



**NATIONAL OPEN UNIVERSITY OF NIGERIA**

**COURSE CODE : NSS327**

**COURSE TITLE:  
COMMUNITY HEALTH NURSING**



**NSS327**  
**COMMUNITY HEALTH NURSING**

Course Team

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## **1.0 Introduction**

NSS327 is a two (2) credit unit course. It is a 300 level elective course available for Bachelor of Nursing Science (B.NSc) students. The goal of Community Health Nursing is to assist the individual, family and community in attaining their highest level of holistic health. It is also, to provide and promote healthy lifestyle choices through education, public awareness and community outreach activities.

This course covers Community Health Nursing (CHN) principles and roles. It examines programs, services, and instructions involved in promoting and maintaining the health of populations. Community Health Nursing also explores interrelationships among environmental factors, human responses and health status of clients.

The main objective of Community Health Nursing is optimum individual, and community health Through services such as prevention education and resources, immunization, pre natal visits and classes - Having a baby is a natural event, so is the anxiety. Anxiety can be lessened with information, prenatal home visits, early and late prenatal classes (one on one or group) and introduction of breastfeeding as a healthy option. Post Natal Visits, Vision and Hearing Testing, Networking with other programs, schools, and surrounding health service agencies providing and sharing resources.

HIV/AIDS Testing and Health Promotion and disease prevention through one to one counseling, group sessions, specialty clinics, in-service, school programmes, media and announcements.

The course consist of 10 units plus a course guide which tells you briefly what the course is about, what course materials you will use and how you can go through these materials with maximum benefit. In addition the course Guide gives you guidance in respect to your Tutor-marked Assignments (TMA) which will be made available to you in assignment files in the study center. It is for your best interest to attend the tutorial sessions.

### **Course Aim**

The course broad objective is to build in you ability to understand and apply the principles, concepts and process of community health nursing in providing the needed care in our contemporary society.

## Course Objectives

In order to achieve the broad objectives, each unit has specific objectives which are usually stated at the beginning of the unit. You are expected to read these unit objectives before your study of the unit and as you progress in your study of the unit you are also advised to check these objectives. At the completion of each unit make sure you review those objectives for self assessment. At the end of this course, you are expected to meet the comprehensive objectives as stated below. On successful completion of the course you should be able to:

- Define the structures, functions and roles of the community
- Define roles and objectives of community health nursing
- Identify major community health problems in Nigeria and factors responsible for them.
- Define community diagnosis, its uses and steps in community health practice
- Describe nurses roles in prevention and control of diseases in the community
- Describe the levels of prevention, surveillance and data collection
- Understand the organization and administration of community health nursing
- Explain the immunization schedules and its nursing implications
- Understand the process of monitoring and evaluation
- Understand the process of research methodology in community health nursing
- Describe demography and biostatistics in relation to community health nursing
- Discuss international health

## Working through the Course

To complete the course, you are expected to study through the units, the recommended textbooks and other relevant materials. Each unit has a tutor-marked assignment which you are required to answer and submit at the study centre at the appointed time.

## Course Material

The following are the components of this course:

- The Course Guide
- Study Units
- Textbooks

## Study Units

### Module 1

Unit 1	Concepts in Community Health Nursing
Unit 2	Community Health Problems
Unit 3	Community Diagnosis/Needs Assessment
Unit 4	Community Mobilization
Unit 5	Nurses Role in Prevention and Control of Diseases in the Community

### Module 2

Unit 1	Organization and Administration of Community Health Nursing
Unit 2	Immunization
Unit 3	Monitoring and Evaluation
Unit 4	Research Methodology in Community Health Nursing
Unit 5	Demography and Biostatistics
Unit 6	International Health

## Assessment

The two components of assessment for this course are the Tutor-Marked Assignment and the End of course examination. The tutor-marked assignment is the continuous assessment component of your course which accounts for 30% of the total score; these tutor-marked assignments must be answered by you at a stipulated time which must be submitted at the Study Centre while the end of course examination concludes the assessment for the course which constitutes 70% of the total course. It is a three-hour written paper which covers all the units of the course. It is expected that you create quality time to study all the units properly in preparation for the end of course examination.

## Tutor-Marked Assignments (TMAS)

Each unit contains self-assessment exercises and you are required to submit assignments. You are required to submit four assignments in which case the highest three of the four marks will be counted. Each assignment count 10% toward your total course work.

## Final Examination and Grading

The final examination for course NSS327 will be of two hours duration and has a value of 70% of the total course grade. The examination will consist of questions which will reflect the type of tutor-marked problems

you have previously encountered. All areas of the course will be assessed.

### **Facilitators/Tutors and Tutorials**

There are 8 hours of tutorials provided in support of this course. You will be notified of the dates, times and locations of these tutorials as well as the names and phone numbers of your tutor as soon as you are allocated a tutorial group. Your facilitator (as the tutors are called) will mark and comment on your assignments, keep a close watch on your progress and on any difficulties you might encounter and provide assistance to you during the course. Do not hesitate to contact your facilitator by telephone if you need help. Best of luck.

Course Code           NSS327  
Course Guide         Community Health Nursing

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**MODULE 1**

Unit 1	Concepts in Community Health Nursing
Unit 2	Community Health Problems
Unit 3	Community Diagnosis/Needs Assessment
Unit 4	Community Mobilization
Unit 5	Nurses Role in Prevention and Control of Diseases in the Community

**UNIT 1 CONCEPTS IN COMMUNITY HEALTH NURSING****CONTENTS**

1.0	Introduction
2.0	Objectives
3.0	Main Content
3.1	Definitions of the community
3.2	Types of Community
3.3	Community Organization, Functions and Roles of the Community
3.4	Leadership in the Community
3.5	Definitions of Health
	3.5.1 Implications of These Definitions to Primary Health Care Delivery
3.6	Definitions, Roles and Objectives of Community Health Nursing
	3.6.1 Definition
	3.6.2 Objectives of Community Health Nursing
	3.6.3 Roles/Responsibilities of Community Health Nursing
3.7	Roles and Functions of Community Health Nurse as a Member of the Health Team
4.0	Conclusion
5.0	Summary
6.0	Tutor-Marked Assignment
7.0	References/Further Reading

**1.0 INTRODUCTION**

The expanding roles of nursing which include caring for the people outside the hospital setting has brought about the concepts of Community Health Nursing.

The major objectives of Community Health Nursing include:

- increasing the capability of families groups and communities to cope with health and illness problem
- controlling and counter acting as much as possible physical, social and environmental conditions that threaten health or decrease the enjoyment of life.

The focus of community health nursing is the community thus nursing services will be shaped by the needs of the community as a whole and by the responses from the community. The great majorities (70%) of people live in rural areas and most of them do not have access to simple health care. This therefore throws challenges to nurses and that it is imperative to make community based nursing care a special area of nursing in which the nurse can put her professional skills to play in rendering services to the rural community.

## **2.0 OBJECTIVES**

At the end of this unit, you should be able to:

- define key concepts of Community Health Nursing
- describe community roles, nature and functions
- describe health from various perspectives
- identify roles and functions of a community health nurse in the community.

## **3.0 MAIN CONTENT**

### **3.1 Definitions of the Community**

A) Define Community stressing the following:

- A Community is a group of people living within a specified geographical boundary.
- It may consist of different subgroups.
- There is usually a leader but there may be many formal or informal leaders.
- Communities are not always homogenous in that within a Community, many different views, languages, ideas and approach to life are often represented.
- It is possible to work successfully with community provided the community health nurse uses the right approaches and stress issues that are common to members.
- Members are governed by the same statutory laws.

- B) Community is a group of interacting organization sharing an environment.

In human communities, intent, belief, resources preferences, needs, risks, and other conditions may be present and community affecting the identity of the participants and their degree of cohesiveness.

### 3.2 Types of Community

- 1) Geographic Community: This ranges from local neighborhood, suburb, village, town, city or even the planet as a whole.
- 2) Community of Culture: This ranges from local clique, sub culture, ethnic groups, religions multicultural or pluralistic civilization or global communities culture of today.
- 3) Community based on identity: Group of people with Community identity other than location, members often interact regularly e.g.
  - a) Professional Community: These are groups of people with same or related occupations e.g. Health professionals consisting of nurses, doctors, pharmacists etc.
  - b) Virtual Community: Group of people primary or initially communicating or interacting with each other by means of information technologies e.g. Internet.

### 3.3 Community Organization, Functions and Roles of the Community

**Community organization:** Process of building a widely accessible power structure often with end goal of distributing power, equally throughout the Community.

Community organizers generally seek to build groups that are open and democratic in governance, such groups facilitate and encourage consensus decision making with a focus on the general health of the Community rather than a specific interest group.

There are three types of Community organization:

- (1) Grass root organization
- (2) Coalition building
- (3) Institution based community organization e.g. Faith based community.

### **3.4 Leadership in the Community**

#### **1. Leadership Composition of a Community**

- (a) Formal leaders
- (b) Informal leaders
- (c) Official Opinion leaders
- (d) Unofficial opinion leaders
- (e) Representatives of the poor and the disadvantaged
- (f) Representatives of the youths
- (g) Representatives of women
- (h) Representatives of any special interest group

#### **2. Nature of Leadership**

- (a) Networks of leadership
- (b) Decision making process
- (c) Communication system
- (d) Delegation of responsibility

#### **3. Community Response to Leadership**

Cooperation Vs Opposition

#### **4. Political Influences**

- a) National
- b) Regional
- c) Local

### **3.5 Definitions of Health**

- Health according to the World Health Organization is a state of complete physical mental and social well being and not merely the absence of disease or infirmity.
- Health is a condition or quality of human organism which is expressed by adequate functioning under genetic and environmental conditions.
- Ill-health is a state of inadequate functioning of human organism under a given genetic and environmental conditions. It is a deviation from normal physiological and psychological functioning of human organism.

### **3.5.1 Implications of these definitions to Primary Health Care Delivery**

- Health is a basic human right
- Health and development activities are crucial for human existence
- Health Care is individual, family oriented and Community Based.
- There are factors in the Community (Physical, Social Environmental
- Spiritual and Psychological) that can affect health.
- Primary Health Care/ Community Health Nursing is the fundamental care that can eradicate almost all diseases within the community, if properly understood, planned and implemented accordingly. Health is brought to the doorstep of almost 70% of population living in the rural areas.
- Community Health nursing which includes welfare services are indispensable to increase efficiency of Health Programme.
- Community Health Services should be given in such a way that contributes to the integrity of individual, family and community.

### **3.6 Definitions, Roles and Objectives of Community Health Nursing**

#### **3.6.1 Definition**

Community Health Nursing is a field of Nursing Practice for which there exists a body of knowledge and related skills which is applied in meeting the health needs of the communities and of individuals, families in their normal environments such as home, school and the place of work. It is a Professional Nursing focusing attention on serving people through organized community effort in their usual environments (home school & work), and part of community effort of health promotion.

#### **3.6.2 Objectives of Community Health Nursing**

1. To increase the capability of families groups and communities to cope with health and illness problems through.
  - a) Adequate information which will form basis for decision making.
  - b) Positive attitude towards health care that are consistent with effective health planning & actions the level of family, group and Community.
  - c) Professional guidance that will increase their ability to solve problems
  - d) Self – reliance

2. To support and supplement the effort of other professional workers or agencies in the control of disease and in the restoration and preservation of health through
  - a) Monitoring and evaluation
  - b) Free flow of information
  - c) Inter- sectoral Collaboration
  
3. To control or counteract as much as possible physical and social environmental conditions that threaten health or decrease the enjoyment of life through.
  - a) Safe environment from health threats such as unnecessary exposure to accident, communicable disease, inadequate or unsafe water supplies or indiscriminate access to harmful habit-forming drugs.
  - b) Environment that should be conducive to self respect and self realization
  
4. To contribute to the refinement and improvement of nursing practice or public health practice and service through
  - a) Generation of relevant research questions,
  - b) Continuous systematic study and appraisal which must be an integral part of professional practice,
  - c) Training orientation and re orientation of professionals in practice, and
  - d) Collaborative effort in multiprofessional research right from planning to implementation stage.

### **3.6.3 Roles/Responsibilities of Community Health Nursing**

Areas of Responsibility are:-

- 1) Nursing which include personal and therapeutic care, health education, counseling and support
- 2) Public Health /Community Health Protective measures including levels of care, disease investigation and environmental control.
- 3) Health related: - Community & family development. These are based on Principles of Community Health Nursing care which are:
  - a) Nursing should be used as a channel of health care
  - b) The Community as a whole should be the focus of attention

### **3.7 Roles and Functions of Community Health Nurse as a Member of the Health Team**

1. The Community Health Nurse Provides and promotes nursing services to families through:
  - a) Assuming direct responsibility for providing care or supervising and directing others to provide care
  - b) Education of others on how to give nursing care e.g. other Professionals individuals family, groups etc.
  - c) Carries out referral.
2. Uses nursing as a channel for strengthening family life and for promoting personnel or family development and self realization through:
  - a) Counseling
  - b) Communication process
3. Participates in disease control activities – through general prevention measures, early identification of disease, provision of care and supervision to reduce effects of disease
  - a) Health Education and campaign
  - b) Screening processes and massive prevention
  - c) epidemiological alerts and investigations
4. Works with appropriate personnel in special setting, such as school, working places to plan and implement nursing phases of their health programmes by:
  - a) Reviewing and interpreting Data
  - b) Monitoring and evaluation
  - c) Medical examinations
  - d) Serving as member of committees for health planning and action.
5. Plans and evaluates nursing services for the population group under her care by:
  - a) using demographic information
  - b) setting goals and objectives and plan outcomes for the Community Health Nursing Services
  - c) planning with the members of the health team the care and services to be rendered.

6. Contributes to the decision and policy setting in the agency and community by:

Writing and sending reports and recommendations to the appropriate agencies for action.

7. Contributes to the extension of knowledge in nursing and health care by engaging in surveys studies or research through
  - a) proposing problems that need systematic study for their resolutions
  - b) planning and carrying out simple studies
  - c) participatory research.

#### **4.0 CONCLUSION**

Unit 1 is an introduction to the whole concept of Community Based Nursing Care which is other wise known as Community Health Nursing.

This unit enables the nurse to have an encompassing idea of what community health, community health nursing are and their interrelationships. This Knowledge will propel the nurse and shapes her understanding of community health nursing in subsequent units.

#### **5.0 SUMMARY**

This unit deals with concepts of community health nursing and various definitions of various concepts such as community health, community health nursing. It also tries to deal with functions, roles and responsibilities of Community Health Nursing as a profession and Community Health Nurse as a practionner in Community Health.

#### **6.0 TUTOR-MARKED ASSIGNMENT**

Write a short essay on the roles of community health nursing /community nurse in Nigerian health systems.

## **7.0 REFERENCES/FURTHER READING**

African Health Training Institution Project: A Topic Outline for the Teaching of Family Health (A Life – Cycle Approach).

Ruth, B. Freeman Community Health Nursing Practice: Philadelphia: 1<sup>st</sup> Education WB Saunders Company.

Frances, A. Maurer Community/Public Health Nursing: Claudia Smith Google Books (Microsoft Entries).

Community: Wikipedia, the free encyclopedic: en-Wikipedia work/wks/Community.

