

**National Primary Health Care Development Agency (NPHCDA)  
Mid-Level Management Training (MLMT) Programme**

**MLMT CURRICULUM MANUAL (B): CURRICULUM DETAIL**

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**November 15, 2010 – Reviewed and approved by interested stakeholders**

**Manual purpose:** This “Curriculum Detail” manual provides summary information about subjects and topics for MLMT classes. The manual has value for MLMT programme managers, faculty members, and participants.

- **Programme managers:** Programme managers (PMs) can use the manual to identify topics and content for class sessions, as well as help to identify relevant instructors from the network of experienced content and context experts that the MLMT draws on for faculty members. When designing a programme, PMs can decide which subjects and topic from which modules to include at different points in the curriculum.
- **Faculty members:** Faculty members can use the manual to identify expected content and outcomes of their sessions.
- **Participants:** Participants can use the manual as a resource to supplement their classroom instruction.

We stress that the curriculum detail manual provides background for faculty, staff, and participant activity, rather than a rote instruction and learning document. PMs and faculty members have the responsibility to determine the appropriate flow and specific content of the overall programme and of individual classroom sessions. The manual supplements the instructors’ knowledge of their subject, providing suggested topics rather than specific detail for the sessions. In turn, participants have the responsibility to apply the material to their own contexts.

This manual supplements “MLMT Curriculum Manual (A): Overview”, which describes the format and philosophy of the programme from the point of view of MLMT programme managers and faculty members.

**Manual structure:** For convenience, the manual includes six modules of material.

- Each module includes multiple related subjects, with a total of about 24 subjects distributed across the six modules. Each subject outlines its aim and objectives, plus learning outcomes that identify key knowledge that students should master by the end of sessions that teach material from the subject.
- In turn, each subject includes multiple topics of related material, including major items and issues, together with examples of skills stations that instructors might adopt or adapt when they are teaching material on the topic. Any given class session can include material from one or more topics within a subject.

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## TOPIC SUMMARY WITHIN SUBJECTS

### Module 1: Policy and Planning

#### Subject 1.1 Policy Development for Health Service Delivery

- T1. Definitional issues in policy
- T2. Policy formulation and implementation
- T3. Historical perspectives of policies in Nigeria
- T4. National health policies and ancillary policies

#### Subject 1.2 Public Sector Reform and National Health Initiatives

- T1. Millennium Development Goals (MDGs) a catalyst for public sector reform
- T2. Public sector reform implementation; lesson learned and next steps
- T3. Health components of the 7-Point Agenda & Vision 20:2020
- T4. The national health sector reform programme
- T5. National strategic health development plan

#### Subject 1.3 Primary Health Care Structures and Functions

- T1. Historical perspective of PHC in Nigeria
- T2. Principles and Components of PHC
- T3. Structures and Functions of PHC at Federal Level
- T4. Structures and Functions of PHC at State Level
- T5. The Ward Health System
- T6. The minimum Health Care Package

#### Subject 1.4 Principles of Planning and Project Management in Health Care

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- T3. Micro-planning
- T4. Project management

#### Subject 1.5 Monitoring and Evaluation in Health Care

- T1. Overview
- T2. Data quality, indicators and targets
- T3. Practical application of probability and statistics in PHC (note: Section 5.2, Introduction to Biostatistics in Epidemiology, has a complementary review of basic statistics)

### Module 2: Health Care Financing and Health Economics

#### Subject 2.1 Health Care Financing in Nigeria

- T1. Health care financing options for PHC
- T2. The National Health Insurance Scheme
- T3. Community health care financing option
- T4. Contemporary issues on health care financing

#### Subject 2.2 Economic Evaluation in Health Care

- T1. Introduction to the uses, methods and approaches of economic evaluation
- T2. Cost analysis in health care
- T3. Cost effectiveness analysis
- T4. Cost benefit analysis
- T5. Cost utility analysis

#### Subject 2.3 Effective Financial Management Systems in PHC

- T1. Fundamentals of financial management systems in PHC
- T2. Strategies for reducing and controlling costs in PHC
- T3. Budgeting and expenditure tracking in PHC

### Module 3: Leadership and Management

#### Subject 3.1 Team Building

#### Subject 3.2 Effective Motivational Leadership

#### Subject 3.3 Human Resource Management.

- T1. Overview and implementation of strategies for HRM framework.
- T2. Talent management and succession planning
- T3. Recruitment and career progression
- T4. Fundamentals and toolkits for strategic negotiations
- T5. Staff motivation reward systems and sanctions
- T6. Performance evaluation and staff appraisal.
- T7. Overview of strategic human resources management concepts and principles

Subject 3.4 Supportive Supervision in PHC

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- T2. Supervisory styles/methods
- T3. Supportive supervision in primary health care

**Module 4: Communication, Decision Making, Advocacy, and Partnership**

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Subject 4.4 Partnership Development

**Module 5: Health Care Delivery**

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- T2. Basic definitions, concepts, aims, and uses of epidemiology
- T3. Epidemiological tools
- T4. Introduction to study design
- T5. Investigating and managing outbreaks
- T6. Epidemiology of non-communicable diseases

Subject 5.2 Introduction to Biostatistics in Epidemiology

- T1. Introduction to biostatistics definition and concepts
- T2. Introduction to descriptive statistics (note: Subject 1.5, Monitoring and Evaluation in Health Care, has a complementary review of basic statistics)
- T3. Data collection, analysis, and presentation
- T4. Sampling techniques
- T5. Application of statistical tools in PHC

Subject 5.3 Integrated PHC Delivery

- T1. Integrated Disease Surveillance and Response (IDSR)
- T2. Emerging and re-emerging diseases
- T3. Current PHC approaches

Subject 5.4 Quality in Health Care Services

- T1. Concept and definition of quality
- T2. Standardization and development of standards in quality assurance
- T3. Technique for quality improvement in health care
- T4. Techniques in quality assessment

Subject 5.5 Customer Service Delivery

**Module 6: Computers, HMIS, and Logistics Management**

Subject 6.1 Computer Knowledge and Applications

- T1. Basic knowledge of computers
- T2. Software applications and important resources

Subject 6.2 Health Management Information Systems (HMIS)

- T1. Introduction to HMIS
- T2. Current situation of national HMIS for PHC

Subject 6.3 Logistics and Supply Management System

- T1. Background to Logistic Management System (LMS)
- T2. Selection processes in LMS
- T3. Procurement and distribution in LMS
- T4. Management support systems in LMS

## **MODULE 1. POLICY AND PLANNING**

### **Subjects**

Subject 1.1 Policy Development for Health Service Delivery

Subject 1.2 Public Sector Reform and National Health Initiatives

Subject 1.3 Primary Health Care Structures and Functions

Subject 1.4 Principles of Planning and Project Management in Health Care

Subject 1.5 Monitoring and Evaluation in Health Care

## **Subject 1.1 Policy Development for Health Service Delivery**

**Aim:** To help participants appreciate the critical role of policy development and implementation in PHC.

### **Objectives:**

- To promote participants' understanding of policy formulation processes
- To acquaint participants on the historical evolution of health policy development.
- To enhance leadership for effective management or staff succession.
- To enable participants acquire skills on how to overcome challenges of policy implementation in PHC

**Learning outcomes:** After completing instruction in this subject (whether after a single classroom session or following a series of related classroom sessions), participants should be familiar with and able to use the following knowledge and skills.

- Know the primary policy initiatives that affect health care in the country
- Know how the initiatives affect their work
- Be able to incorporate the initiatives into their planning and operational activities

### **Topics:**

- T1. Definitional issues in policy
- T2. Policy formulation and implementation
- T3. Historical perspectives of policies in Nigeria
- T4. National health policies and ancillary policies

## **Policy Topic 1: Definitional Issues in Policy**

### **Definitions**

- A policy is a set of clear statements and decisions defining priorities and main directions for attaining a goal.
- Policy is a process of making important organizational decisions, including the identification of different alternatives such as programs or spending priorities, and choosing among them on the basis of the impact they will have. Policies can be understood as political, management, financial, and administrative mechanisms arranged to reach explicit goals.
- Health policy is a set of clear statements and decisions defining priorities and main directions for improving health and health care in a country.
- Health Policy is intended to be a vehicle for the exploration and discussion of health policy issues and is aimed in particular at enhancing communication between health policy researchers, legislators, decision-makers, and professionals concerned with developing, implementing, and analyzing health policy.

### **Characteristics of Good Policy**

- Policies must be clear
- Concise and precise
- They should be general enough to remain valid for a considerable period of time and yet be specific enough to clearly indicate policy-makers' aims and priorities
- A good policy gives a broad agenda and framework for action
- It provides direction without unduly limiting implementers
- It is important that a policy be made available as a written document with official status adhered to by high authorities

### **Focus of Policy**

- Policy is concerned with what is to be done (content)
- It gives a vision on how to solve health problems
- It gives a ground for planning implementation strategies
- It creates uniformity and focus in health development
- It enhances processes for monitoring and evaluation of strategies for accomplishing policy goals.
- Having a health policy further assists authorities with decision-making
- Indicates a preference for supporting community-based health care
- Clearly stated policy will help to attract donor support and strengthen the position of government in the face of individual donor agenda.
- Policy development
- Completely revised in line with developments and changing circumstances locally in countries and internationally.

### **Determinants of Policy:** Policy is determined by:

- How the agenda was formulated?
- How it defines the problems?
- What solutions it offer?
- Whether midlevel technocrats and bureaucrats who are responsible for translating policy into programmes were involved in the formulation of the agenda?

- How well advocacy, facts and evidence-based information were used to influence decision makers and other stakeholders?
- Political climate
- Availability and mobilization of resources required to achieve the desired policy outcomes

## Policy Topic 2: Policy Formulation and Implementation

### Policy making process

- Policy making is: 'the process by which governments translate their political vision into programmes and actions to deliver 'outcomes' - desired changes in the real world'.
- Public policies are developed by officials within institutions of government to address public issues through the political process.
- When it comes to creating public policy, policymakers are faced with two distinct situations.
  - The first situation, and the ideal one, is for policymakers to jointly identify a desirable future condition, and then create policies and take actions to move toward that desired future state, monitoring progress to allow for necessary adjustments.
  - The alternative, and less desirable, situation occurs when policymakers are unable to reach consensus regarding a desirable future condition. In this later instance, policymakers try instead to move away from present situations judged as undesirable, even though no consensus exists about the preferred alternative.

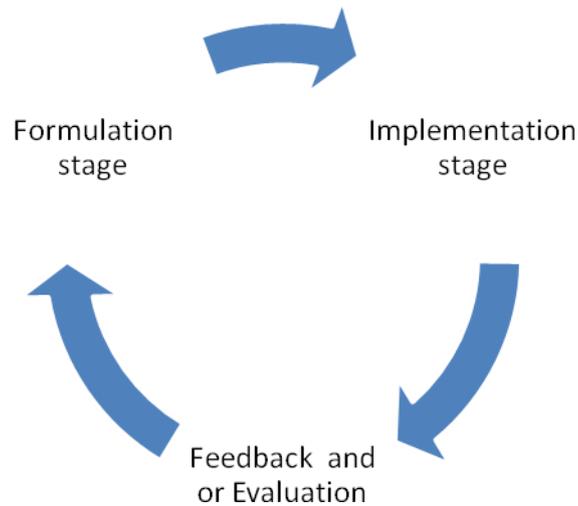
### Guidance for Policymakers

Ideally, policymakers are guided by core principles. For example;

- Politicians and public servants are **accountable** to the public.
- **Elite**, in politics and the private sector, do not have the right to pursue their interests without constraints.
- Government bureaucratic and decision processes must be open, accessible, and **transparent**, as well as being responsive to public concerns.
- Individuals and communities affected by projects have the right to information regarding proposed developments; the right to challenge the need for, and the design of, projects and the right to be involved in planning and decision-making processes.

### There are 3 stages in policy making process

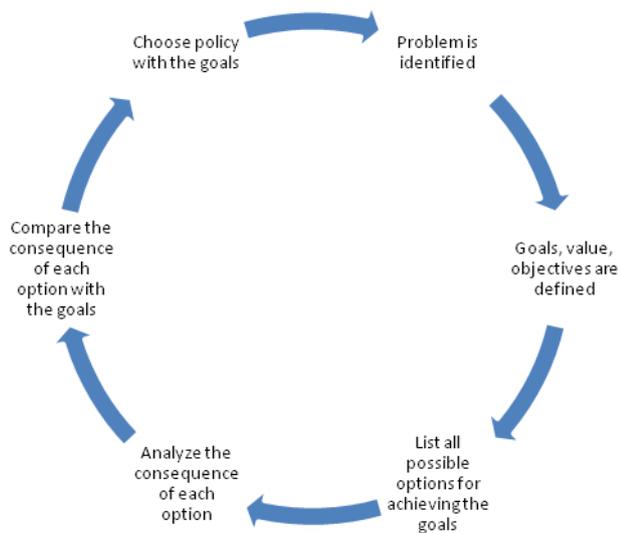
- The formulation stage
- The implementation stage
- The feedback and or evaluation stage



**Figure 2: the policy making process cycle**

### **The formulation stage**

This is a stage where government or policy actors take decision as to what to be done? And how it is to be achieved?



The steps in policy formulation

### **Classical steps in the formulation;**

- Problem is identified
- Goals, value, objectives are defined
- List all possible options for achieving the goals
- Analyze the consequence of each option
- compare the consequence of each option with the goals
- Choose policy with the goals

### **The Implementation stage**

- Implementation stage is the process of interaction between setting policies and actions geared towards achieving them.
- It involves translation of goals and objective of the policy or choice into concrete achievement through various programmes. Policy implementation is regarded as programme implementation.
- For policy to be implemented the following are necessary;
  - Institutional arrangement to implement the policy
  - The institutional commitment to implement the policy
  - The capacity of the institution to implement the policy
  - The resources to implement the policy

### **The Feedback and Evaluation stage**

- This is the stage of comparison between the intended outcome of policy and actual achievements on the basis of experience gained during the implementation stage
- Evaluation means the ability to locate mistakes and to remedy those errors to avoid serious or adverse consequence.
- Feedback means any information about the impact of present and past policy choices to make new decisions about policy decisions.

### **Policy Topic 3: Historical Perspective of Health Policies in Nigeria**

Before 1988 there was no comprehensive document regarded as National Health Policy. Most of the decisions and direction of health care programmes were encapsulated in the development Plans.

- **First Ten Year Development Plan for Development and Welfare 1946-1956**
  - The Walter-Harkness Plan (1946-1956) was the first attempt to officially plan for development of health services in the country.
  - It was conceived as a modest framework which the population should be able to maintain financially and which would be capable of being developed gradually into something approaching the real needs of the country.
  - The Plan however did not live its full course. A new constitution was adopted in 1952 which divided the country into three regions and transferred some of the powers of the Colonial government to elected Regional Representatives who were Nigerians.
- **Regional Health Plans in the period 1952-1962**
  - The first regional policy paper on health was produced by the then Government of Western Nigeria. The Governments of the Northern and Eastern Regions also produced their health programmes between 1952 and 1962.
  - They were mostly noncommittal on those new issues introduced by the Government of the Western Region. The Federal Minister of Health tried without success in 1963 to introduce the Health Insurance Scheme in Lagos.
- **The Six Year National Development Plan 1962-1968**
  - This was jointly produced by all the governments of the Federation in 1962 for the period 1962-1968.
  - This was the first post-independence development plan.
- **The Second National Development Plan 1970-1974**
  - The health plan formulated in the second National Development Plan of the Government of the Federation of Nigeria had the following main objectives.
  - Restoration of the health facilities and services which were destroyed during the civil war.
- **The Third National Development Plan 1975-1980**
  - Basic Health Services Scheme (BHSS): The Basic Health Services Scheme was the strategy formulated for achieving these objectives but it failed to achieve most of its objectives and targets.
  - However, some progress was made in the development and intermediate manpower training.
- **The Fourth National Development Plan 1981 -1985**
- **The National Health Policy 1988**
  - This was the first time a National Health Policy predicated on the Alma-Ata declaration of 1978 which promoted “health for all by the year 2000”
  - The key elements of the NHP include;
    - National Health Care Systems.
    - National Health Strategy
    - National Health Information System
    - National Health System Management.
    - National Health Manpower Development
    - National Health Technology
    - National Health Research
    - National Health Care Financing

- **The National Health Policy 1996**
  - Primary Health Care as the cornerstone of the Nigerian Health System and the strategic objectives has remained the same.
  - It should be mentioned that the 1996 revision was not formally endorsed (by the National Council on Health and FEC) while the 2004 revision was endorsed and published.
- **The Revised National Health Policy 2004**
  - In line with the health sector reform agenda the National Health Policy was revised in 2004. The elements of this policy include;
    - The National Health Systems and Management
    - National Health Care Resources
    - The National Health Interventions
    - National Health Information System
    - Fostering Partnership for Health Development
    - National Health Research
    - National Health Care Laws

## **Policy Topic 4: Nigerian Health Policy and Ancillary Policies**

**Introduction:** The overall objective of a national health policy is to improve accessibility of the population to primary health care as well as to secondary and tertiary care.

- The Nigerian *National Health Policy* identified primary health care (PHC) as the main focus for delivering an effective, efficient, quality, accessible and affordable health services, to a wider proportion of the population through four approaches:
  - Promotion of community participation in planning, management, monitoring and evaluation of the local government health system i.e. the PHC system;
  - Improved inter-sectoral collaboration in primary care delivery;
  - Enhancing functional integration at all levels of the health system;
  - Strengthening of the managerial process for health development at all levels.
- This reviewed National Health Policy recognized the Local Government Area as the operational level for primary health care implementation.
- In a bid to institutionalize PHC services and ensure sustainability, a decree was promulgated in 1992 (*Decree No 29*) establishing a National Primary Health Care Development Agency (NPHCDA). This Agency has a mandate to;
  - Periodically monitor and evaluate the National Health Policy, especially as it relates to primary health care,
  - Mobilize resources nationally and internationally for the development of PHC, and
  - Most importantly; provide technical support, co-ordinate and develop strategies for the effective implementation of PHC nation-wide.
- Despite these developments, the desired outcomes of this policy have not been fully realized.
- An attempt to develop and implement a National Plan of Action for Implementing a District (LGA) Minimum Health Care Package for the plan period of 1995 to 2000, was constrained by low level of political commitment at all levels of Government.
- In an attempt to improve access to health care, the NPHCDA has reviewed the flaws in the present primary health care system and developed a ward health system through which a minimum health care package would be delivered.

### **Challenges of Implementing the Health Policies**

There were numerous challenges identified as responsible for the variable levels of implementation of the policies. They include, but not limited to the following:

- The policies are
  - Fragmented and too many for a period of just over 25 years.
  - Reactive rather than proactive
  - Some are not aligned to other national policies
  - Not integrated into a document
  - Not disseminated to stakeholders
  - In some programmes several sub – policies are developed e.g reproductive health

## **Subject 1.2: Public Sector Reform and National Health Initiatives**

**Aim:** To expose the participants on contemporary issues of public sector reform and National Health initiatives.

### **Objectives:**

- To facilitate understanding of participants of Millennium Development Goals a Catalyst for Public Sector Reform
- To enhance the understanding of the participants on Public Sector reform and 7-point Agenda
- To facilitate understanding of the participants on strategic thrust of Health Sector Reform
- To facilitate understanding of the participants on National Strategic Health Development Plan

**Learning outcomes:** After completing instruction in this subject (whether after a single classroom session or following a series of related classroom sessions), participants should be familiar with and able to use the following knowledge and skills.

