offered at each level.

NATIONAL AND INTERNATIONAL ORGANIZATIONS AND POLICIES THAT INFLUENCE HEALTH CARE DELIVERY

International Organizations

United Nations
World Health Organisation (WHO)
United Nation Population Fund Agency (UNFPA)
United Nations International Children Emergency Fund (UNICEF)
United Nations for AIDS (UNAIDS)
World Food Programme (WFP)
International Labour Organization (ILO)
United States Aid for International Development (USAID)
Department for International Development (DFID)
Action Aid
Save the Children Federation
International Red Cross/Crescent
Plan International
Population Services International (PSI)

National Organizations

Banja la Mtsogolo (BLM)
Malawi Human Rights Commission
National AIDS Commission (NAC)
Council for Non Governmental Organizations (CONGOMA)

Other departments

Community Health Science Unit (CHSU)
Reproductive Health Unit (RHU)
Department of Nutrition, HIV and AIDS
Health Education Unit

Policy Documents

- UN Millennium Development Goals
- Malawi Growth and Development Strategy
- Malawi Poverty Reduction Strategy
- Malawi National Health Plan 1999-2004
- Program of Work (SWAP, EHP)
- Reproductive Health Policy
- National HIV and AIDS Policy
- Prevention of Mother To Child Transmission
- The Malawi Constitution
- Vision 2020
- Youth Policy
- Gender Policy
- Decentralization Policy



ACTIVITY

Read /Review above listed policy documents

Learners Evaluation

Describe the roles of personnel and the services available at the following:

- Community
- Health Post
- Health Centres
- Community/Rural Hospital
- District Hospital
- Central Hospital
- Specialized hospitals

Learners Evaluation

Describe Millennium Development Goals which relate to Community Health.

Describe the objectives and activities of national and international organizations that influence health care.

Identify where Community Health Nursing falls in the MoH organogram.

References

Allendar, J. & Spradley, B. (2005). Community health nursing. (6 Ed) New York, Lippincott.

Ministry of Health (2004). Hand book and Guidelines for Health Providers on -Essential Health Package in Malawi, Lilongwe.

Stanhope , M,& Lancaster, J. (2004). Community and Public Health Nursing. ST Louis: Mosby Pub

Government of Malawi. Malawi Growth and Development Strategy: From Poverty to Prosperity 2006-2011, Lilongwe

Ministry of Finance & Economic Planning. (2002). Malawi Poverty Reduction Strategy. Lilongwe.

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Ministry of Health & Population Prevention of Mother To Child Transmission Handbook for Health Workers .(2003). Lilongwe

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National Statistics Office (2004) Malawi Demographic Health Survey Zomba

National Economic Council Vision 2020 Lilongwe.

National AIDS Commission. (2003) . National HIV and AIDS Policy A call To Renewed Action Lilongwe

www.who.org.

UNIT 2

PRIMARY HEALTH CARE

Introduction

The unit gives you an overview of PHC concept as an approach to address community health needs and problems. It focuses on the goals, implementation, achievements and challenges of PHC in Malawi.

Learning Resources

Policies

Programmes of Ministry of Health

Hint

Field visits will assist you to gain a practical perspective of PHC.

