NATIONAL OPEN UNIVERSITY OF NIGERIA

SCHOOL OF HEALTH SCIENCES

COURSE CODE: PHS 301

COURSE TITLE:
HEALTH MANAGEMENT INFORMATION SYSTEM

PHS 301

HEALTH MANAGEMENT INFORMATION SYSTEM

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COURSE GUIDE

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Introduction

Introduction to Health Management Information System a two credit degree course available to all students offering Bachelor of Science (BSc.) Community Health (CommH).

Health Management Information System is a special field of Health Sciences. The health worker must be trained in the same way and work with the same methods as his colleagues who specialize in other areas of Health Sciences.
The concept of Health Management Information System has dramatically influence health delivery through a more efficient data collection that inform a more productive health decisions. The main concern of Health Management Information System and the purpose underlying the study of Health Management Information System is to develop requisite skill for delivering of community services.

What You will Learn in this Course

The course consists of 15 units grouped into 4 Modules and a Course Guide. This course guide tells you briefly what the course is about, what course materials you will be using and how you can work with these materials. In addition, it advocates some general guidelines for the amount of time you are likely to spend on each unit of the course in order to complete it successfully.

It gives you guidance in respect of your Tutor-Marked Assignment which will be made available in the assignment file. There will be regular tutorial classes that are related to the course. It is advisable for you to attend these tutorial sessions. The course will prepare you for the challenges you will meet in the field of Community Health.

Course Aims

The aim of the course is not complex. The course aims to provide you with an understanding of Health Management Information System; it also aims to provide you with solutions to health challenges in the communities.

Course Objectives

To achieve the aims set out; the course has a set of objectives. Each unit has specific objectives which are included at the beginning of the unit. You should read these objectives before you study the unit. You may which to refer to them during your study to check on your progress. You

should always look at the unit objectives after completion of each unit. By doing so, you would have followed the instructions in the unit.

Below are the comprehensive objectives of the course as a whole. By meeting these objectives, you should have achieved the aims of the course as a whole. In addition to the aims above, this course sets to achieve some objectives. Thus, after going through the course, you should be able to:

- Describe the Expanded definitions of the Concepts and Terminologies of Health Management Information System.
- Undertake Health Data Management to provide great health information capable of guiding the planners and stakeholders in health care delivery system.
- Understand the foundational basis for the National Health Management Information System Policy and
- Describe Project cycle, Monitoring tools and Evaluation of health projects and programmes

Working through this Course

To complete this course you are required to read each study unit, read the textbooks and read other materials which may be provided by the National Open University of Nigeria.
Each unit contains self-assessment exercise and at certain points in the course you would be required to submit assignments for assessment purposes. At the end of the course there is a final examination. The course should take you about a total of 17 weeks to complete. Below you will find listed all the components of the course, what you have to do and how you should allocate your time to each unit in order to complete the course on time and successfully.

This course entails that you spend a lot of time to read. I would advice that you avail yourself the opportunity of attending the tutorial sessions where you have the opportunity of comparing your knowledge with that of other people.

The Course Materials

The main components of the course are

1. The course Guide
2. Study Units
3. References/Further Readings

4. Assignments
5. Presentation Schedule

Study Unit

The study units in this course are as follows:

Module 1	Introduction: Expanded Concepts and Terminology
Unit 1	Conceptual definitions in Health Management Information System
Unit 2	Expanded concept of Health
Unit 3	Expanded concept of Management
Unit 4	Expanded concept of Information
Unit 5	Expanded concept of Systems
Module 2	Health Data Management
Unit 6	Characteristics of good Data
Unit 7	Types and Sources of Health Data
Unit 8	Methods of Data Collection Challenges
Unit 9	of Health Data Collection Basics of
Unit 10	Data Processing and Analysis
Module 3	National Health Management Information System Policy
Unit 11	Stakeholders in Management Information System
Unit 12	Synopsis of National Health Information System Policy in Nigeria
Unit 13	Standard Forms for Health information
Unit 14	Health Indicators
Module 4	Monitoring and Evaluation
Unit 15	Monitoring and Evaluation

As above, there are four modules in this course. The first and second modules contain 5 study units each. The third module contains 4 study units and the last module contain only a study unit.

The first unit focuses on the meaning and concept of important terminologies in HMIS. The second, third, fourth and fifth study units deal with the expanded concepts of health, management, information and

systems. The sixth focuses on the characteristics of good health data, the seventh on types and sources of data while eighth study unit deals with methods of data collection. Study units nine and ten deal with challenges of data collection and basics of data processing and analysis respectively. You will encounter stakeholders on health, Synopsis of national health information system policy, Standard Forms and Health indicators in units eleven, twelve, thirteen and fourteen respectively. The last module focuses on Monitoring and evaluation.

Each unit consists of one or two weeks' work and include an introduction, objectives, reading materials, exercises, conclusion, summary Tutor Marked Assignments (TMAs), references and other resources. The unit directs you to work on exercises related to the required reading. In general, these exercises test you on the materials you have just covered or require you to apply it in some way and thereby assist you to evaluate your progress and to reinforce your comprehension of the material. Together with TMAs, these exercises will help you in achieving the stated learning objectives of the individual units and of the course as a whole.

Presentation Schedule

Your course materials have important dates for the early and timely completion and submission of your TMAs and attending tutorials. You should remember that you are required to submit all your assignments by the stipulated time and date. You should guard against falling behind in your work.

Assessment

There are three aspects to the assessment of the course. First is made up of self-assessment exercises, second consists of the tutor-marked assignments and third is the written examination/end of course examination.

You are advised to do the exercises. In tackling the assignments, you are expected to apply information, knowledge and techniques you gathered during the course. The assignments must be submitted to your facilitator for formal assessment in accordance with the deadlines stated in the presentation schedule and the assignment file. The work you submit to your tutor for assessment will count for 30% of your total course work. At the end of the course you will need to sit for a final or end of course examination of about a three hour duration. This examination will count for 70% of your total course mark.

Tutor-Marked Assignment

The TMA is a continuous assessment component of your course. It accounts for 30% of the total score. You will be given for (4) TMAs to answer. Three of these must be answered before you are allowed to sit for the end of course examination. The TMAs would be given to you by your facilitator and returned after you have done the assignment. Assignment questions for the units in this course are contained in the assignment file. You will be able to complete your assignment from the information and material contained in your reading, references and study units. However, it is desirable in all degree level of education to demonstrate that you have read and researched more into your references, which will give you a wider view point and may provide you with a deeper understanding of the subject.

Make sure that each assignment reaches your facilitator on or before the deadline given in the presentation schedule and assignment file. If for any reason you can not complete your work on time, contact your facilitator before the assignment is due to discuss the possibility of an extension. Extension will not be granted after the due date unless there are exceptional circumstances.

Final Examination and Grading

The end of course examination for Health Management Information System will be for about 3 hours and it has a value of 70% of the total course work. The examination will consist of questions, which will reflect the type of self-testing, practice exercise and tutor-marked assignment problems you have previously encountered. All areas of the course will be assessed.

Use the time between finishing the last unit and sitting for the examination to revise the whole course. You might find it useful to review your self-test, TMAs and comments on them before the examination. The end of course examination covers information from all parts of the course.

Course Marking Scheme

Assignment	Marks
Assignment 1 - 4	Four assignments, best three marks of the four count at 10% each – 30% of course marks
End of course examination	70% of overall course marks
Total	100% of course materials

Facilitators/Tutors and Tutorials

There are 16 hours of tutorials provided in support of this course. You will be notified of the dates, times and location of these tutorials as well as the name and phone number of your facilitators, as soon as you are allocated a tutorial group.

Your facilitator will mark and comment on your assignments, keep a close watch on your progress and any difficulties you might face and provide assistance to you during the course. You are expected to mail your Tutor Marked Assignment to your facilitator before the schedule date (at least two working days are required). They will be marked by your tutor and returned to you as soon as possible.

Do not delay to contact your facilitator by telephone or e-mail if you need assistance.

The following might be circumstances in which you would find assistance necessary, hence you would have to contact your facilitator if:

- You do not understand any part of the study or the assigned readings
- You have difficulty with the self-tests
- You have a question or problem with an assignment or with the grading of an assignment.

You should endeavour to attend the tutorials. This is the only chance to have face to face contact with your course facilitator and to ask questions which are answered instantly. You can raise any problem encountered in the course of your study.

To gain much benefit from course tutorials prepare a question list before attending them. You will learn a lot from participating actively in discussions.

Summary

Health Management Information System is a course that intends to provide concept of the principles of data generation and the processes of getting health information that can help future planning of health care delivery. Upon completing this course, you will be equipped with the basic knowledge of data management, health terminologies, systems operations,

basic computer application in health, programme monitoring and evaluation. In addition, you will be able to answer the following:

- What does health means?
- What is the expanded definition of management, information and systems?
- Identify two types of data
- What different health indicators needed at each level?
- What are the main sources of health information
- Methods of data collection
- Challenges of health data collection
- Basic data processing and analysis
- Stakeholders in Health

The list of questions that you would be able to answer is not limited to the above list. To gain the most from this course you should endeavor to apply the principles you have learnt to your understanding of Community health.

I wish you success in the course and I hope you will find it both interesting and useful.

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NATIONAL OPEN UNIVERSITY OF NIGERIA

Content

Module 1
Introduction: Expanded Concepts and Terminology

Unit 1

Conceptual Definitions

Module 1 Unit 1 Conceptual Definitions

1.0 Introductions

Since you have gone through the course guide, you are probably familiar with what this unit is about. In this unit, you will acquire understanding of the definition of basic concepts of Health Management information System. First let's have a view of what you should learn in this unit as outlined in the objectives below

2.0 Objectives

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

Define the main terms used in Health Management Information System.

3.0 Definition of Definitions of Terminologies used in Health Management Information System

1. Health: World Health Organization defined Health as a state of complete physical mental and social well-being and not merely the absence of disease or infirmity.
2. Management: The process through rules, regulations and procedures by which goals are set and achieved.
3. Information: The outcome of processed health data which increases knowledge about health
4. System: A system can be define as a complex whole formed from many parts that are made to relate with each other or a combination of related parts organized into a complex whole in order to achieve objectives.
5. Health Information System is defined as a set of components and procedures organized with the objective of generating information which will improve health care management decisions at all levels of the health system.
6. Data: Data can be defined as items, quantities and characters used as a basic for making inferences.
7. Data collection: the process of gathering data. Many methods are available for doing this effectively eg Forms, Interviews, Focal group discussion etc
8. Data source: the origin of health data
9. Data type: Primary data are those used for the primary reason they were collected and Secondary data if used for reasons other than that they were collected
10. Monitoring is a systematic process of collection and analysis of data to track project implementation and use of the information in project management and decision making.