Federal Ministry of Health: Primary Health Care Curriculum for Community Health Officers.

## **UNIT 2 COMMUNITY HEALTH PROBLEMS**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 Major Community Health Problems
  - 3.2 Leading Causes of Death and Morbidity
  - 3.3 Problems that can give Rise to High Incidence of Diseases in Nigeria
  - 3.4 Factors Responsible for the Health Problems of the Community
  - 3.5 Impact/Significance of the Problems to the Health of the Community
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

The health services provided for Nigerians from child hood to adult hood is far from being adequate. Nigeria, like many other developing countries particularly in Africa is still far from reducing mortality ratio in various diseases. This may be due to the health system and health status of Nigerians which are in a deplorable state. Nigeria overall health system performance was ranked 187<sup>th</sup> among the 191 member states of World Health Organization (WHO) in 2000. The prevalence rates of most diseases are high thus increasing morbidity and mortality rates. This unit will look at some of these health problems and factors responsible and look at impact of these health problems on the general heath of Nigerian populace.

### **2.0 OBJECTIVES**

At the end of this unit, you should be able to:

- identify major health problems among Nigeria Populace
- describe the impact/significance of these health problems to the health of the Nigerian population
- identify factors responsible for the health problems.

### **3.0 MAIN CONTENT**

#### **3.1 Major Community Health Problems**

The major health problems in Nigeria are infections and parasitic diseases. These include:

- malaria
- measles
- cough (whooping cough)
- Tuberculosis
- Upper respiration tract Infection
- Diarrhea/Dysentery and diarrhea disease
- Malnutrition
- Skin problems
- Cerebra spinal meningitis
- Yellow fever
- Complications of pregnancy and child birth
- Neonatal tetanus
- HIV/AIDS

Some of these diseases particularly malaria and HIV/AIDSs constitute the most important public health problems in Nigeria. Malaria has become the most important disease affecting about 100 million people each year. Malaria along with blindness, leprosy, sleeping sickness and worm infections are major health problems in Nigeria. Measles, though a public health problem in Nigeria is not a problem of scope and significance of the type posed to the Country by malaria and other diseases while HIV/AIDSs has become a global pandemic with its greatest burden in sub-Saharan African, Nigeria inclusive.

In Nigeria HIV/AIDS epidemic has long expanded beyond the Community classified high-risk groups (Sex workers, long distant truck drivers and migrant workers) and now common place in the general population with risk populations cutting across both elite and no-illiterate populations. Most of these contribute to high morbidity and mortality rates in Nigeria.

#### **3.2 Leading Causes of Death and Morbidity**

1. Most common causes of death in Hospitals in Nigeria are:
  - a) Infective and parasitic disease.
  - b) Diseases of the respiratory system.
  - c) Accidents, poisons and violence.

- d) Diseases of the circulatory system.
  - e) Diseases of digestive system.
2. Common causes of death among children:
- a) Malaria
  - b) Diarrheal diseases.
  - c) Acute respiratory infections (Upper and Lower) respiratory tract Infections e.g. pneumonia.
  - d) Vaccine preventive diseases e.g. diphtheria, pertussis (whooping Cough) tetanus, poliomyelitis, measles and tuberculosis.
  - e) Malnutrition
  - f) HIV/AIDS- High prevalence rate about 300,000 people have died of AIDS. (UNAIDS, 2005).

The major indices of health are:

Crude death rate -16 per 1000 population  
 Crude birth rate - 50 per 1,000 populations  
 Child hood mortality rate - 144 per 1000 Children of 1-4 years  
 Infant mortality rate -85 per 1,000 live births  
 Maternal mortality rate- 55,000 deaths per year  
 Most deaths and serious illness occurring are easily preventable and can be treated with simple remedies.

Less than 5 mortality rate is 201/1000  
 Higher fertility rate- 5.7 %  
 21% of women come in Nigeria are over weight BMI, >25 (%).  
 Prevalence of female circumcision -19%  
 Only 6% of children fewer than 5 years sleep under nets  
 Injuries and accidents account for 70o/o of death in Nigeria.  
 Communicable diseases are responsible for 72% of deaths (WHO 2005).

Non-Communicable Diseases -21% of deaths  
 Only 13% of Nigeria children aged between 12-23 months have been fully vaccinated. 27% of Nigeria Children 12-23 months have not been vaccinated.

38% of Children are stunted in growth.

### **3.3 Problems that can give Rise to High Incidence of Diseases in Nigeria are**

- 1. Kind of health activities of the community.
- 2. Ignorance of correct health practices, culture, taboos, food preferences.

3. Poverty, associated with poor nutrition and poor housing.
4. Poor personal hygiene and environmental sanitation.
5. Lack of good quality of water.
6. Too many children being born.
7. Lack of facilities for treatment of diseases and preventing diseases e.g. Immunization.

### **3.4 Factors Responsible for the Health Problems of the Community**

These can be identified in the various facets of Community life.

#### **1. Nutritional Status of the Population**

- Malnutrition is a common phenomenon in the community.
- Half of the world population is caught in the vicious cycle of ignorance, Poverty, malnutrition (under nutrition) diseases and early death.
- Malnutrition is an underlying factor in more than 50% of childhood mortality in Nigeria
- The number of undernourished people old and young in the developing Countries are very high (450 million).

Population at risk in malnutrition:

- Children- Premature babies are easily susceptible to diseases e.g. malaria, diarrhea, twins or multiple babies.
- Elderly persons.
- Adolescents who eat food in erratic fashion e.g. pregnant adolescents.
- Patients with chronic diseases.

#### **2. Vectors**

Vectors are arthropods or similar invertebrates which transmit diseases to man either directly or indirectly. Examples are:

- 1) Mosquito which causes malaria, filarial and yellow fever.
- 2) Housefly which causes typhoid, cholera and gastroenteritis.
- 3) Tsetse fly causes sleeping sickness.
- 4) Rat flea causing plagues.

### 3. Environmental Factors

These include physical environment, topography, neighborhood and Industrial conditions. They may have direct and indirect effect on community health.

a) **Physical environment-** reflection of level of health, orderliness, Cleanliness of a community is usually useful index of health Consciousness and community development of health - related matters.

b) **Topography and climatic variations**

Factors within these domains include: vegetation, temperature variations, types of soil and mineral deposits.

c) **Neighborhood:** - cohesion among neighbors and established traditions and culture

d) Industrial climate of the Community

e) Atmosphere of place of work crease differences in experiences of health.

### 4. Behavioural Factors

All socio-cultural practices exhibited in:

- Habits and culture passed down to the children help in formation of healthful habits (Socialization Process).
- Gender inequality
- Beliefs
- Attitudes

### 5. Factors at Home

- Attitude and behavior of parent to parent, child to parent, and within siblings.
- Family budget
- Educational status of parent
- General sanitation of the home and its environment

### 6. Tradition and Prejudices

- Health bias
- Religious bias
- Religion and cultural behavior of a community will affect health of its members.

- Taboos in foods
- May affect type of services sought for and received from medical, nursing and auxiliary personnel.

### **7. Socio-Economic Status**

- High/low income families
- Poverty
- Economic policies e.g. privatization, deregulation and massive retrenchment of employees in public service
- Income inequality
- stress

### **8. Political Factor**

- Willingness and unwillingness of people in government to give priority to health matters (significant influence the health status of people in the community).
- Political and social crises
- Corruption, crime and insecurity

### **9. Organizational Factors**

- Overlap in functions may affect coordination and integration of services.
- Bureaucracy.

## **3.5 Impact/Significance of the problems to the health of the Community**

These include:

1. High morbidity among, children and adult.
2. High mortality
  - Infant mortality
  - Childhood mortality\maternal mortality
3. Dependency ratio is increased
4. Low productivity leading to retrenchment
5. Decreased life span
6. Increased rate of handicapping conditions/disability
7. Drain on family/community resources
  - Medical care costs
  - Hospital costs
  - Costs of drugs and appliance

**8. Nutritional impact**

- a) Reduced food supply because of disability or death of food producers and disability or death of food purchasers
- b) Inadequate food preparation because of disorganization and result of ill health

**9. Social impact**

- Short term loss due to family and Community disruption caused by acute illnesses.
- Long-term loss due to chronic diseases or debilitating injury
- Loss of security )

**10. Environmental impact**

Climatic influences:

- Relation of drought to nutritional diseases e.g. PCM (protein, calorie, malnutrition).
- Relation of flood conditions to diseases e.g. malaria.

**11. Migration and urbanization**

- a) Relation to the social system of the community.
- b) Effect of disruption of family system by occupational injuries and chronic illnesses.

12. Physical and biological impact such as water supply, housing, waster disposal, vector infestation e.g.

- Effect of overcrowding on communicable diseases
- Relation of inadequate water disposal on the impact of Bilharzias.

**4.0 CONCLUSION**

Unit 2 describes the community health problems in a typical Nigeria Community. It tries to look at whole perspective of health problems in Nigeria. It gives the community health nurse the idea of prevalent health problems, factors that contribute to their incidence and prevalence and the effect on the overall health of Nigerian populace.

## **5.0 SUMMARY**

This unit deals with Community Health problems and factors that contribute to their emergence and the overall impact on health of the Community.

## **6.0 TUTOR-MARKED ASSIGNMENT**

Identify four (4) Community Health Problems in your area and find out the impact of these diseases in Children and Mothers. Write a 4 page summary of your findings.

## **7.0 REFERENCES/FURTHER READING**

A Topic Outline for the Teaching of Family Health a Life-Cycle Approach African Health Training Institute Project 1977.

Wole Alakija M.D. (2000). Essentials of Community Health Primary Health/Care and Health Management Ambic Press.

Nigerian Health Review (2006). Health Reform Foundation of Nigeria (HERFON).

## **UNIT 3      COMMUNITY DIAGNOSIS/NEEDS ASSESSMENT**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 Definition of Community Diagnosis
  - 3.2 Uses of Community Diagnosis in Community Health/Primary Health Care
  - 3.3 Principles that Govern Community Diagnosis
  - 3.4 Roles of Community Diagnosis in Community Health
  - 3.5 Rationale for Community Diagnosis
  - 3.6 Methods used in Community Diagnosis
  - 3.7 Types of Data to be collected in Community Diagnosis
  - 3.8 Steps in Conducting Community Diagnosis
  - 3.9 Plan for Situation Analysis
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

Community Diagnosis is an essential basic tool and one of the major instruments used in community health care/primary health care (PHC). It helps to find out the needs of the community. These needs can be felt needs, that is, those identified by the community and perceived needs are those identified by the health team.

The type of information sought during community diagnosis includes: information about population, births deaths, age groups, leaders, organization, health services rendered (modern and tradition), manpower resources geographical characteristics, environmental problems including infrastructures.

Thus the purpose of community diagnosis is to have a solid basis for making plans to meet specific identified needs.

## 2.0 OBJECTIVES

At the end of this unit, you should be able to:

- define community diagnosis, needs assessment and situation analysis
- identify the objectives, roles principles, rationale and uses of community diagnosis in community health
- identify the types of data to be collected in community diagnosis
- describe the steps in community diagnosis and situation analysis
- carry out community diagnosis and situation analysis within the community.

## 3.0 MAIN CONTENT

### 3.1 Definitions

#### A) Community Diagnosis

- It is an organized process of identifying accurately the nature and relative size of the health problems of a community.
- It is a systematic examination of the health status indicators for a given Population that is used to identify key problems in a community.

Community diagnosis:

- Identifies needs.
- Identifies resources, needs, constraints and problems.
- Identifies physical, social and cultural characteristics of the community.
- Identifies disease patterns.
- Identifies demographic characteristics of the community.

#### B) Needs Assessment

Process of identifying the community wants, strength, weaknesses and constraints of which may have impact on the health of the community.

There are 3 major types of needs in the community.

- 1) **Felt Needs-** This implies what people feel are their greatest or biggest problems. These are things in the people's lives. (living conditions, ways of doing things, beliefs etc) that they feel if dealt with, will help them to be healthy.

- 2) **Observed/Perceived Needs:** These are needs, problems and constraints identified by the health workers as those that can have negative impact on the community.
- 3) **Expressed Needs:** These are needs, problems and constraints on which health workers and/or community has taken some measures of actions which may or may not have adequately addressed the health issue(s).

### C) **Situation Analysis**

It is a comprehensive review and assessment of the community/ District/LGA in order to determine or come to a conclusion about the situation of the communities which may have direct or indirect impact on the health of the people.

### D) **Objectives of Community Diagnosis**

- to determine what information needed to assess the community.
- to select and use appropriate tools to collect information or use available data.
- to plan and coordinate activities with other members of the team.
- to evaluate data and determine health need priorities of the community.

### 3.2 **Uses of Community Diagnosis in Community Health/Primary Health Care**

- It provides for decision on whether to plan strategy for program, the type of intervention and on which target group it will be applied.
- It provides basis for determining what resources will be needed for an intervention program.
- It provides baseline for future measurement of changes in community health problems.
- A descriptive community diagnosis can be used to show occurrence or distribution of selected diseases or health indicators.

An analytic community diagnosis can:

- a) identify groups needing care.
- b) determine causal factors of diseases in the community.
- c) determine attributes that can be risk markers for vulnerable groups of individuals in the community.
- d) identify community syndromes e.g. malnutrition which can be a

community syndrome in poor areas, hypertension, coronary heart disease which may be community syndrome in affluent communities.

### **3.3 Principles that govern community diagnosis**

1. The most effective way to improve the overall health status of the community is through enhanced community based services organized around Primary Health Care model
2. Comprehensive community health needs assessment that provides baseline data is pre requisite to the development of a long term community effort to improve the health status of people living in the community.

### **3.4 Roles of Community Diagnosis in Community Health**

- It identifies needs used as basis for planning.
- It identifies problems thereby leading to self reliance.
- It identifies constraints which can then be addressed in the planning process.
- It provides a baseline for evaluation of intervention.

### **3.5 Rationale for Community Diagnosis**

- It provides realistic information specific to a community for which definite relevant plans are made, in order to solve the problems using identified resources, in a culturally acceptable manner.

### **3.6 Methods used in Community Diagnosis**

- Observation
- Interviews/Surveys
- Group discussion (focus group discussion)
- Review of existing records in the community clinics/ health centres
- Screening of specific problems

### **3.7 Types of Data to be collected in Community Diagnosis**

In assessing the community so as to determine factors (health, economic and environmental) that can affect health of the community the following data will be collected.

#### **A. Demographic Data**

1. Size of population

2. Composition of the population such as age, sex, marital status and size of families, ethnic groups, social class and religion
3. Birth rate (How many children delivered at a specific period of time?)
4. Death rate (Age, specific death rate )
5. Infant mortality rate (causes of death )
6. Growth rate
7. Migration rate
8. Dependency ratio(number of dependants per breadwinner)
9. Life expectancy

#### **B. Health Problems in the Community**

1. Leading causes of death
2. Leading causes of morbidity
3. Nutritional Status
4. Vectors
5. Varying susceptibility to change
6. Lack of effective communication:
  - Between health and social welfare agencies
  - Between these agencies and the people

#### **C. Diseases**

1. Communicable diseases e.g. T.B., measles, HIVAID, Polio
2. Non-communicable diseases e.g. malaria, worm infestation; and their
  - Mode of spread
  - Age/Sex distribution
  - Endemicity
  - Prevalence
  - Groups in the community mostly affected

#### **D. Health Facilities**

1. Available Health centres
  - Facilities and resources
  - Road conditions to health centres
2. Hospitals
  - Number available
  - Distance to community

**E. Nutrition Status**

1. Availability of nutrients/ food at community and family levels.
2. Food practices, habits and preparation.
3. Food taboos.
4. Breastfeeding, weaning and rearing practices.
5. Food selling places, food handlers, observation of regulation related to food protection.