Learning Outcomes

- Define Primary health Care as a concept

- Define Primary health Care

- Explain the elements of primary health care

- Explain the principles

- Explain the achievements and constraints of PHC in Malawi

The Primary Health Care as a Concept

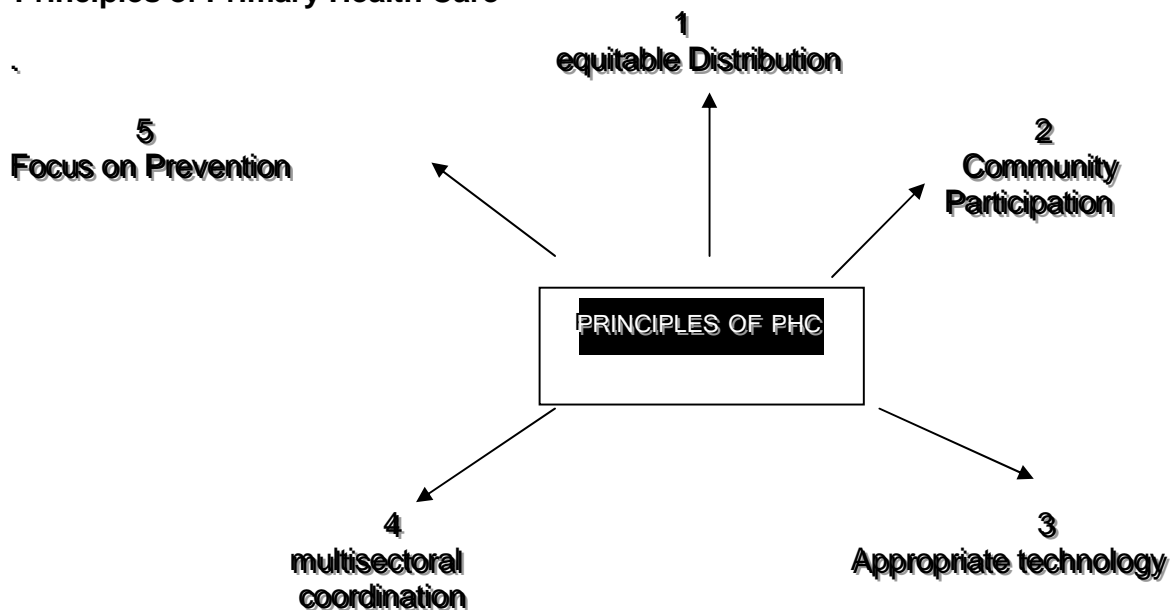
Reports indicating high rate of morbidity in the 1970s compelled WHO to call for a conference in 1977 that adopted a resolution of Health for All by the Year 2000 as a goal of attaining a level of health that permitted all citizens of the world to live socially and economically productive life. This goal of Health for All will be met through Primary Health Care which focuses on curative, rehabilitative services but with emphasis on prevention. Care is provided by a wide variety of health care team members such as physicians, nurses, community outreach workers, nutritionists and sanitation experts

Define PHC according to WHO Alma Ata declaration of 1978

Elements of Primary health care

- Promotion of adequate nutrition
- Promotion of adequate supply of safe water
- Provision of basic sanitation
- Maternal and child health care and family planning
- Immunization against major infectious diseases
- The prevention and control of locally endemic diseases
- Education with regard to health problems including methods of prevention and control
- Appropriate treatment for common diseases and injury
- Promotion of mental health and prevention of mental disorders
- Promotion of oral care

Principles of Primary Health Care



Primary Health Care Approach in Malawi

Initially Malawi adopted a community development approach where communities were key actors in issues affecting their health.

EHP builds on the Primary Health Care approach which guides the Ministry of Health's approach to health delivery. What EHP does is to rationalize PHC services in line with available resources.

Achievements of PHC in Malawi



ACTIVITY

Define primary health care.

Describe achievements and constraints of PHC implementation in Malawi.

Explain specific roles of the nurse in PHC- Refer to unit one

Learners Evaluation

How does the EHP fit into the Health Care Delivery System

Explain primary health care concepts

Reference:

Wood, C.H., Glanville H.D.E., Vaughan, J.P. (2001). Community Health (2nd Ed)
Amref, Nairobi

www.who.int/hpr/NPH/docs/declaration

UNIT 3

HEALTH PROMOTION

Introduction

Promotion of health is an important aspect of community health which emphasizes on healthy life styles that could target at risk populations. Maintenance of a healthy life style requires different approaches directed towards individuals, families and the environment they live in.

Learning Resources

Posters, books, lecturer

Hint

Observe a health worker giving health education

Learning Outcome

- Define health promotion
- Explain health education as a concept in health promotion
- Describe the objectives of health education
- Explain the strategies of health promotion
- Outline seven principles for maximizing the teaching and learning process

Health Promotion Concept

WHO describes health promotion as the process of enabling people to increase control over and improve their health.

Health Promotion includes all efforts that seek to move people closer to optimal wellbeing or higher levels of well being. The goal of Health Promotion is to raise the levels of wellness for individuals, families and communities.

Health Promotion strategies

- Health Education
- Personal Hygiene
- Favorable environmental conditions
- Exercising
- Counseling
- Periodic medical examinations

Illness Prevention is behavior directed towards reducing the threat of illness or disease. This is also referred to as Primary Prevention.

Strategies include:

- Immunizations
- Chlorination of water
- Fluoridation of water
- Screening of clients
- Wearing seat belts
- Personal Hygiene

Health maintenance is directed towards keeping a current state of health

In general, health promotion nursing interventions are not directed at any particular disease or injury but serve to promote general well being.