11. Evaluation on the other hand is a systematic process of collecting and analyzing information to assess the *effectiveness* of the programme organization in the achievement of its stated goals.

12. Disease surveillance: The ongoing systematic collection and analysis of data and the provision of information which leads to action being taken to prevent and control a disease, usually one of an infectious nature.

13. Result: the final outcome or conclusion of a search, research, programme or activity.

14. Reporting: Making results of activities, programmes or research available to limited audience who are probably part of or sponsor of or stakeholders.

15.Dissemination: Making outcome of activities, programmes or research available to a larger audience. This may involve having an expanded theme meetings or a seminar or scientific meetings.

4.0 Conclusion

In this Unit you have learnt the basic and functional definition of Health, Management, Information, System, Health information System, Data, Data collection, Data source, Data type, Monitoring, Evaluation, Disease surveillance, Result, Reporting and Dissemination.

You should at this point be able to define these basic concept of Health Management Information System (HMIS)

5.0 Summary

This unit has focused on the definition of the conceptual terminologies in HMIS. Subsequent units will build on them and show their relevance in the operations of HMIS.

6.0 Tutor Marked Assignments

i. Without looking back on these definitions, take a sheet of paper and write down the basic terminologies in this unit. Repeat this until you get at least 10 correctly.

ii. Attempt at writing down the definition for each. Review and repeat until you have at least correct definition to at least 10 of the terminologies.

7.0 References

1. World Health Organization (1948) Official Records of the World Health Organization Geneval no. 2 pp.100

2. Basic Tool for Process Improvement http://www.balancedscorecard.org/Portals/0/PDF/datacoll.pdf

3. Araoye MO 2003 Research Methodology with statistics for Health and Social Sciences pp 1 - 286

Module 1
Introduction: Expanded Concepts and Terminology
Unit 2
Expanded Definition and Concept of Health

Module 1 Unit 2 Expanded Definition and Concept of Health

1.0 Introductions

Since you have gone through the course guide and successfully learnt the definitions in the last chapter, you have acquire the requisite foundation on which we can build in the next couple of units. This unit will help you acquire basic understanding of what health is about and the use of the definition in different circumstances. Before we get into that let's look at the unit objectives.

2.0 Objectives

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

- Accurately define what Health is
- Mention the use of that definition in various circumstances

- Differentiate the various situations that affect Health staus of a given population and
- List Health needs and Forces that influence health

3.1 Definition of Health

World Health Organization defined Health as a state of complete physical mental and social well-being and not merely the absence of disease or infirmity.

This is the definition contained in the preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York 19-22 June, 1946; signed on 22 July 1946 by the representatives of 61 States and entered into force on 7th April, 1948.

This definition has not been changed since 1948 and it is applicable to individuals and his affiliations.

The import of this definition can easily be seen in linking what ordinarily is not a health issue to health so long as they may affect the physical, mental and social well being of the individuals.

A man without social support is not healthy, A man without adequate food and clothing is also not healthy. People living under fear of war or attacks of natural or man-made events are not healthy and so virtually everything that affect human life could then be capturable as health information which are important in Health Management Information System.

3.2 Application and intervention needs

When it comes to general application, one may apply this definition to personal, family, community, National Regional and Global Health situation.

Both from the Gross Global Situation to a micro-level of personal circumstances, critical appraisal will enable one to understand the wide-scope of the catchments of National Health Management Information System (NHMIS). The following are very central to the achievement of Health.

a. Socio-economic Situations
b. Demographic Situation
c. Epidemiological Situation
d. Health Resources
e. Human Capital
f. Health Services
g. Sectoral Situations: Education, Agriculture, Mineral Resources, Water Resources, Transport, etc.

Force that influence Health

To achieve health involves the interplay of several forces which include Governance, Social Cohesion, Integrity, Resource generation and distribution.

a. *Social-Economy situation:*

   Printing specific population group like infant, women of childbearing age, workers, rural poor, the physically challenged and the unemployed young adults. Also priority certain health challenges like malaria, measles, malnutrition, meningitis.

b. *Demographic situation*

   Population estimation and projection by Ages & Sex Estimating vital rates such as Births and Deaths and differential distribution of these births & deaths between both rural and urban population.

c. *Epidemiological situation*

To identify and analyse public health problems, their distribution, prevalence's and Trends. There will generate the following indicators:

- Nutritional indicators: Weight for-age, weight for height or Body Mass Index (BMI)
- Infant Mortality Rate in both Urban versus Rural
- Child Mortality Rate
- Life expectancy at a given age
- Age specific death rate
- Morbidity and Mortality rates.

d. Health Resources, Health Human Capital and Health Facilities directly after service delivery to the appropriate person of the right place and right time.

Health Intervention need to

Health is a complex issue so also intervention is similarly complex. The strategy must integrate efforts of many other disciplines and professionals like Medicine, Nursing, Psychology, Sociology, Anthropology, Engineering, Economics, Political Science, Biology, History, Law, Demography and others as relevant.

Intervention need to:

1. Focus on generic social & behavioral determinants of disease, injury and disability.
2. Use multiple approaches (e.g. Education, Social Support, Laws, incentives, Behavior Change Programme) and address multiple level of influence

simultaneously (i.e. Individuals, families, Communities, Nations).

3. Take account of the special needs of target groups (i.e based on age, gender, race, ethnicity, social class)
4. Take the "long view" of health outcomes, as changes often take many years to become established and
5. Involve a variety of sectors in our society that have not traditionally been associated with health promotion efforts, these will include Law, business, education, social services and the media.

4.0 Conclusion

In this unit you have learned what health is and it application in several situations. You have also found out that there are mult-disciplinary approach to health intervention. At this point you should be able to without mistake define health and list various intervention approaches.

5.0 Summary

This unit is a build up for the last one and it has expanciated on the initial definition of health in the last unit.

6.0 Tutor Marked Assignments

List the various disciplines involved in health interventions

List the different types of health listuations

7.0 References

Smedley BD & Syme SL (1997) Promoting Health Intervention Strategies from social & behavioural research pg. 1-472.
Park K Park's Textbook of Preventive and Social Medicine, eds. M/s Banasidas Bhanot; India 2000
Federal Republic of Nigeria, national Health Policy, 1996
World Health Organization (WHO) www.whoint.org

Module 1
Introduction: Expanded Concepts and Terminology
Unit 3
Expanded Concept and Definition of management

1.0 Introductions

Most things have limitations. Either limitation in quantity, quality, time-usefulness, resources etc. Hence the need for management. Also, everything good or successful require good logistics and therefore demand effective management. HMIS is not different. No good health information just happen or become available without management support system. Therefore in this unit you will look at application and impact of management. However, it will be desirable to look at the objectives as set out below.

2.0 Objectives

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

Define Management and

List the expected achievement of good management

3.1 Definition of Management

Management can be defined as follows:

a. The process through rules, regulations and procedures by which goals are set and achieved.

b. A set of functions such as planning, organizing, staffing, directing and controlling. Management requires specific skill and know-how for effective utilization of scarce resources and leading the direction for achieving a common or corporate goal. In the content of HMIS, it's the process of managing health information to improve service delivery and achieve set health policy.

Efficient management of the health information is necessary. This can be service delivery, service utilization, outcome measures or input indicators etc. Nigeria has a National Health Policy to create an administrative framework for a universal access to comprehensive Health Services. This will focus on achieving optimal service delivery and utilization that is progressively improving the physical and mental health of the people and incorporating both preventive, curative and rehabilitative components.

3.2 What Management is expected to achieve

Within the context of HMIS, Management achieves the following:

a. Conduct survey to determine a community's health challenges.

b. Determine in partnership with community leaders, the priority ranking of health challenges.

c. Assess demographic characteristics and decide which of the priority health challenges can be realistically solved.
d. Select intervention programmes directed at these health challenges.
e. Set objectives for intervention programmes with the participation of the community.
f. Secure and utilize the resources needed to implement programmes.
g. Decide the types and numbers of staff needed for effective implementation of the programmes.
h. Set job description and targets for staff
i. Organize appropriate trainings, either in-house or external facility.
j. Set the necessary indicators of achievement to be used in evaluating intervention programmes.
k. Decide the frequency, regularity and priority areas for operation Research.

4.0 Conclusion

In this unit you have learned that good management will conduct survey, encourage partnership with community leaders, help assess demographic characteristics, select intervention programmes,set objectives for intervention programmes, secure and utilize the resources needed, decide the types and numbers of staff needed, set targets for staff, organize appropriate trainings, either in-house or external facility. The unit also explained the need to evaluate intervention programmes and the frequency, regularity and priority areas for operation Research for continuous service improvement.

5.0 Summary

This unit main thrust is defining management and expected achievement of effective management. The next unit will build on another concept.

6.0 Tutor Marked Assignments

List 7 major expected outcome of good management in Health Management Information System

7.0 References

Federal Ministry of Health 2000, Manual for certificate in Health Planning and Management P. 1- 40

Osibogun A. Operation Research as a tool for the management of Health services. Nigerian Journal of Pharmacy Practice and Continuing Education, 1,1:27-30, 1998

Federal Republic of Nigeria, national Health Policy, 1996

Module 1
Introduction: Expanded Concepts and Terminology
Unit 4

Expanded Concept and Definition of Information

1.0 Introductions

Information is power. That is what we need to plan, to forecast, to effect behavioural change. We therefore in this unit take a more critical look at information and what is real information. You will also learn what is the relationship between Data and health information as stated in the objective below.

2.0 Objectives

At the end of this unit, you will be able to

- Define Information, Infromation retrieval and Health Information System
- Describe how to generate health information
- Explain the relationship between Data and health information

3.1 Definition of Information and Health Information System

Information can be defined as the communication or reception of knowledge or intelligence. Such knowledge as obtained from research, investigation or study or instruction

Information retrieval: the techniques of storing and recovering and often disseminating recorded data especially through the use of computerized system

Health Information System is defined as a set of components and procedures organized with the objective of generating information which will improve health care management decisions at all levels of the health system.