- Know the most important current public sector development initiatives
- Know how the initiatives relates to health and PHC development
- Be able to incorporate the initiatives in achieving PHC goals and targets within the scope of their responsibilities

### **Topics:**

- T1. Millennium Development Goals (MDGs) a catalyst for public sector reform
- T2. Public sector reform implementation; lesson learned and next steps
- T3. Health components of the 7-Point Agenda & Vision 20:2020
- T4. The national health sector reform programme
- T5. National strategic health development plan

## Public Sector Topic 1: Millennium Development Goals - a Catalyst for Public Sector Reform

- Preamble
  - At the Millennium Summit in September 2000, the largest gathering of world leaders in history adopted the Millennium Declaration, committing their nations to reduce poverty; improve health; and promote peace, human rights, and environmental sustainability- as they all relate to
    - Transparency and accountability
    - 
    - Weak Health systems at the 3 tiers of Government
    - Inadequate funding for the health sector: funding decreased between 1996 and 2006 from 7.1% to 3.5%; far below the 15% agreed upon by Africa union Heads of Governments at the Abuja 2001 declaration
    - Lack of adequate human resource in the sector Weak managerial capacity to carry out basic functions
  - The Millennium Development Goals (MDGs) are a set of 8 time-bound, interdependent Goals that set out to commit specific outcomes by 2015. It is in essence a global compact between developed and developing nations.
  - Specifically, the MDGs aim to reduce poverty, reduce child & maternal mortality, ensure access to basic education, empower women, combat HIV AIDS & other diseases, ensure access to potable water and protect the environment, address debt, trade and aid. African countries need to make the most progress if they are to meet these Goals.
- The Millennium Development Goals:

The MDGs are the world's time-bound (2015) set of 8 Goals that address extreme poverty in its many dimensions. They include:

1. Poverty reduction	5. HIV AIDS & Malaria
2. UPE	6. Child mortality
3. Gender equality	7. Maternal mortality
4. Environment	8. Global partnerships
- African leaders have adopted the MDGs as a tool within their wider development planning framework in order to urgently address poverty, hunger, joblessness, diseases, lack of shelter, gender inequality and environmental decline.
- MDGs: An International Commitment to Human development
  - Contained in the eight goals, 18 targets and 48 indicators are a number of previous declarations, as well as regional, national and international initiatives.
  - Endorsed by over 180 member states of the UN General Assembly.
- The MDGs are not a “one size fits all” solution to the development challenges of any specific country, it only work to kick-start a development that takes into account linkages between different sectors and need.
- In Africa,
  - The MDGs provide a new impetus to reverse the deterioration in human development evident especially since the major economic crises of the 1980s.
  - Also a platform to accelerate human development and facilitate the gradual but effective integration of the developing world, particularly Africa, into the global economy
  - Nigerian Experience-Debt relief Gains (DRG):

- \$1bn released as saving from the Paris Club Debt Deal in 2005, \$750m to FGN and \$250m States.
  - DRGs set aside within FGN Budget framework and Virtual Poverty Fund Concept used.
  - Emphasis on additionality, scale & results on the ground.
  - Must illustrate to Nigerians transparent use of spend through a robust Monitoring & Evaluation Framework Millennium Development Goals used as an entry point to focus spending
  - MDG midpoint assessment report for Nigeria illustrated the risk of not achieving the MDGs by 2015 unless investments increased at all levels
  - The Debt Relief Gains (DRGs) fully integrated into the Federal Budget
  - MDG related MDAs allocated these resources to scale up interventions
  - Conditional Grants to States 18 states and FCT in 2007, and to 35 states in 2008
  - Monitoring & Evaluation mechanism in place
  - MDG costing gap identified
- What we have done so far?
    - Mr. President put in place leadership and platform for implementation of the DRG under his direct supervision. (SSAP MDGs & PC MDGs)
    - DRG integrated into Budget cycle 2006-09
    - MDAs Steering Committee/Task Teams set up
    - Core Team includes both government & International Development Partners (IDP's)
    - National Committee for CGS under the Hon. Minister of Finance
    - Robust M&E framework (OPEN)
  - A Few Successes
    - OPEN fully integrated into 2 Budgets 06/07
    - Disbursement of Conditional Grants to 19 States 2007, and 35 states in 2008
    - M&E Baseline Diagnostic Study
    - M&E field initiative outsourced to CS & Consultants
    - MDG Committee in the NASS
    - 'Quick wins' projects in all senatorial and federal constituencies
  - Health specific achievements:
    - 2006
      - 166 new PHCs built
      - 207 PHCs rehabilitated nationwide
      - 400,000 ITNs procured and distributed
      - Over 1million doses of ACTs and 2m doses of SPs provided
      - 79,000 doses of antiretroviral drugs procured
      - Rehabilitation and equipping of 12 FMC EMOC units
    - 2007
      - Construction and equipping of 111 PHCs
      - Capacity building of PHCs workers
      - Institutional strengthening of NPHCDA
      - Procurement of SPs, ACTs and ITN
      - 80,000 doses of ARVs procured
      - Increased in the proportion of one year olds fully immunized

- 2008
  - Free maternal and child health care for 700,000 pregnant women and under -5 children in Oyo, Bayelsa, Imo, Sokoto, Niger and Gombe states
  - Procurement of 1.25m ARVs, 62m doses of vaccines for routine/supplemental immunization and 6.7m doses of anti-malarials (ACTs and SPs) and 1.5m Long-lasting Insecticide-treated Nets
  - Procurement of 3,320 midwifery kits
  - Rehabilitation of TB and Leprosy centre in Orji River, NTBL zaria, leprosy centre, Sokoto
  - Procurement & installation of equipment for NBTS centre in Katsina, which has been functional since Nov. 2008
- 2009
  - Capacity building for the Sector in collaboration with OHCOSF and NPHCDA
  - Human resources for Health sector through MSS
  - Free maternal and child health care for 500,000 pregnant women and under -5 children in Ondo, Cross River, Katsina, Yobe, Bauchi and Jigawa states
  - Procurement of ARVs, vaccines for routine/supplemental immunization
  - Procurement of midwifery kits and mama kits under the MSS programme
  - Health systems strengthening
- Nigeria's Progress towards achieving the MDGs
  - Past mid-point to the 2015 target, there are prospects that the MDGs would be met, in areas of universal primary education, HIV/AIDS, environmental sustainability, and building of global partnership for development.
- For the reduction of child mortality and maternal health, the task is still daunting, but still achievable, but not without extraordinary effort
- Mid -point Progress report
  - Goal 4- Reducing child mortality
    - The emerging trend in child mortality is of great concern;
      - Infant mortality rate actually rose from 81/1000 live births in 2000 to 110/1000 in 2005/06, which farther away from the global target of 30/1000 live births by 2015
      - Under 5 mortality increased from 184 per 1000 live births in 2000 to 201 per 1000 live births in 2007
      - Reported cases of WPV rose from 201 in 2007 to 651 in 2008
  - Goal 5- Improve Maternal Health
    - Major challenge for Nigeria
      - Slightly past midway, MMR should be 440/100,000 live births, but reality is that in rural areas, it was 828 deaths/100,000 live births and 531 deaths/100,000 live births in urban areas. The target is less than 75 live births per 100,000 by 2015
  - Goals 6- Combat HIV&AIDs, Malaria and other diseases
    - Decline in prevalence rate of HIV/AIDS from 5/100 in 2003 to 4/100 in 2005

- Decline in prevalence rate amongst pregnant women from 6/100 in 2003 to 4/100 in 2005
  - Prevalence rate of malaria declined from 2,024 per 100,000 in 2000 to 1,158 per 100,000 in 2004
  - TB remains a public health problem, although incidence declined from 16 per 100,000 in 2000 to 7 per 100,000 in 2004, as at 2007, Nigeria remained among the 22 high burden countries in the world, one of the highest in Africa.
- Challenges:
  - Good Governance is key to attainment of all MDGs, especially
  - Inadequate harmonization of donor support for the sector
  - Lack of in-country capacity to locally produce vaccines
  - Poor state of infrastructure Insufficient monitoring and evaluation of programmes
- Getting Nigeria on Track on the Health MDGs
  - Nigeria can still attain the health MDGs within the broader social, economic and environmental issues, through:
    - Health systems strengthening, particularly at the PHC level for effective strategies for child and maternal health
    - Financing , a strengthened health systems will require additional funding
      - Bilateral donors, international financial institutions
      - Increased allocation to health sector
      - Domestic resource mobilization: PHC fund etc
- Getting Nigeria on track
  - Human resources Availability of appropriate human resources, particularly at the PHC level;
    - Repositioning the PHC systems
  - Equitable and functional health systems
  - scaling up technical dimensions, including priority settings
  - Effective referral linkages
  - a massive scaling up of public investment,
  - Infrastructural development
  - capacity building,
  - Information systems must be strengthened to be appropriate, accurate and timely

## Conclusion

- The Health related MDGs particularly that of child mortality and maternal health are attainable in Nigeria, but not without extra ordinary efforts.
- The technical interventions for achieving these goals exist; all that is required is the implementation at a scale and in a manner that will reach those who need them most

## **Public Sector Topic 2: Public Sector Reform Implementation - Lessons Learned and Next Steps**

### **Background**

- Articulated on the basis of findings of a diagnostic studies of eight (8) MDAs by the Office of the Civil Service of the Federation (OHCSF)
- Deployed for implementation in Pilot MDAs restructuring between 2003 and 2007.
- Pilot speculated to be implemented for about 6 – 9 months with:
  - Lessons learned at pilot level implementation to be utilized to revise the strategy within the framework of that methodology
  - Elements of the strategy that worked to be scaled-up
- Those that do not work to be fed back into the strategic planning process for redesign in consonance with the strategy's overarching principle of continuous learning and incremental improvement
- Since 2003 Reforms have been the Federal Government's principal policy. The present Administration has affirmed its commitment to the policy

**Scope of the reforms:** The Reform agenda is wide-ranging and includes areas such as:

- Economic Reforms:
  - Privatization
  - Commercialization
  - Deregulation of the economy
  - Introduction of Public-Private Partnership
  - Removal of subsidies
  - Public Debt Management, etc
- Governance Reforms:
  - Anti-corruption
  - Procurement (Due Process) reform
  - Devolution of functions to other tiers
- Public Service Reforms:
  - Budget & Financial management Reform
  - Civil Service (Institutional) Reform
  - Reform of Parastatals
- Sectoral Reforms
  - Health System Reform
  - Banking Consolidation
  - Ports Reform
  - Statistical System Reform

### **Institutional Framework for the Reforms**

- National Council on Reforms (NCR): Chaired by the President
- Steering Committee on Reforms (SCR): Chaired by the Minister of Finance
- Sub-committees of SCR:
  - The Economic Team
  - The Governance Team
  - The Public Service Team

### **Implementation of the Reform**

- Public Service Reforms was implemented at three levels
  - Pilot MDAs Reforms

- Service-wide Reforms
- Sector Specific Reforms
- Implementation between 2003 and 2007 resulted in modest achievements in the areas of:
  - Rightsizing and elimination of ghost workers - underpinned by the introduction and implementation of the Integrated Payroll and Personnel Information System (IPPIS) in 6 pilot MDAs;
  - Monetization of fringe benefits;
  - Introduction of a consolidated salary structure and pay adjustment;
  - The introduction of contributory pensions system;
  - Establishment of SERVICOM;
  - Introduction of a Fiscal Responsibility Act;
  - The Public Procurement Act; and
  - A new national statistical system

### **Reform Implementation: Lessons from the pilots**

- DFID in 2007 conducted an assessment of the Pilot MDAs to document lessons learnt for up-scaling. Deepening and up-scaling the reform requires:
  - Better guidelines
  - Attending to BPSR capacity building needs
  - Information sharing on lessons learned,
  - Integrated approach with SERVICOM
  - Linking performance plans to the long-term strategic and budgetary processes.
  - De-personalizing the reform process
  - Alignment of HR management with the reformed financial management/budget system
  - Introduction of objective performance management system.

### **Things that should be done differently are:**

- Better planning with well thought-through integrated approach to implementation;
- Communication and stakeholders buy-in;
- More emphasis on the 'people' component of reform; their attitudes, their support;
- Change management incorporated into design;
- Emphasis on training and re-training on an ongoing basis;
- A commensurate pay system;
- Improvement of staff welfare/work environment;
- Appropriate funding and fulfillment of government's obligations; and
- The importance of rules to encourage resourceful rather being imprisoned by them.

### **National Strategy for Public Service Reforms (NSPSR)**

- There has been a lull in further implementation of PSRP with the exit of the last administration. This is partly due to the need to address some of the issues identified from the assessment of 2003-2007 reform activities and also wait for the policy direction of the present administration.
- Against these backgrounds, the Bureau partnered with DFID to get the reform process back on track, incorporating lessons learnt from the 2003 PSRP implementation.

- DFID provided the BPSR and Inter Ministerial Technical Team (IMTT) of senior public servants with technical assistance that has helped to deliver the National Strategy for Public Service Reform (NSPSR).
- The development of a long term National Strategy For Public Service Reforms (NSPSR) was considered a priority by the then Yar'Adua administration because the nation's development objectives cannot be achieved without a vibrant public service.
- NSPSR: Long-term strategic thrust
  - Critical place of Public Service Reform (PSR) in the pursuit of Nigeria's development goals is underscored in the current Administration's Seven-Point Agenda.
  - Among the strategic objectives of the Agenda is the achievement of quality public service delivery through accelerated implementation of, among others, an e-Government project and Civil Service Reforms.
  - NEEDS 2 postulate that 'a professional and results-oriented public service' is one of the five critical success factors in the national pursuit of Vision 20-2020.
  - In this regard, it adds that "achieving the goal of economic transformation depends on how effective the public service discharges its catalytic role.

### **Highlights of the NSPSR**

- NSPSR – Objectives & Pillars
  - The National Strategy for Public Service Reform (NSPSR) provides a common vision and a long-term agenda to guide the rebuilding and transformation of the federal public service.
  - The ultimate objective is to have a world-class public service for achieving Nigeria's Vision 20-2020 – to become one of the 20 leading economies in the world by 2020
  - On the basis of the Development and objectives stipulated above, four pillars of the strategy are:
    - Pillar One: Creating An Enabling Governance and Institutional Environment
    - Pillar Two: An Enabling Socio-economic environment
    - Pillar Three: Public Financial Management Reform
    - Pillar Four: Civil Service Administration Reform.
  - NB: It is important to stress that there are significant linkages within and across these pillars even as implementation responsibilities lie with different MDAs
  - NSPSR has three distinct phases:
    - A rebuilding phase (2009-2011)
    - A transformation phase (2012-2015)
    - The final phase that is expected to lead to a world-class public service status (2016-2020).

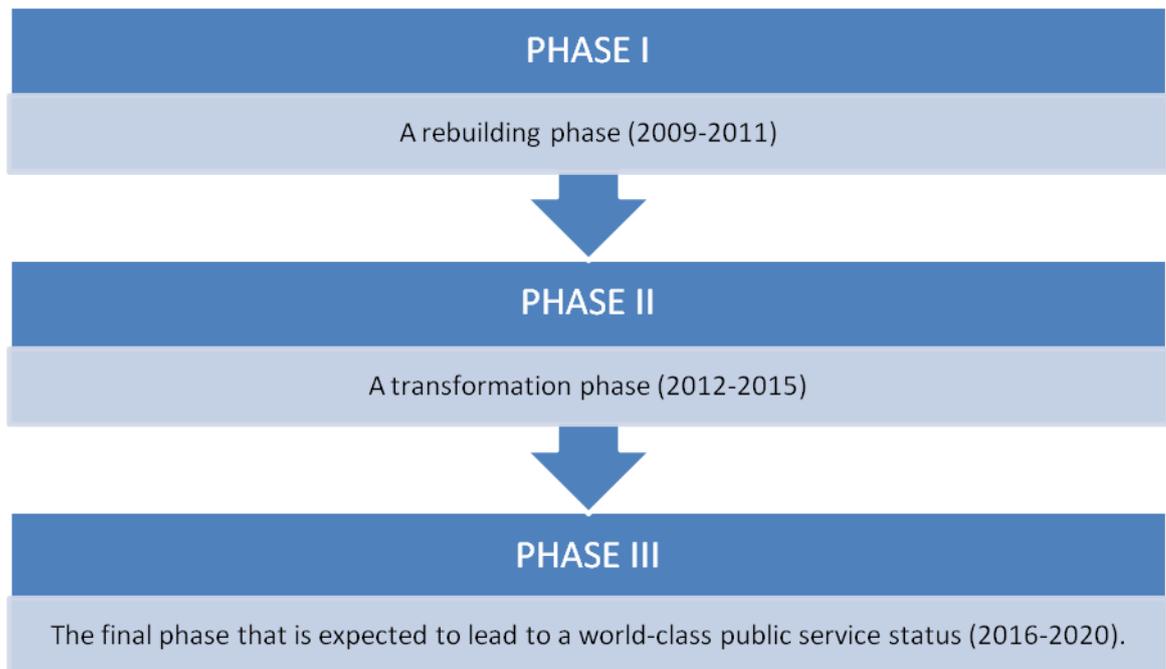


Fig. 1: the phases of NSPSR

#### **Highlight of Implementation Activities across the 4 Pillars**

- Getting the basics and on-going reforms right
- Review of laws that are anti-Federal and restoring proper inter-tier relations in service delivery
- Installing a robust system for policy research, M & E for reporting on development outcomes
- Proper policy and legal frameworks for PPPs
- Instituting a programme/performance based budgeting within improved classification aligned to priorities
- Strengthening MTSS/MTEF for predictable and sustainable funding
- Civil Service Specific Next Step Actions-Getting the basics right: Not a question of best practice; rather, what works for Nigeria.
- Building on our strengths and opportunities and minimizing avoidable risks
- Better planning, phasing and sequencing to ensure sustainability and avoidable system's disruption
- Build on on-going reform efforts
  - Target system improvement and capacity development to support the vision 20: 2020/ 7 Point Agenda

## **Public Sector Topic 3: The Vision 20:2020 & Health Components of the 7-point agenda. Seven (7) Point Agenda**

### **Introduction**

- The 7-Point Agenda is the driving force of the present administration's policies and programmes. It is the seven priority areas of focus. The Government will be judged by the achievements in these seven key areas.
- It is a medium-term policy-based plan (2007-2011)

### **The seven points are as listed below:**

1. Critical Infrastructure: Power, Transport (Rail Transportation, Road Transportation, Marine Transportation, Inter-Modal Transportation, Telecommunication)
2. Niger Delta Development
3. Food Security (Agriculture)
4. Human Capital Development: Health and Education
5. Land tenure Changes and Home Ownership
6. National Security & Intelligence
7. Wealth Creation

### **Issues and Challenges in the Health Sector**

- Health outcomes in Nigeria lag behind others countries at similar stages of development
- The country's dismal health system is ranked 191 out of 201 in the comity of nations (WHO)
- Life expectancy is estimated at 45 years for males and 46 years for females.
- Infant mortality rate is 260 deaths/1000 live birth in the North West and North East, - one of the highest in the world, compared to 180/1000 in other parts of Nigeria
- Maternal mortality in Kano is 2,400/100,000
- About 2.6 million or 4.4% of 15-49 year olds are living with HIV/AIDS
- Size and diversity of the country
- Stewardship – weak governance system especially at the LG level that is responsible for PHC. Each tier has its responsibility and coordination is difficult
- Service Delivery: HCS are fragmented, skewed in distribution, limited in coverage poor in quality, weak in referral system and dearth of resources
- Resource Generation: There is a dearth of all resources for the health sector-drugs, infrastructure, equipment and human resources including scarcity in the number, distribution, mix and motivation of health care providers
- Health Care Financing: Health sector is poorly funded in Nigeria. For example, Malaysia and Brazil spend 11 and 20 times respectively on Health, more than Nigeria does.

### **7-Point Agenda: Proposed Policy options**

- Develop Pro-Poor Public Health Expenditure Programs:
  - The need to improve targeting of pro-poor health needs
  - Pro-poor health programme are immunization, antenatal care, malaria, treatment, emergency obstetrics care, surgery etc
  - State and Local Governments that translates commitments to pro-poor health spending are to be rewarded through an incentive mechanism set up by the FGN

- Capacity Mobilization:
  - Train community volunteers to manage logistics of vaccine and drug supplies and delivery of mosquito bed nets and not trained nurse or Doctor
  - Retired teachers, Civil servants and local business people could assist to spread health promotion messages
- Systematic Engagement with Private Sector on Infrastructure and Service Delivery
  - Government to engage the private sector to improve the weak health infrastructure
  - Government to set standards, and regulate the private sector while promoting the public mission

## **Vision 20:2020**

- Vision: Definition
  - “A mental picture of a future state of being, which is better than the present.”
  - “Ability to think about or plan the future with great imagination and intelligence” (Advanced Learner’s Dictionary).
- The NV20:2020 encapsulates the collective aspirations and desires of Nigerians and what they want their country to be.
- The NV20:2020 is a ten year economic transformation blueprint aimed at stimulating Nigeria’s economic growth and launching the country into a path of sustained and rapid socio-economic development.
- The vision articulates Nigeria’s economic growth and development strategies for ten years, spanning 2010-2020
- For a vision to be realized there is a need for careful planning to determine how to achieve it. Such planning will produce the policies, programmes, projects and the resources required for the realization of the vision as well as the costing of the projects and programmes.
- In this regard, Government has embarked on the preparation of the First NV20:2020 Implementation Plan (2010-2013).
- The key objectives of the Vision 2020:
  - Stimulate Nigeria’s economic growth and launch the country onto a path of sustained and rapid socio-economic development
  - Place Nigeria in the bracket of top 20 largest economies of the world by the year 2020,
  - Achieve a GDP of not less than \$900 billion and a per capita income of not less than \$4000 per annum by the year 2020.