There are several categories of health behaviors including positive behaviors such as diet, exercises and avoidance of harmful behaviors.

Health Education

Health Education refers to communication activity aimed at empowering clients to understand how their behavior affects their health to promote the conditions that maintain good health. It is intended to have a positive impact.

Health Education is a process of assisting individuals, families and communities to make informed decisions on matters affecting health.

Health education and prevention are seen as integral components of health promotion

The objectives of Health Education are to:

- Provide knowledge that will enable clients to voluntarily change their lifestyle
- Help clients change attitudes, opinions, beliefs and values.
- Equip clients with skills for a healthy lifestyle

Points to Remember when giving Health Education

- Decide your aim before giving the talk

Know your subject thoroughly and give true information
 Decide on methods and materials to be used
 Use visual aids that are culturally acceptable
 Tackle one issue at a time
 Make sure the talk is brief and to the point
 Find out what the audience already knows
 Keep talk simple, clear and short
 Encourage audience to ask questions
 Motivate audience
 Encourage discussion
 Evaluate and summarize your talk
 Reinforce by repeating information
 Give information early in the discussion when it is easily remembered
 Record and report what you have covered
 You require a lesson plan to give health education

Structure of a Lesson Plan

1. Cover page
 - Title of lesson
 - Type of audience
 - Venue
 - Teaching methods, teaching aids
2. Introduction
3. Broad and specific objectives
4. Expectations
5. Body

TIME	OBJECTIVE	CONTENT	STUDENT ACTIVITY	TEACHER ACTIVITY	EVALUATION

6. Evaluation
7. Summary

Refer to Module 4 for human communication process



ACTIVITY

1. Develop lesson plan
2. Give health education to colleagues
3. Describe the various methods of giving health education
4. Describe seven principles for maximizing the teaching and learning process.
See Allender, J. A. & Spradley, B. W. (2005) .page 294

Learners Evaluation

Develop a lesson plan on your topic of choice

Explain health promotion concepts and client education

References

Allendar, J. & Spradley, B. (2005) Community health nursing. (Ed) New York, Lippincott

Pender, N., Murdaugh, C. & Parsons, M. (2002) Health Promotion in Nursing Practice (4th Ed) New Jersey Prentice Hall.

Stanhope, M. & Lancaster, J. (2004). Community and public health nursing. ST Louis: Mosby Publishing

UNIT: 4

ENVIRONMENTAL HEALTH AND SANITATION

Introduction

This unit discusses Environmental issues that affect the health of individuals, families and communities. Emphasis will be on sewage and sewage disposal, refuse and refuse disposal, water and water supply, housing, pests and pest control, food hygiene and personal hygiene.

Learning Resources

Books, lecturer

Hints

Participate in all field visits

Learning Outcomes

- Define Environment

- Explain various types of sewage disposal

- Explain types of refuse disposal

- Explain types of water supply

- Discuss pests and pest control

- Describe a good house

- Explain food hygiene

- Explain personal hygiene **refer to Module 5 unit 6 for details**

Environment is the collective term used to describe all the living and non living things that make up people's surroundings. These include the biological, physical, cultural, social, economic and political environment.

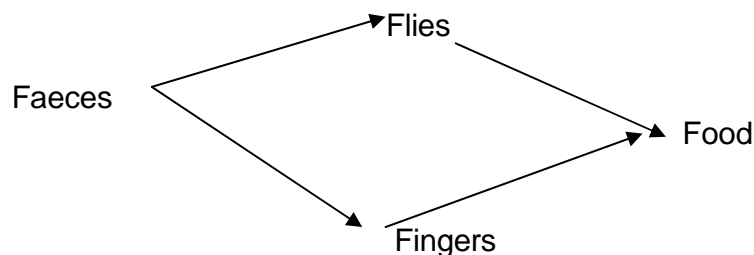
Environmental Health encompasses all elements of the environment that influence people's health and well being. It is concerned with assessing, controlling and improving the impact people make on their environment and the impact of the environment on people.

SEWAGE DISPOSAL

Sewage is waste water comprised of fecal matter, urine, sullage from personal washing, laundry, food preparation and the cleaning of kitchen utensils, industrial and agricultural wastes. Excreta include both feces and urine from the human body. A basic fact of life is that human beings need to get rid of excreta everyday and hygienic disposal of excreta is important because the infective organisms for many diseases leave the human body in feces and urine.