3.2 Example of how to generate Health information

Data can be defined as items, quantities and characters used as a basic for making inferences. Data usually occur as raw materials (Fact) that require processing. Data becomes information when processed and gets to the right person, in an appropriate form in a timely manner and in a form that can be utilized.

Example:

a. Mira weighed 12kg when the Nurse saw her in the well-baby clinic yesterday.
b. James had a length of 65cm in the last clinic attendance.
c. Mira attended the well baby clinic at the age of 12months and weighed 12kg, his last diarrhoea episodes were 4months ago and mother said she feeds well.

Explanation: a and b contains Data, c information

a. provided the Name, the weight of Mira and the fact that a well baby clinic opens. It is difficult to make use of such "data" b. also tell us that James' length was 65cm and also the clinic opens. These cannot be used to infer anything about the health of these children (Mira and James).

However c, gives utilizable data (Information) Mira at the age of 12 months weighs 12kg. This is good information. Why?

To estimate the normal weigh for any infant use this formula

N plus Eight divided by Two, That is

$$= \frac{N + 8}{2}$$

N = Age in months.

Mira who is Twelve months old should weigh Twelve plus Eight divided by Two, that is

$$= \frac{12 + 8}{2}$$

$$= \frac{20}{2}$$

= 10kg.

Therefore should have awight of Ten Kilogram

The fact that we know that Mira has passed the expected weight for age is a good information of good health status. Also the fact that she had the last diarrhoea episodes 4 months ago and eats well were information about contributing factor for the health status achievement.

3.3 Relationship between Data and Health Information Data becomes information if it is in a useable form and is used appropriately

1. Data forms the basis for information.Data is raw fact about an entity.
2. Data are quantitatives or characters while information (processed data) pursues decision making process directed at identifying problems, evaluating outcomes and getting ready for improvement in service delivery.

3.0 Conclusion

In this unit you have acquire necessary understanding of the definition of information, information retrieval and health information system. You have also learned how to generate health information from material available to you. The unit also stress the relationship between data and health information.

You should by now be comfortable with defining information terminologies and generate health information from the observations in the community.

4.0 Summary

This unit has focused on Information, its retrieval and generating health information. The unit stressed that information is as good and reliable as the data set that produce it. The next unit will further build on this.

5.0 Tutor Marked Assignments

In Egbejila Village, school children were clinically examine for evidence of malnutrition and oral health staus in a UNICEF supported project. It was found that 80% of the primary school children were underweight, 20% had angular stomatitis and 40 % were stunted. Oral examination shows that 75% had poor oral hygiene and 20 % had dental caries.

What is the health information you could draw from the above?

7.0 References

The Merriam-Webster dictionary 2010

Mercedes de O. The WHO Child Growth Standards. In Koletzko B. Eds. Pediatric Nutrition in Practice. Basel, Karger, 2008. Pp 254-269

Park K Park's Textbook of Preventive and Social Medicine, eds. M/s Banasidas Bhanot; India 2000

Federal Republic of Nigeria, national Health Policy, 1996

World Health Organization (WHO) www.whoint.org

Further Readings

WHO Multicentre Growth Reference Study Group: WHO Child Growth Standards based on length/height, weight and age. Acta Paediatr Suppl 2006;450: 76-85.

Module 1
Introduction: Expanded Concepts and Terminology

Unit 5
Expanded Concept and definition of Systems

Module 1 Unit 5 Expanded Concept and definition of Systems

1.0 Introductions

Achieving most things in life requires more than one step. So also the health care services delivery require. The working together at such steps for a wholesome service delivery is what is refered to as a system. Even the making of a household lunch for a family require multiple steps to complete. A system is as good as the functionality of the components. This is what you will learn in this unit. However, it will be better for you to review the unit objectives as set out below.

2.0 Objectives

At the end of this unit, you will be able to

- Define what a System is
- Explain the types of System

- Explain how vaccine delivery qualify as a System
- List the elements of the health information system

3.1 Definition of System

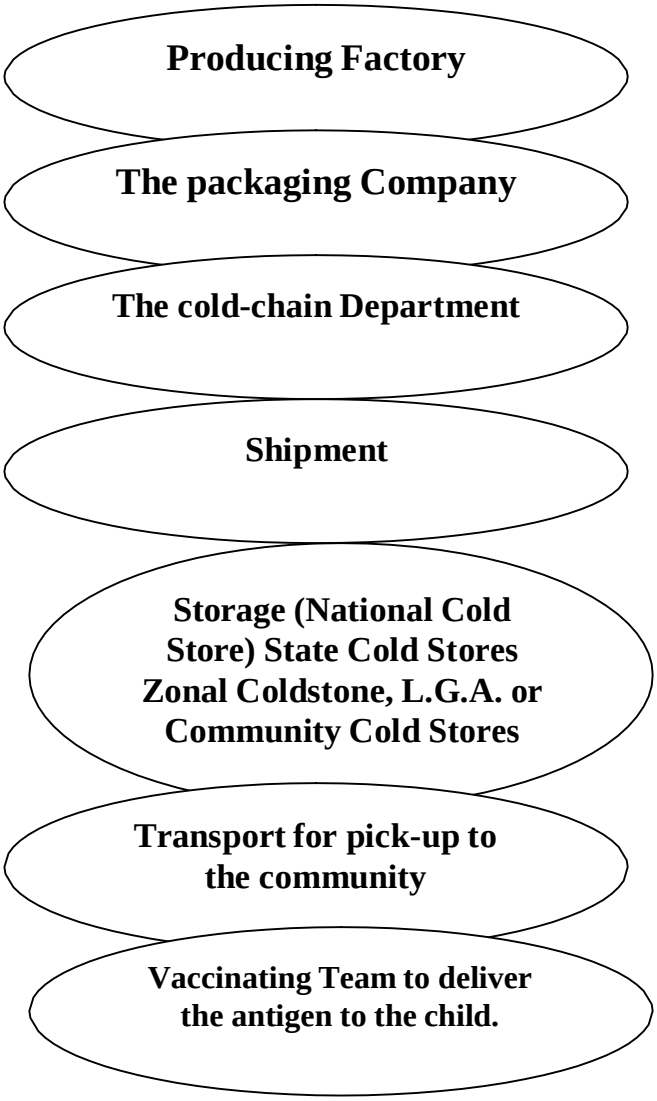
A system can be define as a complex whole formed from many parts that are made to relate with each other or a combination of related parts organized into a complex whole in order to achieve objectives.

Health Management Information is a complex whole that are integrated to function as a system. Health Service provision is a system that works together as whole to deliver the necessary services to a community.

3.2 Example of system in Vaccine delivery

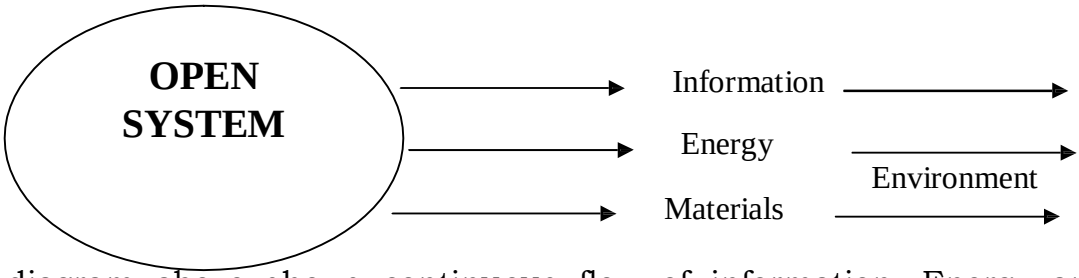
Example

Look at the Immunization Programme: To deliver an antigen e.g. Tetanus Toxoid, to a child requires the following:-



The interlinking and effective working together just defines what a system is. All the component parts must be working optimally.

An organization is said to have open system if it exchanges information, energy or material with the environment.



The diagram above shows continuous flow of information, Energy and material from the system to and fro the environment based on interaction between components. Remember that the Environment is the sum total of the condition within which organisms live. We can also have closed or semiclosed systems which either does not exchange information at all with the outside or exchanges information at limited volume or time.

3.3 The elements of health information system

The objects in a system are called the elements of the system. Therefore, the elements of any health information system includes:

a. Health data – Information or data on patients and their complaints, drug supplies, hospital facilities, budget, epidemiological and demographic data etc.

b. Personnel: Staff who collect or process health data, usually medical records officers, doctors who attend to patients health planning officers, Nurses or Community Health Officer etc.

c. Tools for collecting, processing and presenting health data – forms, Registers, Admission cards Tally Sheets, Ledgers etc or Data processing machines such as hand-calculators, computers search engines, intranet and internet.

4.0 Conclusion

In this unit you have learned what a system is and what an open system does by allowing free exchange of information with the environment. You have also appreciated the various elements of the health information system. By now you should have no major challenges with how a system operates.

5.0 Summary

The unit has focused on the definition of system, open system, and essential elements of health information system which includes health data, personnel and tools needed for collecting the data. You will be able to build you knowledge further in the next unit.

6.0 Tutor Marked Assignments

Within the community, think out 2 major systems that delivers good services to the people. What are the components of this systems.

7.0 References

Health Management Information System www.distance.jhsph.edu/hmis/

T M Akande and J O Monehin Health Management Information System in private clinics in Ilotin Nigerian Medical Practitioner vol 46 No ***5.*** 2004 (103 - 107)

Federal Ministry of Health 2000, Manual for Certificate in Health Planning and Management Course.

Module 2

Health Data Management

Unit 6

Characteristics of good health data

Module 2 Unit 6 Characteristics of good health data

1.0 Introductions

We have seen before that health information is as good as the data from where the information was derived. Therefore to have good health information data must come from reliable source and possess good characteristics. This unit will help you acquire good understanding of the peculiar characteristics that good data must posess. Before we go into that let's look at the main objective that this unit have to offer you on your programme.

2.0 Objectives

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

List and explain at least 10 characteristics of a good data

3.0 Characteristics of good health data

Source data transformed into information, it is necessary to examine the characteristics of good Data that are capable of giving birth to good information after processing.

A simple Mneumonic to help students remember is as follows:-

"The Vice Principal paid VAT on CAR parked in front of Students Common Room"

V - Valid
P - Periodicity
V - Verifiable
A - Appropriate
T - Timely
C - Confidentiality
A - Acceptable
R - Reliable S
- Security
C - Currency
R - Relevant

1. Valid:- Data must be correct and trustworthy in its quality.
2. Periodicity:- Measurement must be done based on the nature of the data e.g. Pulse rate changes with activity and so normal pulse should not be taken immediately after a rigorous exercise.
3. Verifiable:- Data should have the characteristic of been constituently rechecked or revalidated. E.g. when a child has pneumonia the most verifiable sign is the Respiratory rate.
4. Appropriate:- Data is appropriate when it meets the needs of the users.
5. Timely:- Data should be available at the appropriate point in time for use. Right data at the right time in the right place.