**F. Environmental Aspect of the Community****1. Land Space**

- a) Amount
- b) Urban versus rural
- c) Ownership (Land tenure)

**2. Land Quality**

- a) Fertile or arid
- b) How utilized? (crops)
- c) Adequacy of food supplies

**3. Drinking Water**

- a) Sources of water supply in relation to pollution
- b) Adequacy
- c) Water treatment

**4. Water disposal**

- a) Kinds
- b) Safety
- c) Adequacy

**5. Climate**

- a) Temperature
- b) Seasonal variations
- c) Rainfall (drought and flooding).

**6. Transportation and Communication**

- a) Roads (quality and seasonality)
- b) Telephone
- c) Radio

- d) Television
- e) Other means of transportation
- f) Other means of transportation.

## **7. Economic**

- a) Industry
- b) Agriculture
- c) Employment versus unemployment

## **8. Housing**

- a) Types
- b) Adequacy

## **G. Resources for Health and Social Welfare**

1. Hospitals and/or health centres
  - Location
  - Size
  - Services offered
  - Organizational System
  - Adequacy to meet community needs
  - Financial support
2. Agricultural and Environmental Services
3. Religious Structure (or Services)
4. Educational services (schools)
5. Social and recreational resources
6. Man power for these services

## **H. Customs/Heritage**

### **1. History of the Community**

- New or established
- Origin of various families

### **2. Established Customs, Beliefs or Taboos**

- Puberty-rites, sexual attitudes and behavior
- Marital roles, relationships, types of marriages
- Traditional fertility regulation
- Childbearing and rearing

- Meaning of children, including social value
- Family customs or habits, including value systems
- Clan or tribal royalties
- Food habits, taboos etc.

### **3. Traditional Medical Practice and Beliefs**

- Manpower medicine man, healers etc.
- Practice based on magic, spells, voodoo. herbs etc.
- Coordinator cooperation with modern scientific medicine.

### **1. Leadership**

1. Identification and selection.
2. Nature of leadership.

- Network of leadership
- Decision making
- Communication
- Delegation of responsibilities.

### **3. Community response**

- Cooperation versus opposition.

### **4. Political influences**

- National
- Regional and local.

### **J. The Community**

- 1) Exploration of how all the preceding factors affect health of the community.
- 2) Uniqueness of each community.

### **3.8 Steps in Conducting Community Diagnosis**

1. Identify boundaries of the community.
2. Make a map of the community showing the boundaries, landmarks that is major. Roads, rivers and markets, important land marks and settlements.
3. Make a list of resources available in terms of industries, markets, churches, mosque, health care facilities personal organizations e.g. transportation, Non- governmental organizations. (NGO'S).

4. Find out about cultural practices and attitudes affecting health, that is those that are useful or harm less or harmful.
5. Describe the social customs and important festivals of the community.
6. Find out the major economic activities of the community.
7. Perform an interview survey of the community by:
  - a) Conducting focus group discussion. (note: focus group discussion is a group discussion that gathers together people from similar back grounds or experiences to discuss specific topic of interest).
  - b) developing a survey instrument using suitable questionnaires or oral questions.
8. Pretesting the instrument on colleagues or some members of the community.
9. Revise the instruments taking into account information gathered during the pretesting.
10. Have group discussion with health staff and with community about sample survey.
11. Train interviewers and validate the result of their data.
12. Carry out interviews of the sample chosen using appropriate sampling techniques.
13. Analyze data, summarize.
14. Write report.
15. Give feedback to the community and other health workers.
16. Discuss the report with the health workers.
17. Plan for discussion with the community.
18. Present to the community in a manner they will understand.
19. Discuss possible suggestion for solution.
20. Plan for community heath activities to solve identified problems.

This is done in collaboration with the community.

### **3.9 Plan for Situation Analysis**

1. Situation analysis is conducted usually on the health services provided to determine the ability of health services to respond to problems found during community diagnosis.
2. Types of information gathered during situation analysis:
  - The analysis consists of a complete survey of health facilities in the local Government area, their distribution, category of personnel in the facilities and number in each category.
  - It provides information in the number on the type and volume of services provided in the facilities.

- Information on the number of settlements in each local Government area, their population, presence of basic infrastructures that affect health e.g. roads, electricity telephones, portable water supplies and schools.
3. Role of Situation Analysis
    - To provide baseline data for implementation of community health services/primary health care at local government level, district and community levels.
  4. Instruments used for Situation Analysis
    - a) House Hold Questionnaire (Form H) used for holding information e.g. members of the household, demographic characteristics and documented illness episodes in the past month.
    - b) Child questionnaire used to collect child information e.g. immunization status, episodes of diarrhea.
    - c) Female questionnaire – information to be collected will be on marital status, under 50 years, child bearing status, and women who have never been pregnant, number of children, dead or alive, knowledge on certain vital health matters necessary for the survival of her children e.g. immunization and nutrition, type of maternal and health services (Antenatal, delivery & Post Paternal Services) during her last pregnancy.
  5. Plan for Situation Analysis
    1. Contact the local Government Area
    2. Obtain instruments from (FMOH, SMOH, and NPCHDA)
    3. Train interviewers
    4. Conduct situation analysis by collecting information on the:
      - Local Government Area population by district and age.
      - Health facility by type, location and ownership
      - Health personnel by type & location
      - School population by type and location
      - Socio economics status
      - Public utilities and services
      - Local government Primary Health Care (PHC) activities
      - Local government area logistics and information supports
    5. Collate data from the field
    6. Write report.

## 4.0 CONCLUSION

Community diagnosis and situation analysis are both instrument for Community Health Care and for implementation of Primary Health care; for planning activities of intervention to improve the health of the populace in the community. The instruments, if properly utilized, enable the community to understand their problems, thus enabling them to take control of the services and ensures that it effectively serves their needs.

## 5.0 SUMMARY

This unit has looked at community diagnosis as an instrument used in finding out the needs of the community. The roles used objectives, and information collected was discussed in this unit. It also described the steps to follow in carrying out community diagnosis so as to provide solid basis for planning to meet specific needs of the community. The unit also looked at situation analysis. The situation analysis like community diagnosis is an instrument used to determine the ability of health services to respond to problems found during community diagnosis.

## 6.0 TUTOR-MARKED ASSIGNMENT

### Group Assignment

The students are expected to carry out community diagnosis in a particular community.

The students divide themselves into groups.

**Group one:** Map out the community showing major land marks.

**Group two:** Gather

- 1) Demographic data
- 2) Information on:
  - a) Health problems, diseases and health facilities.
  - b) Nutritional Status

**Group three:** Gather information on

- a) Land space and quality
- b) Drinking water, water disposal
- c) Climate
- d) Transportation and Communication
- e) Economic activities
- f) Housing

**Group four:** Gather information on

- a) Resources for health and social welfare
- b) Leadership
- c) Community
- d) Customs and heritage

- **Write a report on each of the assignment not more than six pages.**

## **7.0 REFERENCES/FURTHER READING**

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## **UNIT 4 COMMUNITY MOBILIZATION, COMMUNITY PARTICIPATION/INVOLVEMENT**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 Definition, Purpose, Rationale and Advantages of Community Mobilization
  - 3.2 Community Participation and Involvement
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

Community mobilization is a method of making people become actively involved in solving their health care problems. It is not a onetime activity but rather a continuous one that is expected to outlive any health worker. In addition, it requires patience on the part of health worker and if intensively and properly done, one can begin to see the results community mobilization efforts within a short space of time.

### **2.0 OBJECTIVES**

At the end of the unit, you should be able to:

- describe community diagnosis
- identify the principles of community mobilization
- describe community participation and involvement
- identify the advantages of community mobilization
- describe the steps in community mobilization.

### **3.0 MAIN CONTENT**

#### **3.1 Definition of Community Mobilization**

- It is means of encouraging, inspiring and raising the interest of the community to make them actively involved in finding solutions to some of their own problems.
- It is a continuous process requiring participation by all health workers and community including the leaders.

## **Purpose of Community Mobilization**

The purpose of community mobilization is to generate active community participation and involvement leading to self-reliance and initiatives, obtain support of different interest groups, non-governmental organizations, etc.

## **Rationale of Community Mobilization**

The rationale for community mobilization is because there is need for the community to be informed, educated, motivated and involved formally or informally in health programs so that they can be convinced that the program is convenient efficacious and affordable. They should be made to feel that the program is thus with government support.

## **Advantages of Community Mobilization**

1. There is increased interest in working together as a team.
2. It reaches the community whether homogenous or heterogeneous community at the same time.
3. The community is actively involved in the health activities.
4. It enhances self-reliance.
5. There is an increased level of health awareness.

## **Role of Community Mobilization in Community Health Care/Primary Health Care**

It provides the community the opportunity to:

1. Identify own problems
2. Plan own solutions
3. Use own resources to solve problems
4. Foster prompt attention to problems

## **Organizations within the Community that can Enhance Community Mobilization and Then Community Participation**

1. Market women
2. Age grades/groups
3. Pressure groups
4. Voluntary social groups
5. Political group
6. Churches
7. Mosques
8. Schools
9. Village health committee.

## **Principles of Community Mobilization**

The principles are not different from that of Health Education.

The basic principles are:

1. The community must have interest or motivation.
2. Respect for culture and tradition: This is quite essential in community mobilization process; it will enable the community to listen because there is respect for their culture and values.
3. Reliability of the source of information: messages presented must be based on facts and must be from reliable source.
4. Acceptability and adaptability of the health information and activities: The community must understand and accept the activity.
5. Active participation: - The community must be actively involved and participate in the program activities.

## **Steps Involved in Community Mobilization**

1. Identify the head of the community and find out who the local leaders are.
2. Make the initial contact with the leaders and communicate intentions.
3. Acquaint self with the cultural and social protocols of the community.
4. Arrange meeting with the community head and community representatives.
5. Develop an agenda for the meeting with the other health workers.
6. Attend the meeting.
7. Explain purpose of the meeting in an acceptable language. The following points may be taken as explanation:
  - What the program is all about.
  - What the program is already doing in this regard.
  - What the community contribution could be.
  - How community participation would make a difference to the program.
8. Request them to convey the message to other community members and bring feedback to subsequent meetings.
9. Encourage questions and participation from the audience to clarify all issues before meeting disperses including actions to be taken before the next meeting.
10. Decide with the participants the time, date and venue of the next meeting.

11. Have as many meetings as necessary until a consensus is reached.
12. Follow-up visits should be made to:
  - a) meet the different district or village heads.
  - b) obtain a formal reaction from the community.
  - c) Explain points that were unclear to the community at previous meetings.
  - d) clarify all questions.

### **Composition and Functions of Committees that can Enhance Community Mobilization**

1. Local Government Area (LGA). PHC Management Committee.

- Composition:
- a) Supervisory Councilor for health.
  - b) LGA/PHC Coordinator of Health, who acts as secretary.
  - c) Teaching Hospital PHC Coordinator
  - d) School of Health Technology PHC Coordinator
  - e) Chief Community Health Officer for LGA
  - f) Chief Community Development Officer for LGA
  - g) At least 3 representatives of the community must include a woman
  - h) Representative of International NGO which has PHC Program in the Area
  - i) Representative of Mass Media

- Functions: -
- 1) Plan and Manage PHC Service
  - 2) Identify training needs of health workers at LGA
  - 3) Take care of PHC budget and Finances at LGA
  - 4) Mobilize communities for effective participation in health care program.

2. District Health Committees (LGA is divided into district of 30,000-40,000 population)

- Composition: -
- a) A District Head
  - b) At least 4 representatives of village organizations
  - c) 2 representatives of NGOs (health-related).
  - d) 3 representatives of health-related sectors, for example directorate of foods, roads, rural infrastructure, agriculture
  - e) District health team.

- Functions: -
- 1) Organize fund raising activities.
  - 2) Liaise with government and other voluntary agencies in the district to solve health and social problems.
  - 3) Coordinate and supervise the activities of village health committee.

### **3. Village Health Committee**

- Composition: -
- a) All those whom are very influential in the community and reside in the community.
  - b) Those representing intersect oral agencies in the community (agricultural extension workers, community development officers and educationists).
  - c) Representatives of women organizations, religious organizations and youth organizations.

In addition, members of the committee:

- i) should be resident in the area they represent.
- ii) understand and speak local language.
- iii) be knowledgeable and share the community's culture, attitude and beliefs.
- iv) Command the respect of the community, be friendly and approachable and must be willing to make sacrifices to the community.

Functions village/community health committee.

1. Identifies health and social needs of the community.
2. Identifies local, human and material resources to meet these essential needs.
3. Mobilizes and stimulates active participation of other members of the community in the planning and implementation of any projects.

### **3.2 Community Participation and Involvement**

This is one of the strategies of Primary Health Care. The community is involved right from the planning stage of a program to implementation and even evaluation stage, thus decision-making process is revolved around the community.

Advantages of community participation and involvement in health care activities:

- 1) It allows communities to exert effective administrative supervision over health service
- 2) It makes use of part time unremunerated community/village health workers.
- 3) It promotes local insurance scheme for purchasing pharmaceutical products.
- 4) It provides a communal labor for the construction of health care facilities for example toilets, water supply and cleaning of the community.
- 5) It improves communication between the population and the health service.
- 6) It improves coverage and access to health care.
- 7) It enables people to be more aware of their own potential contributions to health and to engage in health promoting activities.
- 8) It eases the government constraints and resources by sharing the burden with community resources by sharing the burden with communities themselves.
- 9) It allows for a better understanding of traditional values, beliefs and structures for example if the role of traditional healers in health care is understood and accepted, they can be utilized in health care delivery.

Socio-political factors that can affect community participation/ involvement

- 1) Unfavorable Socio/political factors:
  - a) Rural poor communities and landless workers.
  - b) Monopoly of productive crops.
  - c) No opportunity for formal/ informal leadership among the poor.
  - d) Repression of trade unions by the powers that be.
  - e) Concentration in curative health services and greater percentage of health care resources spent in rural areas.
  - f) High tax rate and poor payment for secondary health service.
- 2) Favorable Socio/Political circumstances
  - g) Rural family relatively homogenous.
  - h) Government showing concern for rural development and improvement of living standards in rural areas.
  - i) Local people and NGOs showing initiative for health care.

#### **4.0 CONCLUSION**

In mobilizing people in support of community health /Primary health. Health care, the strategies of community mobilization/ involvement. Have been utilized in such a way that health care is able to reach the undeserved. Community involvement has been the bedrock of community health care.

#### **5.0 SUMMARY**

In unit 4, community mobilization and community Participation/involvement was described. Their functions and interrelationship in community health care was discussed.