Fecal organisms infect people directly or indirectly. Excreta when accessible to flies and fingers for transfer to food may cause much sickness in the community.

The four F Connections



Proper excreta disposal methods provide safe disposal of excreta to stop it from contaminating the environment.

Types of Sewage Disposal

Latrines

- Pit latrine
- Bucket latrine
- Composting latrine

Flush toilet/Water Closet

This is the most hygienic method of sewage disposal when properly used.

Waterborne Sewage Treatment

- Small scale systems/Septic Tank
- Larger system-commonly found in urban areas

REFUSE DISPOSAL

Refuse or solid wastes is considered as something which is no longer wanted in a given place and time. Sound management of refuse disposal is essential in any

society. Fly breeding, rodents and litter are examples of what can happen when waste is disposed of without proper care. It can result in health hazards such as contamination of ground water, surface water, air pollution causing diseases like cholera. Refuse disposed of indiscriminately is aesthetically unacceptable.

Types of Refuse

- Domestic
- Street
- Commercial
- Institutional
- Industrial
- Agricultural

Methods of Refuse Disposal

- Crude dumping
- Controlled tipping/sanitary land fill
- Incineration/burning
- Composting
- Recycling

WATER AND WATER SUPPLY

Water is essential to life it is part of every cell in our body and it is necessary for most basic functions. Lack of water may result in the increased transmission of some diseases called Water Washed diseases. Unsafe water causes Water Borne Diseases.

- Sources of water
 - Rain water
 - Surface water
 - Underground water
 - Shallow well
 - Deep wells
 - Sea water
- Protection of water Sources
 - Protecting a well
- Water purification
 - Methods
 - Storage
 - Filtration
 - Sterilization
 - Boiling
 - Chlorination
 - Iodination



ACTIVITY

Describe characteristics of a good pit latrine.
Describe chlorination of water.

HOUSING

Housing provides security to the occupants from adverse weather conditions and other threats such as wild animals

Types of Housing

There are three main types of housing. Permanent, semi permanent and temporary.

- A permanent house is made of durable materials-walls, roof, and floor.
- Semi permanent house is made of a combination of permanent materials and non permanent
- while a temporary house is made of nonpermanent materials.

Characteristics of a good house considerations should be made about the Location; Size; Windows; Roof; Floor; Walls; Surroundings



ACTIVITY

Write notes on each characteristic of a good house
Describe the characteristics of an ideal home in detail.

PESTS AND PEST CONTROL

Pests spread some of the common diseases. The control of insect pests and vermin should take into consideration the life cycle and the general conditions favorable to growth. This enables health personnel to identify possible methods for intervention and control. This unit therefore deals with insect vectors and pests of public health importance. There are national and international programmes for the control of vectors. There are also steps which individuals, families and community can take to reduce health hazards from pests.

Common pests

Bed bugs
Cockroaches

Fleas
House flies
Human lice
Mosquitoes
Mites
Ticks
Tsetse flies
Rodents



ACTIVITY

Define pests

Describe common pests that affect health

Describe how the above mentioned pests can be controlled in a family?

PERSONAL HYGIENE

Refer to Module 5



ACTIVITY

Give Health Education on Personal Hygiene to a group of students

FOOD HYGIENE

Food is one of the basic human needs. It is important for good health. Food hygiene is concerned with all measures necessary to ensure safety of food at all stages of production, preparation, marketing and distribution. Food borne illnesses are caused by ingestion of food which contains pathogenic microorganisms.

The following are important in order to maintain food hygiene:

- Food preservation

- Regulation for food safety

In order to achieve food safety the following must be done:

- Survey the types of food and food premises that exist in a catchment area.

- Plan programmes for inspection, sampling and analysis of food.

- Inspect food premises for compliance with sanitary requirements and hygienic practices.

- Issue licence in respect of premises which comply with regulations.

- Inspect food handlers.

- Implement food laws.