6. Confidentiality:- Allow only authorized persons access to the data.
7. Acceptable:- The recipient understand the data. There should be no hidden codes that end users wouldn't understand.
8. Reliable:- Data should have value which ordinarily could not have been allocated by near chance.
9. Security:- Good data must be protected, from misuse or abuse. To serve data, it is necessary to put procedure that protect the data in place.
10. Currency:- More recent value for the data are usually preferred.
11. Relevant:- The data must contain only what is pertinent in the particular circumstance. If you need to know of a child has completed the immunization schedule, it is unnecessary to be asking for the school teacher's name or if he has paid school fees or not.

4.0 Conclusion

In this unit you have learned a simple Mnemonics that helps you remember the needed characteristics of a good data. This unit has also assured you that when you secure data with those set of characteristics, you are likely going to derive good health information from them. With is Mnemonics which when you repeat it to yourself 21 times is likely you will not easily forget these characteristics of a good data. By now looking through the community you should be able to know how to get good data set.

5.0 Summary

This unit focus on getting good data set just by remembering that *"The Vice Principal paid VAT on CAR parked in front of Students Common Room"*.

6.0 Tutor Marked Assignments

Give yourself some thinking time and see if you can figure out another Mnemonics for this characteristics of good data.

7.0 References

Federal Ministry of Health 2003 Manual for certificate in Health Planning and Management course.

World Health Organization (WHO) www.whoint.org

Park K Park's Textbook of Preventive and Social Medicine, eds. M/s Banasidas Bhanot; India 2000

Module 2

Health Data Management

Unit 7

Types and Source of Health Data

Module 2 Unit 7 Types and Source of Health Data

1.0 Introductions

You have learned in the previous units that health information depends seriously on data. However there are various types of Data that could be used to generate health information. Data come from several sources depend on the type and intended use. This unit is intended to help you acquire requisite understanding of this. Let's take a quick look at the unit objectives.

2.0 Objectives

At the end of this unit, you will be able to

- Describe the various types of health data
- Identify the various sources of health data

3.1 Types of Health Data

There are two main types of Health data that would be relevant to us at this stage:

1. Primary Health Data
2. Secondary Health Data

Primary Health Data: are data collected and used only for the purpose for which they were collected. You may wish to determine the percentage of the population of the Prince and Princess Estate, Abuja who have personal cars to take them to Hospital, in case of sickness in the night when taxi would not be available. You need to carry out a survey of the community of people living in Prince and Princess Estate Abuja. Collect necessary data and calculate the percentage. Here primary data is used.

Secondary Health Data: is that used for a purpose different from the purpose for which the data was collected originally.

From the above example if you found out that only 10% of the community have personal cars. A company may want to establish a night ambulance pick up targeting the 90% of the people without personal cars. Then a Bank also visited the Estate to find out how many families would be interested in getting car loans with very low interest. The Bank therefore estimates to print information/advertisement materials that will be sufficient for 90% of the population. The Bank is making use of Secondary data, since the data collection was not meant for a Banking product development in the first instance.

Brainstorming:- Can you think about Primary & Secondary data from blood samples collected from Children's ward.

3.2 Sources of Health Data

i. Home-Based Records: This will include the PHC Child Health cards and Child Treatment Card, PHC Personal Health Card and Adult treatment card and the Healthy Mother Card.

ii. Community Activities:- Community forms the basis of human activities, interaction and environmental influences. Data from the community are used to determine important epidemiological rates for various segments of the population.

Examples Birth data, Death data, Migration, New settlements etc. The community is a good source of health data. Sources include village health committees, community leaders, voluntary village health workers and traditional birth attendants.

iii. Hospital Activities:- Various data are routinely collected from each time a patient visit the hospital. These includes Name, Address, Age, Sex, Date of Birth, Date of Admission, Length of Hospital Stay, Consultant in-charge of Care, Diagnosis Investigation utilized, drugs prescribed, Discharge weight, Ambulatory Status of Patient, Next Clinic appointment at discharge etc.

Health facility based records (HMIS 000 FORMS):

- Tracer diseases are outpatient attendance
- Antenatal care and pregnancy outcome
- Family, Planning, Immunization, Growth monitoring
- In-patient Care
- Disease Surveillance and Notification Forms

Local Government based Data

- Corresponding forms from facility based reports (HMI 001 Forms)

- DSN Data
- Report of Epidemics etc.

This data could be used to estimate the magnitude of health problem and makes identification of Epidemics likely: It is also to identify the percentage of the population receiving hospital-based care. It helps planning for drug supplies, bed occupancy rates, laboratories consumables, and other facilities requires in meeting the provision of health care.

iv. Census

Data from Census provides demographic information such as age, sex, occupation, mental status, type of accommodation, cooking methods etc. This may not describe health directly, but reveals the underlying population characteristics which may be related to health. God planning is usually premise on understanding of population demography. Type of health services required for the age, sex and ethnic structures of the population.

v. Research Surveys and Reports

There is a heavy volume of health data in journal articles and other research reports found in libraries of institutions, Federal Ministry of Health generates and keeps 'lots of health data, especially from tertiary health facilities State Ministry of Health also generates and keeps heavy number of health data from Secondary H.F. Health Department of the LGA are also expected to keep health data on various health activities in the local government. Especially, from Primary Health Care facilities.

vi. Intranets: Within the same organization, health data could be found and shared without restrictions.

Internets: This contains a magnitude of information available to users from e-libraries, e- Journals, websites Blogs, etc.

Examples of sites with health data/information inclusive:

See listing under reference below

vii. Other Sectors and agencies

- Agriculture
- Education
- Works and Housing
- Non-governmental organizations
  CBOs Faith Based Organizations, NGOs

4.0 Conclusion

This unit not only focused on the importance of types of Data but also the sources from where they come. At this point you should know what types of data that may be obtainable from your community and

5.0 Summary

In this unit you have learned the types of data and various sources of health data/ information that may include but not limited to Census, Registration of vital events,Sample registration system (SRS), Notification of diseases, Hospital records, Disease register, Record linkage, Epidemiological surveillance, Other health service records, Environmental health data, Health manpower statistics, Population surveys, Other routine statistics related to health and Non - quantifiable information.
You are set to move on this course.

7.0 Tutor Marked Assignments

Take a look at the community school in your area and make a list of data that you may be able to generate from there.

To what use can you put those data?

7.0 References

1. World Health Organization – www.whointer.org
2. United National Children's Fund UNICEF – www.unicef.org
3. African Journal Online – www.goal.org
4. National Library (USA) – www.pubmed.nl
5. Pediatric Oncall Journal – www.paediatriconcall.com
6. NHS UK
7. NIH National Institute of Health
8. HINARI
9. Araoye MO 2003 Research Methodology with statistics for Health and Social Sciences pp 1 - 286
10. Park K Park's Textbook of Preventive and Social Medicine, eds. M/s Banasidas Bhanot; India 2000

Module 2

Health Data Management

Unit 8

Methods of Data Collections

1.0 Introductions

Health information doesn't just happen. People are responsible for making it happen. The improvement needs in our health delivery system depends on availability of sound health information for policy makers to take good decision for improvement. This can only happen when good data are available . The process of data collection is what this unit promises to address. Let's take a view of the unit objectives before you go into the process.

2.0 Objectives

At the end of this unit, you will be able to

- Determine what kind of Data need to be collected
- Make a list the personnel responsible for Data collection
- Describe the process of Data collection

3.1 Methods of Data Collections

There are currently 32 different forms which LGA health staff is expected to complete:

- Growth monitoring and promotion tally sheet 8Hf – 1, 8HF – 2, 8HF – 3
- Tally sheet for immunization 5HF – 1, 5HF – 2, and 5HF – 3
- Tally sheet of antenatal care and pregnancy outcome 3HF – 1, 3HF – 2, and 3HF – 3
- Tally sheet of tracer diseases and outpatient attendance in the health facility 2HF – 1, 2HF – 2, and 2HF – 3
- Monthly records of disease cases seen by the VHW/TBA supervised by the health facility 1HF – 1, 1HF – 2, 1HF – 3, 1HF – 4, 1HF – 5, 1HF – 6, 1HF – 7, and 1HF – 8.
- Daily/ monthly records of in – patient care in the health facility 6HF – 1, and 6HF – 2
- Sentinel surveillance system monthly tally sheet for outpatient cases (3 forms)
- Daily records of family planning in the health facility 4HF – 1, 4HF – 2, 4HF – 3
- Monthly report of infant and child health (2 forms)
- Monthly disease condition: age and sex distribution of cases and deaths forms).

Clearly, thirty – two forms constitute so much paper work on weekly, monthly or annual basis. A lot of money would be required to produce these forms and many LGAs do not feel committed to produce them.

3.2 Who are responsible for Data collection

Level	Who	When	Frequency
Community	JCHEWs	3 days after month	Monthly
Health facility	HRO/clerk	2 weeks after month	Monthly
LGA	M&E/HIMS Officers*	4weeks after quarter	Quarterly
State	HMIS officer	6weeks after due	Semi-annual

*(JCEWs Junior Community Health workers, HRO Health Records Officer, *Disease Surveillance & Notification officers reports monthly to the HMIS officer)*

3.3 The processes/ methods of Data collection

How to collect data

1. Use of appropriate Forms for the collection of health data from Household, Community, Health facility, Local Government Areas and forwarded to the state from where information is sent to the Federal level.
2. Other methods of Data Collection methods includes

   Quantitative Methods

   Qualitative Methods

   Quantitative method is based on measures of quality or frequency. There must be consistency of administration. Data may be coded and responses usually compared.

   Examples:

   Questionnaires: Structured Interviews, Telephone Interview, Face to face interviews, Diaries/Record analysis, Observations Records

   Qualitative Methods emphasizes the value of prose data, rather than categories and codes. It is commonly used in social surveys, or in exploratory studies singly or in addition to quantitative methods.

   Example

   Participant observation e.g. Participatory Community Diagnoses, Informant Interviews, Focus group discussions, group interviewing and historic case studies.