## **Overview of Health Thematic Area**

- Currently, health care is delivered by the three tiers of Government and the private sector:
  - Primary Health Care is the responsibility of the LG
  - Secondary Health Care - State Government
  - Tertiary Health Care - Federal Government
- Scope of Health Thematic Area in the Vision 20:2020
  - Primary Health System is the first level of contact of the individual, family and community with the national health system. It is delivered in:
    - Comprehensive Health Centers
    - Primary Health Centres
    - Primary health Clinics

- Primary Health posts
- Primary Health Care involves the following:
  1. Health education
  2. Nutrition and food supply
  3. Immunization
  4. Maternal and child health (including family planning)
  5. Basic sanitation and water supply
  6. Control of Endemic diseases
  7. Treatment of common diseases and minor ailments
  8. Supply of essential; drugs
  9. Primary Mental Health
  10. Primary Dental Health
- Secondary Health Care is the Second level in health care system. The services are delivered in General Hospitals
- Tertiary Health Care is highest level of health care in the country.
  - It is the ultimate referral; with highly specialized services.
  - Its main functions include teaching, service delivery and research.

#### **NV20:2020 - Objectives for the Health Sector**

- To harmonize the health care policies and programmes of all the tiers of government, paying attention to peculiar geographical health care needs
- To redress the disproportionately poor health indicators in the country
- To improve the level of routine immunization through primary health care services to cover all children
- To ensure regular access to affordable drugs and vaccines through significant increase in the local production of essential medicines by building Nigeria's capacity to manufacture essential drugs, vaccines and consumables
- To address the acute shortage of drugs by revamping the drug-revolving scheme including the Bamako Initiative
- To increase Universal access to healthcare through mechanisms such as the National Health Insurance Scheme and the National Community Health Insurance that provides FREE health services to vulnerable groups
- Reduction in the maternal mortality which ranges from 300 per 100,000 live births in the south-west of Nigeria to over 1,200 in the north-east of the country by 75% by 2020. (NDHS, 2008).
- Reduction in under-5 mortality from 189 per 1000 live births (2007, UNICEF) to 75 in 2015 and 50 in 2020.
- Reduction in the maternal mortality which ranges from 300 per 100,000 live births in the south-west of Nigeria to over 1,200 in the north-east of the country by 75% by 2020. (NDHS, 2008).
- Reduction in under-5 mortality from 189 per 1000 live births (2007, UNICEF) to 75 in 2015 and 50 in 2020.
- Reduction in under-5 malnutrition from 53% to less than 20% (NDHS 2008) by the year 2015.
- Increased life expectancy of Nigerians from 47 years (2007 UNICEF) to 70 years by 2020.
- Reduction in HIV/AIDS prevalence from 4.4 percent in 2006 to half by 2015.

## Strategic Initiatives

- Provision of adequate infrastructure and well maintained equipment through partnership with the private sector.
- Expansion of secondary and tertiary health care coverage will require the citing of at least one general hospital in each Local Government Area. Each General Hospital will have specialists to cover a minimum of four major disciplines: - Surgery, Paediatrics, Medicine, Obstetrics and Gynaecology.
- Inclusion of family life education should be part of junior secondary school curriculum, with a view to encouraging the citizenry to seek health care knowledge from appropriate health sources.
- The development of adequate and appropriate manpower for the health sector will require thorough assessment of the training needs, and the update of in-service training programmes
- Embarking on training and re-training of all health personnel to update their skills and competence.
  - In this regard, the Postgraduate Medical Colleges, Colleges/Faculties of Medicine and the Teaching Hospitals will be better funded to help perform their training mandates more effectively.
  - A special fund for the training of house officers and other interns is also necessary.
  - To meet the new, growing demand for health workers, the relevant institutions, such as Schools of Health Technology and Midwifery, would be strengthened and empowered to accommodate new intakes.
- Strengthening existing national health information systems and integrating them into a comprehensive national database by to improve health database and promote research.
  - This will be supported by ensuring effective vital registration (births, deaths, marriages, divorce) at all levels and the establishment of the mechanisms for **collation, coordination and management of health research** by a well funded body such as the National Medical Research Council (NMRC).
- Enhancing the availability and management of health resources (financial, human and infrastructural) by
  - Consolidating and expanding the national midwifery scheme.
  - Implementing a competitive Health Workers compensation and motivation package would also be introduced across all levels.
- Strengthening the various health regulatory agencies and accelerating the implementation of the three components of the National Health Insurance Scheme (NHIS) for the attainment of 100% coverage of Nigerians by 2015.

## Conclusion

- For every nation, there is need for a vision of an ideal state towards which society should move.
- In the march to the preferred state, it is necessary to set targets and reference points against which short term actions and achievements can be evaluated.
- This is what the ten-year economic blueprint and the 7-point Agenda are set out to achieve.
- Vision 20:2020 is achievable and we have the human and material resources to make it possible.

## **Public Sector Topic 4: The National Health Sector Reform Programme**

### **What is health sector reform?**

Health Sector Reform (HSR) is a sustained process of Fundamental Change in POLICY and INSTITUTIONAL arrangement, guided by Government, designed to improve the functioning and performance of the health sector and ultimately the health status of the population (Source – Sikosana et al ,1997). HSR is a sustained purposeful change to improve the effectiveness, efficiency, equity and quality of the health sector( Berman 1995)

### **Characteristics of HSR**

- Structural rather than incremental or evolutionary
- Change in Policy Objectives followed by Institutional Change rather than redefinition of policies alone
- Purposive rather than haphazard change
- Sustained and lengthen rather than one off.
- Political and “top down” process led by national, regional or local government
- Contents is marked by diversity rather than uniformity of measures
- Content is specific to a country and to its health system characteristic.

### **Components of Health Sector Reform**

1. Enabling/Empowering
  2. Regulation
  3. Financing
  4. Purchasing
  5. Providing
- Enabling/Empowering: by
    - Liberalizing laws on Private Sectors
    - Introducing Incentives for expansion.
  - Regulations : By
    - Revising regulatory structure to protect consumers & ensure minimum quality standards.
  - Financing: Very critical, particularly as it relates to
    - Community Financing
    - Social Health Insurance
    - User fees
  - Purchasing: Through
    - Creation of purchasing agencies & management agreements with providers
    - Introduction of competitive non-structural relationship
    - Reforming the payment system.
  - Provision: via
    - Decentralization of Health Service Management
    - Increased autonomy of public hospitals
    - Improved accountability to service users and the population

### **The Key actors in HSR**

- Government – providing the Structure/regulatory instruments
- Patients/ Population - Pay for Health system and receive services
- Financial Intermediaries – Collect funds and pay providers

- Providers of health care services: 1<sup>o</sup>, 2<sup>o</sup>, 3<sup>o</sup> – level of care, Public or Private-ownership. For profit or not for profit, formal or informal – degree of organization-orthodox, allopathic, homeopathic – medical system

### **Functions / Roles of the Actors**

This is as it relates to the functions of the HSR: Regulation; Financing; Purchasing; Providing. The actors include:

- Government and or professional groups:
  - Safe guarding and promoting public health
  - Enforcing standards
  - Monitoring the behaviour and performance of providers and perhaps insurers
  - Implementing appropriate package of services and or benefits.
- **The Citizenry**
  - As patients – knowing their responsibilities and rights
  - As payers - insurance, exemptions etc.
  - As part of reformed managing and policymaking structures
  - Financial Intermediaries: Collecting payments from patients (users)
  - Making payments to Providers, i.e. act as purchases of services
  - Act as Providers occasionally
  - Encourage efficient and equitable financing and delivery of services
- **Roles of Providers:**
  - Adapting to the spirit and concept of decentralization, competition, diversity of ownership and reforms at all levels of care
  - Embracing evidenced-based health care & quality improvement
  - Paying more attention to the most vulnerable groups to enhance their health indicators: MMR, IMR, under-five MR, etc.
  - Maintaining accurate HMIS for System Indicators such as waiting period, bed occupancy, admission rates, plans availability, HR system, etc.

### **Why or when is HSR necessary?**

- When a Health System is not performing hence resulting in Poor health status of the population. The Performance issues include: Effectiveness, Quality, Efficiency, Accessibility, Equity, sustainability.
- This is measured in terms of
  - Indicators of General Health of the population: - Disability rate, life expectancy, Quality of life etc.
  - Vulnerable groups health indicators:-Maternal mortality rate (MMR), infant mortality rate (IMR), under five mortality rate (U5MR) etc.
  - System Indicators: - waiting period, bed occupancy, admission rates, plans availability, HR system. Etc. (input process & output indicators)
  - **Health Sector Reform (HSR) in Nigeria 2004-2007**

**HSR Goal:** To improve the health status of Nigerians as a significant co-factor in the national poverty reduction efforts.

**HSR Mission:** To undertake a government- led comprehensive health sector reform aimed at strengthening the national public and private health system to enable it deliver effective, efficient, qualitative and affordable health services.

## **Rationale: Why Health Sector Reform**

- National health System: Nigeria's overall health system performance was ranked 187<sup>th</sup> among the 191 Member States by the World Health Organization in 2000.
- Health status:
  - Our maternal mortality rate is one of the highest in the world (making Nigeria the most unsafe place for a woman to be pregnant and go into labour)
  - some other health status indicators like under-5 mortality rate and adult mortality rates are higher than the average for sub-Saharan Africa.
- Health policy, legislation, and health sector agenda:
  - Limited capacity for policy/plan/programme formulation, implementation, monitoring and evaluation at all levels.
  - Absence of a National Health Act (to describe the national system and define the health functions of each of the 3-tiers of government)
- Health service delivery and quality of care
  - Disease programmes currently implemented within a weak health system and have had little impact.
  - Routine immunization coverage rate that reached over 80% in the early 1990s nose-dived to an all time low level of 15% until recently.
  - A very high proportion of primary health care facilities serve only about 5-10% of their potential patient load, due to consumers' loss of confidence in them among other causes.
  - Our secondary health care facilities in very bad conditions.
  - Diagnostic and investigative equipment in tertiary health institutions outdated.
  - The referral system between various types of facilities is non-functional or ineffective.
- Pharmaceuticals and medical supplies:
  - Fake, sub-standard, adulterated and unregistered drugs still prevalent.
  - Erratic supplies and availability of drugs and other materials abound
- Health finance
  - Health sector is grossly under-funded.
  - No broad-based health financing strategy.
- Management and management systems
  - Management of the limited health resources available ineffective and inefficient
  - Culture of corruption and self interest.
- IEC and consumer rights
  - Consumers' health knowledge and level of awareness of his rights to quality care low.
- International community
  - Activities of Donors and other development partners are poorly coordinated.

## **Seven Strategic Thrusts of Nigeria's HSR Agenda**

1. Improving the stewardship role of Government
2. Strengthening the National Health System and its Management
3. Reducing disease burden
4. Improving Health Resources and Management
5. Improving access to quality health service
6. Improving Consumer awareness and Community involvement
7. Promoting effective partnership, collaboration and coordination

NB: there are two over arching issues (HMIS & Communication) identified with the HS

### **Approaches to undertaking ‘HSR’ at any level**

- Establishing baseline information to enable the Description of the Health System:
  - Structure of HS – Governance and Management
  - Policy and Regulation Mechanism
  - Financing – Services, quality, distribution
  - Human Resources – Quality, quantity, performance
  - Private Sector – Size, quality, relationship with public role, regulation etc.
  - Disease Burden and how they are addressed
  - Accessibility - physical and financial
  - Equity assessment
  - Health infrastructure
  - Health indicators
  - Economic performances & other related government policies
- Diagnosis/ Identification of key problems
- Utilize HSR ‘Control Switches’ to design responses:
  - Policy/Regulation, i.e. decentralization, commercialization, autonomization, etc.
  - Financing – User fees/IGR Utilization, resource allocation, tax Insurance, incentives
  - PPP – Contracting ,subsidizing, regulation
  - Equity measures – exemption, minimum package
  - Consumer education
- Implement Response
- Monitor & Evaluate

### **The Critical Success factors in undertaking Health Sector Reform**

- HSR actions must involve both internal and external stakeholders from the earliest possible stage
- Where HSR initiatives involve significant adverse economic impact on people, efforts should be made to encourage government and businesses to create new opportunities for affected persons
- Responsibilities for various HSR activities must be defined and allocated among all responsible parties in a clear and definitive way
- Regulatory considerations should be addressed early in the HSR planning process

## **Public Sector Topic 5: National Strategic Health Development Plan (NSHDP)**

*“ The Federal Government of Nigeria recognizes that, in order to achieve the country health targets, inclusive of the health-related MDGs, particularly for its poorest and most vulnerable population, the health system should be strengthened, health services must be scaled-up and existing gains in the health sector must be sustained and expanded. These improvements can be achieved through the use of an evidence-based Framework to guide the development of a National Strategic Health Development Plan (NSHDP), with appropriate costing.”*

- **Goal, Vision and Mission Statement of NSHDPF**
  - Goal: To significantly improve the health status of Nigerians through the development of a strengthened, coordinated, reinvigorated and sustainable health care delivery system
  - Vision : “To reduce morbidity and mortality rates due to communicable diseases to the barest minimum; reverse the increasing prevalence of non-communicable diseases; meet global targets on the elimination and eradication of diseases; and significantly increase the life expectancy and quality of life of Nigerians”.
  - Mission Statement: “To develop and implement appropriate policies and programmes as well as undertake other necessary actions that will strengthen the National Health System to deliver effective, quality and affordable health”
- The overarching goal of the NSHDP is to significantly improve the health status of Nigerians through the development of a strengthened and sustainable health care delivery system.
- Nigeria operates a pluralistic health care delivery system with the orthodox and traditional health care delivery systems operating alongside each other, albeit with hardly any collaboration.
- Both the private and public sectors provide orthodox health care services in the country.
- In 2005, FMOH estimated:
  - a total of 23,640 health facilities in Nigeria of which
    - 85.8% are primary health care facilities, 14% secondary and 0.2% tertiary.
    - 38% of these facilities are owned by the private sector, which provides 60% of health care in the country.
    - While 60% of the public primary health care facilities are located in the northern zones of the country, they are mainly health posts and dispensaries that provide only basic curative services.
  - The Private Out-Of-Pocket- Expenditure (OOPE) in Nigeria accounts for over 70% of the estimated \$10 per capita expenditure on health, limiting equitable access to quality health care.
- The public health service is organized into primary, secondary and tertiary levels.
- While the Constitution is silent on the roles of the different levels of government in health services provision, the National Health Policy ascribes responsibilities for primary health care to local governments, secondary care to states and tertiary care to the federal level. At the same time, a number of parastatals, based at the federal level, for example, the National Primary Health Care Development Agency (NPHCDA) are currently engaged in primary health care services development and provision; the latter is evidently part of its mandate.

- Although national policies, formulated by the Federal Ministry of Health provide some level of standardization, each level is largely autonomous in the financing and management of services under its jurisdiction.
- The health system is in a deplorable state with an overall health system performance ranking 187<sup>th</sup> out of 191 member States by the World Health Organization (WHO).
- Primary Health Care (PHC), which forms the bedrock of the national health system, is in a prostrate state because of poor political will, gross under funding, and lack of capacity at the LGA level, which is the main implementing body.
- The health system remains overstretched by a burgeoning population; physical facilities are decaying, equipments are obsolete and there is scarcity of skilled health professionals.
- In addition, the roles of stakeholders are misaligned and coordination systems are weak. These are further compounded by the dearth of data which renders evidence based planning, policy formulation and health systems management weak.
- The very weak health system contributes to the limited coverage with proven cost-effective interventions.
  - For example, immunization coverage is 23%; only 12% of under-fives sleep under ITNs, 20% of children in urban areas and 14% resident in rural areas with fever are appropriately treated with anti-malarials at home; contraceptive prevalence rate is 15% and only 39% of women deliver under the supervision of skilled attendants.
- It is important to note that wide regional variations exist for these indicators, with comparatively worse figures in the rural areas and in the northern part of the country.
- The NSHD Framework has been developed to serve as a guide to federal, state and LGAs in the selection of evidenced-based priority interventions that would contribute to achieving the desired health outcomes for Nigerians.
- It is expected therefore, that through the use of this Framework, the Federal, States and LGAs would respectively develop their respective costed plans through participatory approaches to reflect their context and prevailing issues.
- The end product being a harmonized National Strategic Health Development Plan with its appropriate costing will thereafter serve as the basis for collective ownership, adequate resource allocation, inter-sectoral collaboration, decentralization, equity, harmonization, alignment, and mutual accountability in Nigeria.
- It would also stipulate requirements for future health investments towards achieving sustainable universal access and coverage with a defined package of essential services within the planned period of 2009 - 2015.
- The generic framework discusses eight evidenced-based priority areas identified to improve the performance of the health sector, through a holistic approach at federal, state and LGA levels. They are: leadership and governance, service delivery, human resources for health, health financing, health information system, community participation and ownership, partnerships for health and research for health.

**The priority areas;**

1. Leadership and governance
2. Health service delivery
3. Human resources for health
4. Health financing
5. National Health information systems
6. Community ownership and participation
7. Partnerships for health development

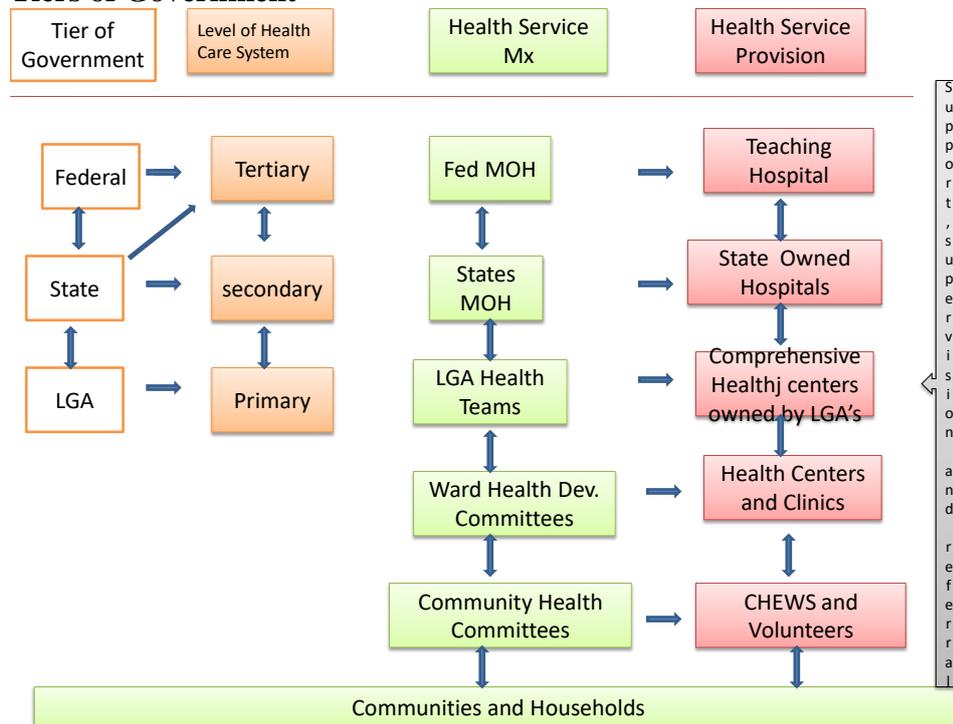
8. Research for health

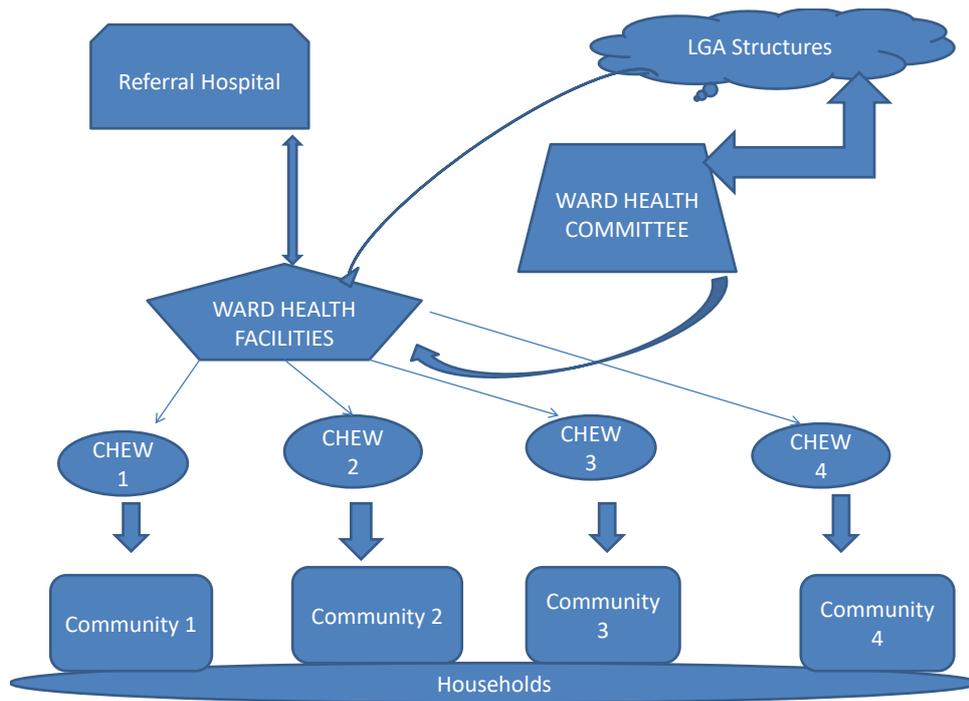
- For each of these priority areas, the framework provides uniform guidance, specifying a goal with strategic objectives and corresponding recommended interventions for the States to consider.
- It is recognized that specific actions to deliver the different interventions, which in turn contribute to the attainment of strategic objectives and the goals may vary by level of government and from state to state and likewise for LGAs

**Organization of services at the LGA level**

- This entails the reorganization of Health Services at the State and LGA levels to deliver on the (NPHCDA) Ward Minimum Package to improve on health indices.