Methods of food preservation

- Smoking

- Drying



ACTIVITY

Visit urban sewage plant, septic tank, refuse dump and water treatment plant.
Write a report of a visit to the above places

Learners Evaluation

Discuss environmental Health and sanitation

References

Wood C H , Glanville H D E, Vaughan J P (2001) Community Health 2nd Ed
Amref Nairobi

UNIT 5

NUTRITION AND HEALTH

Learning Resources:

Lecturers,
Books
Journals,
Dietary charts

Introduction:

Nutrition is vital to health. Promoting good nutrition and dietary habits is a key to maintaining health. The quality of nutrition has been widely accepted as an important influence on growth, healing, body functioning, development and promotion of health. This unit therefore introduces you to Nutrition as it relates to health and management of Nutrition related problems/needs

Hint(s)

Visits to nutrition rehabilitation Units is a requirement to help you understand Nutrition and health

Learning outcomes: at the end of the unit you will:

- be able to apply the principles underlying the science of nutrition and health throughout the life span.
- discuss factors influencing nutrition and health
- conduct nutrition assessment
- discuss the management of nutrition –related problems/conditions

Definition of Nutrition

Nutrition is a process by which food consumed by an organism is utilized through digestion, absorption, transport, storage metabolism and elimination: its purpose is to

maintain life, growth, normal functioning of organs and the production of energy (Wood et al. (2001,pp 274)

Nutrients are chemical substances in food that are used by the body for a variety of functions

There are six categories of Nutrients:-

Carbohydrates, Proteins, Fats, Vitamins, Minerals (Macrominerals and Microminerals) and Water.

Nutrients are categorised as Essential and Non essential;

- Essential Nutrients: these are nutrients that the body cannot manufacture or produce in sufficient amounts (essential means required in the diet). Examples of these are carbohydrates, certain amino acids (histidine, isoleucine, leucine, lysine)
- Linoleic acid and alpha-linolenic acid (essential fatty acids)
- and Nonessential Nutrients; these are present in food and used by the body but do not have to be part of the diet such as cholesterol, glucose and creatine.

Principles of the Science of Nutrition:

There are ten principles that help to understand the relationship between nutrition and health, these are:-

1. Food is a basic need of humans (refer to Maslows hierarchy of needs, Module 2, unit 9)
2. Foods provide energy, nutrients and other substances needed for growth and health.
3. Health problems related to nutrition originate within cells
4. Poor nutrition can result from both inadequate and excessive levels of nutrient intake.
5. Humans have adaptive mechanisms for managing fluctuations in food intake.
6. Malnutrition can result from poor diet and disease states, genetic factors or a combination of these causes.
7. Some groups of people are at higher risk of becoming inadequately nourished than others.
8. Poor nutrition can influence the development of certain chronic diseases.
9. Adequacy and balance are key characteristics of a healthy diet.
10. There are no "Good" or "Bad" foods. (Brown et al. (2002). page 2.

Factors That Influence Nutrition:



ACTIVITY

How do the following factors affect Nutrition of a person?

1. Ethnic group

2. Race
3. Culture
4. socio-economic factors
5. age
6. Health and mental Status

Nutrition Assessment

Nutrition Assessment refers to a thorough physical measurement of the body/clinical assessment such as heart rate, respiratory rate and blood pressure. This is useful in the case of growing children, particularly under fives. One assesses for feeding pattern and techniques such as addition of solids at 6 months, breastfeeding or formula in the first year until weaning with cup and spoon.

There are three methods of determining nutritional status of an individual

- Anthropometric measurements- height for weight, weight for height and Mid-Upper Arm Circumference (MUAC) body mass index.
- Laboratory Tests which includes biochemical assessment based on a specific health problems such as Hemoglobin tests, blood cell count, serum protein levels.
- Assessing individual dietary intake where food records are completed by clients or health workers, the purpose is to estimate the person's overall diet quality so that strengths and weaknesses can be identified and dealt with accordingly.

Nutrition Requirements Across The Life Cycle

See BROWN J.E.2002 Nutrition through the lifecycle front cover table1997-2001 Recommended Dietary Allowances (RDA)

- New Born To 6 Months- feeding options, exclusive breastfeeding
6 MONTHS 108cal/kg body weight for breast fed babies,
protein2.2g/kg body wt Fat intake
INFANTS- Caloric requirement 6mos –12 mos average caloric need
is 98 cal/k protein 1.6g/kg