   Diaries/Record Analysis

   This is a documentary source of health data such as clinical records, discover registry e.g. Sickle Cell Anemia register, ART register, cancer registry and identification registers. This is very useful for retrospective cohort studies. Many times information are not complete, inaccurate, or poorly standardized.

Observation

It involves simple visual observation and those requiring special skills such as clinical examination or use of laboratory tests.

Example: In a research, it was observed that there was a time difference between when patients arrived in the hospital and when they seen by the doctor. The time difference was measured and called "Waiting time in Emergency Pediatric Unit". This was purely observational. The information was used to improve service by allowing more doctor see patient at same time to reduce the waiting period.

Structured Interview

Through the use of questionnaires which can be administered by respondent or through an Interviewer. The self administered questionnaires can be hand delivered, mailed or e-mailed. Occasionally one can use faceless interaction; chatting on the internet but it requires the patience of the respondents. Telephone can also be used but telephone interview should be restricted to a few sample size e.g. Assessing performance of a health reform strategies from the State Commissioners for Health.

4.0 Conclusion

In this unit you have learned the use of appropriate Forms for the collection of health data from one level of health care to another. You have also appreciated the other methods of data collection, be it quantitative or qualitative. By now, you should have no doubts as to how to collect health data or information from any community based on requirement for such data collection

5.0 Summary

Health information needed to make positive decision that will improve the health of that community resides right within the community. In this unit,

you have acquire necessary understanding of data collection. But you are not done yet, next unit will help build on your professional knowledge.

6.0Tutor Marked Assignments

Photocopy one of the Forms in the appropriate chapter and visit a community/primary health care centre. After appropriate greetings, request to complete the form. Note your difficulty and how much of the information you are able to collect. Bring your completed forms to the tutorial session for discussion.

7.0 References

Sickle Cell Anemia register, ART register, Cancer register and Identification registers.

ERNEST SK, ANUNOBI NE & ADENIYI A. 2002 Correlates of Transfusion Emergency Response Interval and Mortality from severe anaemia: West Afr J Med (Lagos, Publ: West African Health Community) 21 : 3;177-179 Patients Monitoring and Management Tools (PMMs)

Module 2

Health Data Management

Unit 9

Challenges of Health Data Collection

1.0 Introductions

Every good ventures in life will have one challenge or the other, so data collection is not an exception. This is what this unit sets out to address. Mastering challenges is one of the measure of professional competence, but knowing what the challenges are is the first step to solving them and you will be equipped for that in this unit.

2.0 Objectives

At the end of this unit, you will be able to

Identify possible challenges in health data collections

3.1 Challenges of Health Data Collection processes

- Poor/irrelevant data
- Inadequate data
- Lack of cooperation of the sources
- Hard-to-reach environment for data collection
- Season of the year or climatic changes
- Infrastructural breakdowns
- Poor logistic support and poor quality of data collection
- Natural or man-made disasters: war, military.
- Selection Bias
- Volunteer Effect
- Information bias e.g. low validity of instrument
- Confounding variables
- Chance observation
- Poor Storage of data
- Falsification of records
- Omission of vital information
- Collection of unnecessary data
- Missing records
- Delay in forwarding of collected data
- Poor feedback mechanisms-no feedback on reports
- Poor accessibility and dissemination process of results
- Lack of appreciation of the relevance of data collected
- Poor motivation for those entrusted with data collection
- Lack of harmonization of instruments (Forms/Format) used in data collection.

3.2 Solutions to challenges

Proper planning, good understanding of terrain, field testing of instrument before use, adequate funding, adequate staffing, good understanding of the needed data sets, operational feedback pathways and well harmonized format form reporting Forms and training and retraining of staff.

4.0 Conclusion

Challenges are inevitable but could be reduced to the minimum if adequate planning and painstaking conduction of the data management processes.

5.0 Summary

You have learned the challenges and probable solutions for data collection. The next unit is another building-block which will further inform you.

6.0Tutor Marked Assignments

For each of the above challenges, write out probable solution to solving them in your community.

_____

_____

_____

_____

_____

7.0 References

Parakoyi DB, Ebomoyi EW. Priorities of Primary Health Care services utilization: A comparative study of two communities. Physical health education and Recreation Journal 4, 1:6-20, 1987

Federal Office of Statistics, Nigeria and Columbia, MD. Demographic and HJealth Survey. IRD/Macro System Inc, 1990

Araoye MO 2003 Research Methodology with statistics for Health and Social Sciences pp 1 - 286

Further Reading

Federal Republic of Nigeria, national Health Policy, 1996

World Health Organization (WHO) www.whoint.org

Module 2

Health Data Management

Unit 10

Basics of Data Processing and Analysis

Module 2 Unit 10 Basics of Data Processing and Analysis

1.0 Introductions

This unit introduces you to the basic data processing and analysis.

2.0 Objectives

At the end of this unit, you will be able to

- List the Basic component of data processing
- Describe simple approach to data analysis
- Describe basics operation of a computer system

3.1 Basics components of Data Processing and Analysis

Data from researchers should be processed for analysis, whether it be qualitative or quantitative methods. Without proper or meticulous data processing, information that with come out of such

data collection efforts may be erroneous and misleading when used to guide health care planning.

The following are essential steps in data process using questionnaire methods as example:

1. Sifting of questionnaires
2. Sorting of questionnaires
3. Scoring and coding
4. Collation of scores
5. Data entering (see section on computer basics)
6. Storing.

3.2 Basic approach to Data analysis

As one prepares to analyze the data collected there are basic questions that must be addressed:

1. What data have been collected for this research
2. What data have been missed or incompletely collected
3. What do this data set look like. The means, frequency distribution, figures, are qualitative and quantitative ones well presented?
4. Can the data be summarized, to make analysis faster and trustworthy?
5. Can we determine the type of descriptive statistical analysis required?
6. How are we going test differences, within the group or between the groups. We must be sure if we are using student's t-test, paired t-test, chi-square test etc.
7. Do we need to estimate the confidence interval, Odds ratio (OR) or Relative Risks (RR).
8. Do we need to estimate the sensitivity, specificity or positive predictive value of certain variables?

9. Do we need scattergrams, Regression analysis, in correlation coefficient to determine association between various variables?
10. Are there something becoming obvious that defile conventional wisdom or validate it?

3.3 Basics of Computer operation in health

A lot of data analyses are done on the computer and so it would not be neat to end this unit without introducing you to the basics of computer. A computer is an electronic device that is capable of fast operative actions. It accepts and process data by obeying a set of constructions and commands which may be contained in a program to produce an accurate result that translates into information. The computer is more robotic being that accepts just anything you feed into it. It is not capable of determining where data is sensible accurate or it is non-sense.

You need to look briefly at a few technical considerations, which directly influence the successful application of computers in health. In the past, most of the computer software packages were tailored to the problems of the business sector. After successful application in the private sector, many of the software are also now applied in the public sector, and in particular in the software have been written specifically to solve certain repetitive health problems.

The type of computer software for health and data management can be grouped into three major ones: the first is the set of software like the spreadsheets and statistical package software. Such spreadsheets include superCale 4 or 5 and Lotus 123 and they can be put to good use in health budgeting. Similarly, the statistical software such as SPSS PC

– SAS, survey mate, Epi Info, etc is packages that can be used be used to estimate parameters, perform tests of hypothesis etc. Quite apart from these software there are other supportive software such as Harvard presentation Graphics, Flow etc.

Benefit expected from use of computer include the following: Quicker and more accurate data management, Achievement of institutional goals, Provision of prompt and accurate health information, Improved health services, Enhancement of national technological advancement, Development within the health sector, Staff development (personal and professional) of health personnel. The ultimate aim of computer application is provision of a health management information system (HMIS), which integrates the ministry's finance personnel and operations on database. An HMIS is only as good as the raw data it is fed with – and this is still to be collected and collated by clerks.

4.0 Conclusion

In this unit, you learned the basics of data processing and analysis. By now you know about the computer and its usefulness in managing health information. You should begin to imaging if you could put most of the health information that you have into a computer system for later analysis. (Note please: you need to have a hands-on experience on the computer if you have not done so. You also need to learn a software package to attempt data entry and analysis.)

5.0 Summary

When you have health data and you enter them into a computer, never expect something better to come out. Don't forget the popular cliché about computer: 'garbage in garbage our'. Even when you have the best of health information, you need to do more to get more out of it. That is what you will learn in the subsequent units.

6.0 Tutor Marked Assignments

To test your use of computer search engine, get to a cyber café if you don't have access to a computer that is linked to the internet and use a computer search engine like Yahoo, MSN, Google etc, to locate the following:

1. A medical term that is the longest word in the Oxford EnglishDictionary: Pneumonoultramicroscopicsilicovolcanoconiosis

2. Also search the terms: Diagnosis, Borehole, Pneumocystis

7.0 References

Federal Ministry of Health 2003 Manual for Certificate in Health Planning and Management course
World Health Organization (WHO) www.whoint.org
Computer Basics

Module 3

National Health Management Information System Policy

Unit 11

Stakeholders in Health Management Information System

1.0 Introductions

Stakeholders are people or groups with direct interest, involvelment or investment in health management information system. Take a look at the unit objectives before going into the details

2.0 Objectives

At the end of this unit, you will be able to

- Make a list different stakeholders in HMIS
- Identify the core uses of Data and health information

3.1 Stakeholder in Health Management Information System and Uses of health information

Stakeholders includes people, groups or organisation with direct interest in health, people who make use of health information for decision making and planning. They include the following:

1. Health care givers; Doctors, Nurses, Pharmacist, etc.
2. Ministries of health
3. Health institutions and other health care providers e.g. Teaching Hospitals, General Hospitals, Primary Health Care Centres, Health Management Organisations. These groups of individuals or organisations need health information for the purpose of identifying, and prioritizing and designing health care needs. They also need health information to plan strategies for health actions and for monitoring and evacuation of health services
4. The General public at large who have a desire, a need or a right to know. As people get to know about issues related to health the get prepared to respond to taking right decision and cooperative with community mass action for health.
5. Researchers and research institutions – information help them identify needs and future research priorities
6. International agencies and donors: these are called implementation partners, they help drive processes that achieve better health for a community. They could be multi – lateral or bilateral agencies:

Examples : WHO
UNICEF
Global Fund
Clinton foundation
DFID etc.