#### **6.0 TUTOR-MARKED ASSIGNMENT**

Write short note on community mobilization and its interrelationship with community participation/involvement. The write up should not be more than six pages.

#### **7.0 REFERENCES/FURTHER READING**

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## **UNIT 5 NURSES ROLE IN THE PREVENTION AND CONTROL OF DISEASES IN THE COMMUNITY**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 Levels of Prevention
  - 3.2 Control of Communicative Diseases
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

The control of diseases is a central and major concern of community health stakeholders. The control of diseases initially was limited to communicable diseases, however public health practitioners have expanded the scope of control measures to non-communicable diseases including chronic diseases. The community health nurse as a member of the health team is closely involved in the dynamic process of control of diseases.

### **2.0 OBJECTIVES**

At the end of this, you should be able to:

- describe the levels of prevention of diseases
- describe the strategies for prevention and control of diseases
- identify the principles of control of disease
- describe surveillance/tracking/data collection as strategies for prevention and control of diseases
- discuss management of disease outbreak.

### **3.0 MAIN CONTENT**

#### **3.1 Levels of Prevention**

It provides foundation for planning preventive programs and education. Targeting levels of prevention ensures effective intervention by promoting protective factors and reducing risky behaviors.

The three levels of prevention are primary, secondary and tertiary levels of prevention. Prevention takes place at these levels.

### **1. Primary Level of Prevention**

At this level, development of a disease is avoided. Most population based health promotion activities are primary preventive measures e.g. hand Washing, immunization, personal hygiene, positive health habits.

### **2. Secondary Level of Prevention**

Preventive activities are aimed at early disease detection thereby increasing opportunities for interventions to prevent progression of the diseases and emergency of symptoms e.g. early treatment of diseases.

### **3. Tertiary Level of Prevention**

It reduces the negative impact of an already established disease by restoring function and reducing disease related complications e.g. rehabilitative measures. These are based on 5 levels of control

- a. Health Promotion
- b. Specific disease prevention
- c. Early diagnosis and treatment
- d. Limitation of disabilities
- e. Rehabilitation

There is also another classification known as three tiered preventive intervention classification system- universal, selective and indicated prevention.

- a. Universal prevention addresses the entire population (national, local, community, school, district) and aims at preventing delay in the diseases. All individuals without screening are provided with information and skills necessary to prevent the problem.
- b. Selective prevention focuses on groups whose risk of developing problems is above average e.g. alcoholism. The subgroups may be distinguished by characteristics such as age, gender, family history, or socio economic status.
- c. Indicated prevention involves screening process and aims to identify individuals who exhibit early signs of the disease.

## **3.2 Control of Communicative Diseases**

Communicative disease is an illness which is caused by a specific infectious agent or its toxic products which arises through transmission

of that agent or its products from a reservoir to a susceptible host. Such transmission can be either directly as from an infected person or indirectly through the agent of intermediate plant and animal host, vector and inanimate environment.

An infected agent: - An organism mainly micro organism that is capable of producing an infection or infectious diseases.

An infection is defined as the entry and multiplication of an infectious agent in the body of man or animal resulting in cellular injury.

Ways by which infection can be acquired:

- a) diseases.

### **Reservoir of Infection**

- can be any humanity being animal anthropoid plant, soil, inanimate matter in which an infectious agent normally lives and multiplies and on which it depends primarily for survival and on which it depends primarily for survival and reproduction in such manner that it can be transmitted to a susceptible host.
- Such susceptible person or animal is presumed not to possess sufficient resistance against a particular agent to prevent contracting disease if or when exposed to the agent.

### **Methods of Control of Communicable Diseases**

There are three main methods of control

- 1 Eliminate reservoir of infection
- 2 Interrupt the pathway transmission
- 3 Protect the susceptible host

#### **1. Elimination of Reservoir of Infection**

The objective is to find and treat all infected persons both patients and carriers thereby eliminating source of infection.

For Some Infections:

- a. Isolation of patients for diseases with high morbidity and mortality and infectivity.
- b. Quarantine-This refers to limitations of movement of persons who have been exposed to infection. The restriction continues for a period of time equal to the usual longest duration of the

incubation period of the disease. In case of animals as reservoir, destruction e.g. killing the dogs in case of rabies.

## **2. Interruption of Transmission**

This mostly involves improvement of environmental sanitation, personal hygiene and food hygiene.

## **3. Protection of the Susceptible Host**

This may be achieved by active or passive immunization and chemoprophylaxis.

The general methods for the control of communicable diseases

### **A. Preventive Measures**

1. Vaccination against epidemic e.g. measles and others
2. Chlorination of water supplies to prevent water borne diseases
3. Pasteurization of milk.
4. Control of rodent, anthropoid and animals.
5. Immunization
6. Health education
7. Environmental sanitation and personal hygiene
8. Chemoprophylaxis e.g. malaria, filariasis, meningococcal meningitis and bacillary dysentery.

### **B. Control of Patient. Contact and Environment**

1. Measures are taken to prevent spread of infectious matters to persons and to the environment.
2. Keeping contacts under surveillance during incubation period.
3. Keeping carriers under control until found to be free of infectious agents.
4. Reporting to local authority.
5. Isolation.
6. Concurrent disinfection.
7. Quarantine i.e. limitation of persons exposed to the infection.
8. Immunization of contact.
9. Investigation the contact.
10. Specific treatment.

### **C. Epidemic Measures**

These are measures to limit spread of communicable disease which has developed widely in a group or community within an area, state or nation.

1. Notification of occurrence to the appropriate health authority.
2. Mass immunization.
3. Health Education.
4. Investigation of source and contact.

### **D. International Measures**

1. Control of international travelers, immigrants, goods, animal product and other means of transportation of the above.
2. Intergovernmental arrangement/ collaboration enactment of national laws.
3. Monitoring immunization posts especially at the borders and posts.

Agents of communicable diseases and their associated diseases.

1. Bacteria- All communicable bacterial diseases.
2. Virus- HIV and all communicable viral infection.
3. Protozoa- malaria, amoebas.
4. Fungi- *Tina corpora*'s.
5. Metazoan- Helminthes.
6. Rickettsiae- Louse- borne typhus fever and relapsing fever.

### **Control of Non-Communicable Diseases**

These are diseases that cannot be transmitted by infectious agents and cannot be transferred from one person to the other.

The non- communicable diseases are:

1. Cancer
2. Hypertension
3. Diabetes mellitus
4. Obesity
5. Accidents

They are mostly chronic diseases.

The epidemiology of non-communicable diseases focus on the following:

1. Etiology of the diseases
2. Morbidity rate in comparison with other countries or border communities.
3. Factors associated with the morbidity:
  - a) Seasonal variation
  - b) effect of heredity or race
  - c) Social class and operational factors
  - d) Sex differences, age factors
  - e) psychosomatic factors
4. Mortality of the disease.
5. Evaluation of the chances of a person developing the disease (risk factors).
6. Methods of preventing the disease:
  - a) completely without occurrence.
  - b) from deteriorating.

### **Methods Available for Prevention and Control**

#### **1. Primary**

- a) Researches to find out agents or factors associated with the disease.
- b) Health Education- Creating awareness on the early signs and Symptoms, so that they can seek for early medical intervention.
- c) Periodic examination check-up particularly for those of higher risk groups.
- d) Legislation against any potential causal agent e.g. carcinogen.
- e) Specific protection of those at risk:
  - 1) Substitution
  - 2) No mechanical handling of dangerous agents e.g. isotopes
  - 3) Dust control measures and wet process
  - 4) Exhaust ventilation
  - 5) Protective clothing
  - 6) Control of toxic substances
  - 7) Control of motor vehicle exhaustion fumes

## 2. Secondary

- a) Early detection of disease
- b) Screening test e.g. Papanicolaou test for cervical test, mammography for breast cancer, chest X-ray.
- c) Treatment to cure or stop progression of disease e.g. surgery, chemotherapy, chemoprophylaxis.

## 3. Tertiary

1. Rehabilitation
2. Nursing care of terminal or chronic diseases in the hospital or the Patients home (Community –Based Nursing Care).

### Surveillance/Tracking/Data Collection

This is continuous scrutiny of careful observation of the distribution and spread of infections and the related factors with sufficient accuracy and completeness to provide basis for effective control.

It involves 1) systematic collection of all relevant data. 2) Orderly consolidation and evaluation of these data. 3) Prompt dissemination of the results to those who need to know, particularly those who are in position to take action.

Included are tracking and data collection including evaluation of:

- a) Morbidity and Mortality reports.
- b) Special reports of field investigation of epidemics and of individual Cases.
- c) Isolation and identification of infectious agents by laboratories.
- d) Data concerning the availability, use and effect of vaccines and toxoids immunoglobulins, insecticides and other substances used in control.
- e) Information regarding immunity levels in segments of the population.
- f) Other relevant epidemiological data. A report summarizing the above should be prepared and distributed to all cooperating persons and others with a need to know the results of the surveillance activities.

This procedure applies to all levels of public health from local to international serological surveillance.

The practice of close medical or other observation of the health of contacts without restricting their movements to promote prompt recognition of infection or illness in these contacts if it occurs.

### **Disease Outbreak Management**

This includes:

- Provision of prompt and adequate care. It includes secondary preventive care and tertiary care (rehabilitation).
- Health Education activities (mass campaign) targeted at people with high risk.
- Serves as part of the epidemiological investigation group by helping to design and collect for epidemiological analysis.
- Involved in the implementation of regulations for the control of disease.
- Plan, implement and evaluate immunization measures by :
  - a) educating on the need for immunization.
  - b) giving the immunization.
- Control of the spread of infection by:
  - a) monitoring the care provided for those who suffer from the disease whether in the hospital community based care.
  - b) takes part in quarantine and surveillance and tracking of the population.
  - c) Health Education on the prevailing disease and how to prevent spread of the disease.
  - d) Counseling on prevention and treatment so as to promote their active participation in their own care and protecting others.
- Provision of therapeutic care in treatment centers.

### **4.0 CONCLUSION**

The control of disease is a dynamic process of action. Control programs enhance efforts to define the nature and distribution of disease in the population, to institute available preventive measures and to secure prompt and adequate curative and rehabilitative care.

## 5.0 SUMMARY

Unit 5 has discussed levels of prevention, strategies for prevention and control of disease, principles of control. The unit also discussed surveillance/tracking/ data collection as strategies for prevention and control of diseases. It also discussed briefly management of disease outbreak.

## 6.0 TUTOR-MARKED ASSIGNMENT

Write short notes on methods available for:

- a) Control of communicable diseases using Tuberculosis as an example.
- b) Control of non- communicable diseases using hypertension as an example.

## 7.0 REFERENCES/FURTHER READING

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**MODULE 2**

Unit 1	Organization and Administration of Community Health Nursing
Unit 2	Immunization
Unit 3	Monitoring and Evaluation
Unit 4	Research Methodology in Community Health Nursing
Unit 5	Demography and Biostatistics
Unit 6	International Health

**UNIT 1 ORGANIZATION AND ADMINISTRATION OF COMMUNITY HEALTH NURSING****CONTENTS**

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3.1	Planning and Organizing Community Health Services
3.1.1	There are Core Concepts that are Inherent and Valued within the Community Environment
3.1.2	Coordination Ensures Harmony in the Function of Various Units and Subunits
3.1.3	The Community Health Nurse Must Have
3.2	Planning and Organization of Services for Mother and Children
3.2.1	Introduction
3.2.2	Objectives of Care for Mother and Children
3.2.3	Activities Undertaken in Caring for Mother and Child (Maternal and Child)
3.2.4	Identification and Intensified Care of High Risk Group
3.2.5	Problems that May be Encountered in the Organization of MCH/Clinic Include
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3.3	Services Rendered to Handicapped and Physically Challenged
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3.3.2	Categories of Handicapping Conditions in the Community
3.3.3	Handicapping Conditions in Children
3.3.4	General Management of Handicapping Conditions in the Community
3.3.5	Ways to Help Handicapped Persons in the Society

- 3.4 Services Provided to the Vulnerable
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- 3.5 Planning and Organizing of Services for Patients with Chronic Conditions
  - 3.5.1** Definition
  - 3.5.2 Features of Chronic Conditions
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  - 3.5.4 Areas of Nursing Intervention
- 4.0 Conclusion
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- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

## **1.0 INTRODUCTION**

The most important thing in making the community health nurse functional is effective organization or proper administration of community health services.

The aim of organization and administration is to get things done through people.

Therefore services that will be provided to the target group such as mother and child, handicapped, the vulnerable and those with chronic diseases must be properly organized and effectively coordinated by all members of health team such as the community health nurse.

## **2.0 OBJECTIVES**

At the end of this unit, you should be able to:

- plan and organize services to be provided to all segments of the Population
- implement effectively, services to be rendered to mother and child
- identify essential services needed by the handicapped/physically challenged
- identify services to be provided to the vulnerable
- describe services provided to people with chronic diseases e.g. tuberculosis, cancer, HIV/AIDS.

### **3.0 MAIN CONTENT**

#### **3.1 Planning and Organizing Community Health Services**

##### **3.1.1 There are Core Concepts that are Inherent and Valued within the Community Environment**

1. Promotion and understanding of health as a complete state of physical, social and emotional wellbeing not merely the absence of disease.
2. Contribution to identifying and meeting the main health needs of the community
3. Comprehensive service delivery and program content that includes treatment, early identification and intervention, and health promotion
4. Participation and consultation of people and communities about health Issues.
5. Multidisciplinary approaches.
6. Promoting health through working in collaboration with other sectors in order to address the social and environmental factors that inhibit health and well-being.

As a member of the health team and in the process of planning and organizing community health services, the nurse carries out the following functions:

- Provide general counseling service to the local community.
- Contribute to the development of community health policies.
- Plan health promotion projects initiatives and facilitates groups e.g. supportive groups (group living with cancer etc.
- Develop health promotion initiatives within the principles of research, partnership and community consultation.
- Responsible for maintaining quality management program and service wide planning.
- Plan for community awareness program.
- The community health nurse as a member of the health team:
  - ensures access to quality of care.
  - mobilizes and distributes resources.
  - trains personnel.
  - supervises and monitors activities in the service area.
  - collects, collates information for planning purposes.
  - carries out research.
  - provides integrated services at district/ community level.
  - ensures provision of quality health services at community level.

- supervises, monitor and train lower level health workers.
- forges a close partnership with community institutions and leaders, community-based health workers and other health related institution in the catchment area.
- plays advocacy role in ensuring the provision of health
- related services such as sanitation, water and the protection of the environment.

### **3.1.2 Coordination Ensures Harmony in the Function of Various Units and Subunits**

It involves supervision which has the following qualities:

1. Regular
2. Timely
3. Based on set targets
4. Done in culturally acceptable manner
5. Not humiliating
6. Offers timely reward for good performance
7. Facilitates 2- way communication.

### **3.1.3 The Community Health Nurse Must Have**

- 1) motivating skills that is ability to inspire staff to direct their efforts to the attainment of set goals.
- 2) delegating ability which involves assigning part of one's responsibility to a junior colleague and giving sufficient resources and control to undertake the responsibility and sharing accountability.
- 3) Good supervising skills.