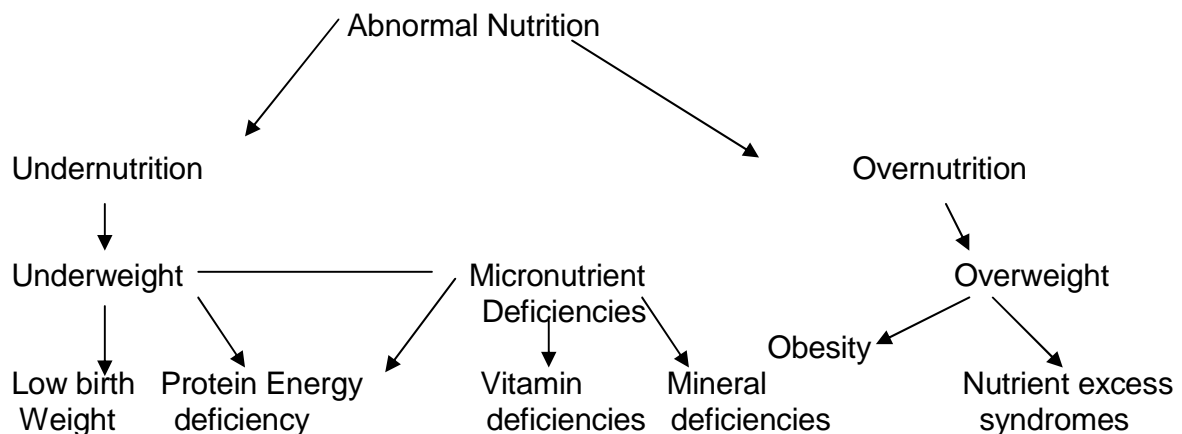
ACTIVITY

Describe nutrition requirements for the following groups

- Pre and school age
- Adolescence
- Adults
- Women
 - During pregnancy
 - While breastfeeding
- Men

The elderly
Sick children

Management of Nutrition-Related Problems/Conditions



Underweight.: The aim of managing an underweight child/person is:

- To increase calories in the diet by increasing the amount of energy foods.
- Protect the child from infections by immunizations.
- Recommend a mixed diet that the family can afford.
- Weigh the child regularly as a way of assessing progress.

Protein-energy malnutrition: Three types of protein energy deficiency are:

- Marasmus
- Kwashiorkor
- Marasmic kwashiorkor

The aim of treatment should be for the child to:

- Regain lost weight
- Recover from any complications and infections

- Grow at a healthy rate.

Diet : Feed the child with high energy feeds, for early recovery give child milk mixture
Treat infections and dehydration if any.
Keep the baby's body at normal temperature.
Show the family how to feed the child
Teach the family about children's food needs.

Micronutrient Deficiency Diseases

Iron Deficiency Anaemia

This condition can result from lack of iron in the blood or loss of blood from hookworm, and excess bleeding.

Management:

Treat anaemia with iron tablets

Educate the client to take iron-containing food e.g. dark leafy vegetables such as leaves of cowpeas, cassava, sweet potato etc., legumes e.g. beans, animal sources like, red meat and liver,

Iodine- Deficiency Disorders.

The body needs iodine so that the thyroid gland can make hormones. Thyroid hormones are essential for:

Development of the brain and nervous system

Control of temperature

Growth of young children.

Iodine deficiency disorder is not easy to treat hence there are control programmes that aim at giving extra iodine to at risk groups e.g.

adding iodine to salt and giving high doses of iodine by mouth or injection.

Overnutrition

People who eat more than they need are likely to suffer from **Obesity or Overweight.**

People who are overweight are at great risk of several disorders.



ACTIVITY:

Identify the conditions that an obese person is likely to have.

How would you recognize obesity?

Why are more people obese these days?

How can an obese person be managed?

How can obesity be prevented?

Community Nutrition

Community level assessment identifies a population status using broad nutrition and health indicators. A community's state of nutritional health can generally be estimated using existing vital statistics data, seeking opinions of target group members and local health experts and making observations

Nutritional programs in Malawi

- School feeding programs
- HIV and AIDS feeding program
- Community therapeutic care- food fortification program

Nutritional clinics and Nutrition Rehabilitation Units

- Ambulatory nutritional services
- Non ambulatory nutritional services

Assessment of community nutrition

Food security, food and nutrition
Agricultural land holding- land availability, gardens size, soil quality, crops grown, methods, utilization of farm inputs, harvesting and food utilization, storage, processing and food preparation and knowledge of average household income. Assess prevalence of nutritional disorders.



ACTIVITY

Find out functions of nutrients

Learner's evaluation

Discuss factors that influence nutrition in health and illness.

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SUPPORT RESOURCES

Internet

Journals

Subject/Content Experts

Field Visits