**Tiers of Government**





**LGA Health Services**

### **Subject 1.3: Primary Health Care Structures and Functions**

**Aim:** To update the knowledge and skills of the participants on the existing PHC structures and functions.

**Objectives:**

- To refresh the knowledge of the participants on the philosophy and principles of PHC
- To update the knowledge of the participants on the emerging structures for PHC
- To acquaint the participants on the new Ward Health systems
- Skill station ( Challenges of PHC implementation)

**Learning outcomes:** After completing instruction in this subject (whether after a single classroom session or following a series of related classroom sessions), participants should be familiar with and able to use the following knowledge and skills.

- Know the existing primary health care structures and functions
- Understand how the ward health system operates as a basic unit of the PHC system in Nigeria.
- Be able to utilize the ward health system in provision of effective PHC services within the scope of their responsibilities

**Topics:**

- T1. Historical perspective of PHC in Nigeria
- T2. Principles and Components of PHC
- T3. Structures and Functions of PHC at Federal Level
- T4. Structures and Functions of PHC at State Level
- T5. The Ward Health System
- T6. The minimum Health Care Package

## Structures and Functions Topic 1: Historical Perspective of PHC in Nigeria

### Background

- Primary Health Care (PHC) is defined as *“the essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at each stage of their development, in the spirit of self-reliance and self-determination”*
- Primary Health Care is a practical approach to making essential health care universal it means much more than the mere extension of basic health services having the aim of using only those technologies that have really proved their worth and can be afforded delivered by community health workers who understand the real health needs of the communities they serve and have the confidence of the people.
- With the global declaration in 1978 of Primary Health Care (PHC) as the key to the attainment of Health for All and its reaffirmation by the Africa Health Ministers in Bamako (Mali) in 1985, the Three-Phase Health Development Scenario (TPHS) was adopted as a strategy for strengthening national health systems.
- The TPHS recommended the three- tier levels for health care delivery with PHC forming the primary level and central focus.
- This influenced the formulation of Nigeria’s maiden Health Policy, which was developed between 1985 and 1986 and launched in 1988.
- From 1986, Nigeria began the process of reorientation of her health services towards the PHC approach. In a step-wise fashion, beginning with 52 model LGAs at inception, PHC was extended to all LGAs by 1990.
- Prior to this, most states owned and operated PHC facilities within the LGAs. This was considered incompatible with the policy which outlined a 3-tier structure of health service responsibility.
- Consequent to this development, health units at the federal and state levels were re-structured and state governments directed to hand over their PHC facilities and personnel to the LGAs. This was designed to transform the facilities of the LGAs and greatly strengthen their staff position.
- For the first time in the country, planning for health services implementation was done using the bottom-up approach.

### Establishment of the National Primary Health Care Development Agency

- Nigeria’s efforts at developing primary health care has over time been subjected to critical examinations by external observers, including the WHO Review Team (1992) and on all the occasions, the crucial question of sustainability was raised.
- Reviewers were unanimous that the efforts were commendable and needed to be pursued over the life of subsequent administrations for PHC to take firm root.
- They were unanimous that to ensure sustainability, the efforts would best be pursued outside the setting of the Federal Ministry of Health, albeit with strong government support at all levels.
- Based on the recommendation of the WHO Review Team and other considerations, the National Primary Health Care Development Agency (NPHCDA) was established by Decree 29 of 1992.
- The core mandates of the Agency is to Support formulation of national health system, provide technical support for planning, management, implementation, monitoring and

evaluation of PHC, mobilize resources, support village health system, support health manpower development and support health system research amongst others.

### **National Health Policy**

The National Health Policy (2004) and Strategy to achieve Health for All Nigerians, which is a revision of two earlier health policies; represents the collective will of the government and people of the country to provide a comprehensive health care system based on primary health care. Furthermore:

- It describes the goals, structure, and strategy and policy direction of the health care delivery system in Nigeria.
- It defines the roles and responsibilities of the three tiers of government without neglecting the nongovernmental actors.
- Its long term goal is to provide the entire population with adequate access to health care services based on the Primary Health Care (PHC) approach as its bedrock and supported by a functioning referral system. PHC is to be used to provide general health services of preventive, curative, promotive and rehabilitative nature to the population and to serve as the entry point to the health care delivery system. The PHC system was to ensure, community participation, improved inter-sectoral collaboration, functional Integration and strengthening managerial processes for health. The policy stipulates that the provision of care at this level i.e. PHC is the responsibility of the LGAs with technical support from the State Ministries of Health and Federal Government.

## **Structures and Functions Topic 2: Principles and Components of PHC**

### **Components of PHC**

1. Health education
2. Promotion of food supply and proper nutrition
3. Safe water supply
4. Maternal and child care
5. Immunization
6. Prevention of endemic diseases
7. Appropriate treatment
8. Provision of essential drugs

### **Principles of PHC**

1. Equity of distribution
  - a. Health services must be shared by all people
  - b. Provide access to all people
2. Community participation
  - a. Financial and man power wise
  - b. Let them promote their own health
3. Inter-sectoral coordination/collaboration
  - a. Education, housing, agriculture, etc....
4. Appropriate technology
  - a. According to need not on demand

## **Structures and Functions Topic 3: Structures for Health Service delivery in Nigeria**

### **Key Goals and Strategies for PHC in Nigeria**

The overall goal of the Primary Health Care in Nigeria is to ensure that the Nigerian populace has effective access to equitable, affordable and quality health care where they live and work. In order to achieve this, the following key strategies have been identified:

- Enactment of the Nigerian Health Act
- Establishment of a minimum (essential) health package in all Wards across the country
- Reduction of financial barriers to health services through the establishment of community based social health insurance schemes
- PHC infrastructural development.
- Promote a system of comprehensive and qualitative integrated health services delivery at PHC level.
- Ensuring full community participation, ownership and co-management.
- Implementing comprehensive human resources for health programme.
- Improving evidence based decision making by strengthening the National Health Management Information System
- Effective mobilization of resource through partner coordination and development of a national health account.
- Operational Research

## **Structures and Functions Topic 4: Structures and Functions of PHC at LGA level**

### **A Local Government Area (LGA) is:**

- Clearly defined administrative area covering a defined population at which the LGA takes over many administrative responsibilities from the Central and regional government. Its responsibilities are defined in the constitution
- They are compact and in Nigeria, there are 774 of them, with varying population ranging from 100 – 5000 population
- They are many settlements that include urban and rural areas.
- They have their own system of administration
- It is the level of government closest to the people and the most important in terms of local development. In establishing operational levels for implementing socio-economic development activities at local and community levels, the LGAs are in the best position to do that. I
- PHC implementation would require decision-making and support structures being brought as close as possible to the people. The LGA, being the administrative unit closest to the people is therefore in the best position to do that.

**Health districts:** This is defined as the smallest administrative unit for which health services are organized by trained personnel. It may revolve round a health facility. In Nigeria, we have redefined it as the health wards.

### **LGA Health Systems**

This is a self contained segment of the national health system. It comprises:

- A self-contained clearly defined population living within a defined administrative and geographic area;
- It includes institutions and personnel providing health care, including systems for referrals

### **Functions of the LGA Health System**

- Provision of the minimum integrated district health care package, which are as follows:
  - Basic Health interventions
    - Maternal and child health services
    - Medical care for the treatment of diseases and injuries
    - Disease control
  - Priority health interventions
    - basic immunization
    - family planning
    - essential drugs
  - Health-related interventions
    - household food security
    - water and basic sanitation
    - adult literacy

NB: The roles of the different components of the LGA health system in the implementation should be defined.

- Special LGA Health Programs  
These would be determined by need. They are people-centered and community based, focused on health promotion and disease prevention. They may include:
  - HIV/AIDS prevention and control

- Community-based revolving funds
- Community-based emergency preparedness and first aid
- Programs for specific health problems targeted for elimination – neonatal tetanus, guinea worm, polio, goiter from iodine deficiency and Vitamin A deficiency, leprosy etc
- Health promotion and protection of specific target groups – adolescent health, geriatrics health, , Workers health, women’s health( breast and cervical cancer, early marriage, MMM etc)
- Health promotion and protection of targeted groups/issues – healthy housing, healthy cities, accident prevention, alcohol dependence, substance abuse, tobacco dependence, hypertension and diabetes control etc

### **Developing a district health plan**

- A district health plan will involve finding answers to the following questions;
  - Where are we now? – Situation analysis
  - Where do we want to go? - Identifying priorities and setting goals, objectives and targets
  - How will we get there? – Work plan indicating tasks, who where when and resources required
  - How will we know when we have reached the end of the plan and achieved our objectives – monitoring indicators and evaluation results
  - The plan will list all the needs according to priority, the objectives and targets the interventions, the strategies , the indicators for monitoring, the mechanisms for monitoring and evaluation, the resources (material and financial) and the implementation schedule.
- Situation analysis;
  - Brief discretion of LGA
  - District health infrastructure and staffing – facilities by categories and distribution, same for other resources
  - Catchment area
  - LGA map
  - Demographic data
  - Major causes of morbidity and mortality
  - Problems in the organization and delivery of health care (organizational and managerial factors limiting efficiency and effectiveness of the system)
- Identify Priority health Problems
  - Criteria used in ranking:
    - magnitude of problem
    - severity
    - amenability to intervention
    - cost
    - ease of service delivery
  - Develop an LGA health Profile from situation analysis.
    - A district health profile covers the following areas: **General information; district population; health status; health resources; health programs and health related programs; community health-related initiatives**
- Set Goal, objectives, targets, strategies, and indicators:
  - Goal – desired state of being. This gives enough focus on the general direction for planning
  - Objective – intended result

- Strategy- tactics or techniques to be employed in achieving objectives
- Activities are the series of tasks that need to be carried out using earmarked resources so as to achieve the objectives
- Indicators – observable, quantifiable criteria which will be measured as part of monitoring and evaluation to determine extent of attainment of objectives
- Do a detailed program and budget
- The plan becomes operational when translated into a work plan that shows
  - What activities are to be carried out?
  - How the activities will be carried out (technical, managerial and administrative actions and procedures)?
  - Who is responsible for ensuring that they are done?
  - When is it to be done?
  - Where is it to be done?
  - How much it will cost?
  - Plotting activities against time – GANNT Chart

### **Implementation of the Health Care Package**

- The management processes for health development would include:
  - Management development support
    - Planning and evaluation
    - Continuing education
    - Operations research
  - Operational management support
    - Operational plan
    - Supportive supervision
    - Monitoring of progress
  - Administrative management support
    - Human resources
    - Budget and finances
    - Supplies and equipment
    - Drug supplies
    - Transport and communication
    - Physical facilities
- There is the need to have a management Structure at each level
  - The LGA Health Committee – multi-sectoral – gives direction
  - The Medical officer of Health – responsible for program operations
  - The LGA Health team – ensures operation of activities

### **The LGA Development Committee**

- Serves as apex organ for development in the LGA
- Promotes inter-sectoral collaboration
- Facilitates LGA action towards meeting the health needs of the people
- Integrates health and other development activities
- Coordinate sectoral plans
- Identify and mobilize resources for health action
- Monitor and evaluate implementation of programs

### **LGA Health Committee**

- Supports general mobilization for health action

- Organize and support LGA health education
- Does needs identification and epid. Profile of LGA
- Develop LGA health policies
- Ensures each community has a plan
- Review LGA health plan
- Organize LGA health system
- Monitor and evaluate implementation

**LGA Health Team headed by MOH**

- The MOH provides leadership and provides operational support for PHC
- Identifies health needs of the population and the measures needed to address the needs
- Develop health plans
- Draws up budget
- Coordinates interventions
- Ensures standards of care are maintained through effective supervision
- Identify training needs of staff
- Ensures health activities, especially those at community level are given adequate support
- Supervises health workers
- Resource management – Financial management, logistics management, transport management, personnel management, information management, facilities management
- Collect, collate and analyze relevant health information
- Write report

## Structure and Functions Topic 5: The Ward Health System

*The overall objective of a national health policy is to improve accessibility of the population to primary health care as well as to secondary and tertiary care. The Nigerian National Health Policy identified primary health care (PHC) as the main focus for delivering an effective, efficient, quality, accessible and affordable health services, to a wider proportion of the population through four approaches:*

- Promotion of community participation in planning, management, monitoring and evaluation of the local government health system i.e. the PHC system;
- Improved inter-sectoral collaboration in primary care delivery;
- Enhancing functional integration at all levels of the health system;
- Strengthening of the managerial process for health development at all levels.

This reviewed National Health Policy recognized the Local Government Area as the operational level for primary health care implementation. In a bid to institutionalize PHC services and ensure sustainability, a decree was promulgated in 1992 (*Decree No 29*) establishing a National Primary Health Care Development Agency (NPHCDA). This Agency has a mandate to; periodically monitor and evaluate the National Health Policy, especially as it relates to primary health care, mobilize resources nationally and internationally for the development of PHC, and most importantly; provide technical support, co-ordinate and develop strategies for the effective implementation of PHC nation-wide.

Despite these developments, the desired outcomes of this policy have not been fully realized. An attempt to develop and implement a National Plan of Action for Implementing a District (LGA) Minimum Health Care Package for the plan period of 1995 to 2000, was constrained by low level of political commitment at all levels of Government. In an attempt to improve access to health care, the NPHCDA has reviewed the flaws in the present primary health care system and developed a ward health system through which a minimum health care package would be delivered.

### Ward overview

- The ward is the smallest political structure, consisting of a geographical area with a population range of 10,000 to 30,000 people. There are on average, ten (10) wards per LGA, each represented by an elected councilor.
- The main rationale for selecting a ward as an operational area for delivering a minimum health care package was **to mobilize political commitment** to health service delivery as a requisite for social development.
- Structurally, each ward has a Ward Development Committees composed of the following:
  - A Ward/Clan Head as Patron
  - An elected Chairman
  - Secretary,
  - Chairmen of village/community development committees,
  - Headmaster of school,
  - Senior agricultural extension worker,
  - Ward committee development officer,
  - Representatives of occupational groups (which includes VHW/TBA, NGO/International Organizations, Religious Groups, Women and Youth groups, chairmen of patent medicine and store dealers, traditional healers),
  - Heads of facilities in the area.

- Functionally, each Ward Development Committee is responsible for the following:
  - Identification of health and social needs of the Ward and planning solutions.
  - Mobilization of resources (human and material)
  - Supervision, monitoring and evaluation of health activities in the Ward
  - Mobilization for community participation in health, and other health related programmes
  - Liaison with Government, NGO and other partners in the implementation of health programmes
  - Forwarding plans from villages and the wards to LGA/PHC Development Committee and providing feedback
  - Supervision and support to TBA/VHW/CHEWs
  - Support the establishment of health facilities and overseeing their functions at ward level

### **Establishment of the Ward Health System**

- In view of the size of our LGAs, the federal government in 2000 adopted the Ward as the functional unit for PHC delivery by adopting Ward Health System (WHS).
- The WHS aligns the delivery of health care with the current democratic dispensation, and demonstrates in concrete terms the desire of the national government to establish a people oriented and focused PHC system, which is co-managed by the health staff and community members.
- The homogeneity and the ability to generate grass-root political commitment and support, has proven far more beneficial than the former District Health System, which was based on vague boundaries created by the LGA health departments.
- The focal point of WHS is the ward health centres which serve as the fulcrum around which the Ward Health System (WHS) is implemented, coordinating all health activities within the Ward in Partnership with the communities.
- This community focused health system, is being established with the following core objectives of:
  - Promoting full and active community participation at the grass root level in order to sustain an effective and efficient delivery of PHC services in the Wards.
  - To reinforce political commitment to PHC at grass root level i.e. the Ward.
  - Promote local initiative and encourage poverty alleviation activities in the Ward
  - To reduce morbidity and mortality from preventable causes especially amongst women of reproductive age and under five children.

## Structure and Functions Topic 6: The Minimum Health Care Package

### Concept and Development of the Minimum Health Care Package

- In February 1994, at the 16<sup>th</sup> WHO Regional Programme Meeting held in Yaoundé, Cameroon, participants from African countries including Nigeria met to discuss issues relating to acceleration of the attainment of Health for all through PHC.
- The meeting recognized the need for each member country of WHO in the African Region to organize a National Programme Meeting (RPM.16C). This was to serve as a forum for presentation of the Minimum District Health for all Package, which was extensively discussed at that meeting.
- Strategies for implementing the package were developed. In August 1994, six months
- After the Yaoundé meeting, the then Hon. Minister of Health and Social Services, in collaboration with the WHO, Nigeria and the National Primary Health Care Development Agency, organized a four day stakeholders meeting aimed at developing a Minimum District Health Care Package for Nigeria for the acceleration of HFA through PHC.
- A package that came out of that meeting consisted of thirteen (13) components each with objectives and strategies to be implemented between 1995 and 2000.
- In 1996, each of the 36 States and selected LGAs developed a Plan of Action to implement the package.
- In January 1998, report of supervisory visits conducted to ascertain level of implementation indicated that most of the selected LGAs had 4 – 5 components in their plan of action; however, level of implementation of MHCP was low.
- In June 1998, a National Review Meeting to discuss progress report was convened, and a resolution by the meeting, brought the number of components to four namely:
  - **Child Survival (IMCI & Routine Immunization)**
  - **Safe motherhood (ANC, Delivery, Postnatal Care, FP)**
  - **Control of Communicable diseases of public health importance (Malaria, TB, HIV/AIDS)**
  - **Health Information, Education and Communication.**
- At a national review meeting held in Port Harcourt in 2001, an additional component was incorporated into the package, namely: **Nutrition**. State and LGAs presentations at the review meeting indicated low implementations of components of the package. The meeting re-emphasized the need for government to fund the package in line with the recommendation of WHO-AFRO of 1994.
- It also observed that socio-economic indicators had worsened; level of unemployment was high, while morbidity and mortality statistics were unacceptably high. Cost of health services had gone beyond the reach of majority of Nigerians.
- The meeting recommended the need to strengthen budgetary allocation to health. The reviewed package was renamed Ward Minimum Health Care Package (WMHCP) in line with the introduction of the Ward Health System (WHS) in 2001. However constraints in costing the package undermined its widespread dissemination and utilization.
- In 2005, the NPHCDA in collaboration with WHO convened a meeting to update the WMHCP and adopt instruments for its costing. At this meeting, the **Control of Non Communicable diseases** was incorporated as the sixth component.

### **Costing Of Minimum Health Care Package**

- In November 2005, the NPHCDA in collaboration with WHO, conducted a preliminary field survey in one geopolitical zone to generate data for costing the WMHCP. A Health Economist was engaged for this purpose, and the outcome was presented to a cross-section of stakeholders; who called for additional data collection in the other geo-political zones, prior to the finalization of the costing exercise.
- Subsequent to this, in March 2007 the NPHCDA with support from PATHS conducted a second survey in 5 geo-political zones.
- Data generated from these two surveys was analyzed and provided the cost for each of the components of the package. The costed package was adopted at a stakeholders' meeting in July 2007

### **Plan of Action for Implementation of the Ward Minimum Health Care Package**

- **Overview**
  - The Ward Minimum Health Care Package describes a priority set of health interventions which should be provided in PHC centres on daily basis at all times and at little or no cost to clients, through government financial mechanism.
  - The operability of the package requires that government defines minimum health manpower requirement, equipment, drugs, infrastructure and services for the primary health centre.
  - To facilitate this process, the package has been costed. It is to be used as a tool for advocacy to all levels of government and to Partners within the health sector.
  - This plan of action stipulates that over the plan period i.e. 2007-2012, government at all levels would demonstrate a high level of political commitment and harness all available resources in collaboration with Partners, the private sector and communities to ensure that the proposed package is instituted in all wards by 2012.
  - At the end of the plan period a comprehensive evaluation would be conducted to create the evidence base for a possible review. This plan of action acknowledges that many local government authorities and communities may possess enough resources to provide services based on all the components of PHC.