## **3.2 Planning and Organization of Services for Mother and Children**

### **3.2.1 Introduction**

There are three general problem areas with which the community health nurse must deal with in providing nursing care to a growing family:-

- 1) Problems associated with child bearing and early infancy
- 2) Problems associated with child development and child rearing.
- 3) Problems associated with prevention and care of childhood illness and injury

In the community there is need to reduce maternal risk in order to maintain an intact healthy family. Services are provided in an integrated and culturally acceptable manner.

The integrated service allows:

- i. more children to be attended to
- ii. for supporting staff to be utilized

### **3.2.2 Objectives of Care for Mother and Children**

The objectives of care include:

- 1) to make sure that every expectant mother maintains good health (both physical and psychological health) to normal delivery and delivers healthy children.
- 2) to provide antenatal, intranatal, postnatal and child spacing services.
- 3) to prevent infertility, sub-fertility and sterility

### **3.2.3 Activities Undertaken in Caring for Mother and Child (Maternal and Child Health Services)**

- Screening of pregnant women to know those “at risk”
- Referring to those “at risk” for management at the secondary and tertiary level
- Routine deliveries
- Follow up during puerperium
- Immunization of children and also of expectant mothers
- Identification of children “at risk” and families “at risk” so that they can be followed up.
- Collection of routine data about clinic activities
- Collection of data which are used to monitor development and growth of children e.g. weight and height
- Health education with emphasis on nutrition, immunization, childbearing, child spacing and fertility problems
- Counseling on problems relating to pregnancy
- Distribution of medicines like folic acid, multivite, iron tablet and anti malarial tablets
- Distribution of contraceptive device and supplementary food
- Treatment of common ailments and diseases and referring difficult cases to secondary or tertiary centre
- Nutrition rehabilitation unit and its maintenance including agricultural process
- Adult literary program( encouragement to participate)

- Intersectoral coordination maintenance with community development unit, agricultural extension unit, education unit and other units involved in case of mother and child
- Liaising with other health agencies in the area providing them with data in community problems
- Liaising with community leaders on current and future health programs.

### 3.2.4 Identification and Intensified Care of High Risk Group

High Risk groups include:-

- 1) All vulnerable families with members of child bearing age in
  - a) Low income groups
  - b) Immature or incomplete families
  - c) Genetically disadvantaged families
- 2) Families in which mother is subject to the special obstetric risk in the following categories
  - a) Those under 16 or over 35 years of age
  - b) Those having poor nutritional status or poor habits, particularly overweight or underweight and history of inadequate diet
  - c) Those with history of systemic or metabolic disorders especially hypertension or genetic risk
  - d) Those with first pregnancy or more than four pregnancies
  - e) Those with history of previous obstetric complications e.g. difficult labor, premature labor or fetal loss
- 3) Families with risk infants in the categories
  - a) Premature or low birth weight babies
  - b) Babies with low apgar score and children who have undergone difficult maternal labor
  - c) Failure to thrive
  - d) Child whose suffering from rubella HIV/AIDS, viral diseases
- 4) Families with social problems in the categories
  - a) Unwanted/pregnancies/babies
  - b) Families with alcoholic father/mother
  - c) Unmarried mother

### 3.2.5 Problems that May be Encountered in the Organization of MCH/Clinic Include

- Poor infrastructures and management tools, old or poorly built infrastructures
- Inadequate manpower
- Poorly trained manpower
- Lack of contact with community
- No definite routine activities
- Too many patients
- No job satisfaction among staff, lack of career structure and poor morale
- Shortage of drugs or irregular supply of drugs or pilfering of drugs
- Broken down equipment, unused equipment, misuse of equipments and vehicles
- Lack of intersectoral collaboration e.g. education, agriculture
- Misuse of equipments e.g. refrigerators for vaccines
- Inadequate or incomplete records.

### 3.2.6 Major Areas of Community Health Nursing in MCH

- 1) Prevention of prematurity and caring for the premature babies.
- 2) Reduction of congenital defects.
- 3) Preventing or caring for the victims of accidents and injuries.
- 4) Recognizing and caring for illness.
- 5) Prevention and controlling of communicable diseases.
- 6) Prompt care for handicapping conditions (Rehabilitation).

## 3.3 Services Rendered to Handicapped and Physically Challenged

### 3.3.2 Categories of Handicap

These include:

**Psychological group-** mentally retarded, maladjusted. emotional, specific learning defect such as autism and dyslexia

**Motor group-** cerebral palsy, spinal bifida, congenital dislocation of the hip.

**Sensory group -** visual defect, auditory defect.

**Chronic disorder -** severe asthma, congenital heart disease, epilepsy, Sickle cell disease

### 3.3.2 Categories of Handicapping Conditions in the Community

- Cerebral palsy, blindness and partial sightedness.
- Mental retardation and its variations 9 difficulty in learning, brain damage disorders.
- Epilepsy.
- Sickle Cell Disease
- Cardiac problems
- Asthma
- Tuberculosis
- Diabetes
- Leprosy
- Hypertension.

### 3.3.3 Handicapping Conditions in Children

- 1) **Blindness** e.g. visual acuity less than 3/60 by Snellens chart.
- 2) **Partially deaf** – can be assisted with special apparatus.
- 3) **Educational subnormal-** requires special type of education.
- 4) **Partially deaf-** can be assisted with special apparatus.
- 5) **Partially sighted** e.g. visual acuity with glasses between 3/60 and 6/60 by Snellens chart.
- 6) **Epileptic:** those whose epilepsy prevents them from attending ordinary schools.
- 7) **Maladjusted** – children who are emotionally and psychologically disturbed and require special schools.
- 8) **Physically handicapped** – those who cannot attend normal school due to crippling defect not associated with hearing or sight
- 9) Speech defect.

### 3.3.4 General Management of Handicapping Conditions in the Community

- Recognizing and taking appropriate action on environmental hazards as applicable to the disabled persons e.g. wells, pools of water, uneven terrain, pot holes, open fire, etc.
- Teaching and working with families of disabled person on the care and rehabilitation of disabled persons to be independent and self reliant
- Keeping a register of names, ages, address and activities of disabled persons.

- Organizing in collaboration with the community development committee, sheltered workshop for the disabled persons within the community.
- Identify available resources for screening and care of disabled persons in the area.
- Obtain or prepare a directory of institutions catering for disabled persons.

### **3.3.5 Ways to Help Handicapped Persons in the Society**

- 1 Teaching parents/ guardians of mentally subnormal about how to look after them.
- 2 Financial help to those bringing up mentally retarded children.
- 3 Make available special sheltered workshop.
- 4 Available special education facilities.
- 5 Adequate hospital care.
- 6 Occupational therapy.
- 7 Gainful employment to those who are too incapacitated to be self reliant and supporting.
- 8 Community awareness and social acceptance
- 9 Keeping a register of handicapped including personal information.
- 10 Removal of environmental hazards e.g. pot holes, ditches, open fire etc.

## **3.4 Services Provided to the Vulnerable Group**

### **3.4.1 Definition**

Vulnerable is one who is more susceptible to health or social disorders. The person is likely to go into crises when there is stress.

### **3.4.2 Classification**

Vulnerable families

- The very poor family
- Crisis prone family
- Old people
- People with disability
- Families with many children
- Families with one parent
- Families with disabled children
- Unemployed persons (official/unofficial)
- Orphan children

- Incomplete family
- Group with low education
- Vulnerable due to mental illness
- Domestic violence
- Vulnerable due to physical health problem

### **3.4.3 Services Provided to the Vulnerable in the Community**

- 1) Monitoring of community Health status.
- 2) Identifying community health hazards.
- 3) Providing people with education and tools to promote health and Prevent illness and injury.
- 4) Mobilizing community partnership in health delivery service to solve community health problems.
- 5) Developing policies and plans to solve community health problems.
- 6) Evaluating community health services and outcomes.
- 7) Community oriented nurses' design their population level assessment, policy, surveillance strategies to eliminate health disparities of vulnerable population groups.

## **3.5 Planning and Organizing of Services for Patients with Chronic Conditions**

### **3.5.2 Definition**

Chronic conditions are those illnesses that are long term (lasting more than 6 months) and can have a significant effect on the person's life. Examples are: heart disease, cancer, diabetes, chronic bronchitis and tuberculosis.

### **3.5.2 Features of Chronic Conditions**

1. It is permanent.
2. It leaves a residual disability.
3. It is caused non reversible pathological conditions.
4. It requires rehabilitation.
5. It requires long period of supervision.

### **3.5.3 Services Rendered to Patients with Chronic Conditions**

This is based on the three levels of care:

#### **A. Primary Level**

1. Health Education health promotion.
2. Immunization.
3. Genetic counseling for those families with history of diabetes, mental retardation and sickle cell disease.
4. Prompt care of predisposing factor e.g. obesity, elevated blood pressure, anemia and stress.
5. Accident control in the home, school and industry.

#### **B. Secondary Level**

1. Surveillance including developmental and emotional assessment, physical assessment
2. Screening: - General screening, multiphasic screening or screening for special conditions such as Tuberculosis, Cancer, heart disease or behavioral disorders and to identify a symptomatic disease e.g. screening for breast cancer, prostate cancer
3. Alerting vulnerable groups to the need for early recognition of symptoms of particular chronic conditions

### **3.5.5 Areas of Nursing Intervention**

- 1) Support of the family by:
  - a) Maintenance of harmony in the family
  - b) Support the management of the patient
  - c) Maximize comfort and safety of the patient
  - d) Coordination of community and family efforts in the care of chronically ill
  - e) Reduce family and patient stress through reassurance, visitations.

## **4.0 CONCLUSION**

Process of organizing and administration of community health nursing helps to maximize the benefits of nursing care and helps minimize the stress associated with community health care because of its complexity.

## 5.0 SUMMARY

This unit focuses attention on the process of organization of health services and tries to apply the process to caring for different segments of the community e.g. mother and child, the vulnerable, the physically challenged and people with chronic illness.

## 6.0 TUTOR-MARKED ASSIGNMENT

Write a short note on how organization of community based Nursing Services using examples to illustrate your points. The write up should not exceed 10 pages.

## 7.0 REFERENCES/FURTHER READING

African Health Training Institutions Project (1977). *A Topical Outline for the Teaching of Family Health. (A Life-Cycle Approach) in Nursing and Midwifery*

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## UNIT 2 IMMUNIZATION

### CONTENTS

- 1.0 Introduction
- 2.0 Objectives
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  - 3.2 Factors Affecting Individual's Resistance to Diseases
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    - 3.5.2 Components of Cold Chain System
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  - 3.8 Steps to take to ensure that Vaccines are Properly Collected and Transferred
  - 3.9 Giving of Immunization
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

## **1.0 INTRODUCTION**

The objective of immunization is to reduce mortality and morbidity caused by preventable diseases that are common in childhood. They include poliomyelitis, tuberculosis, measles, diphtheria, tetanus, peruses (whooping cough), yellow fever and hepatitis B.

Expanded program on immunization was launched in 1979 by World Health Assembly and later changed to NPI (National Program on Immunization).

## **2.0 OBJECTIVES**

At the end of this unit, you should be able to:

- define immunization and immunity
- identify types of immunity
- describe cold chain system
- describe the role and practice of the community health nurse in immunization
- describe Expanded Program on Immunization
- discuss Nigerian immunization schedule.

## **3.0 MAIN CONTENT**

### **3.1 Definitions**

#### **3.1.1 Immunization**

This is introduction of antigens into the body in order to produce and strengthen the body defense system and to prevent infection. The prevention of diseases by immunization is the best known practical, low cost and community based means of protecting children and adult against the major Killer diseases.

#### **3.1.2 Immunity**

It is the resistance usually associated with possession of antibodies that has an inhibitory effect on specific micro-organisms or its toxins that cause a particular infectious disease.

The level of immunity in a community is known as herd immunity. It is also resistance of a group to the introduction and spread of an infectious agent, such resistance is based the immunity of a high proportion of

individual members of the group and the uniform distribution of immunity within the group.

### 3.2 Factors Affecting Individual's Resistance to Diseases

- 1) Nutrition
- 2) Age
- 3) Disease condition
- 4) Health Status
- 5) Stress

### 3.3 Four Ways by which Immunity is gained are

1. By having the disease
2. By having active immunization
3. By passive immunization
4. By receiving maternal antibodies

### 3.4 Types of Immunity

#### 3.4.1 Passive Immunity (Temporary)

This can be divided into

- a) **Natural Immunity-** acquired either naturally by Maternal transfer and it is short lived e.g. measles may not be contacted before four months of age.
- b) **Artificial Immunity-** Inoculation of specific protective antibodies, convalescence or immune serum globulin containing antibodies e.g. ATS.

#### 3.4.2 Active Immunity

This lasts months or years. It can be divided into:

- a) **Natural Immunity-** Through infection (clinical/sub-clinical infections).
- b) **Artificial Immunity-** inoculation of products of infectious agent, the agent itself is killed or in modified form (attenuated) or variant form, Killed. e.g. whooping cough, IM polio, cholera typhoid and influenza. Killed- attenuated e.g. measles, BCG, Oral polio, yellow fever, rubella, Mumps, toxoid e.g. Tetanus (TT) and diphtheria.

### **3.4.4 Inherent Resistance**

Ability to resist disease without action of antibodies or of specifically developed response. Inherent resistance immunity rests in anatomic or physiologic characteristics of the host and can be genetic or acquired, permanent or temporary.

## **3.5 Cold Chain System**

### **3.5.2 System Used for Storing and Distributing Vaccines**

In a potent state from the manufacturers to the child or woman being immunized.

It is a supply system which particularly critical because vaccines are easily destroyed by heat, temperature that is hot or cold.

It is a logistic system involving equipment and persons designed to preserve, transport, distribute and store vaccine in a potent state right from the manufacturer until it is finally administered to the target group.

### **3.5.2 Components of Cold Chain System**

- People
- Equipments e.g. refrigerators, stores, freezers, vehicles, vaccine, ice packs, thermometers, sterilization and injection equipment. (must be adequate and in good condition).

### **3.5.3 Maintenance of Cold Chain System**

In order to maintain the system, the following actions must be taken:

- a) Obtain Vaccine
- b) Maintain Equipments
- c) Handle Vaccine properly

### **3.5.4 Vaccine Cold Chain Monitor**

These are cards for monitoring the temperature of vaccine during distribution or visits to the field.

The monitor has three windows ABC. If ABC windows are exposed to temperature over +10degrees centigrade, they will turn blue.

The round disc indicator labeled D turns blue if exposed to Temperature over +34 degrees centigrade for more than two hours.

All indicators will remain white if the temperatures in the cold box of vaccines have never been above +100degrees centigrade.

### 3.5.5 Vaccine Storage Time and Temperature

Site	Central store	Regional store	Health centre	Transport
Max storage time	up to 8mths	up to 3mths	up to 1mth	up to 1 week
Measles, oral polio vaccine	-15oc to-5oc	-15oc to-25oc	+2oc to +8oc	+2oc to +8oc
DPT, Tetanus Toxoid (TT), BCG	+2oc to +8oc	+2oc to +8oc	+2oc to +8oc	+2oc to +8oc

### 3.5.6 Equipments used for Cold Chain

- Transport facilities: - Air plane, Ship, Trucks, Motor cycles, Bicycles.
- Ice lining and ice packs, Refrigerators/ freezers.
- Cold Box and Vaccine.