3.2 Use of Data or health information

1. Provides relevant basic information to draw profile of community by age, sex, disease, morbidity and mortality.

2. Provides information for comparison purposes between communities, temporal changes or provide basis for comparing country with another
3. Provides basis for recognising, diagnosing and providing early control of epidemics
4. Provide useful information for health workers in accessing resources, grants, technical support etc.
5. Assist in indentifying essential researchable challenges in a community
6. Useful for improving output or coverage of health services
7. Provide basis for medical handling or more efficient use of resources
8. Increase in acceptability of services in a community
9. Help community accept health planning strategies and secure community participation
10. Provide basis for planning, help monitoring and evaluation and contribute greatly to health decision making.

4.0 Conclusion

Everyone that has to do with health; service provision, service consumption, Funding, Planning, Logistics provision, Forecasting etc are involved.

By now you should be able to know who to invte to stakeholders meeting in your community if needs arise.

5.0 Summary

The stakeholders and uses of health information is central to service delivery and must be seen as such in all considerations of community health.

6.0 Tutor Marked Assignments

Look round your community and generate a list of stakeholders for Health MIS

7.0 References

Federal Ministry of Health, Chronic HIV Care with ARV Therapy IMAI H1-H118

World Health Organization (WHO) www.whoint.org Partnership

Module 3
National Health Management Information System policy
Unit 12
Synopsis of National Health Management Information System policy

1.0 Introduction

The effective management of health services demands the establishment of a national health information system. Basic demographic data are essential for planning and monitoring of health services. A policy came up the establishment of a simple but efficient information systems that is supported to grow both in quality and quantity. The understanding of this national policy is what this unit is out to help you achieve at this stage of your programme. It may be great to see the objectives for this unit as follows.

2.0 Objectives

At the end of this unit, you will be able to

Describe the policy thrust of NHMIS

List the main objectives of NHMIS

List the Health indicators and the definitions of each indicator

Explain the function at each Level of health delivery system

List the components of Health Management Information System

3.1 Policy Need/Gaps: The planning, monitoring and evaluation of health services are hampered by the dearth of reliable data on a national scale. The basic demographic data about the size, structure and distribution of the population are unreliable. The system for the registration of births and deaths on a national scale is defective and hence it is not possible to calculate the simplest indications like the crude birth rate, crude death rate, and infant mortality rate. The state of health of the population is assessed on the basis of scanty information which has been collected in a few limited surveys and research studies. The health services at the national, state and local levels cannot be managed efficiently on the basis of the available data.

3.2 Establishment and objectives: A national health information system shall be established by Governments of the federation as a management tool:-

a) To assess the state of the health of the population, to identify major health problems and to set priorities on the local, state and national levels:
b) To monitor the progress towards state goals and targets of the health services;
c) To provide indicators for evaluating the performance of the health services and their impact on the health status of the population.
d) To provide information to those who need to take action, those who supplied the data and the general public.

3.3 Development of the information system shall proceed as follows:

a) The information system shall be developed in a phased manner starting with the simplest data which can be collected at the peripheral institutions. Efforts shall be made to implement community based systems for the collection of vital health statistics – births and deaths.

Such data shall be used for planning and monitoring of health services at the local level.

b) The state ministry of health shall promote and support the collection of data by the local government health authorities to improve the quality and quantity of the information. The methods of collection and recording shall be standardized as far as possible to facilitate their collation and comparison.
c) As and when feasible, state health authorities shall use simple electronic data processing equipment for storage, retrieval and analysis of the data.
d) At the federal level, in collaboration with the federal office of statistics, the statistics unit of the ministry of health shall responsible for obtaining, collating, analysing and interpreting health and related data on a national basis. The unit shall support the state health authorities in the development of their information systems.

3.4 For comprehensive monitoring and evaluation of health care; minimum categories of indicators shall be as follows: -

a) Health policy indicators;
b) Health status indicators;
c) Socio – economic indicators related to health and living standard;
d) Provision and utilisation of health care indicators.

The indicators to be selected shall be based on the available resources, relevance to the health policy and availability of the information required. Level of functions shall be as follows:-

a) Local level: - the local government health authority shall be responsible for the collection of data in its area of jurisdiction;
b) State level: - sate ministry of health shall be responsible for collection of health information from the local government areas and preparing state health information data;
c) National level: - the federal ministry of health shall be responsible for: -
    a. The development, introduction and maintenance of an effective national health information system;
    b. The central coordination of the health information data; and

c. Collecting, processing and presenting relevant and necessary information required both for national health planning and for monitoring the utilisation of resources in accordance with national priorities and objectives.

Components of a health information system

The health information system is composed of several related subsystems. A comprehensive system requires information on the following subject

1. Demography and vital events
2. Environmental health statistics
3. Health status: mortality, morbidity, disability, and quality of life
4. Health resources: facilities, beds, manpower
5. Utilization and non – utilization of health services: attendance, admissions, waiting lists
6. Indices of outcome of medical care
7. Financial statistics (cost expenditure) related to the particular objective

Conclusion

This unit dealt with the policy thrust of NHMIS, the main objectives of NHMIS, the Health indicators and their definitions, the function at each Level of health delivery system and the components of Health Management Information System. By now you should have appreciated the policy foundation on which NHMIS is based.

Summary

Health information directly come from Demography and vital events, Environmental health statistics, Health status (mortality, morbidity, disability, and quality of life), Health resources (facilities, beds, manpower), Utilization and non – utilization of health services(attendance, admissions, waiting lists), Indices of outcome of medical care and Financial statistics (cost expenditure) related to the particular objective

Tutor-Marked Assignment

1. List the main objective of the NHMIS policy

2. How does Policy gives backbone to health services delivery system

References

National Health Reform Policy 2003
Federal Republic of Nigeria, National Health Policy, 1996
World Health Organization (WHO) www.whoint.org

Module 3
National Health Management Information System policy
Unit 13
Standard Forms

Module 3 Unit 13 Standard Forms

1.0 Introductions

To gather on regular basis several statutory Forms are used at regular interval. This is what this unit will address. Take a look at the oblective

2.0 Objectives

At the end of this unit, you will be able to

- List different types of Forms available for Data collection
- Complete those Forms on the field with high degree of accuracy

3.1 The Forms

1. Immediate Case-Based Reporting Form

REPORTING HEALTH FACILITY				REPORTING LGA				
IDENTIFICATION NUMBER:_____								
Immediate/Case-based Reporting Form From Health Facility/Health Worker to LGA health team								
Cholera	Dracunculiasis	Neonatal Tetanu	Measles	Meningitis	HP AI	Viral Hemorrhagic	Yellow Feve	Others/specify

		s				Fever e.g Lassa Fever	r	

Date form received at SMOH or the national level:_____(Day/Month/Year)				
Name of Patient:				
Date of Birth (DOB):_____/_____/_____ (Day/Month/ Year)	Age (if DOB is unknown)			
		Year	Month (if <12)	Day (NNT only)

Sex:		M=Male F=Female					
Patient's Address:		Urban		Rural			
Settlement/Village							
Ward		LGA			State		
Exact residential address:				If applicable or If the patient is neonate or child, please write full name of mother and father of the patient.			
Date seen at Health Facility:		Date Health Facility notified LGA:			Date of Onset:		

Number of vaccine doses received:	9=unknown For cases of Measles, NT (TT in mother), Yellow Fever, and meningitis (For Measles, TT, YF-by card & for Meningitis, by history)
Date of last vaccination:	_____/_____/_____/ (Measles, Neonatal Tetanus (TT in mother), Yellow Fever, and Meningitis only)
Close contact with infected poultry	1= Yes 2= No
Close contact with suspected or confirmed case of Avian Influenza	1= Yes 2= No
Associated with an outbreak?	1= Yes 2= No

In/Out Patient	1=Inpatient		2=Outpatient	
Outcome	1-Alive	2=Dead		9=Unknown
Final Classification of case	1=Confirmed	2=Probable	3=Discarded	4=Suspect

Final	1=Laborat	2=Conform	3=Clinical	4=Discarde	5=Suspect

Classification for Measles	ory Confirmed	ed by Epidemiological linkage	Compatible	d	with lab pending
Person completing form Title:		Name: Address:		Signature:	
Date form sent to LGA: _____/_____/_____/ (Day/Month/Year)					

2 Line List for Reporting from Health Facility to LGA and for Use during Outbreaks

Health Facility:_____ Date sent to LGA_ _____ ___ ___ LGA:_____

State_____

Disease/Condition:_____

	ID Number (Assigned at the LGA level only) 001,002 etc	(O)ut/(I)n Patient	Name	Village, ward or Town and Neighbourhood	Sex	Age**	Date of onset of disease	Date seen at Health facility	Number of doses of vaccine (Exclude doses given within 14 day of onset)	Close contact with suspect/confirmed case of HPAI	Lab test		Outcome (A)live (D)ead	Comment
											Specimen taken (Yes/No) if yes, date collected	Lab results		
1.														
2														

.														
3.														
4.														
5.														
6.														
7.														

- If LGA sends specimen to the lab, use ID number as well (PPP-DDD-YY-00X format) to identify lab specimen
- If health facility sends lab specimen to lab without passing through the LGA, then the name (only) will be the lab specimen identifier
- NOTE: If more than 100 cases occur in a week (e.g foe measles, cholera, etc) at a health facility, line listing of cases is not required, record just the total number of cases
- If previously reported cases die, update the status by completing a new row with "died" in the status column and "update record" in the Comments column.** Age in years if more than 12months otherwise write age in months (e.g. 9m)Date received at LGA ---------- Name & signature of Officer ----------

3. WEEKLY REPORTING OF NEW CASES OF EPIDEMIC PRONE DISEASES AND OTHER PUBLIC HEALTH PHENOMENA UNDER SURVEILLANCE IDSE 002

Year:

Week number:

Health facility:

HFs /LGAs/ States (withcases)	Cerebro-spinal Meningitis			Cholera			Viral hemorrhagic fever (e.g Lassa fever)			Measles			Yellow fever			Other acute communicable disease outbreak (specify) * (HPAI)		
	Cases	Lab confir	Death	Cases	Lab confir	Death	Cases	Lab confir	Death	Cases	Lab confir	Death	Cases	Lab confir	Death	Cases	Lab confir	Death

		m ed	s		m ed	s		m ed	s		m ed	s		m ed	s		m ed	s
Total																		
Case fatality rate																		
Date of submission of this report:___/____/_____/																		
Officer in charge:_____ Signature:_____																		

4. ROUTINE MONTHLY NOTIFICATION FORM: IDSR 003
[ ] Health facility [ ] LGA [ ] State(tick as appropriate)
Name of HF/LGA/State:_____

DISEASE	Cases out-patient			Cases in-patient				DEATHS			
	Less than 5yrs	5-14yrs	15yrs and above	Less than 5yrs	5-14yrs	15yrs & above	Total cases in & out patient	Less than 5yrs	5-14yrs	15yrs & above	Total
1. CSM											
2. Cholera											
3. Diarrhoea (Watery without blood)											
4. Diarrhoea (with blood)											
5. Dracunculasis (Guinea worm)											
6. Hepatitis B											
7. HIV/AIDS											
8. Viral hemorrhagic fever (e.g Lassa Fever)											
9. Leprosy											
10. Lymphatic Filariasis											
11a)											

Malaria											
11b) Malaria (severe)											
11c) Malaria (Pregnant Women)											
12. Measles											
13. Pertussis											
14. Plague											
15. Pneumonia											
16. Poliomyelitis											
17. STIs: a).Vaginal discharge											
17b) Genital Ulcer											
17c) Urethral discharge											
17d) Other STIs											
18. Neonatal Tetanus											
19. Tuberculosis											
20. Onchocerciasis											
21. Yellow Fever											
22. HPAI											

Name of Reporting Officer:_____ Signature & Date:_____

4.0 Conclusion

It take practical feeling of the forms to master appropriate Form for reporting health information

5.0 Summary

Tools like Forms are needed in gathering data either on regular basis or ad hoc. By now you should be able to complete these Forms when records are available.