### **Overall Goal of delivering the Ward Minimum Health Care Package is:**

- To contribute to national socio-economic development.
- **Purpose:** To Reduce morbidity and mortality; in the Nigerian community
- **Objectives:**
  - To define a ward minimum health care package that would be made available at PHC level.
  - To improve access to quality health care at community level particularly for the rural population.
  - To address the inequalities between and within wards in health service delivery.
  - To ensure availability of quality interventions that addresses the health needs of the population.
  - To strengthen the monitoring and evaluation indicators of the ward health system as part of the National Health Management Information System.
  - To provide a structure for effective programme integration at ward/primary care level

- To provide a minimum health care package as a basis for improved public health expenditure and to guide the investment of all stakeholders.

### **Implementation of the Ward Minimum Health Care Package**

- The minimum health care package includes health interventions and/or services that address health and health related problems that result in substantial health gains at low cost.
- In defining this package, a number of considerations were made; disease patterns, economic considerations (e.g. cost of services) and proportion of population affected/benefiting from health services.
- This package targets the grass root level through the delivery of a minimum set of interventions needed to meet the basic health requirement of the people hence contributing to achieving the global target of Health For All and the attainment of the Millennium Development Goals (MDGs).
- Technically, this package comprises of cost-effective interventions known to promote health and development and reduce mortality and morbidity from major/common illnesses. Based on these and other considerations, a package is proposed.
- During the implementation period of this Plan of Action (2007-2012), the Minimum Health Care Package will include the following health interventions:
  - Control of Communicable Diseases (*Malaria, STI/HIV/AIDS, TB*)
  - Child survival
  - Maternal and Newborn Care
  - Nutrition
  - Non Communicable Disease Prevention
  - Health Education and Community Mobilization
- In order to implement this set of interventions, communities will be mobilized using appropriate IEC/BCC strategies. Functional health infrastructure, human resources/manpower and financial resources would also be provided to support health service delivery at the ward level. Therefore, the following services are required:
  - Provision of Essential Drugs
  - Human Resources for Health
  - Health Infrastructure Development

### **Other Interventions of Public Health Importance:**

- Certain services have reasonable effect on the health status of the population, though their provision is not entirely confined to the health sector.
- These services include **water, sanitation, and emergency and disaster preparedness.**
- The Plan of Action (2007-2012) for the WMHP recognized the role of other sectors in the financing and provision of these services.

### **Need for Co-ordination and Collaboration:**

- To ensure effective implementation and optimization of resources for the delivery of the Minimum Ward Health Care Package, there is the need for co-ordination among related programmes such as Essential Drugs Programme or Bamako Initiative, Malaria (RBM), CDD/ARI (IMCI) and NASCP.
- Co-ordination will take the form of **integrated approach** to training, service delivery, supervision and monitoring.

- In addition to programme co-ordination, **Development Partners and Agencies need to be encouraged to collaborate** at various levels of service delivery particularly at the Ward and LGA levels, in the implementation of the Minimum Care Package.

#### **Monitoring and Evaluation:**

- The availability of accurate, timely, reliable and relevant health information is the most fundamental step towards informed public health action (Revised NHMIS Policy, 2006).
- This underscores the fact that Monitoring and Evaluation stands out as an essential component necessary for achieving success in implementing the Ward Minimum Health Package.
- It is mandatory that at the Ward level, a Primary health care information system for effective monitoring and evaluation be instituted for routine data collection, collation, analysis and feedback to the communities.
- Data collected from communities within the ward are sent to the Ward PHC centre where they are analyzed together with facility based data and forwarded to the LGA M&E Office for subsequent transmission to the State and zonal office of the NPHCDA. Data from the State are sent to the Federal Ministry of Health and those from the zonal office of the NPHCDA are sent to its headquarters. At the federal level, the NPHCDA headquarters is expected to forward data to the Department of Health Planning and Research, FMOH. Furthermore, interaction at Data Users' Forum would enhance comparability, feedback and generate evidence for more integrated planning.

#### **Implementation of the Primary Health Care Information System:**

- The PHC information system is a sub-set of the NHMIS. It consists of health maps, house numbering, home-based records (child health card, personal card) facility based Family Master Card, the wall chart, health facility/district referral forms, VHW/TBA pictorial and tally sheets, M&E forms and Health Facility Registers etc.
- The Revised NHMIS was revised in 2008 and is the current guiding policy and should be used strictly. However, other parallel reporting formats such as the Integrated Disease Surveillance and Response IDSR with its forms (IDSR 001 for immediate notification; IDSR 002 for weekly notification and IDSR 003 for monthly Notification) should be used as appropriate. It is currently in used and should continue to feed into the relevant reporting systems.
- However, it must be emphasized that basic **training, retraining, and necessary logistics** must be given to the PHC staff at the ward level to be able to collect, analyze and use data for informed decision making and provide a feedback to both the communities and the next level of reporting.
- This coupled with **active supportive supervision** is an effective strategy for achieving desired results in the operation of PHC at the Ward level.
- Regular supervision not only emphasizes management's commitment to an issue but is also supportive. It provides the necessary feedbacks for evidence based decision making, planning and achievement of desired outcome.

#### **Challenges to PHC Implementation in Nigeria**

Although significant successes were made in the implementation of PHC in Nigeria, there is still a lot that still need to be done. Several Challenges were encountered in the process and these include:

- Funding gaps: Inadequate funding at all levels.
- Three Tiered Health Systems: Over the years, the health policy has been acclaimed as a sound document, however because it was never backed by legislation, some stakeholders were not fully committed to its implementation. It is envisaged that the National Health Act currently in the National Assembly will provide necessary legal backing.
- Inadequacies in HR for PHC particularly in the rural areas (Quality and quantity)
- Fragmentation of programmes due to multiplicity of implementing partners.
- Inadequacies in the HMIS
- Poor coordination / Inter sectoral Collaboration; Multiple sectors and partners.

### **Example of a skills station for this topic**

Having had a brief introduction and reminder of the various level of implementation of PHC in Nigeria, it is time to chart the way forward. Break into groups and each group will be given one of the task below.

- Task one: identify the Ten (10) major challenges to the full scale implementation of PHC in Nigeria and arrange them in the descending order of their magnitude.
- Task two: Identify five key stakeholders in the effective implementation of PHC in a LGA in Nigeria. For each stakeholder, identify at least three strategies to be used for their mobilization and sustained commitment to the implementation of PHC at the LGA level.
- Task three: Having received renewed Political will and commitment from the newly Sworn-in Executive Chairman of Wazobia LGA, As the Head of the Health Department, prepare a short term work plan for the period January – July 2050 for the scale up towards full implementation PHC activities in the LGA.

## **Subject 1.4: Principles of Planning and Project Management in Health Care**

**Aim:** To expose the participants on practical knowledge of planning and project management in PHC

### **Objectives**

- To acquaint the participants on basic concept of planning process
- To promote understanding of participants on strategic planning
- To expose the participants with knowledge on how to develop and manage project

**Learning outcomes:** After completing instruction in this subject (whether after a single classroom session or following a series of related classroom sessions), participants should be familiar with and able to use the following knowledge and skills.

- Know the basic steps in the strategic planning process.
- Know how apply the planning process in the developing PHC projects and activities
- Be able to incorporate project management techniques in carrying out PHC programmes and activities within the scope of their responsibilities

### **Topics:**

- T1. Overview of planning process
- T2. Strategic planning
- T3. Micro-planning
- T4. Project management

## **Planning Topic 1: Overview of Planning Process**

### **Basic definitions and concepts of planning**

- Planning is a *systematic process* of identifying and specifying desirable future goals and outlining appropriate courses of action and determining the resources required to achieve them.
- Strategic planning is establishing a master plan that shapes the *future direction* of a program. It may also be define as a dynamic and deliberate process that allows the program or hospital to invent the future.
- Operational planning is establishing plans that relate to running a program or hospital on a *day-to-day*, short term basis.
- Planning is essential for the efficient achievement of all human endeavours. Individuals as well as organizations need to plan because of the uncertainties in a constantly changing environment.
- Whether we plan for a party, a workshop, a health facility or a health service, planning is that process which we use to select our goals and objectives and to determine how best to achieve them. Put every simply, the process involves taking decisions on what needs to be done in future to attain objectives in view of past and prevailing circumstances.
- Planning is the most basic of all management functions and precedes all the others. Indeed, it is considered to be the most strategic of all management functions as it establishes institutional objectives and determines how the other major functions of the manager will be executed towards the attainment of the objectives.
- The manager in order to ensure the attainment of objectives which have been experienced in health plan, organizes resources particularly decides what types of staff are required to fulfill the objectives of the organization, chooses the most appropriate leadership.

### **Rationale and Purpose of Health Planning**

- Efforts at health planning have been traced to the beginning of this century when the National Tuberculosis Association of the United States of America began to stimulate the development of programmes for the control of tuberculosis.
- These early efforts consisted largely of intuitive, spontaneous and subjective projections of activity based on past experience (Waterston, 1987).
- Since that time however, health planning in the developed world has now progressed to become a much more deliberate, systematic, objective and scientific process of mobilizing exact information and deciding how best to organize resources.
- Modern health planning is a systematic decision-making process during which objectives are set and decisions are taken on how, when and where to deploy resources in order to achieve these objectives.
- The purpose of health planning is to facilitate the accomplishment of the objectives of the organization in the most efficient manner i.e. without undue wastage of resources.
- The health planning process involves an assessment of health needs and of tasks that must be accomplished in order to satisfy the identified health needs.
- In other words, health planning is deciding in advance, what to do, who is to do it, how to do it and when.

- Planning bridges the gap between the present health situations i.e. where we are and the desired health situation or where we want to be with regard to health.
- Planning makes the desired health situation more certain by not leaving it entirely to chance.
- Furthermore, planning ensures that the most cost effective and cost efficient health care activities are pre-selected and thus rationalizes the use of scarce resources.
- Fig. 2 illustrates the differences in what is likely to be achieved in terms of improvement in health status by an unplanned health programme whose outcome is left to chance (A) and a planned one (B). It is assumed that health programmes are carried out within the same period and using the same resources. The marked fall in disease incidence attained by the well-planned programme (B) as compared with the unplanned programme (A) is attributable to good planning.

NB: Health planning minimizes the negative effects of future uncertainty and of change in both the external and internal management environment.

- Secondly, the act of planning focuses attention on the objectives to be attained, and galvanizes purposeful action towards the attainment of these objectives.
- Thirdly, it minimizes cost, and by establishing standards, planning facilitates control, monitoring and evaluation.

### **Classification of Health Plans**

Several criteria have been used for the classification of formal health plans. The major criteria of practical significance include:

- The flexibility of the plan
- The duration of the period covered by the plan and
- The nature and scope of the plan.

### **Nature and Scope of the Plan**

- Planning is a function of all health managers.
- However, the nature and scope of planning does vary according to the level of management at which the plan is being formulated i.e. whether at top (strategic) management level, middle (tactical, executive or administrative) management level or at junior (operational or supervisory) management level.

Accordingly, two broad categories of health plans have been distinguished;

- STRATEGIC, CORPORATE or COMPREHENSIVE health plans, and
- OPERATIONAL, TACTICAL or FUNCTIONAL health plans (DUSS, 1976).

NB: Like management itself, each type of health planning takes place at all levels of management, but at varying degrees.

- The top and middle-level management is primarily concerned with strategic planning,
- The supervisory management level is more preoccupied with the formulation of operational health plans prepared at the departmental or unit level.
- It must be emphasized that strategic and operational planning are NOT two separate and entirely unrelated processes; rather, they are closely interrelated.
- Strategic health planning is the process of determining the health goals and general objectives (intended achievements) of the health service organization, formulating policy guidelines to all decision-making and selecting strategies or general approaches in which the goals can best be attained in the light of current circumstances and future projections.

- A strategic plan provides a general framework and a sense of direction for more detailed tactical and operational planning of specific function programmes with specific operational targets at the lowest levels of the health service organization, thus creating a hierarchy of plans as described below.

### **A Hierarchy of Plans and Objectives**

Strategic Level	Subject Matter	Examples of Goals/Objectives
Strategic	Broad goals Policies Strategies Outcomes Impacts	1. To increase the well-being of the rural population within 20 years through primary health care. 2. To reduce the health problems of the rural population. 3. To reduce mortality and morbidity of the rural poor. 4. To reduce maternal and infant deaths in the rural poor by 50% in 10 years through the promotion of the health of others and children under 5 years.
Tactical, Operational	Service Output Targets Service Processes Resource Inputs	1. To increase the proportion of pregnant women attended by trained health workers by 50% in 5 years. 2. To recruit and train at least 2 traditional birth attendants for 20% of all villages within 1 year. 3. To design manuals of procedures for traditional birth attendants within 1 month.

Thus, the two levels of planning are complementary.

### **Seven steps of planning**

1. Problem identification
2. Stakeholder's analysis and analyze strengths and weaknesses (SWOT)
3. Establish goals and objectives
4. Develop action plan (road map)
5. Develop budgets
6. Implement plans
7. Monitor plans

### **Problem identification**

**Step 1:** Define the present situation in your program (situational analysis)

- Where are we now?
  - Geographic coverage
  - Target population
- What is the magnitude of the problem?
- How visible is it?
- Is it new or old?
- Are there effective interventions?

**NB: In Defining the problem operationally:** Identify **why** the problem exists. For example, if the problem identified is ‘TB treatment program in X state has poor coverage’, the **whys** may include:

- Increased cost of care
- Downsizing number of doctors
- Severe shortage of nurses
- Limited outreach preventive activities
- Shrinking budget due to slow economic growth
- Low morale among staff

**Step 2: SWOT analysis**

- **Strengths:** What are the strengths of the existing program? What do we do well?
- **Weaknesses:** What are the weaknesses of the program? Who do we need to improve?
- **Opportunities:** What are the external trends that offer opportunities?
- **Threats:** What are the local, national, and international threats that pose risks?

<b>SWOT Analysis Matrix</b>	<b>Strengths (S)</b>	<b>Weakness (W)</b>
<b>Opportunities (O)</b>	<b>S-O Strategy</b>	<b>W-O Strategy</b>
<b>Threats (T)</b>	<b>S-T Strategy</b>	<b>W-T Strategy</b>

**How do you apply the matrix?**

- S-O strategy: Guides the organisation to pursue opportunities that are good fit for the organisation strength.
- W-O strategy: Overcomes organisational weakness to pursue opportunities,
- S-T strategy: To identify ways to use the existing strength to reduce the vulnerability of the organisation to external threats.
- W-T strategy: To establish a defensive plan on the organisational weakness from making it highly vulnerable to external threats

**Stakeholder management**

- Stakeholder management is critical to the success of every project.
- By engaging the right people in the right way in your project, you can make a big difference to its success.

**Stakeholders’ analysis**

1. You can’t do it single-handedly
2. Identify those that will ask **why** and **why not** and at **what cost?**
3. Gain support and resources

4. Communicate the benefit of the project
5. Anticipate peoples reaction to your project

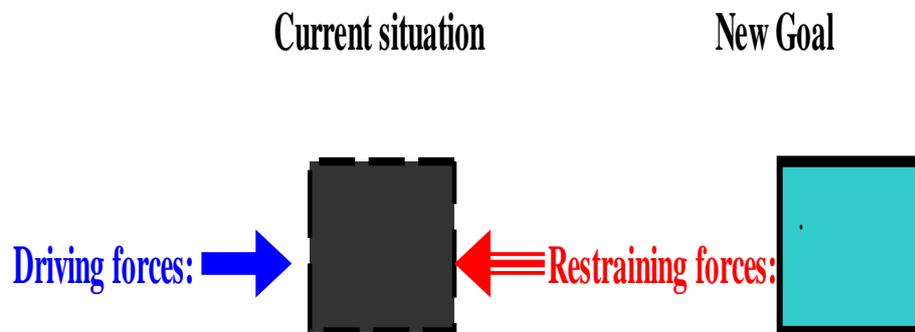
### **How to identify stakeholders**

1. People affected by the project
2. People who have influence or power over it
3. People who have interest in its success
4. People who will be against the project
5. Source of funds

NB: A stakeholder could be an individual or individual representing an organization

### **Tools for stakeholders analysis (1)**

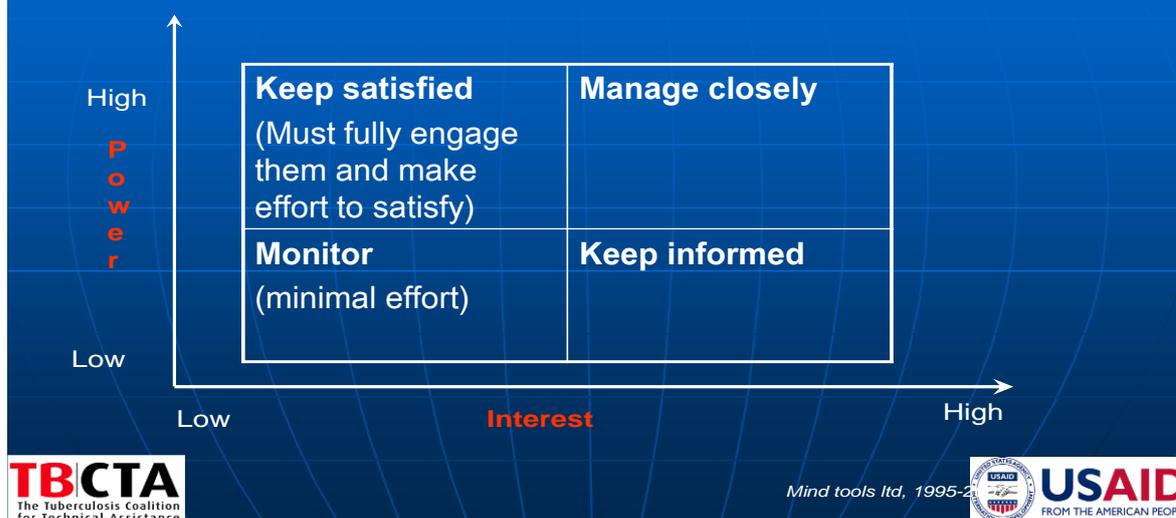
#### **Force field analysis model**



Paul Hesse, Kenneth H. Blanchard & Dewey E. Johnson (2000)

### **Tools for stakeholders' analysis (2)**

## Tools for stakeholders analysis (2)



### Understanding the stakeholders

- Financial and emotional interest on the outcome
- What motivates them?
- What information do they want?
- How to communicate with them?
- What is their current opinion on the project?
- Who influence their opinion generally?