### 3.6 Expanded Program on Immunization

It was initiated in 1979 by World Health Assembly which was later changed to National Program on Immunization (NPI). The objective of EPI is to effectively control the occurrence of the immedicable diseases through immunization and provision of Vaccines.

These diseases are:

1. Tuberculosis
2. Poliomyelitis
3. Diphtheria
4. Whooping Cough
5. Neonatal Tetanus
6. Measles
7. Diseases of women of childbearing age,

### 3.6.1 Target Population for EPI delivery in Nigeria

1. All children aged 0-24 months initially, but after the first year, focus should be on 0-12 months of age.
2. Women of child bearing age.

### 3.6.2 Nigerian Immunization Schedule

An Immunization schedule contains information to which health workers may refer when deciding which immunization types to administer to a child, woman of child bearing age and pregnant women.

Specifically an immunization schedule contains the following information:

- Vaccine to be given
- Desirable age at which to administer first dose of each vaccine
- Minimum time interval between successive doses of vaccine

#### NIGERIA IMMUNIZATION SCHEDULE TABLE

Contact	Target age	Type of vaccine	Dosage	Site	Route of administration
1 <sup>st</sup>	At birth	BCG	0.05ml	Upper arm	Intradermal
2 <sup>nd</sup>	At birth 6 weeks	OPVO	2-3 drops	mouth	oral
		DPT1	0.5ml	buttock	Intramuscular
3 <sup>rd</sup>	10 weeks	OPV1	3drops	mouth	oral
		HBV1	0.5ml	upper arm	Intramuscular
		DPT2	0.5 ml	buttock	Intramuscular
		OPV2	3drops	mouth	Oral
4 <sup>th</sup>	14 weeks	HBV2	0.5ml	upper arm	Intramuscular
		DPT3	0.5ml	buttock	Intramuscula
5 <sup>th</sup>	9.11 months	OPV3	3drops	mouth	oral
		Measles	0.5ml	Lt Upper arm	Subcutaneous
		Yellow fever	0.5ml	Lt Upper arm	Subcutaneous
		HBV3	0.5ml	upper arm	Intramuscular

**TETANUS TOXOID IMMUNIZATION SCHEDULE**

<b>VACCINE</b>	<b>Dosage</b>	<b>Time of Adm</b>	<b>Site</b>	<b>Method of Adm</b>	<b>Duration of Protection</b>
TT-1	0.5ML	At first contact	Deltoid	Deep subcutaneous	None or as early as possible
TT-2	0.5ML	At least four weeks	Deltoid	Deep subcutaneous	3 years After TT-1
TT-3	0.5ML	At least six months	Deltoid	Deep subcutaneous	5 years after TT-2 or during subsequent pregnancy
TT-4	0.5ML	At least one year after	Deltoid	Deep subcutaneous	10yrs TT-3 or during subsequent pregnancy
TT-5	0.5ML	At least one year after	Deltoid	Deep subcutaneous	TT-4or during subsequent for life Pregnancy

**3.6.4 WHO General Guidelines to Administration of Vaccine**

- Health workers should use every opportunity to immunize eligible children.
- BCG and OPV can safely and effectively be given to the newborn and the DPT as early as six weeks of life. In countries where measles poses a major burden before the first birthday, measles vaccine should be given at the age of nine months.
- No vaccine is totally without adverse reactions, the risks of serious complications from EPI vaccine are much lower than the risks from natural diseases.
- The decision to withhold immunizations should be taken after serious considerations of the potential consequences for the individual child and community.
- It is particularly important to immunize a child from malnutrition, low grade fever; mild respiratory tract infections or diarrhea and

other minor illnesses should not be contra indication to immunization.

### **3.6.4 Planning and Management of Expanded Programme on Immunization (EPI)**

1. Situation analysis of:
  - a) Total Population
  - b) Health status related to the EPI diseases
  - c) Health resources
2. prioritizing (setting priority)
  - a) Accessibility
  - b) Population coverage
  - c) Critical areas
3. Encouraging participation of all sectors
  - a) Non-governmental organizations (NGO)
  - b) Government organization
4. Revising plans and setting goals for full immunization coverage
  - a) Vaccines
  - b) syringes and needles
  - c) Cotton wool and alcohol
  - d) Records/report forms
  - e) Transportation for outreach immunizations teams.
  - f) Information, Education, Communication

### **3.6.5 Expanded Programme on Immunization (EPI) Surveillance**

This is continuous collection and analysis of cases/ deaths of the EPI Diseases from government health facilities, health offices and private Hospitals.

The collected data will show:-

- a) Completeness of reporting
- b) Vaccination coverage
- c) Seasonal variations
- d) Epidemic patterns

It is a means of measuring the effectiveness of the immunization program.

### **3.6.6 Evaluation of Expanded Programme on Immunization (EPI) Program**

This is part of planning process and can take place at any point during implementation. It ensures reviews of factors that can influence failure/success. Evaluation should be conducted at all levels, National, State and Local Government.

At the health centre, evaluation can be carried out by asking:

- a) How many children came for different immunizations?
- b) How many did not come for the first and succeeding doses?
- c) Reasons for default.
- d) Whether they are informed of immunization schedule?

### **3.6.7 Factors Militating against Success of EPI Program**

- Problems of logistics.
- Maintenance of cold chain.
- Inadequate and ineffective managerial capabilities at all levels
- Poor management of resources.
- Wastage of vaccine as a result of frequent power failure without provision of backup power sources.
- Frequent breakdown of vehicles and cold chain equipments due to lack of maintenance.
- Poor maintenance of facilities.
- Lack of supervision of field activities resulting in general poor performance at all levels.
- Inadequate/ lack of monitoring and control.
- Poor reporting system and absence of quality control and cost accounting.
- Inadequate management information for planning and evaluation.
- Low levels of public enlightenment.
- Minimal Health Education efforts.
- Lack of community involvement.

### **3.7 Practice of Immunization and Role of Community Health Nurse**

This includes:

1. Mobilizing the community so that everyone can transfer information on immunization.
2. Getting the health authority to ensure constant availability of vaccines.
3. Educating and convincing parents to immunize their children.
4. motivating mothers to t, go back respectfully until full dose is completed

### **3.8 Steps to take to ensure that Vaccines are properly Collected and Transferred**

- a) Obtain the right amount of vaccine needed by preparing an inventory report and calculating vaccines requirements for a specific period.
- b) Make sure that there is enough storage facilities.
- c) Check type, amount of vaccine diluents and ice packs.
- d) Check expiry date of the vaccines.
- e) Put fully frozen icepacks or cold packs around the sides and bottom of the transport box.
- f) Take shortest route to your destination.
- g) Transfer vaccines and diluents immediately to cold chain facilities (refrigerators, freezers, cold room).
- h) If there are no refrigerators, use transport box for temporary storage for not more than five days.
- i) Notify personnel receiving vaccine for date, time of arrival of vaccines, if vaccines are shipped by air or sea.

### **3.9 Giving of Immunization**

1. Explain to mother in the language she understands, the complete immunization course for her child.
2. Obtain accurate immunization history in a newly registered child.

This Includes:

- a) History of immunization previously received with dates.
- b) history of infectious diseases which the child has had, if any.
- c) history of allergies and reactions to immunization.
- d) Note vaccination scar if present.

3. Assess the immunization of the child. This will be based on assessment of:
  - a) history of immunization.
  - b) child's health and nutrition.
  - c) risk of exposure to particular disease.
  - d) current national immunization guidelines.
  - e) contraindications.
4. Administer and supervise administration of immunization. This includes giving intradermal, subcutaneous and intramuscular.
5. Record the immunization given on the child's record.
6. Instruct the mother on the immunization given, expected reactions and appropriate follow-up.
7. Tell the mother when to bring the child back for the next immunization.

#### **4.0 CONCLUSION**

Vaccine preventable diseases are the second commonest cause of less than five mortality and third commonest cause of infant mortality. Thus routine immunization against diphtheria, pertussis and tetanus, measles, polio and tuberculosis has proved to be one of the most cost effective intervention for reducing childhood illness and mortality.

#### **5.0 SUMMARY**

This unit has discussed immunization, principles and practice of immunization, factors affecting immunization process in Nigeria and the role of community health nurse.

#### **6.0 TUTOR-MARKED ASSIGNMENT**

Write an essay on the Expanded Program on Immunization (EPI) diseases and type of immunization for each disease.

#### **7.0 REFERENCES/FURTHER READING**

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## **UNIT 3      MONITORING AND EVALUATION**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 Definitions
  - 3.2 Levels of Data Collection
    - 3.2.1 Records Available for Collecting Information at Home
    - 3.2.2 Records Available for Information in the National Primary Health Care Program
    - 3.2.3 Records Available for Information Collection in the Clinics/Health Centers
  - 3.3 General Approach to Evaluation and Instruments of Evaluation
  - 3.4 Indicators for Maternal Child Health Services
  - 3.5 Indicators for Food and Nutrition
  - 3.6 Indicators for Water Supply and Sanitation
  - 3.7 Indicators for Prevention and Control of Epidemic and Endemic Diseases
  - 3.8 Indicators for Care of Treatment of Common Diseases
  - 3.9 Management Information System
  - 3.10 Nurses Role in Measurement and Evaluation
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

There is no programme that can be successfully implemented without an element of monitoring built into it. Monitoring and Evaluation are useful tools in Community Health /Primary Health Care management at all levels, home, community facility level, State and Federal levels. It is essential to establish a monitoring and evaluation system as a continuous process of assessing programs, its implementation in accordance with agreed schedule and use of inputs, expected outputs and ultimate impact of the health programme. Monitoring and Evaluation allow for assessment of impact of Health system on the population in terms of coverage, efficiency and effectiveness.

## 2.0 OBJECTIVES

At the end of the unit, the student is expected to be able to:

- define Monitoring and Evaluation, Indicators, Management Information System
- identify types of records in the community, clinic/centre or health facility
- describe nurse's role in Monitoring and Evaluation.

## 3.0 MAIN CONTENT

### 3.1 Definitions

**Monitoring:** It is a continuous day to day assessment or checking of service activities. It is a continuous follow up of activities to make sure that they are proceeding according to plan. Periodic measurement of an activity against set objectives. It is a process of comparing achievement with set goals at the beginning of the program. This can be done every two or three years.

Indicators are measures of achievement of objectives. It provides data to measure changes in health situations and health status and enables health workers to assess progress towards attainment of objectives. The level of indicator illustrates how near or how far away a particular program is to achieving objectives.

### 3.2 Levels of Data Collection

- a) Home
- b) Community
- c) Health facility
- d) State level
- e) Federal level

#### 3.2.1 Records Available for Collecting Information at Home

- a) Children's home based and health card.
- b) Adult home based card.

#### 3.2.2 Records Available for Information in the National Primary Health Care Program

- a) Village Health Workers Record of work.

- b) Monthly and Annual summaries of Village health workers records of work in a health district.
- c) Community demographic Profile.
- d) Community Pregnancy Profile
- e) Community Family Planning Profile.

### **3.2.3 Records Available for Information Collection in the Clinics/Health Centers**

- a) Tally sheets, monthly and annual records for outpatient clinic and tracer diseases.
- b) Tally sheets, monthly and annual records for antenatal clinics, tetanus toxoid and pregnancy outcomes.
- c) Talley sheets, monthly and annual records of family planning by type.
- d) Talley sheets, monthly and annual records of immunizations.
- e) Daily/ monthly record of inpatients
- f) Daily diary, monthly and annual record of Environmental health activities
- g) Family file record (master card).

### **3.2.4 Advantages of Home-Based Records in the Health System**

- a) Cuts down patient's waiting time
- b) Facilitates participation of the community in their own health care.
- c) Ensures continuity of care.

## **3.3 General Approach to Evaluation**

1. decide what to be evaluated and select indicators.
2. collect relevant information.
3. compare results with the targets or objectives.
4. decide the extent of objectives that have been met
5. decide whether to continue with the program unchanged, redefine strategies, replan or modify or discontinue the program.

### **Instruments of Evaluation**

- a) **Routine Reporting System-** Data are collected on continuous basis from health clinics on morbidity, this is used to monitor performances as well as needs and requirements of health services.
- b) **Sentinel Reporting System:** It is used for monitoring program impact on diseases as well as their trends by age group and

immunization status. It can be used to identify health service research needs.

- c) **Coverage Survey:** - It is used to evaluate accurately the performance of a program and to validate information from routine reporting system and to identify reasons for inadequate coverage.
- d) **Outbreak Investigation:** - It provides information on the effectiveness of a disease control program, attack rates by age group and immunization status and on efficacy of vaccine.
- e) **Program Review:** - This is used for assessment every 2-3 years to see whether a program was implemented as planned and whether a program was designed enough to achieve results.
- f) **Cost Analysis:** Process of identifying all the relevant results input in the program, quantifying them in the most appropriate units and valuing them separately. It is useful in the choice of strategies and for managerial decisions within strategies selected.

### 3.4 Indicators for Maternal Child Health Services

1. Percentage of deliveries attended by trained personnel including TBA expressed as:  $\frac{\text{No of deliveries by trained personnel}}{\text{Expected no of births (crude birth rate)}} \times 100$ .
2. Proportion of pregnant women receiving antenatal post natal care.
3. Proportion of eligible women (15- 44years) receiving family planning advice or actually using modern methods of family planning.

### 3.5 Indicators for Food and Nutrition

1. Percentage of children under 3-5 years of age who are below reference value of weight for age (3rd percentile). This is measured by growth monitoring chart.
2. Percentage of new born with weight below 2500grams, this is done through measurement of pregnancy outcome or by coverage survey.

### 3.6 Indicators for Water Supply and Sanitation

1. Percentage of population with reasonable access to safe water supply or with safe water at home.
2. Percentage of population with adequate facilities for excreta disposal or living within 50 meters of a pit latrine or toilet.

### **3.7 Indicators for Prevention and Control of Epidemic and Endemic Diseases**

1. Specification of disease incidence and prevalence rate.
2. Mortality rates for selected number of diseases.
3. Proportion of mortality rate from communicable diseases.
4. Vector indices.

### **3.8 Indicators for Care of Treatment of Common Diseases**

1. Percentage of population living within 5km or ½- 1 hour travel time of a health facility.
2. Number of children under 5 years treated with homemade rehydration salts/ no of reported cases of diarrhea x 100.
3. Proportion of fevers treated with chloroquine.
4. Proportion of acute respiratory tract infections treated with antibiotics.
5. Proportion of malnutrition treated with supplementary feeds
6. Proportion of injuries or accidents treated by first aid or simple treatment.

### **3.9 Management Information System (MIS)**

This is a system designed to collect and report information on a program which allows managers to plan, monitor and evaluate the operations and the performance of the whole program.

MIS will provide the information which allows managers to:

- analyze current situations.
- Identify immediate problems
- Find solutions to the identified problems.
- Discover trends and patterns so that they can formulate goals and objectives for the future.
- Make intelligent decision on the use of scarce human, financial and material resources.