6.0 Tutor Marked Assignments

Print out a copy of these Forms and get down to your community and complete them.

Compare what you have with the regular staff that normally send the reports to see how

7.0 References

National Primary Health care Document
Federal Republic of Nigeria, National Health Policy, 1996
World Health Organization (WHO) www.whoint.org

Module 3
National Health Management Information System policy
Unit 14

Health Indicators

Module 4 Unit 14 Health Indicators

1.0 Introductions

2.0 Objectives

3.1 Health policy indicators

3.2 Health status indicators

3.3 Social and economic indicators

3.4 Provision and utilization of health care indicators

3.5 These are the Indicators for Community or Village, Health facility and the LGA Levels

4.0 Conclusion

5.0 Summary

6.0 Tutor Marked Assignments

7.0 References

1.0 Introduction

Health indicators give directions to what data to collect and also used to measure performance. There are different types of indicators used. Indicators can be Input, Process, Impact and Output types. The details of these are what this unit will focus on. However, you need to take a look at what the objectives are for this unit.

2.0 Objectives

At the end of this unit, you will be able to

- Define and explain what health policy indicators are
- Define and explain what health status indicators are

- Define and explain what Socio-economic indicators are
- Define and explain what utilization indicators are
- List appropriate health indicators for each level of health deliveries

3.1 Health policy indicators shall include:

- Political commitment for "health for all"; especially enactment of any necessary legislation to effect the commitment
- Financial resources allocation in terms of the proportion of the gross national product spent on health; the proportion of the total governments expenditure going to health and specifically to expenditure on health described by states and local government areas.
- Distribution of health resources, financial, manpower, physical facilities to reflect the degree of equity by geography and by the urban/rural ratios;
- Degree of community involvement as indicated by the establishment of health development committees, community participation in health and health related programmes and contribution towards health care; and
- Organisational framework and managerial process.

3.2 Health status indicators shall include:-

- Nutritional status as indicated by birth weight of babies, weight and height measurement of infants and children in relation to age;
- Infant mortality rate;
- Child (1 – 4years) mortality rate;
- Maternal mortality rate;
- Crude death rate
- Crude birth rate;
- Life expectancy at birth and at 5 years of age; and
- Fertility rate.

3.3 Social and economic indicators shall include:-

- Rate of population increase
- Gross national domestic product;
- Income distribution;

- Work condition;
- Adult literacy rate by sex;
- Food availability;
- Housing;
- Basic sanitation;
- School enrolment by sex

3.4 Provision and utilization of health care indicators shall include coverage by primary health care referral support:-

- Information and education concerning health; proportion of population with access to mass media outlets and measurement of adult literacy activities to the community;
- Food and nutrition;
- Water supply and sanitation as above;
- Family health indicators including proportion of children receiving child health services; proportion of pregnant women receiving antenatal, post – natal care and proportion of eligible women receiving family planning advice;
- Immunization indicators shall include the percentage of children at risk who are fully immunized against the major childhood disease: the incidence of the six disease in the children under 5 years of age group; and mortality rate due to the six diseases in children under 5 years of age
- Prevention and control of epidemic and endemic diseases indicators shall specify disease specific incidence and prevalence rate; mortality for selected number of diseases; proportion of mortality rates from communicable diseases; proportion of leprosy and tuberculosis detected as well as under regular treatment: and lastly vector indices;
- Treatment of common disease and injuries indicators shall include proportion of cases of diarrhoea in children under 5 years, proportion of fevers treated with chloroquine, proportion of respiratory infections treated with common antibiotic, proportion of

malnutrition treated with supplementary feeds and proportion of injuries or accidents treated by first – aid or simple treatment;

- Provision of essential drugs indicators shall specify provision of essential drugs, vaccine and supplies, standard drug list and availability of such items;
- Coverage by referral system indicators shall state the proportion of population in a given area with access to the services within 5 kilometres or 1 hour travel time, the proportion of referred cases who made use of the services and the availability of referral services, e .g., paediatric, obstetric, surgical, medical, etc.

3.5 These are the Indicators for Community or Village, Health facility and the LGA Levels

S/N	INDICATORS	MEASURE/ DETERMINATION
COMMUNITY/VILLAGE LEVEL		
1	No. of trained, kitted and functional VHWs in the community	No. of trained, kitted and functional VHWs in the community
2a 2b	No. of TBAs in the community No. of trained, kitted and functional TBAs in the community	No. of TBAs in the community No. of trained, kitted & functional TBAs in the co
3	No. of live births	No. of live births
4	No. of still births	No. of still births
5	No. of maternal deaths	No. of maternal deaths
6	No. of referral	No. of referral
7	No. of patients attended by VHWs	No. of patients attended by VHWs
8	No. of women attended by TBAs	No. of women attended by TBAs
9	No. of clients that received family planning services	No. of clients that received family planning servic
10	No. of cases of diseases seen e.g. malaria (specify)	No. of cases seen e.g. malaria (specify)
11	No. of deaths (specify age and sex)	No. of deaths (specify age and sex)
FACILITY/WARD LEVEL		
1	Maternal mortality rate,	No. of deaths of WRA (15-49yrs) resulting from pr

S/N	INDICATORS	MEASURE/ DETERMINATION
		related causes, child birth and post-natal in a ye x 100,000 Total No. of live births in the same period
2	Infant Mortality Rate	No. of U-1 year deaths in a year 1000 Total No. of live births during the same period
3	Under-5 Mortality Rate	No. of U-5 years deaths in a year X 1000 Total No. of U-5 children in the population in the period
4	Crude Birth Rate	No. of Births in a year X 1000 Mid year population
5	Crude Death Rate	No. of deaths in a year X 1000 Mid year population
6	No. of WRA (15-49 yrs) using modern contraceptives	No. of WRA (15-49 yrs) using modern contracep Health facility
7	No. of deliveries by trained TBAs	No. of deliveries by trained TBAs
8	% of newborn with low birth weight	No. of new born with weight lower than 2.5kg X Total No. of new born
9	Immunization coverage rate	No. of children less than 12 months fully Immuni year X 100 Total No. of children less than 12 months in the s
10	% of women who received ante-natal care in a year	No. of women who received at least 4 ante-natal c contacts in a year X 100 Total No. of deliveries in the same period
11	No. of children 0-6 months – exclusively breast-fed	No. of children 0-6 months exclusively breast fed
12	No. of deliveries in the health facility	No. of deliveries in the health facility
13	% of children aged 0-59 months weighing below the lower line (3rd percentile) on the child's health card	No. of children aged 0-59 months weighing below line X 100 Total No. children aged 0-59 months weighed
14	Incidence of each of the notifiable Communicable diseases (specify)	No. of new cases of notifiable Communicable diseases (specify) in a target group in a year Total population of target group in the same peri
15	Incidence of each of the	No. of new cases of notifiable Non Communicable

S/N	INDICATORS	MEASURE/ DETERMINATION
	notifiable Non Communicable diseases (specify)	diseases (specify) in a target group in a year Total population of target group in the same perio
16	Prevalence of notifiable Communicable diseases (specify)	No. of new & old cases of notifiable Communicable diseases in a target group in a yea Total population of target group in the same year
17	Prevalence of notifiable Non Communicable diseases (specify)	No. of new & old cases of notifiable Non Communicable diseases in a target group in a yea Total population of target group in the same year
18	% of HF in the ward providing condoms to clients	No. of HF in the ward providing condoms to client Total No. of HF in the ward
19	% of health facilities in the ward providing minimum health services package as defined in HSR document	No. of health facilities in the ward providing mini health services package as defined in the HSR x 100 Total No. of No. of HF in the ward
20	Incidence of malaria in the U-5 children	No. of new cases of malaria in Children 0-59 mo year x 1000 Total population of children 0-59 months in the s
21	Incidence of malaria in pregnant women	No. of new cases of malaria in Pregnant women in 1000 Total population of pregnant women in the same
22	% of deaths due to notifiable Non communicable diseases (specify)	No. of deaths due to notifiable Non communicable diseases (specify) in a year 100 Total No. of deaths in the health facility in the sa
23	% of deaths due to notifiable communicable diseases (specify)	No. of deaths due to notifiable communicable diseases (specify) in a year Total No. of deaths in the health facility in the sa
24	No. of deaths due to vaccine preventable diseases (VPD) (specify)	No. of deaths due to vaccine preventable dise facility (specify)
25	No. of health facilities not experiencing stock-out of essential drugs in the ward in the last 3 months	No. of health facilities that did not experience s essential drugs in the last 3 months
LGA LEVEL		
1	Maternal mortality rate,	No. of deaths of WRA resulting from pregnancy related causes, child birth and post-natal in a ye 100,000 Total No. of live births in the same period
2	Infant Mortality Rate	No. of U-1 year death in a year x