### Relating stakeholders analysis to the workplan and M&E plan

	<b>USAID</b>	<b>World Bank</b>	<b>WHO</b>	<b>Government</b>	<b>Total</b>
<b>Budget Line</b>	<b>42%</b>	<b>17%</b>	<b>29%</b>	<b>12%</b>	<b>100%</b>
Personnel & Fringe	70,000	30,000	50,000	20,000	\$ 170,000
Travel	3,000	2,000	4,000	1,000	\$ 10,000
Office supplies	1,500	400	600	-	\$ 2,500
Communications	4,000	500	2,000	1,000	\$ 7,500
Other expenses	5,000	1,000	2,000	2,000	\$ 10,000
<b>Total expenses</b>	<b>83,500</b>	<b>33,900</b>	<b>58,600</b>	<b>24,000</b>	<b>200,000</b>

### Relating stakeholders analysis to the work plan and M&E plan

#### Priority setting: key criteria to select the 'whys' to address

- Affordability
- Feasibility
- Visibility or prevalence of problem
- Risk if no action is taken

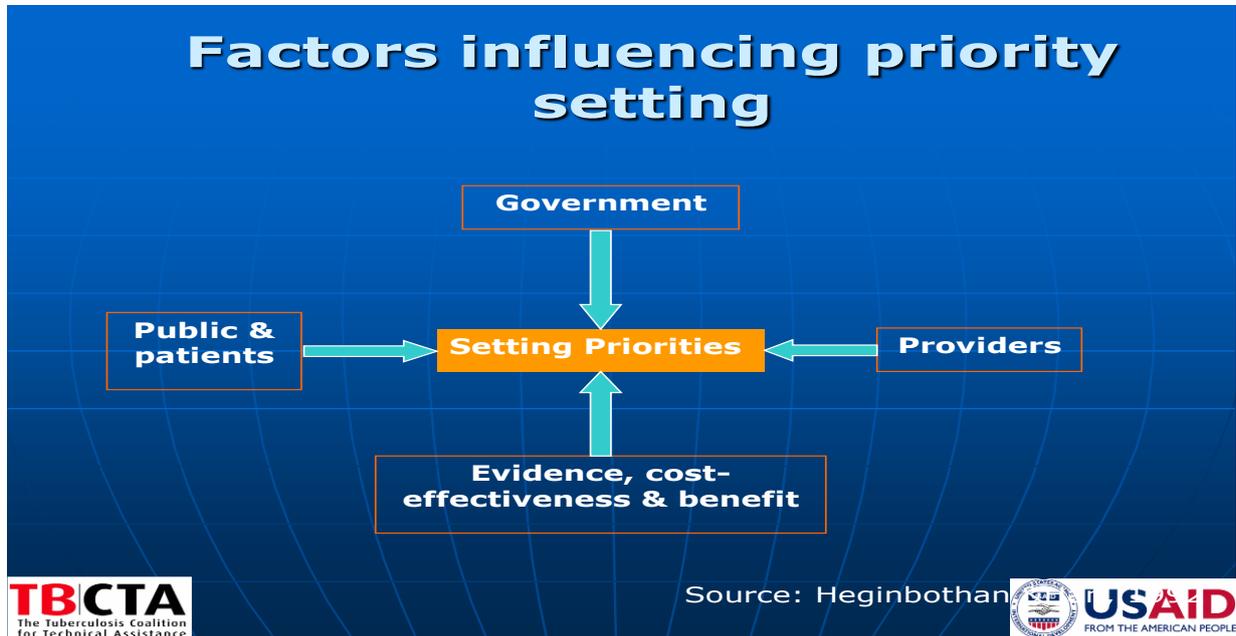
- Importance
- Severity
- Management and community support
- Efficiency/effectiveness

**Example of a priority-setting matrix**

*TB treatment program has limited coverage*

Criteria Problem	Importance	Management Support	Risk if no action	Feasibility	Cost effectiveness	Total Score

Score: 1=low to 5=high



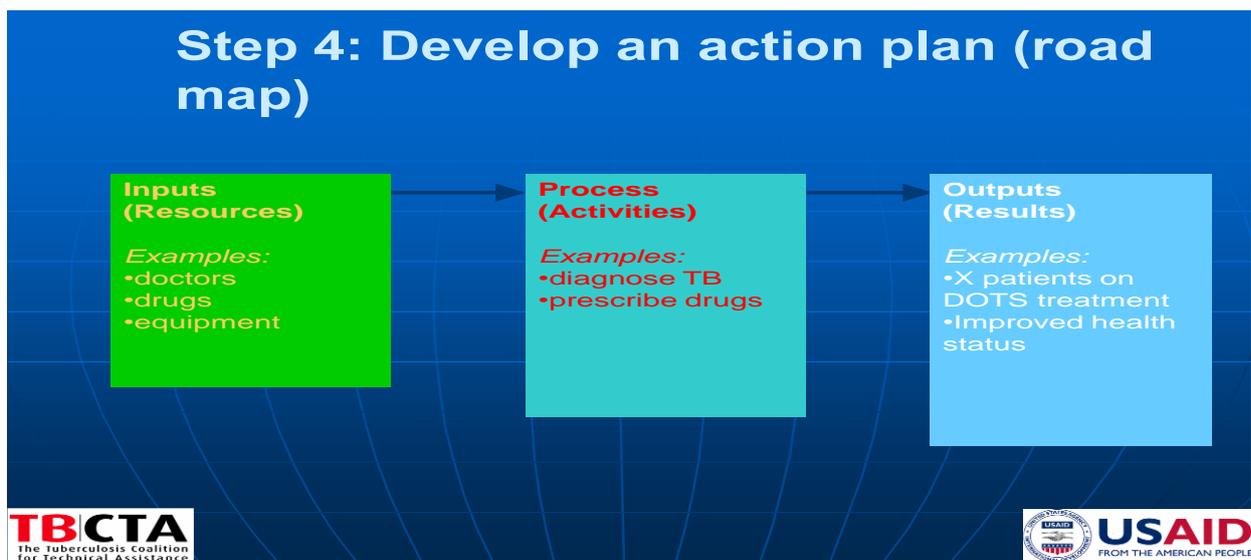
**Factors influencing priority setting**

**Step 3: Establish goals and objectives**

Always make your objectives **SMART**

- Specific: What is the specific change desired? Who is the target group? What is the location?

- Masurable: What is the measure (number or percentage) to monitor progress/performance?
- Appropriate: to goals and strategies
- Realistic: Given the limited amount of resources
- Time-Bound: What is the date by which the change will occur? This will help with resource allocation and activity planning.
- **Examples of program objectives – are these SMART?**
  - To establish 10 PLHA support groups in Zaria
  - To increase TB case detection from 5% to 95%
  - To build the capacity of community volunteers in TB-DOTS and ART adherence



### Logical framework (LogFrame)

## Logical framework (LogFrame)

<u>Narrative Summary</u>	<u>Objectively Verifiable Indicators - OVIs</u>	<u>Means of Verification -MOVs</u>	<u>External Factors (Assumptions)</u>
<u>Development Objective</u>			
<u>Immediate Objective</u>			
<u>Outputs (Results)</u> 1. 2. 3.			
<u>Activities</u> 1. 2. 3. 4.	<u>Inputs</u> 1.1 1.2 1.3 1.4		

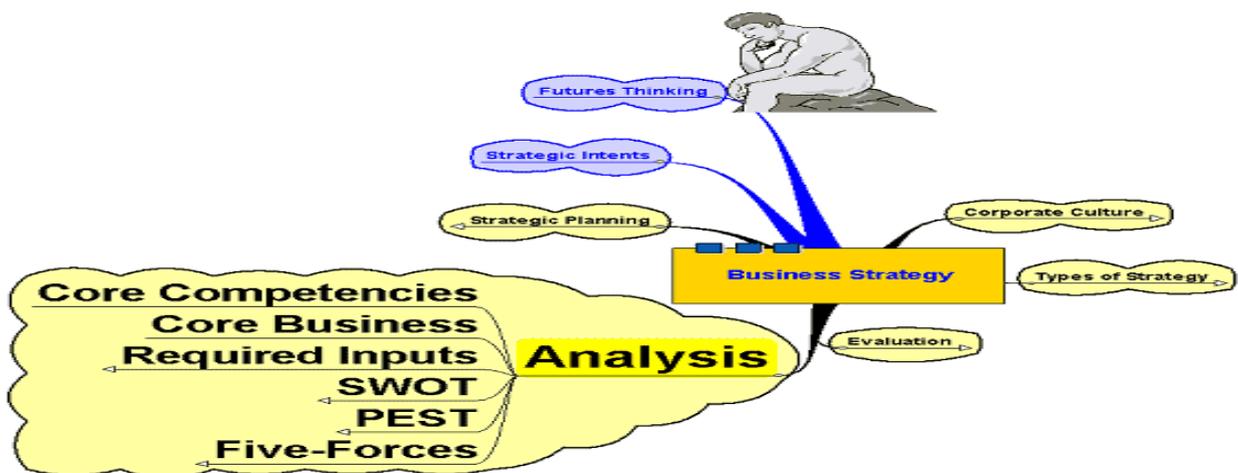
## Planning Topic 2: Strategic Planning

**Introduction:** Strategic planning is an organization's process of defining its strategy, or direction, and making decisions on allocating its resources to pursue this strategy, including its capital and people.

- Strategic or comprehensive health planning involves the preparation of broad policies and strategies. Strategic planning takes a broad overview over an extended period of time usually ten years and more.
- Also, strategic plans usually cover a large service area such as a country.
- In other words, they are long range plans which plan for comprehensive health development covering a broad scope and extending over a long period of time.
- Strategic health plans set priorities for general health development, and plot the general course of decision (strategies) to be taken towards the attainment of health goals.
- Various business analysis techniques can be used in strategic planning, including:
  - SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats ),
  - PEST analysis (Political, Economic, Social, and Technological),
  - STEER analysis (Socio-cultural, Technological, Economic, Ecological, and Regulatory factors), and
  - EPISTEL (Environment, Political, Informatics, Social, Technological, Economic and Legal).
- Strategic planning is the formal consideration of an organization's future course. All strategic planning deals with at least one of three key questions:
  - "What do we do?"
  - "For whom do we do it?"
  - "How do we excel?"
- In business strategic planning, the third question is better phrased "How can we beat or avoid competition?"
- In many organizations, this is viewed as a process for determining where an organization is going over the next year or more -typically 3 to 5 years, although some extend their vision to 20 years.
- In order to determine where it is going, the organization needs to know exactly where it stands, then determine where it wants to go and how it will get there. The resulting document is called the "strategic plan."
- It is also true that strategic planning may be a tool for effectively plotting the direction of a company.
- However, strategic planning itself cannot foretell exactly how the market will evolve and what issues will surface in the coming days in order to plan your organizational strategy.
- Therefore, strategic innovation and tinkering with the 'strategic plan' have to be a cornerstone strategy for an organization to survive the turbulent business climate.
- First Stage of Strategic Planning may involve:
  - Futures Thinking: Thinking about what the business might need to do 10–20 years ahead
  - Strategic Intents: Thinking about key strategic themes that will inform decision making
  - “The thicker the planning document, the more useless it will be” - (Brent Davies: 1999)

- **The Vision:**
  - Communicating to all staff where the organisation is going and where it intends to be in the future
  - Allows the firm to set goals
- **Aims and Objectives:**
  - Aims: Long term target
  - Objectives: The way in which you are going to achieve the aim
  - An Example of aims and objectives:
    - Aim: May be for a chocolate manufacturer to break into a new overseas market
    - Objectives:
      - Develop relationships with overseas suppliers
      - Identify network of retail outlets
      - Conduct market research to identify consumer needs
      - Find location for overseas sales team HQ
- Once the direction is identified:
  - Analyse position
  - Develop and introduce strategy
  - Evaluate: Evaluation is constant and the results of the evaluation feed back into the vision

## ANALYSIS



## PEST

- **Political:** local, national and international political developments – how will they affect the organisation and in what way/s?
- **Economic:** what are the main economic issues – both nationally and internationally – that might affect the organisation?
- **Social:** what are the developing social trends that may impact on how the organisation operates and what will they mean for future planning?
- **Technological:** changing technology can impact on competitive advantage very quickly!
- **Examples:**

- Growth of China and India as manufacturing centres
- Concern over treatment of workers and the environment in less developed countries who may be suppliers
- The future direction of the interest rate, consumer spending, etc.
- The changing age structure of the population
- The popularity of ‘fads’ like the Atkins Diet
- The move towards greater political regulation of business
- The effect of more bureaucracy in the labour market

**Five forces plus three (developed by Michael Porter and added to by Will Mitchell)**

- Forces that shape and influence the industry or market the organisation operates in

**Five forces**

- **Customers:** What are the major characteristics of customers and clients in your environment?
- **Rivals:** What are the key characteristics of your current competitors?
- **Potential entrants** - How easy is it for new rivals to enter the industry?
- **Substitutes** – What alternative product and services are there and what is the extent of the threat they pose?
- **Suppliers:** What are the major characteristics of suppliers of component goods services for your products and services?

**Plus three**

- **Partners:** What organizations are partners or potential partners in helping to develop and deliver your goods and services?
- **Social forces:** What laws, regulations, social trends, and other social forces are shaping your environment?
- **New strategies:** What new ways of developing and delivering goods and services are other organisations experimenting with?

**Required inputs**

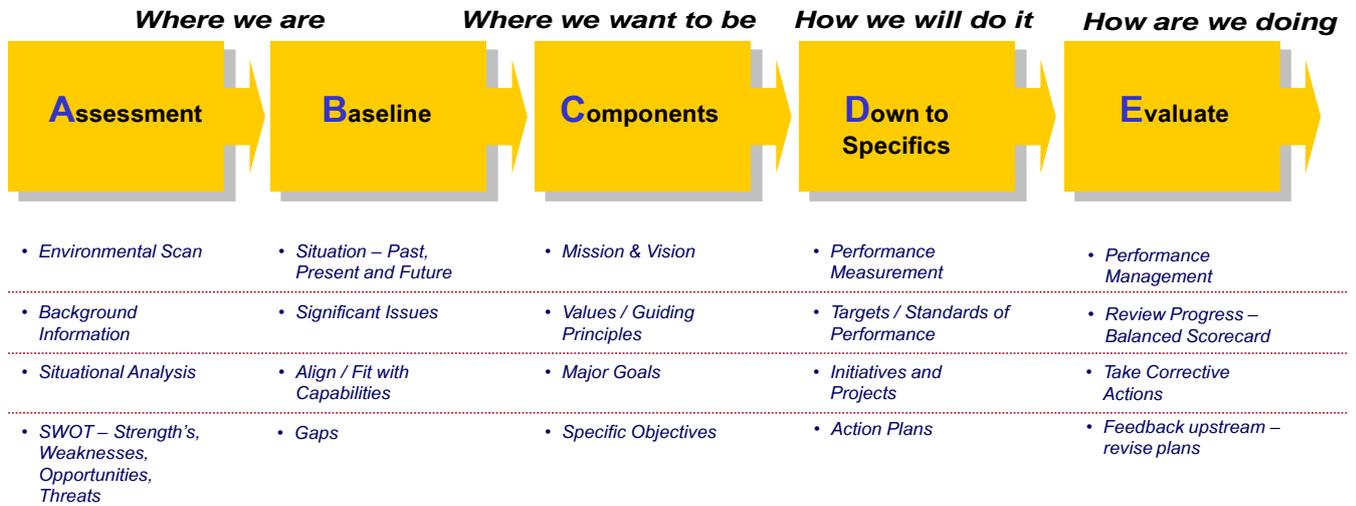
- Changing strategy will impact on the resources needed to carry out the strategy
- And specifically, The impact will be on:
  - Land – opportunities for acquiring land for development – green belt, brown field sites, planning regulations, etc.
  - Labour – ease of obtaining the skilled and unskilled labour required
  - Capital – the type of capital and the cost of the capital needed to fulfil the strategy

## Evaluation



- Data from sales, profit, etc. are used to evaluate the progress and success of the strategy and to inform of changes to the strategy in the light of that data.
- Information from a wide variety of sources can help to measure and inform the impact and direction of the strategy.
- **A good strategic plan should ...**
  - Address critical performance issues
  - Create the right balance between what the organization is capable of doing vs. what the organization would like to do.
  - Cover a sufficient time period to close the performance gap
  - Visionary – convey a desired future end state
  - Flexible – allow and accommodate change
  - Guide decision making at lower levels - operational, tactical, individual

# Strategic Planning Model A B C D E



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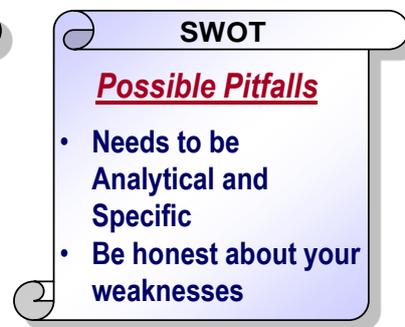
## Pre-Requisites to Planning

- Senior leadership commitment
- Who will do what?
- What will each group do?
- How will we do it?
- When is the best time?

# Assessment Model: S W O T

**Internal Assessment:** Organizational assets, resources, people, culture, systems, partnerships, suppliers, . . .

**External Assessment:** Marketplace, competitor's, social trends, technology, regulatory environment, economic cycles .



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### Strengths

- Strength's – Those things that you do well, the high value or performance points
- Strengths can be tangible: Loyal customers, efficient distribution channels, very high quality products, excellent financial condition
- Strengths can be intangible: Good leadership, strategic insights, customer intelligence, solid reputation, high skilled workforce
- Often considered “Core Competencies” – Best leverage points for growth without draining your resources

### Weaknesses

- Weaknesses – Those things that prevent you from doing what you really need to do.
- Since weaknesses are internal, they are within your control
- Weaknesses include: Bad leadership, unskilled workforce, insufficient resources, poor product quality, slow distribution and delivery channels, outdated technologies, lack of planning

### Opportunities

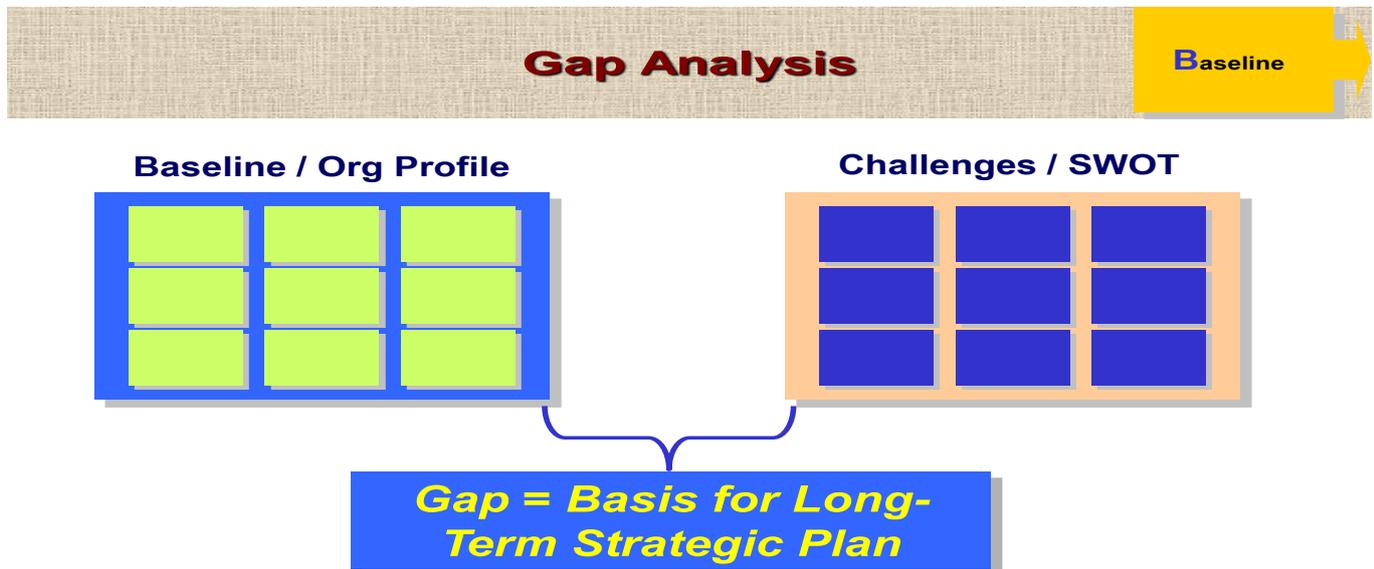
- Opportunities – Potential areas for growth and higher performance
- External in nature – marketplace, unhappy customers with competitor's, better economic conditions, more open trading policies,....
- Internal opportunities should be classified as Strength's.
- Timing may be important for capitalizing on opportunities

## Threats

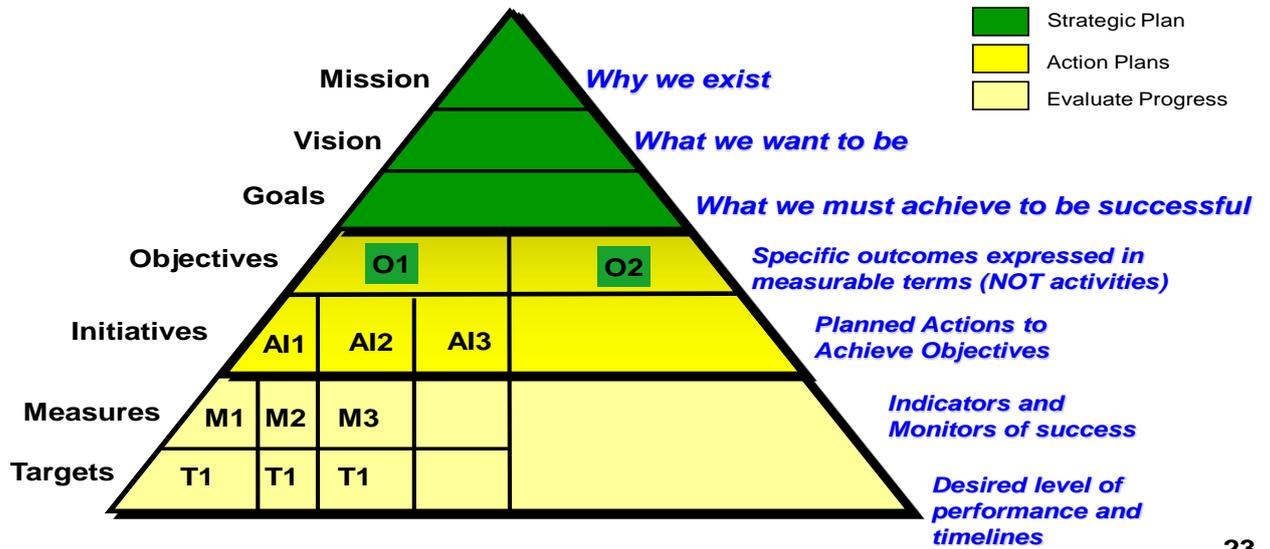
- Threats – Challenges confronting the organization, external in nature
- Threats can take a wide range – bad press coverage, shifts in consumer behavior, substitute products, new regulations, . . .
- May be useful to classify or assign probabilities to threats.
- The more accurate you are in identifying threats, the better position you are for dealing with the “sudden ripples” of change

## Baseline

- **Why create a baseline?**
  - Puts everything about the organization into a single context for comparability and planning
  - Descriptive about the company as well as the overall environment
  - Include information about relationships – customers, suppliers, partners, . . .
  - Preferred format is the Organizational Profile
  - External (Regulatory Compliance, Social Responsibility, . . .)