#### **Steps of Management Information System (MIS)**

1. Identifying
2. Collection of data
3. Processing the information
4. Reporting the results

### 3.10 Nurses Role in Monitoring and Evaluation

The community health nurse function must be in collaboration with the health Team. She is involved in all the steps of Evaluation which are:-

1. Plan the survey
2. Identify target population by sampling
3. Mobilize communities
4. Design questionnaire
5. Set targets
6. Select and train interviewers
7. Pretest questionnaires
8. Administer questionnaires according to plan
9. Collate data for the questionnaire
10. Analyze data and calculate for example PHC coverage
11. Make management decisions based on finding
12. Provide feedback to health teams at all levels including the community

### 4.0 CONCLUSION

In community health system, it is essential to establish Monitoring and Evaluation system for continuous assessment of health programs.

A coordinated and cohesive health information system is essential for sound progressive development and implementation and as a prerequisite for strategic decision making.

### 5.0 SUMMARY

This unit has discussed monitoring and evaluation, indicators and management information system. It has identified types of records available in the community, health facility and other levels of health care. It has discussed the role of community health nurse as a member of the health team in Monitoring and Evaluation.

### 6.0 TUTOR-MARKED ASSIGNMENT

Identify types of information needed at the health facility level.  
The write up **should not** be more than 6 pages.

## 7.0 REFERENCES/FURTHER READING

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## **UNIT 4 RESEARCH METHODOLOGY IN COMMUNITY HEALTH NURSING**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
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  - 3.2 Research Methods
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    - 3.7.1 The Purpose of Writing Report is to convey Information to the Readers
    - 3.7.2 The Research Report should contain the Following
  - 3.8 Uses of Research findings in community Health Nursing
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

The primary task of nursing research is the development and refinement of nursing theories which serves as a guide to nursing practice. Nursing research helps the professional nurse including the community health nurse better understanding of her changing roles as a member of the health team and the changing environment in which she must function. Research can be defined as systemic collection, analysis and interpretation of data to answer a certain question or solve problems.

### **2.0 OBJECTIVES**

At the end of this unit, you should be able to:

- identify research methods used in community health nursing practice
- carry out research in community health nursing
- discuss report writing
- use research finding in solving community health problems.

### 3.0 MAIN CONTENT

#### 3.1 Types of Research

There are two main broad categories:

- a) **Basic Research-** It is designed to generate new knowledge and technologies to deal with new or unresolved problem. It provides information required for planning health care and monitoring events among others, e.g. 1) identifying factors that can influence certain behavior in the community 2) determining risk factors of a disease in the population.
- b) **Applied Research-** It focuses on finding solutions to immediate problems.

It is concerned with testing and applying existing theories in solving problems.

Other categories of research include:

- c) **Operation Research:** Method of identifying service problems and developing effective solutions for them. It provides the community health nurse a practical and systematic way to improve nursing management, nursing service delivery, develop program policies and improve client's satisfaction. E.g. operation of family planning services in the community, care of the chronically ill patients e.g. patients with tuberculosis.
- d) **Health System Research-** This is concerned with improving the health of the community by enhancing the efficiency and effectiveness of the health system as an integral part of the overall process of socio-economic development. It looks at existing system of health service functions whether they have failed or succeeded.

#### 3.2 Research Methods

##### 3.2.1 Research Design

This is a plan according to which data will be assembled. It is a vehicle for achieving the objectives of study either in the form of research questions, hypothesis or study objectives. The research design can be categorized into two:

- 1) Qualitative Method
- 2) Quantitative Method

- 1) **Qualitative Method:** These can be:
  - Focus Group Discussion
  - In depth interviews
  - Observation method
  - Case study method
  - Rapid community profiling method
- 2) **Quantitative Method:** This can be:
  - a) **Experimental Method:** Plan developed to carry out an experiment to test the validity of a hypothesis.

There are two types: True experiment designs and Quasi-Experiment.

**True experiment** can be on the field or in the laboratory. The three characteristics are randomization, control and manipulation.

**Quasi-experiment-** There is no randomization.

Advantages of experimental design are:

- i. Helps to establish causality.
- ii. Offers the ultimate in control which is important for data analysis hypothetical testing.
- iii. Longitudinal analysis allows for opportunity to study change in time.

#### b) **Non-Experimental Method**

It is employed in studies where the investigation set to describe an event as it naturally occurs.

The major advantage is the ability to generate ideas that could be further explored in controlled condition.

Non- Experimental methods are divided into:

#### 1. **Epidemiological Studies**

Epidemiology is the study of distribution, determinants and deterrents of health related events in a human population.

It may involve distribution of diseases or health related characteristics in groups (descriptive) surveys or it could deal with factors influencing this distribution (analytical surveys, experimental or quasi- experiments).

**Uses:**

- a) Diagnostic purposes (community diagnosis)
- b) Provision of information on etiology
- c) Determinants of the natural history of diseases (the course of disease over time)
- d) Contribution to evaluation of health service

**2. Survey**

It is a non experimental research method conducted in a natural setting in which there is less control over the study subjects and there is less control over the study subjects and the setting than in an experiment. It is a collection of data from a defined population in order to make description of the existing phenomenon with the aim of employing the results to justify current conditions in practices.

Survey can be categorized into two:

- a) Cross sectional studies
- b) Longitudinal surveys

**a) Cross Sectional Studies**

The researcher collects data from a study group at appoint in time rather than at several points in time.

Examples: - 1. Study of prevalence of contraceptive use among a defined population.

**Advantages:** it is less time consuming, less expensive and thus more manageable.

Cross sectional study can be 1. Descriptive Studies 2. Explanatory Studies.

**Descriptive studies-** Process of relating one variable to another and does not attempt to determine the cause.

Explanatory Studies (exploratory or analytic surveys) are designed to analyze and determine or explain the cause of relationship described by a descriptive survey e.g. determinants of health care utilization in the community.

**b) Longitudinal Studies**

This is collection of data from different groups at different point in time.

There are two types of longitudinal study:

- 1) Prospective studies 2) Retrospective studies.

**Prospective studies:** The researcher explores the presumed cause and proceed in time presumed effect. The investigator starts from the present and ends in future. Examples: Prospective study of effect of environmental pollution on the health status of the community (over a period of time).Prospective can be descriptive or explanatory.

**2) Retrospective studies:** Attempt is made to draw up a relationship or link between present events and events that have occurred in the past.

Example:

Retrospective study of relationship between smoking and cancer of the lungs in a community. Retrospective study of the effectiveness of Tetanus vaccine among children.

Retrospective study can be both descriptive and explanatory studies.

**Comparison of Retrospective and Prospective Study Designs****In Retrospective Design:**

- a) Exposit facto investigations in which the manifestations of some outcomes in the present is linked to some factors occurring in the past.
- b) Useful in outcomes which are infrequent and where reasonable good records exist that will contain information on exposure to the factor being investigated.
- c) Advantages are that they are easy to carry out, cheap and can easily be obtained, useful for rare outcomes.
- d) Disadvantages are that they are difficult to get controls, results may be unreliable and conditions for study cannot be controlled.

**In Prospective Studies:**

- a) It is investigation which attempt to follow up a group or groups (cohorts) exposed and another group with similar characteristics

but not exposed to factor through time to see how many of them will produce a given outcome.

- b) Useful one is able to follow up each group of individuals for some time to see the outcome of a particular exposure.
- c) Advantages are that the study population can be well defined, easy to get control, results are more reliable.
- d) Disadvantages are that it is long and tedious to execute, high pro [rate, more expensive and not useful events that occur more frequently. For example; to assess the efficacy of tetanus immunization program in a rural community.

### **3.3 Research Process**

It consists of the following steps:

#### **1. Introduction and Statement of the Problem**

Problem statement is the essential basis for development of a research plan. It allows the research to systematically describe the problem.

It consists of:

- i. The back ground of the study, that is. information needed to understand the nature of the problem.
- ii. The rationale for the study explains why you have chosen the study.
- iii. Significance of the study is the benefits of the study in improving the health status of the community.
- iv. Purpose and objectives of the study- Why is it being carried out. Aim of the study. Objectives which are the goals to be achieved at the end of the study. These are expressed towards which efforts are being directed. The objectives can be in form of study objectives, research questions or hypothesis.
- v. Operational definitions: - Process of defining concepts or variables in a study. It shows how you intend to define each term specifically for this study in a manner that will explain how you intend to measure each variable.

#### **2. Review of Relevant Literature**

It helps to facilitate the process of research and enriches knowledge of the researcher about the subject being investigated. Literature is an extensive, systematic or critical review or examination of all relevant publications on the topic being investigated.

### 3. Research Method

A. In chosen the method, WHO suggested the following:

- What do I want to measure?
- Where should I measure it?
- What will I do with the answers collected?
- How can I check whether my methods for measuring are correct before beginning a large study?
- What professional or non professional staff do I need to carry out the study?
- What logistic support do I need?
- Are there any ethical problems related to the study?
- How can I avoid introducing biases into my study?
- What constraints may affect the study?

B. The components of the research method are:

- The study design
- Population and sampling methods
- Instruments
- Method of data collection
- Method of analysis
- Pretest or pilot study
- Ethical issues to the study
- Limitations of the study

### 3.4 Population, Sample and Sampling

#### 3.4.4 Population

It is a well defined group of people or other entities that have certain Specified properties.

#### 3.4.5 Sample

Set of elements that make up the population. An element is the most basic units about which information is collected.

#### 3.4.6 Sampling

Process of selecting units that are representative of a population for study in a research investigation. Purpose is to increase the efficiency of research study.

## **Types of Sampling**

- 1) Non-Probability Sampling Design**
  - a) Accidental sampling or sample of convenience
  - b) Quota sampling
  - c) Purposive sampling
  - d) Snowball sampling
  - e) Dimensional sampling
  
- 2) Probability Sampling Design**
  - a) Simple random sampling techniques
  - b) Stratified random sampling
  - c) Systematic sampling
  - d) Cluster sampling.
  - e) Multistage sampling

## **3.5 Method of Data Collection**

### **3.5.1 Instruments for Data Collection**

#### **a) Questionnaire Design and Administration**

Questionnaire is an instrument for data collection. It is a form that presents written questions that are to be answered in written form by the respondents.

#### **b) Observation**

It is a process of selecting systematically, watching and recording behaviour of people or phenomenon and the setting in which it occurs for the purpose of gaining specified information. There is participant and non-participant and observation.

#### **c) Interview**

This is an instrument of data collection that involves questioning orally the respondents using an interview guide.

#### **d) Data Collection Form**

This is used to collect from available records such as case notes of parents and vital statistics on participants.

### **3.6 Pretest/Pilot Study**

They are used to test methods selected for the study.

Pretest helps to define the weakness of the instrument and points out areas of correction. It helps to assess reliability, validity and objectivity of the instrument.

Pilot study is the process of conducting a mini study using the plans put in place in order to test the effectiveness of the plans.

### **3.7 Ethical Issues in Research**

All researches that will involve human subjects should be carried out in Accordance with ethical principles.

These are:

1. Autonomy or respect for persons.
2. Protection for persons with diminished or impaired autonomy.
3. Beneficence- Ethical obligation to maximize benefits, and minimize harms or Wrongs.
4. Non-maleficence which requires no harm should be done to research subjects.
5. Justice which requires that subjects in studies are treated equally as much as possible.

### **3.7 Writing of Report**

#### **3.7.1 The Purpose of Writing Report is to convey Information to the Readers**

It has some unique characteristics:

- It is written for a defined audience e.g. nurses.
- It is written in form of report.
- It has many headings and subheading.
- It is presented in standard form using acceptable format.
- It is objective.
- Its language is formal, clear and concise.
- It is mechanically correct
- It is complete as possible and leaves no research questions unanswered.

### **3.7.2 The Research Report should contain the Following**

- a. Title or cover page
  - b. Summary of findings and recommendations
  - c. Acknowledgement (optional)
  - d. Table of contents
  - e. List of tables, figures
  - f. List of abbreviations
- 
1. Introduction
  2. Objectives
  3. Literature Reviews
  4. Methodology
  5. Results/ findings
  6. Discussion
  7. Conclusions
  8. Recommendations
  9. Reference
  10. Appendix or Annex (data collection, tools, maps etc.)

### **3.8 Uses of Research Findings in Community Health Nursing**

1. Apply the findings to improve community health nursing services planning and operations.
2. Develop theories which can help to explain how the community health nursing services operates.
3. It assists in developing health and socio- economic policies that will enhance the status of health in the community.
4. It improves practice of community health services.
5. It improves administrative processes and procedures.
6. It assists in the development of curriculum, its review and change
7. It allows for further studies in the problem being investigated.

### **4.0 CONCLUSION**

Nursing research helps the professional nurse to have better understanding of her changing role as a member of the health team and changing environment in which she must function. Nursing research also assists the community health nurse answer questions about various aspects of her activities and also helps to solve community health problems in a scientific manner.

### **5.0 SUMMARY**

This unit identifies research methods that are applicable to nursing practice in the community. It discussed research process including report writing.

It tries to discuss some uses of research finding in community health practice.

## 6.0 TUTOR-MARKED ASSIGNMENT

- a) What are the steps to take in carrying out a research project in community? In health nursing.
- b) Write a research topic use these steps in carrying out the research. The write-up should not be more than 15 pages.

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## **UNIT 5      DEMOGRAPHY/BIOSTATISTICS**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 Definition of Demography
  - 3.2 Objectives of Demography
  - 3.3 Terms used in Demography
  - 3.4 Measurements carried out in Demography
  - 3.5 Nigeria Basic Indicators
  - 3.6 Sources of Demographic Data
  - 3.7 Determinants of Mortality
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- 5.0 Summary
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### **1.0 INTRODUCTION**

The study of the population provides framework of analysis of nature of the population. The population of a state, country, city or community can change in only three ways through births, deaths or immigration. New persons can be added through births or immigration; persons can exit through death or migration.

Therefore measuring them enables insight into population problems and think of ways to solve them.

### **2.0 OBJECTIVES**

At the end of unit, you should be able to:

- define demography and biostatistics
- describe the principles and practice of demography and use of statistics
- identify sources of data
- explain uses of demography in community health nursing.

### 3.0 MAIN CONTENT

#### 3.1 Definition of Demography

It is the scientific study of human populations, including size, age and sex. It includes study of influencing factors such as fertility, mortality, migration and marriage.

#### 3.2 Objectives of Demography

They include:

- 1) To plan for the needs of the population, for example; food, clothing and shelter.
- 2) To plan for economic and political strategies to be used for improving the health status of the population.