S/N	INDICATORS	MEASURE/ DETERMINATION
		Total No. of live births during the same period
3	Under-5 Mortality Rate	No. of U-5 year deaths in a year x 1000 Total No. of U-5 children in the population in the
4	Crude Birth Rate	No. of Births in a year X 1000 Mid year population
5	Crude Death Rate	No. of deaths in a year X 1000 Mid year population
6	Contraceptive Prevalence Rate	No. of WRA (15-49 yrs) using modern contracepti year x 100 Total No. of WRA (15-49yrs) in the same year
7	% of new born with low birth weight	No. of new born with birth weight below 2.5kg Total No. of new borns at the LGA
8	Immunization Coverage Rate	No. of children less than 12 months fully Immuni year X 100 Total No. of children less than 12 months in the s
9	% of health facilities that provide minimum health package	No. of health facilities providing minimum health 100 Total No. of health facilities
10	No. of deliveries in the LGA	No. of deliveries in the LGA
11	% of deliveries by trained TBAs in the LGA	No. of deliveries attended to by trained TBAs in t h 100 Total No. of deliveries in the LGA
12	% of health facilities providing clients with condoms in the LGA	No. of health facilities providing clients with cond LGA X 100 Total No. of health facilities in the LGA.
13	% of health facilities providing services on STIs, HIV/AIDS	No. of health facilities providing services on STIs, X 100 Total No. of health facilities
14	% of health facilities providing family planning services	No. of health facilities providing family planning X 100 Total No. of health facilities
15	% of health facilities with referral protocol	No. of health facilities with referral protocol X Total No. of health facilities
16	% of pregnant women who received ante-natal care (ANC) in a year	No. of women who received ante-natal care (ANC) X 100 Total No. of pregnant women in the same period
17	% of infants 0-6 months exclusively breast-fed	No. of infants 0-6 months exclusively breast- fed Total No. of infants 0-6 months
18	Incidence of each of the	No. of new cases of notifiable Non

S/N	INDICATORS	MEASURE/ DETERMINATION
	notifiable Non communicable diseases (specify)	communicable diseases (specify) in a target grou p x 1000 Total population of target group in the same year
19	Incidence of each of the notifiable communicable diseases (specify)	No. of new cases of notifiable communicable diseases (specify) in a target grou p x 1000 Total population of target group in the same year
20	Prevalence of notifiable Non communicable diseases (specify)	No. of new & old cases of notifiable Non communicable diseases in a target group in 1000 Total population of target group
21	Prevalence of notifiable Communicable diseases (specify)	No. of new & old cases of notifiable Communicable diseases in a target group in a ye a Total population of target group
22	% of establishments providing occupational health services	No. of establishments with 10 or more employees occupational health services X 100 Total No. of establishments with 10 or more empl
23	% of private health providers participating in the NHMIS	No. of private health providers participating in th x 100 Total No. of private health providers
24	% of deaths due to notifiable Communicable diseases (specify)	No. of deaths due to notifiable Communicable dis (specify) in a year x 100 Total No. of deaths in the same period
25	% of deaths due to notifiable Non Communicable diseases (specify)	No. of deaths due to notifiable Non communicabl (specify)in a year x100 Total No. of deaths in the same year
26	% of deaths due to vaccine preventable diseases (VPD) (specify)	No. of deaths due to vaccine preventable diseases (specify) X 100 Total No. of deaths in the same year
27	% of health facilities not experiencing stock-out of essential drugs in the last 3 months	No. of health facilities that did not experience stock-out of essential drugs in the last three mon 100 Total No. of health facilities in the LGA

Module 4
Programme Supervision
Unit 15
Monitoring and Evaluation

Module 4 Unit 15 Monitoring and Evaluation

1.0 Introduction

Monitoring and Evaluation have come not only to provide a completion to any health programme but it has become a necessary cross-cutting issues on which the success of any health programme depends. This unit will

address this fact. But before you go into that, it may bedesirable to look at the oblectives of this unit as below.

2.0 Objectives

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

- Describe the programme cycle
- Demonstrate understanding of the tools and indicators used in monitoring and evaluation of Health programmes
- Describe how data is generated, reported, for the purpose of improving the quality of health services
- Discuss the role of health care providers in monitoring health programmes.

3.1 Programme cycle

This is the process of assessing a particular situation and designing strategies for addressing or responding to the situation. There are five major steps in the programme cycle namely:

- Assessment: The first step in programme cycle. It is the processes of identifying the extent of the problem. Assessment helps to identify age group, gender, and geographical spread of the problem under investigation. Example, the need assessment may show that a particular age group e.g Under-5 children are more infected by Scabies and have access to only local treatment.

- Planning: The next step to address the identified gaps during assessment. During the planning stage, strategies are developed to respond to the identified needs. This include defining the programme objectives, identifying implementation sites, procurements and supplies of equipment, development of programmes and training guidelines, budgeting and implementation plans. At this stage, targets are set to

give direction and measure the progress of the programme implementation.

- Implementation: This is the third stage of the cycle which involves putting into actions all the strategies made during the planning phase. During this phase, healthcare providers are trained, equipment and other supplies are provided to the facilities and services are provided to the community. It must be an ongoing process.

3.2 Monitoring and Evaluation

- Monitoring

This is the routine tracking of priority information about programme and its intended outputs. Monitoring at the community/ Village, Health facility, LGA, State and National levels require many types of information including aggregated patient data. Monitoring shows if the programme is being implemented in line with plans and if implementation is achieving the desired objectives. It helps in identifying gaps and making corrections.

- Evaluation

This is the final phase aimed at measuring the success of the programme. Evaluation helps to determine if the programme goal is achieved. It could be carried out periodically to determine programmes successes and barriers to implementation. Evaluation provides lessons learnt and direction for future. Evaluation answers the question like how many children with advance HIV receiving treatment that have survived for 6, 12, 18 months etc.

Global, National and facility- based indicators for the ART programme are parameters used in tracking information regarding the performance of the ART programme at the facility, national and global level. National/State Indicators are indicators are reported at the national level. They provide

information useful for planning, budgeting, decision making and for advocacy. These indicators:

- Reflect the goals, objectives and activities of the national HIV programme
- Measure the effectiveness of the national response
- Include the Universal Access indicators

Example: Number of adults and children on ART who are still alive at 12 months after initiating ARV therapy.

Facility – based indicators are information/data generated at the facility are important to monitoring and evaluation, and to providing quality health care services to the patients. The data generated from the facilities are the source of information required for reporting the national and global indicators. These indicators:

- Support target setting and tracking of progress toward reaching all persons requiring HIV care and services
- Help identify progress, problems and challenges
- Help improve quality of care and service coverage.

3.3 Characteristics of Health programme monitoring system

A good health monitoring system should include the following;

- Clear definition of indicators
- Standard tools, data source, and methodology of collection
- Clear guidelines and protocols for data collection - these address data quality assurance procedures as well as frequency of collection and reporting.

At every facility where health services are being provided, it is important to designate staff and define their roles in the monitoring process for:

- Data collection
- Analyses
- Reporting
- Dissemination
- Data use

3.4 How health workers can ensure collection of accurate data

Rational decision making and effective management of health programme requires accurate and timely data. All the healthcare providers involved in the provision of services at the sites have vital roles to ensuring quality and accurate data through the prompt documentation of the services provided

The following information is crucial for all health care providers involved in data generation;

- Ensuring a good understanding of the data elements to be collected
- Recording the data every time. Record on the appropriate form or register each time you provide a service.
- Record all data. Make sure you provided all the information requested on the form or register
- Record all data following the same format every time. Use the same definitions, the same rules in filling the registers or forms.

Examples: Indicators to track the paediatric ART programme

The following indicators below should be used to monitor the paediatric antiretroviral therapy ART programme.

3.5 Paediatric Anti-Retroviral Therapy (ART) programme core indicators

Code	Indicator	Periodicity of reporting	Source
ART 1	Core 1: Existence of up-to-date national paediatric policies, strategy, and guidelines for ART programmes	Annually	Informant survey
ART 2	Core 2: Percentage of LGAs with at least one health facility providing paediatric ART services in-line with national guideline	Annually	Mapping/ listings/ Health facility survey
ART 3	Core 3: Percentage of health facilities with systems and items to provide paediatric ART services	Biannually	Health facility survey
ART 4	Core 4: Number of health workers trained on paediatric ART delivery in accordance with national standards	Annually	Programme records,
ART 5	Core 5: Percentage of ARV storage and delivery points experiencing stock-outs in the previous 6 months	Annually	Drug tracking system, programme reports
ART 6	Core 6: Percentage of children with advanced HIV infection receiving ARV combination therapy	Annually	Review of programme monitoring data and estimates
ART 7	Core 7: Number of HIV-infected children continuing first-line ART regimen at 3, 6, 12, 18 and 24 months after initiation	Annually	ART register
ART 8	Core 8: Number of children surviving at 3, 6, 12, 24, 36, etc. months after initiation of treatment	Annually	Review of patient registers/Cohort analysis form
ART 9	Functional status of HIV positive children on ART at 6, 12, 24, 36, etc. months after initiation of treatment	Annually	Review of patient registers/Cohort analysis form

3.6 Tools and methods of monitoring

Generally, the following tools are used

- Immediate case-based reporting Form
- Weekly repoting of new cases of Epidemic prone Diseases
- Routine monthly notification Form
- Line list for repoting from Health facility to LGA
- Disease Surveillance and Notification (DSN) Form
- Others

For HIV infection, the ART MIS includes the following tools:

1. The Care/ART card
2. PMM forms including:
    - Paediatric clinical evaluation and follow up forms
    - Laboratory request and result forms
    - Pharmacy order forms
    - Adherence strategy work plan
3. Pre-ART register
4. ART register
5. ART monthly summary forms
6. Cohort analysis forms
7. Early infant diagnosis tools

3.7 Project management meeting

The health care team comprising of the medical officer, pharmacy staff, community health staff, counsellors, nurses, record officer, laboratory scientist and nutritionist and others should meet monthly. The essence of this meeting is to share insights, discuss issues pertaining to patient care and participate in care updates on topics of interest and discuss future activities. During this meeting the service statistics of the previous months should be shared and discussed to provide insight into

the successes and challenges in health care service delivery and proffer solutions.

Conclusion

Understanding of Programme cycle is critical to effective supervision.
By now you should be able to effectively supervise health programmes in your community

Summary

Monitoring and Evaluation are cross-cutting activities for effective management of health programme

Tutor Marked Assignments

Write in details how you would supervise the immunization activities in your community for the next 18 months

References

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3. Federal Republic of Nigeria. HIV and AIDS Policy, 2002