# Major Components of the Strategic Plan / Down to Action



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### **Planning Topic 3: Micro-planning**

#### **Introduction: Micro Planning is planning at the lowest level of development.**

- It brings the planning process to the grass root level to tackle specific problems at the micro region.
- Development of local resources and provision of infrastructure facilities receives due attention during the process of micro planning, along with local tradition, history, values and practices.
- Lack of people's participation in the planning and implementation of programmes has been one of the reasons for unsuccessful implementation of different development schemes.
- It was assumed that without the active cooperation and support of the local people, identification of genuine needs and available resources at the local level would not be possible. This was termed as "planning at the grass roots level" or "micro planning".
- Planning at micro level means:
  - The participation of the beneficiaries, the local people, in identifying need
  - Generating available resources in terms of (i) material inputs (ii) co-operative action (iii) creation of more resources through supportive efforts, and
  - Reparation of village plan, keeping in view the available resources.
- Micro planning is a comprehensive action planning procedure for producing development plans for upgrading settlements.
- Originally designed for use in developing countries, it is based on regular intensive workshops which involve a minimum of preparation, materials and training.
- The micro planning procedure involves 8 to 12 community representatives working closely with a small team of experts and facilitators for several days.
- A sequence of activities is worked through to arrive at a development plan and work programme.
- The process is structured by charts on large sheets of paper which are completed and kept as a record.
- The workshops are repeated every year or so to monitor progress and plan the next stages.
- Micro Level Planning (MLP): Making The Invisible Visible.

NB: MLP is a process whereby each individual household dwelling in a hamlet gets a fair chance to participate and design the Plan.

- The beauty of the plan lies in people's approval and flexibility that gives a scope to revisit the steps and rectify the mistakes.
- When people of various categories with an individual focus, are involved thoroughly in all the stages; i.e. right from problem analysis to resource allocation and role-define, the process itself challenges the existing power structure without resorting to any violent means.
- Hence, probability of change in power equation, assertion of rights assigned to each individual under constitutional framework and finally the development programs (as designed by the people and approved by the state) do work out in tandem.
- For this very reason MLP is often defined as a people's empowerment process. As the communities get involved in the analysis of problems for formulation, execution and monitoring of MLP they get empowered in the process.
- The basis of MLP is people-centred and emphasizing on people's decision.

- It gives opportunity to people to define “development” as per their own perception and do their planning accordingly so as to play the major role and become accountable in its implementation. Here, the bias of the planner is reduced to a large extent. The local resources are put into optimal use and the communities as critical support only to complement the local resources and initiatives mobilize external resources.
- The resources from various support agencies are pooled together to solve different village problems, thereby avoiding duplicity of efforts.
- It entails a more integrated development process, which is different from the present watertight departmental developmental programs.
  
- The main reasons for undertaking local/micro level planning are as follow:
  - Specific attention may be given to the needs of the targeted groups
  - Programmes are geared more towards the specific needs of the area
  - To decentralize the planning process
  - A closer partnership with the people and the planners can be established
  - The lowest echelons of the administration can be organized and coordinated.

## **Planning Topic 4: Project Cycle Management (PCM)**

### **Participatory Planning**

- Project cycle management (PCM) is the term given to the process of planning and managing projects, programmes and organizations. It is used widely in the business sector and is increasingly being used by development organizations.
- Development projects sometimes fail because they are badly planned and do not take account of some important factors, particularly the needs and views of stakeholders.
- PCM is based around a project cycle, which ensures that all aspects of projects are considered. A central value of the PCM method is that aspects of the project are reconsidered throughout the project cycle to ensure that any changes which have occurred are included in the project design. As a result, projects are more likely to be successful and sustainable.
- The starting point in discussing how projects should be managed properly is to first understand what a project is and just as importantly what it is not.

### **What is a Project ?**

- The word “project” was first used in or around the sixteenth century and derives from the Latin *projicere* (= throw forward). The Latin root thus suggests movement, a trajectory, a certain relationship with space and time.
- The implied process involves point of departure used as a base, from which one throws oneself forward towards a goal.
- The Oxford English dictionary defines ‘project’ as individual or collaborative enterprise that is carefully planned and designed to achieve a particular aim e.g a nationwide project to encourage business development.
- A project is a method which enables us to move from an idea to action, structuring the various stages in the process.
- Projects represent the commitment of human and physical resources to produce specific outputs in a given time and budget framework.
- Projects vary in scale, purpose and duration. They may be initiated within a community, requiring modest inputs and producing tangible outputs within a relatively short timeframe.
- At the other extreme, projects may require substantial financial resources and only generate benefits in the long term. For example, the former could be an adult literacy project in a village; the latter may be the provision of universal primary education for all children of school age in a country. Whilst the former needs one trainer and a few teaching materials, the latter requires numerous schools, teachers, equipment and administration.
- Projects may stand-alone or be integrated into a programme, with several projects contributing to one overall goal. Despite the difference in scale and nature of projects, there are aspects of sound project management that are universal.
- Types of project: Development projects can vary significantly in their objectives, scope and scale.
  - Smaller projects might involve modest financial resources and last only a few months, whereas a large.
  - Project might involve many millions of Euro and last for many years. Examples of projects could include;

- A health service reform and expansion project, implemented primarily by the Ministry of Health of the partner government and with financial support of other donors, costing Euro 30m over 10 years;
- An emergency relief project, coordinated by the UN and implemented by international NGOs, costing Euro 5m over 1 year.
- Business promotion projects, providing grants to non-profit organizations of up to Euro 200,000 over a maximum time line of 2 years.
- A road and bridge building project, using a contracted project manager, costing Euro 50m over 5 years.

### **Characteristics of Projects**

1. Projects have a purpose: projects have clearly-defined aims and set out to produce clearly-defined results. Their purpose is to solve a “problem”, and this involves analyzing needs beforehand. Suggesting one or more solutions, it aims at lasting social change.
2. Projects are realistic: their aims must be achievable, and this means taking account of requirements of both the financial and the Human resources available.
3. Projects are limited in time and space: they have a beginning and an end, and are implemented in a specific place and context.
4. Projects are complex: projects call on various planning and implementation skills, and involve various partners and players.
5. Projects are collective: projects are the product of collective endeavour. They are run by teams, involve various partners and cater for the needs of others.
6. Projects are unique: all projects stem from new ideas. They provide a specific response to a need (problem) in a specific context. They are innovative.
7. Projects are an adventure: every project is different and ground-breaking; they always involve some uncertainty and risk.
8. Projects can be assessed: projects are planned and broken down into measurable aims, which must be open to evaluation.
9. Projects are made up of stages/phases: projects have distinct, identifiable stages/phases

### **Project Cycle Management**

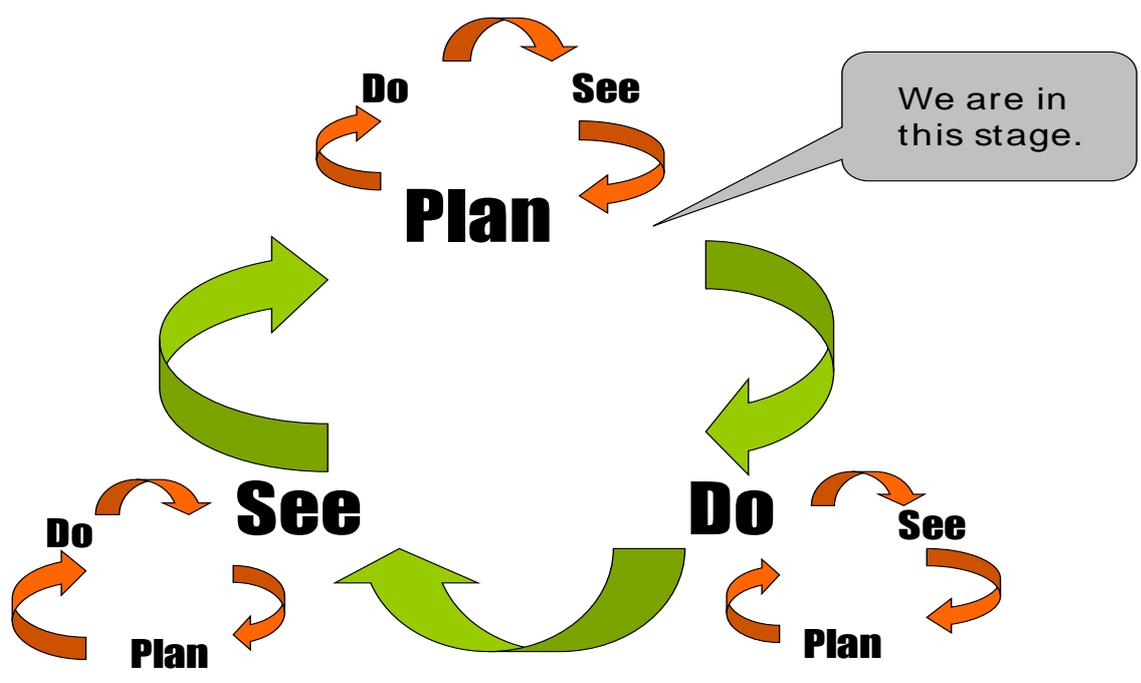
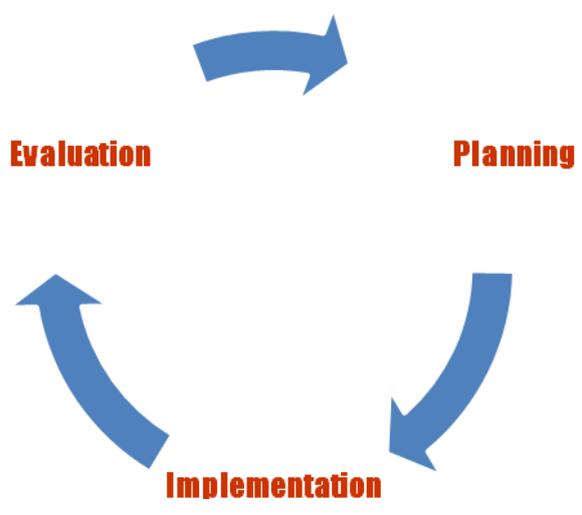
- A generic project cycle has six (6) different identified stages.
- In practice, the duration and importance of each stage may vary for different projects. This stages include:
  1. Identification – generation of the initial project idea and preliminary design
  2. Preparation – detailed design of the project addressing technical and operational aspects.
  3. Appraisal – analysis of the project from technical, financial, economic, gender, social, institutional and environmental perspectives
  4. Proposal preparation, approval and financing – writing the project proposal, securing approval for implementation and arranging sources of finance
  5. Implementation and monitoring – implementation of project activities, with on-going checks on progress and feedback.
  6. Evaluation – periodic review of the project with feedback for next project cycle.
- Each stage of the cycle is essential and should be given the same amount of attention.

- Firstly, because it is important to acknowledge that change is the only constant; aspects of humanitarian work are constantly in flux whether it is needs, people of concern, organizations, social and political relations, finance etc.
- Secondly, it allows learning from the successes and challenges of completed work. Learning organizations have imbedded structures and systems to support institutional learning through project cycle management.
- Examples from the European Commission's (EC) external Aid Programme:
  - The generic project cycle within all European commission's (EC) programmes share three common themes:
    - Key decisions, information requirements and responsibilities are defined at each stage.
    - The stages in the cycle are progressive – each phase needs to be completed for the next to be tackled with success.
    - New programming draws on evaluation to build experience as part of the institutional learning process.
  - Aid co-operation and partnership programmes with non-member states involve often complex processes that require the active support of many parties.

**PCM reflects the decision-making and implementation process; the methodology applied for planning, managing, evaluating projects is the Logical Framework Approach.**

- PCM helps ensure that the stakeholders support the decisions, and that decisions are based on relevant and sufficient information.
- Project management methods and PCM tries to ensure that:
  - Projects respect and contribute to overarching policy objectives of the EC such as respect of human rights, poverty alleviation and to cross-cutting issues such as gender equality, protection of the environment (relevance to and compatibility with these issues in the broad sense);
  - Projects are relevant to an agreed strategy and to the real problems of target groups / beneficiaries;
  - Projects are feasible, meaning that objectives can be realistically achieved within the constraints of the operating environment and the capabilities of the implementing agencies;
  - Benefits generated by projects are sustainable. For that purpose, PCM
    - Uses the Logical Framework Approach to analyse the problems, work out suitable solutions i.e. project design, and successfully implement them.
    - Requires the production of good-quality key document(s) in each phase, to ensure structured and well-informed decision-making (integrated approach).
    - Requires consulting and involving key stakeholders as much as possible.
    - Puts emphasis on a clear formulation and focus on one Project Purpose, in terms of sustainable benefits for the intended target group(s).
    - Incorporates key quality issues into the design from the beginning.

The Project Cycle:



## Project Design Matrix (PDM)

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Overall Goal			
Project Purpose			
Outputs			
Activities	Inputs		
			Pre-conditions

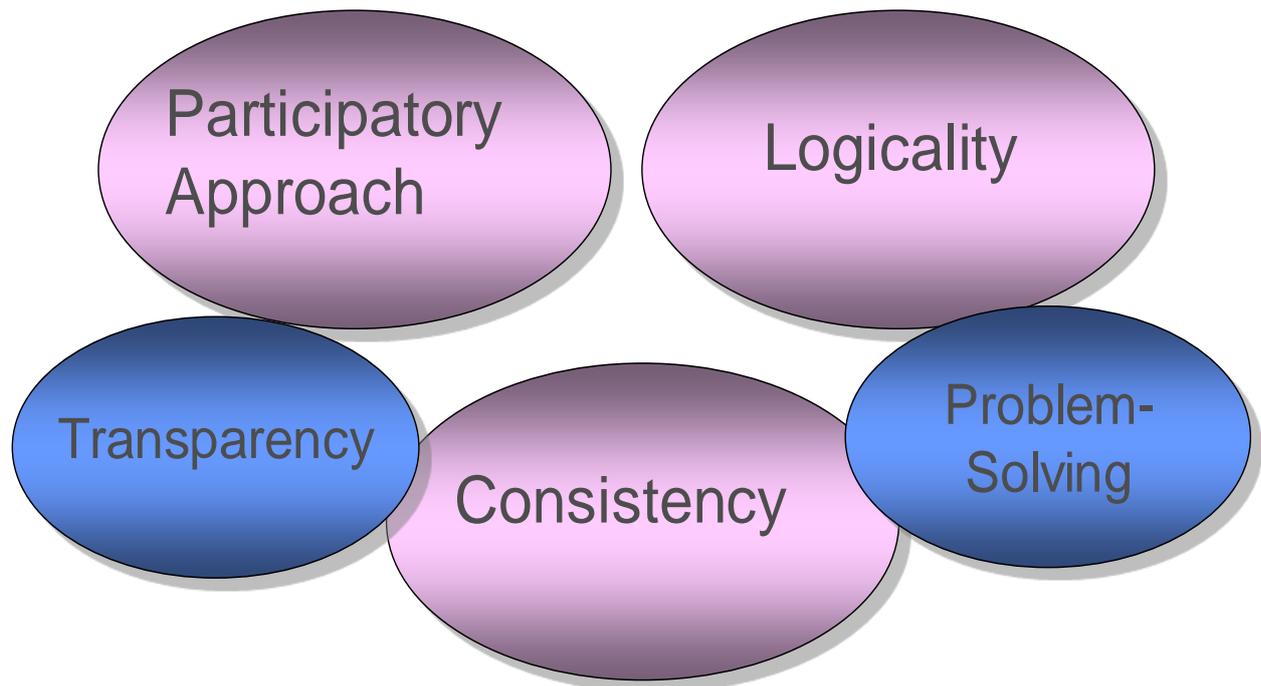
### PDM Vertical Logic

- Project Purpose: Objectives that the project should achieve within the project duration
- Overall Goal: Direction that the project should take next
- Outputs: Strategies for achieving the Project Purpose
- Activities: Specific actions taken to produce Output
- Important Assumptions: Conditions important for project success, but that cannot be controlled by the projects; whether these conditions develop or not is uncertain.

### PDM Horizontal Logic

- Objectively Verifiable Indicators: Standards for measuring project achievement.
- Means of Verification: Data sources from which indicators are derived.
- Inputs: Personnel, materials, equipments, facilities and funds required by the project.
- Preconditions: Conditions that must be fulfilled before a project gets underway

## CHARACTERISTICS OF PCM



## **Subject 1.5: Monitoring and Evaluation in Health Care**

**Aim:** To enable participants understand the basics of monitoring and evaluation in the context of primary health care for effective decision making and programme management

### **Objectives:**

- To identify the basic purposes and scope of monitoring and evaluation
- To identify the differences between monitoring and evaluation
- To describe the functions and components of monitoring and evaluation plan
- To describe how to use statistical tools to collate and analyze data for decision making
- To describe the quality of a good data and indicators for effective monitoring and evaluation

**Learning outcomes:** After completing instruction in this subject (whether after a single classroom session or following a series of related classroom sessions), participants should be familiar with and able to use the following knowledge and skills.

- Know the most important elements of data quality
- Be able to identify key data indicators and targets for activities within the scope of their responsibilities.

### **Topics**

T1. Overview

T2. Data quality, indicators and targets

T3. Practical application of probability and statistics in PHC

## M&E Topic 1: Overview

### Introduction

- Monitoring and evaluation (M&E) is an essential component of any intervention, project, or program
- **Monitoring\*** of a program or intervention involves the collection of routine data that measure progress toward achieving program objectives.
  - It is used to track changes in program performance over time.
  - Its purpose is to permit stakeholders to make informed decisions regarding the effectiveness of programs and the efficient use of resources.
- Monitoring is sometimes referred to as **process evaluation** because it focuses on the implementation process and asks key questions:
  - How well has the program been implemented?
  - How much does implementation vary from site to site?
  - Did the program benefit the intended people? At what cost?
- **Evaluation** measures how well activities have met expected objectives and/or the extent to which changes in outcomes can be attributed to the program or intervention.
- The difference in the outcome of interest between having or not having the program or intervention is known as its “impact,” and measuring this difference is commonly referred to as “**impact evaluation.**”

### Basic Monitoring and Evaluation Concepts

- **Monitoring:** Process of continuous data collection and observing implementation of activities to ensure they follow plans and to take early remedial actions
  - Inputs\_Process\_Outputs=Quality of Service
- **Evaluation:** process of assessing a programme to see if purpose has been achieved and programme was relevant. The process of evaluation highlights;
  - effectiveness of programme or Intervention
  - Research Methods – needed
  - Can either be Summative or formative
- **Why do we need M&E?**
  - To show how programme is working
  - To strengthen programme
  - To institutionalize programme
  - To sharpen decisions of funding agencies
  - To contribute to global understanding of what works
  - To mobilize communities to support programme
  - To improve programme performance.
- Planning stage is integral to overall plan

### What are the key parts of the M&E plan?

- Schedules
- Monitoring check list
- Resources – Financial and people

### What kind of data do we need?

- Financial
- Medical and health status
- Programme results
- Coverage data

## **M&E Topic 2: Data Quality, Indicators and Targets**

### **Indicators**

- **Indicators** are clues, signs or markers that measure one aspect of a program
  - Show how close a program is to its desired path and outcomes.
  - They are used to provide benchmarks for demonstrating the achievements of a program.
- One of the most critical steps in designing an M&E system is selecting appropriate indicators
- The M&E plan should include descriptions of the indicators that will be used to monitor program implementation and achievement of the goals and objectives.

### **Characteristics of indicators**

A good indicator should:

- Produce the same results when used repeatedly to measure the same condition or event
- Measure only the condition or event it is intended to measure
- Reflect changes in the state or condition over time
- Represent reasonable measurement costs; and
- Be defined in clear and unambiguous terms.