#### 3.3 Terms used in Demography

1. **Population Dynamics:** - Study of changes in the population size and structure over time. This depends on number of births, deaths and migration (in and out of the area).
2. **Total Growth:** - Balance of births, deaths and migration.
3. **Natural Growth Rate:** - Balance between total births and total deaths.
4. **Natural Increase:** - The surplus or deficit of births over deaths in a population in a given time period.
5. **Dependency Ratio:-** Ratio of the economically dependent part of the population to the productive part ( 65+ years plus the young ( 15years and younger) to the Population in the working ages (15 – 64 years).  $\frac{<15+65 \text{ yrs}}{15 - 64 \text{ yrs}}$

#### 3.4 Measurements carried out in Demography

1. Size of the population
2. Growth and diminution of the population
3. Proportion of people dying
4. Proportion of people living
5. Fertility
6. Mortality
7. Marriage
8. Migration
9. Population composition

### 3.5 Nigeria Basic Indicators

<b>Indicators</b>	<b>Estimated size</b>
Area	909,890 square meters
Population	130 million
No of LGA	774
Crude birth rate	45 per 1000
Rate of Natural Increase	45 per 1000
Population doubling time	23 years
Total Fertility rate	5.7(2003)
Infant mortality rate	100/1000
<b>Children protected against</b>	
Tetanus	85.60%
Maternal mortality rate	704/100,000
Life expectancy at birth	52 years
Literacy rate	60.4% (2003)
Per capital GNP (USD)	290
Food energy intake	Adult equivalent 2100 cal to 2900 cal
Poverty incidence	65.6 (1996)
Population in poverty	67.11 million (1996)
Adult literacy	68.70 million (2004)
Growth rate	2.3%
Population in the rural area	80%

### 3.6 Sources of Demographic Data

1. Numerical data derived from records of events:
  - Death (mortality statistics) e.g. Crude death, Age specific deaths, maternal mortality, infant mortality and neonatal mortality.
  - Morbidity statistics.
  - Reproduction (fertility statistics).
  - Marriage statistics.
  - Divorce statistics
  - Birth statistics.
2. Health indicators to determine population profile:
  - Size of areas
  - Size of target groups
  - Health status of target groups
  - Attitude about health
  - Preventive measures

3. Census
4. Demographic and health surveys.
5. World Fertility Surveys.
6. Epidemiological Studies on sexually transmitted diseases, infertility, teenage Pregnancy, abortions, breastfeeding practice.

### 3.7 Determinants of Mortality

As living conditions improve, causes of death shift quite dramatically. Major causes of death in developing countries are infectious diseases. In developed countries, causes of death are concentrated among degenerative diseases.

Reasons for the shift are:

1. Infant and child deaths are much higher in developing countries
2. Poor nutrition which makes children to be more susceptible to infections.
3. Improvement in living conditions implies better nutrition, Sanitation, water supply and access to public health measures like immunization against tetanus, measles and other common diseases.

### 3.8 Rates Associated with Mortality

#### 1. Crude Death Rate: -

$$\frac{\text{Total deaths in a year}}{\text{Estimated mid-year population}} \times 1000.$$

#### 2. Age/ sex specific death rate:-

$$\frac{\text{Total deaths in specific age/sex}}{\text{Population of the particular age/ sex}} \times 1000.$$

#### 3. Infant Mortality Rate: - $\frac{\text{Death in infant under 1 year}}{\text{Number of live births}} \times 1000.$

Causes of Infant Mortality Rate:

- a) Congenital Malformation
- b) Complications of pregnancy, difficult labor
- c) Immaturity
- d) Accidents
- e) Premature labor

**4. Post Neonatal Mortality Rate:-**

$$\frac{\text{Infant Deaths below one year but above 28 days}}{\text{Number of live births}} \times 1000$$

It is a reflection of:

- a) Nutritional hazards to infant health.
- b) State of infectious disease control.
- c) State of environmental health control.

**5. Prenatal Mortality Rate:-**

$$\frac{\text{Still births + deaths in the first week of life}}{\text{Total (live + still) births}} \times 1000$$

**6. Maternal Mortality Rate:-**

$$\frac{\text{Deaths in women associated with child birth}}{\text{Total (live+ still) births}} \times 1000$$

1. It is a measure of the risks to the mother at child birth.
2. It is affected by the standard of obstetrical practice rather than by the living conditions.
3. Main causes of MMR are:-
  - a) Abortion
  - b) Toxemia of Pregnancy
  - c) Puerperal sepsis
  - d) Pulmonary Embolism
  - e) Entopic Pregnancy.
  - f) Ante-Partum Hemorrhage
  - g) Post Partum Hemorrhage

7. **Still Birth Rate:** 
$$\frac{\text{Death at or over 28 weeks of gestation}}{\text{Total (live+ still) births}} \times 1000.$$

1. The main causes of Still Births are:
  - a) Abnormal conditions of the placenta.
  - b) Congenital Abnormalities.
  - c) Abnormal condition of the fetus.
  - d) Toxemia of Pregnancy.
  - e) Abnormal conditions of the umbilicus.

2. Still Births are common in:
  - a) Young mothers (less than 20 years)
  - b) Primiparous women
  - c) Those with previous history of still births
3. Still Births increases with mothers' age and parity.
4. Stillbirths rate is about 40/1000 in Nigeria.

### 8. Cause Specific Rate

This is number of people dying from a specific (diseases) cause during a given period divided by total number of death from all diseases in the same period. It is usually expressed in percentage.

### 3.9 Determinants of Fertility

- 1) Factors that directly affect child bearing are:
  - a) Menarche b) Menopause c) Sterility.
- 2) Biological limits on childbearing age between menarche and menopause.
- 3) Variations in the proportions of females at each age who are sexually active and therefore exposed to risks of pregnancy.
- 4) Variations across populations in the spacing between initiation of sexual activity and first live birth in the spacing between one live birth and the next.
- 5) Age at marriage and proportion married.
- 6) Birth Interval.
- 7) Effects of breastfeeding, contraception and abortion.
- 8) Effects of Sexually Transmitted Diseases.
- 9) Effects of Nutrition.

### Determinants of Migration

Factors of determinants are:

- A) **“Push” factors:** - These are wars, floods, famines, political/religious persecution, high unemployment, low wages and little hope.
- B) **“Pull” factors:-** These are good jobs, high wages, good public services such as education, attractive environment, religious freedom, proximity to family or large ethnic group.

### **3.10 Census and Population**

#### **3.10.1 Definition**

Process of collecting, compiling and publishing demographic data, Economic data and social data for all persons in a defined territory at a specific time.

#### **3.10.2 Reasons for Census**

- 1) Planning various essential services including health services.
- 2) Administrative and political purpose.
- 3) Determination of the denominators of health indices.

#### **3.10.3 General Characteristics of Census**

- 1) The questionnaire used for census may be filled by the enumerator (Canvasser)
- 2) The questionnaire may be filled by the head of the household or member of the household.
- 3) The timing of the census should be when there are no disturbances e.g. school holidays, national holidays so as to make sure people are at home.
- 4) Census population may be 'de facto' or 'de jure'.
- 5) A small pilot study is usually done in order to detect and therefore correct errors, inadequacies and deficiencies.

#### **3.10.4 De facto and De jure Population**

##### **A. De facto**

1. Does not distinguish between temporary and permanent residents.
2. People in transit are counted.
3. It is not easy to manipulate.
4. It may give false impression of population which may be due to seasonal variation.
5. It is open to criticism.
6. Everybody is counted (Permanent or no-permanent residents.).

##### **B. De Jure**

1. It may be difficult to determine who is actually a permanent resident.
2. A resident who is temporarily away may be missed because he is not counted.
3. It is free from short term mobility or migration.

4. It may not reflect the population actually present in the area at the time.
5. Only those who are permanent residents are counted.

### 3.10.5 Population Pyramid

#### Definition

A special type of bar chart that shows distribution of a population by age and sex.

**Types of Pyramid:** - The three types of Pyramid are:

1. **Expansive:** - A broad base, relative to the middle indicating a high proportion of children and a rapid rate of population growth.
2. **Constrictive:** - A base that is narrower than the middle of the pyramid usually the result of a recent rapid decline in fertility.
3. **Stationary:** - A pyramid with gradually declining number in age group tapering off more rapidly as the older ages indicating a moderate proportion of children and a slow or zero rate of growth.

Population decrease and increase.

A) Population decrease is due to:

- Epidemics.
- Pandemics.
- Natural disasters e.g. flooding and earthquakes.
- War.
- High Infant mortality rate.

B) Increase in population is due to:

- Advances in medical science
- Advances in agriculture
- Advances in Public health measures
- Improvement in standard of living.

#### National Population Policy

Reasons for National Population Policy:-

The national population policy came into being for two major reasons:-

- 1) Continuous burden of high fertility and population growth rate on the health of the families.
- 2) High growth rate has affected the quality of life and standard of living of the citizens.

#### Goals of National Population Policy

1. To improve the standard of living and quality of life of the people of this nation.
2. To promote their health and welfare, especially through preventing premature death and illness among high risk groups of mothers and children.
3. To achieve lower population growth rates, through reduction of birth rates by voluntary fertility regulation methods that are compatible with the attainment of economic and social goals of the nation.
4. To achieve a more even distribution between urban and rural areas.

#### Uses of Demography in Community Health Nursing

1. Demography enables the Community Health Nurse to plan for strategies to reduce the mortality and morbidity in the community.
2. It enables the nurse to put in measures to reduce the risks of associated with maternal health and child birth.
3. It helps to reduce causes of maternal mortality by putting strategies of safe motherhood.
4. It enables the nurse to be involved in immunization programs to stem the incidence and prevalence rates of infectious diseases.

### **4.0 CONCLUSION**

Demography is concerned with studying factors such as fertility, mortality, migration and nuptial that influence population distribution. Knowledge of demography will help to device strategies and plans that will assist in dealing with factors that influence the components of demography.

### **5.0 SUMMARY**

This unit discussed demography, the components and the uses in the practice of community health nursing.

## 6.0 TUTOR-MARKED ASSIGNMENT

Write short essay on demographical measurements and population policy.

## 7.0 REFERENCES/FURTHER READING

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## UNIT 6 INTERNATIONAL HEALTH

### CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 Origin of International Health
  - 3.2 Diseases of concern in International Health
  - 3.3 Preventive Measures
  - 3.4 Organizations Associated with International Health
    - 3.4.1 World Health Organization
      - 3.4.1.1 Functions of WHO
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    - 3.4.2 UNICEF (United Nations International Children's Emergency Fund)
    - 3.4.3 Other International Agencies are:
    - 3.4.4 Functions of the Organizations:
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### 1.0 INTRODUCTION

International Health policy tries to promote health and wellbeing and quality of life through researches, evaluation, training and technical assistance and by building community partnership. International health regulations are the principal legal instrument guiding the international management of public health emergencies. This is with a view to prevent international spread of disease without unnecessary disruption of trade or travel.

### 2.0 OBJECTIVES

At the end of this unit, you should be able to:

- understand the concept of international health
- identify strategies for implementation of international health policy in Nigeria
- identify principal agencies that are responsive for international health and their functions
- identify diseases that are of concern in international health.

### **3.0 MAIN CONTENT**

#### **3.1 Origin of International Health**

International health regulation arose out of concern for the spread of diseases from one country to the other. It is intended to ensure the maximum security against international spread of disease with the maximum interference with world traffic.

#### **3.2 Diseases of Concern in International Health**

These are:

1. Cholera
2. Yellow fever
3. Plague
4. Meningitis
5. Aids
6. Poliomyelitis
7. Influenza
8. Malaria
9. Avian flu.

All these diseases can cross international barriers

#### **3.3 Preventive Measures**

There is quarantine and Epidemiological unit at Federal Ministry of Health which is concerned with the establishment of:-

- 1) Port Health
- 2) Air port health
- 3) Quarantine stations or hospitals
- 4) Vaccination- carried out in order to obtain international certificate. This is done in designated centers. The international vaccination certificate for yellow fever is valid for ten years starting from ten days after the primary vaccination or in the same day after re-vaccination.

The aim of these units is to guard against the import and of diseases thus keeping the indigenous population reservoir as small as possible.

The International health stipulates every member states are obliged to develop strength and maintain the capacity to detect report and respond to Public health events.

### 3.4 Organizations Associated with International Health

The International Health deals with various organizations who are involved in providing health care to Nigerian citizens.

#### 3.4.1 World Health Organization

The broad objective of WHO is: - To have a single inter-governmental health Agency. The specific objective is the attainment by all peoples of highest level of health by all the people. Membership is opened to all countries.

##### 3.4.1.1 Functions of WHO

1. Help member states to improve their own health. It also strengthens health services of member nations.
2. Technical services rendered are related to disease control.
3. Standardization of medical products e.g. analysis and control of drugs.
4. Dissemination of information on possible epidemics.
5. Formulating International Health Regulations.
6. Decide which diseases should be under surveillance e.g. malaria, paralytic poliomyelitis and viral influenza.
7. Compilation of health statistics on notifiable diseases and causes of death. E.g. International statistical classification of diseases, injuries and causes of diseases.
8. Coordination of research activities on health problems e.g. special programs on research and training in tropical diseases.
9. Promote Primary Health Care.

##### 3.4.1.3 Internationally Notifiable Diseases

These are diseases covered by the international health regulations and the occurrence of which the health authority of any country must report to the World Health Organization.

They are also called convention or quarantinable diseases.

They are:-

1. Yellow fever
2. Small pox
3. Cholera
4. Typhoid fever
5. Plague
6. Louse borne relapsing fever

### **3.4.2 UNICEF (United Nations International Children's Emergency Fund)**

This was established in 1946 to deal with rehabilitation of children affected by war. It collaborates with FAO (Food, Agriculture Organization), UNESCO (United Nation Education, Scientific and Cultural Organization).

UNICEF also assists Family Planning Program. UNICEF has been involved in:-

1. Revising declining trends in Breastfeeding and improving weaning Practices
2. Growth monitoring to detect malnutrition and institute intervention before it becomes serious
3. Universal use of oral rehydration
4. Primary Health Care activities
5. Safe water supply and sanitation
6. Family Planning Services
7. Organizing basic educational and income- generating activities for mothers

### **3.4.3 Other International Agencies are:**

- 1) United Nations Fund for Population Activities (UNFPA) who are supporting The strengthening of Maternal and Child Health Service including provision of Family Planning Services.
- 2) Christian Voluntary Agencies for Health under the umbrella of Christian Health Association are providing support for Primary Health Care.
- 3) Ford foundation renders financial assistance in operational research issues in Primary Health Care.
- 4) United States Agency for International Development (USAID):- Carries out Programs for combating childhood communicable diseases. 2) Assists in EPI, control of diarrhea diseases, malaria control, health communication, training for health information system and health planning.
- 5) Pathfinder, Africare and IPPF.
- 6) United Nations Acquired Immune-Deficiency Syndrome (on HIV/AIDS)
- 7) UNHCR (on Refugees)
- 8) UNFAO (on Agriculture, Food and Nutrition)
- 9) UNDP (on community development)

### 3.4.4 Functions of the Organizations:

These organizations generally perform the following functions:

- 1) Promoting the development of comprehensive health services.
- 2) Prevention and controlling communicating diseases.
- 3) Improving environmental conditions.
- 4) Controlling rapid population growth.
- 5) Developing health manpower.
- 6) Planning and implementation of health program.

## 4.0 CONCLUSION

A community working in the broad text of health services will fulfill her roles in international health services. The various activities of international health organizations have in no small measures brought some improvement on the health of the people, most especially women and children.

## 5.0 SUMMARY

This unit discussed the concept of International Health, strategies for implementing health policy. It has identified principal International agencies that have carried out health activities and tackle International notifiable diseases.

## 6.0 TUTOR-MARKED ASSIGNMENT

- A) Write short notes on internationally notifiable diseases.
- B) Write short notes on 3 key International agents and their activities in Nigeria.

## 7.0 REFERENCES/FURTHER READING

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