### **What are the Targets of M&E?**

- They are levels of objectives to be achieved in stated time
- Examples:
  - Cut malaria burden in half by 2011
  - Reduce prevalence from 4.5% to 3.0% by 2011

### **What are the Indicators of M&E?**

- Measurable statements of programme objectives & activities
- Formulated from programme objectives & activities
- Examples
  - Contraceptive prevalence rates
  - Maternal mortality rates
  - Percentage of births attended by skilled personnel

## **M&E Topic 3: Practical Application of Probability and Statistics in PHC**

### **Statistics**

- Statistics is the scientific way of collecting, organizing, summarizing, analyzing, interpreting and presenting data.
- Statistics deals with inferences in trying to make conclusions out of the whole populations

### **Probability**

- The likelihood of the occurrences of events
- Helps in predicting outcomes and in taking decisions (inferential statistics)

### **Basic probability - Dice: Toss one fair die and observe the number of dots on the top face**

- The probability of an outcome must lie between 0 and 1, inclusive.
- The sum of the probabilities of the outcomes MUST equal 1.
- The probability of a *certain* event is 1.
- The probability of an *impossible* event is 0

### **Practical application of probability**

- Rates/Ratio/Proportion
- Assessment of PHC services
- Sampling Methods
- Research
- Investigation of outbreak
- Community diagnosis
- Data presentation

### **Relevance of statistics**

- Medical outcomes
  - Morbidity rates
  - Mortality rates
- Social Acceptability
  - Quality of services( Technical quality)
  - Clients satisfaction
  - Equity/Equality
- Economic Efficiency
  - Achieving the same objectives by the cheapest methods
  - Using the same means to achieve the greatest benefits

### **Use of statistical tools to collate and analyze operations data**

- **Sources of health data and Information for PHC**
  - Population and household census
  - Vital events register – records of vital events such as births, deaths, marriages and divorces
  - Routine health services data dealing with morbidity and mortality data; immunization, disease treatment, out-patient attendance and admission
  - Epidemiological surveillance data - including immunization records and notifiable diseases
  - Disease registers for specific morbidity and mortality

- Community surveys undertaken by Government agencies, International agencies, Non-Governmental Organizations, research groups, etc

### **Core areas of statistics**

- Measures of central tendencies( mean, median, Mode, Mid-range)
- Measures of Dispersion (Variance, standard deviation, Range, Coefficient of variation).
- Normal distribution
- Concept of P-Value
- Confidence intervals
- T-test ( paired and unpaired)
- CHI Square
- Correlation and Regression
- Sampling Methods

### **Data presentation**

- The appropriate statistical tools commonly used in presenting descriptive statistics include;
  - Frequency tables
  - Diagrams or Graphs e.g. Bar charts, pie charts, Histogram
  - Summary statistics

### **Data summarization**

- There are two well known summary measures for the numerical description of any data
  - Measures of central tendency
  - Measures of Dispersion

### **Challenges of data collection**

- **What are the challenges of data collection at PHC level?**
  - Lack of interest
  - Inadequately trained personnel
  - Funding
  - Over dependence on donors
  - Non availability of data collection tools
  - Multiple data collection tools from various International organizations

### **Way forward**

- Strengthening the PHC HIS structure at the bottom
- Staff training and orientation towards HMIS
- Provision of appropriate information technology for data and information
- Strengthening of data flow
- Data and information dissemination
- Data collection from private health institution

### Example of a skills station for this topic

You have been asked to present basic statistics that will reflect the activity of your clinic over the past week. You have the following data available to you:

<b>Indicator</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	
<b>Patient visits</b>	150	70	90	80	70	
<b>Number of staff</b>	10	7	9	10	8	

### Questions

1. What is the arithmetic mean (average), the median, and the mode of the daily patient visits for this week?
2. What is the standard deviation of patient visits per week?
3. Explain the practical meaning of the difference in the mean and median of patient visits per week.
4. What is the mean and median number of staff per day during this week?
5. What is the average number of visits per day per staff member for the week?
6. Prepare various charts and graphs that depict the relationship between patient visits and number of staff members.

## **MODULE 2: HEALTH CARE FINANCING AND HEALTH ECONOMICS**

### **Subjects**

- 2.1 Health Care Financing in Nigeria
- 2.2 Economic Evaluation in Health care
- 2.3 Effective Financial Management Systems in PHC

## **Subject 2.1: Health Care Financing in Nigeria**

**Aim:** To Update the skills of the participants on effective and sustainable methods of mobilization of resources for PHC

### **Objectives:**

- To update participants knowledge of the various strategies for financing PHC
- To describe the health care financing functions
- To identify the advantages and disadvantages of the financing options
- To Update the participants knowledge of mechanisms of health care financing

**Learning outcomes:** After completing instruction in this subject (whether after a single classroom session or following a series of related classroom sessions), participants should be familiar with and able to use the following knowledge and skills.

- Know the various financing options available for PHC within the country
- To know how to harness these options in enhancing financing for PHC activities within the scope of participants' responsibilities
- To how pool resources for PHC activities within the scope of participants' responsibilities
- To know how to expend resources effectively and within policy guidelines for activities and programmes within the scope of participants' responsibilities

### **Topics:**

- T1. Health care financing options for PHC
- T2. The National Health Insurance Scheme
- T3. Community health care financing option
- T4. Contemporary issues on health care financing

## Financing Topic 1: Health Care financing option for PHC

### Definition:

- **Definitions:** Health care financing refers to the strategies or means of paying for health care expenditure i.e. goods and services whose primary aim is to promote health and wellbeing.
- **Functions:**
  - Collection of revenue from the various sources
  - Pooling of funds
  - Purchase/payment: This is the transfer of pooled resources/funds to health care providers
- **Mechanism :** Basically, there are 3 main mechanisms for health care financing:
  - Funding mechanisms
    - Public: through taxes, loans, grants, insurance etc
    - Private: through fee for service, employer financed-scheme etc
  - Allocation mechanism: based on service package, matching grant mechanism, supply-side Vs demand side mechanism etc
  - Payment mechanism: either per case, per capita, global budgeting or diagnoses -related payment

### Example of a skills station for this topic

Today inadequate funding has been identified as a major challenge to the delivery of comprehensive and quality health care services.

1. List ALL the possible of sources from which funds can be made available for financing the health care delivery services in Nigeria
2. From the list above choose the source(s) you deem appropriate considering the peculiarity of the present Nigerian society.

10 minutes

## Salient features of some Health Care financing options

### Community financing

- **Advantage**
  - It builds the spirit of self-reliance, self-development and ownership. It also addresses perceived needs of the community. It also improves the utilization of services, the organization capacity of the community and accountability. Furthermore, it has the Potential for generating a huge amount of resources.
- **Challenges**
  - Top-down approach in public health planning may limit community participation; the lack of cohesion and scattered nature of settlement in rural areas, at times the Need of the community may be a basic need and not a health need; Low orientation of health workers on community financing etc
- **Strategies for generating resource for community financing**
  - Private donations from individuals, health or organizations; Income generating activities/project (e.g. cooperatives, communal labour); Special fund raising events: dinner, festivals, shows, bazaars, etc.
  - **Strategies for payment under community financing:**
    - Prepayment; Co-payment; Standard rate of payment for services; Payment for only cost of material used etc

- **Health Insurance**
  - **Advantages:** Pooling of resources; Sharing of risk; Protects members against catastrophic health expenditure; a defined benefit package; a defined annual premium etc
  - **Challenges:** Tendency of over-provision of services by the provider, Adverse selection; Moral hazards; Cost escalation etc
- **Donor fund:** Can generate substantial input for health care finance; Provides additional funds for service provision (e.g. PEPFAR, Bill and Melinda Gate Foundation, Carter Centre, etc); has potential of distorting national programmes; Potential for imposing donor agenda etc
- **Government funding:** Potential to provide huge-based capital for health infrastructure; Potential to promote equity; Can be used for funding public goods; Can be subjected to inefficiencies and bureaucracies of the public sector; Can be subject to abuse and corruption.
- **User charges:** May prevent wasteful utilization of services and procedures; Does not promote equity; (The poor who need services may be denied based on their inability to pay for the service); Pauperizing effect (it impoverishes the poor etc

## Financing Topic 2: National Health Insurance Scheme

### Overview

- Oftentimes, illnesses/injuries are unpreventable. When they occur the cost may be high and there may be little or no time to mobilize the needed resources for the needed cure. Thus the need to pool these risk so that Insurance (HI) refers to an insurance against loss by illness or bodily injuries through the pooling of health risk.
- Therefore, National Health Insurance (NHI) is the pooling of resources by groups of individuals to take care of health needs by legislation, involving employers and employees. Usually, NHI has an aim in-built mechanism to cover the unemployed, Poor and Aged.

### NHIS: The Nigerian experience:

- The search for a comprehensive, cost-effective healthcare plan began in the 60's at the inception of self-government in Nigeria.
  - Public Health insurance was first considered an administrable policy in 1962 by the Halevi Committee and acquired legal teeth through the Lagos Health Bill.
  - However, it was not until 22 years later that Government, driven in part by a dwindling revenue profile and a spiraling birth rate set up a committee headed by Professor Diejomoah to advise it on the desirability or otherwise of a National Health Insurance Scheme. The committee's positive recommendation set the ball rolling.
  - Two more committees with wider public and organized private sector participation were set up in 1985 to further study the subject, while a harmonization committee was inaugurated to work out a feasible model in 1988.
  - In 1988, Professor Olikoye Ransome-Kuti commissioned the National Committee on Establishment of the NHIS, chaired by Mr Emma Eronmi.
  - In 1989, the Eronmi committee report was submitted and approved by the Federal Executive Council.
  - The United Nations Development Programme (UNDP) and International Labour Organization (ILO) consultants conducted their own studies in Nigeria to provide costing, draft legislation and implementation guidelines for establishing the NHIS in 1992.
  - The Federal Executive Council which had given its approval in 1989 directed the Federal Ministry of Health in 1993 to start the scheme.
  - In 1999, the enabling decree - Decree 35 was promulgated - May 10, 1999. finally creating the NHIS.
  - Several meetings of the National Council on Health, the country's broadest health policy formulating body, deliberated on the recommendations of these committees, fine-tuning contentious proposals until it finally convened the Special meeting of July 2001 where the Council set up an Implementation Planning Committee upon whose report the scheme finally took off.
  - The scheme aims to harness private sector participation in healthcare delivery, freeing public funds for other social services while ensuring standard service delivery.
  - On the 6th of June 2005, the formal sector of the Social Health Insurance Scheme was flagged off by the then president, Chief Olusegun Obasanjo
- **Benefits of health insurance:** these are the rights of the beneficiaries of the scheme.
  - Cash payment: In form of compensation paid for loss of income or expenses to patients e.g. sickness allowance, maturity allowance, funeral grant etc

- Health service benefits: these refer to the categories or the range of services available to the members of a scheme.
- **Delivery system in Health Insurance**
  - The delivery of health insurance has undergone transition through several phases from: Fee for service payment, then Indemnity insurance coverage, Managed care etc
  - **Determinant of a Delivery System in a Health Insurance:** cultural factor; making of capital; level of private health care service; maturity of health insurance care etc
  - **Modes of delivery:** Through Government-sponsored NHI; Employer plans (eg Employer sponsor group policies); Prepayment plan (Individuals join a group to which they make payments in return for needed health care); Private insurance to cover fees etc
- **Health maintenance Organization (HMO)**
  - HMO is an organization that offers pre-paid, comprehensive health care coverage.
  - They manage rather than actually provide health care services to individuals
  - HMO provide health care service to its members through a network of doctors, hospitals and other health care providers
  - Implement utilization management controls
  - There may be co-payment (direct or indirect) for use of certain services:
  - HMO's bear some of the financial gain
  - Proper referral system is mandatory: primary care providers act as "gate keepers"
  - Can cover a large variety of services at a significantly low cost
  - The financial burden of risk of over-using health services are borne by the HMO, its service providers or a combination.
  - The member must receive health care from HMO-Approved provider
  - HMO's Assume contractual responsibility for assuring the delivery of stated range of health care service
  - HMO's serves a voluntarily enrolled population
  - The premium is fixed, regardless of utilization.
  - Costs associated with HMO can be in the form of
    - Premium: monthly amounts paid for coverage.
    - Co-payment: amounts paid each time a member receives a covered medical service e.g. doctor visits, prescription drugs, etc.
- **NB:** HMO does not pay for medical care received outside its network except where it is stated in the contract e.g.
  - Medical emergency and treatment sought in an emergency facility as defined by the HMO.
  - Medically necessary services not available from providers within the HMO network
  - The member has a point of service option.

### **Example of a skills station for this topic**

Enumerate the challenges facing the implementation of the NHIS in Nigeria and proffer a solution to each challenge identified.

## **Financing Topic 3: Community Health Care Financing/Community Health insurance Schemes**

### **Background:**

- A large portion of the total expenditure on health (THE) is private and most of this flows directly from households to the private-for-profit health care sector
- Unfortunately, the Poor lack the resources to pay for health care. As such, They are far more likely to avoid seeking for care, or are likely to become indebted or impoverished trying to pay for it
- The World Health Report 2000, for example, noted that pre-payment schemes represent the most effective way to protect people from the costs of health care, and called for investigation into mechanisms to bring the poor into such schemes
- In recent years, community health insurance (CHI) has emerged as a possible means of:
  - Improving access to health care among the poor; and
  - Protecting the poor from indebtedness and impoverishment resulting from medical expenditures.
- Various other terms are used in reference to community health insurance, including: ‘micro health insurance’ , ‘local health insurance’
- We define CHI as “any not-for-profit insurance scheme that is aimed primarily at the informal sector and formed on the basis of a collective pooling of health risks, and in which the members participate in its management.” CHI schemes involve prepayment and the pooling of resources to cover the costs of health-related events.
- They are generally targeted at low-income populations, and the nature of the ‘communities’ around which they have evolved is quite diverse: from people living in the same town or district, to members of a work cooperative or micro-finance group.
- Often, the schemes are initiated by a hospital, and targeted at residents of the surrounding area. As opposed to social health insurance, membership is almost always voluntary rather than mandatory

### **Types of CHIS:**

- In Type I (or HMO design), the hospital plays the dual role of providing health care and running the insurance programme.
- In Type II (or Insurer design), a voluntary organization is the insurer, purchasing care from independent providers. And finally
- In Type III (or Intermediate design), a voluntary organization plays the role of an agent, purchasing care from providers and insurance from insurance companies.

### **Rural Community Health Insurance Programme in Nigeria**

- **Operation:**
  - Under the RCHIS programme: community members
  - Make a monthly payment of between N120-N150 for the most common of ailments like malaria, typhoid fever, diarrhoea etc
  - Only need to present an NHIS participant's card at an approved healthcare service centre to receive Medical care, no need for deposit
  - Participants requiring specialist or longer treatment would need to pay for the balance from what they are entitled from the common pool

- NB: Participants under the RCHI programme need not belong to any occupational group but must belong to same community.
- The RCHI Programme was expected to cover Nigeria's rural folks who constitute over 50 per cent of its then, 120 million populations.
- The Rural Community Social Health Insurance and the Under-5 Children Health Programmes of the scheme were flagged off in Ijah, a rural community in Niger state,
- Four more flag-offs have since taken place in Aba, Abia state, South-East zone; Jada, Adamawa State, North East zone and for the South West zone, it was in Ogun State. The North West Zonal flag off took place at Zangon-Aya, in Kaduna state, while that of the South-South zone was done later on.
- RCHI programme when fully operational will make contributors to reap the gains of quality healthcare services at reasonable costs.
- **Some other examples of Community scheme include:**
  - Bayelsa Health Services scheme in Bayelsa State
  - Ndo Nwanne Health Insurance scheme in Enugu State
  - Leguru I (Ala-Idowa) Health Insurance Scheme in Odogbolu LGA in Ogun State
  - "The Lawanson Community Partners" Insurance Scheme in Surulere LGA, Lagos State
  - The Oriade Initiative in Oriade LGA of Osun State
  - The Mumunye Health Project, Yakoko, Zing LGA in Taraba State.

**Example of a skills station for this topic**

- Identify the factors in your individual host communities that will enhance a RCHIP
- Similarly, identify likely challenges to the smooth take off of a RCHIP in the same communities
- Prose a plan of action for the introduction of a RCHIP

## Financing Topic 4: Contemporary Issues in Health Care Financing

### Global Fund

- **Background**
  - The Global Fund was created in 2002 to help the world battle those three killer diseases, and its accomplishments have been spectacular, making it arguably the most successful innovation in foreign assistance of the past decade.
  - As a result of Global Fund programs, The Global Fund's remarkable successes result from its operational procedures.
  - Disease-specific committees, called the Country Coordination Mechanism (CCM), are constituted in each developing country. Each CCM is chaired by the national government, but incorporates input from non-government organizations to formulate national-scale, disease-specific plans for submission to the Global Fund.
  - Once the Global Fund receives these plans, they are sent to a Technical Review Panel (TRP) to check that the plans are scientifically sound and feasible.
  - If the TRP approves, the plan is sent to the Board of the Global Fund, which then votes to approve financing.
  - Once the program gets underway, the Global Fund follows the implementation of the program, undertaking audits, monitoring and evaluation.
- Since 2002, the Global Fund has approved around \$19 billion in total funding.
- There are two huge challenges now facing the Global Fund, and especially the donor countries that support it.
  - The first is lack of financing. The Global Fund has been so successful that countries are submitting increasingly ambitious programs for consideration. Unfortunately, the Global Fund is already in a state of fiscal crisis.
    - It needs around \$6 billion per year in the next three years to cover expansion of programs for the three diseases,
    - But it has only around \$3 billion per year from donor countries.
    - Unless this is corrected, millions of people will die unnecessarily.
  - The second challenge is to broaden the Global Fund's mandate.
    - So far, the Global Fund has addressed MDG 6, which is focused on the control of specific killer diseases.
    - Yet control of these three diseases inevitably requires improvement of basic health services - community health workers, local clinics, referral hospitals, emergency transport, drug logistics - that play a fundamental role in achieving MDG 4 (reduction of child mortality) and MDG 5 (reduction of maternal mortality).
    - All three health MDGs are interconnected; all are feasible with an appropriate scaling up of primary health services.
    - The obvious step to address MDGs 4 and 5 is to explicitly expand the Global Fund's financing mandate.
- Many programs, such as those in the Millennium Villages project, already show that a scaling up of primary health systems at the village level can play a decisive role in reducing child and maternal mortality.
  - Expanding the Global Fund's mandate to include financing for training and deployment of community health workers, construction and operation of local health facilities, and other components of primary health systems could ensure the development of these local systems.

- Many countries - including France, Japan, Norway, the United Kingdom, and the United States - have recently recognized the need to move beyond the financing of control of AIDS, TB, and malaria to financing improvements in primary health systems more generally.
  - But they seem to view the issue of health-system financing as an either-or choice: scale up control of AIDS, TB, and malaria, or scale up financing of primary health systems.
  - The truth, of course, is that both are needed, and both are affordable.
- The annual cost of specific disease control in the next three years is perhaps \$6 billion, and another \$6 billion per year for health-system expansion.
- The total, \$12 billion per year for an expanded Global Fund, might seem unrealistically large compared to the \$3 billion per year spent now.
- But total annual funding of \$12 billion is really very modest, representing around 0.033% (three cents per \$100) of the donor countries' GNP. This is a tiny sum, which could be easily mobilized if donor countries were serious.

### **Medium Term Expenditure Framework (MTEF)**

- MTEF was adopted in 1998 as part of a broader package
- MTEF is a tool for linking policy, planning and budgeting over a medium term (3 years) at the Government-wide level; although only the single upcoming year is voted on by the parliament, each year.
- It consists of a top-down resource envelope and a bottom-up estimation of the current and medium term costs of existing policy
- Matching of policy priorities and budget in the context of the annual budget process; and involves rolling over this exercise every year by incorporating policy changes and Government presents the numbers for the following two years as well
- It is a tool to encourage cooperation across ministries and planning over a longer horizon rather than just the upcoming fiscal year.
- **Objectives of MTEF**
  - Improved macroeconomic balance especially fiscal discipline
  - Integrating policy priorities (identified in NEEDS) into annual budget: Resources allocated to priorities; to ensure credible policy.
  - Better inter- and intra-sectoral resource allocation
  - Greater budgetary predictability for line ministries by providing mid-term perspective (3-5 yrs)
  - Enhancing operating efficiency: high quality, low cost
  - Greater accountability for public expenditure
- **Advantages/benefits/potentials of MTEF**
  - Enhances stability by letting MDA know what resources will likely be available to them.
  - Emerges investment by making taxation, interest rates and government spending more predictable.
  - Improves transparency: cutting future spending provides a signal to the public, civil societies of government priorities and how it intends to implement its vision
  - Facilitates programme evaluation; the future predictions also provide a baseline for assessing the effectiveness of the past years programme.

<b>Experience in Africa</b>			
<b>Countries</b>	<b>Year of initiation</b>	<b>Scope and format</b>	<b>Government level &amp; length of period</b>
Ghana	1996	All sectors/recur/cap	Central, 3 years
Kenya	1998	All sectors/recur/cap	Central, 3 years
Malawi	1996	All sectors/recur/cap	Central, 3 years
Rwanda	1999	15/20 sectors/recurr	Central and regional
S. Africa	1997	All sectors/recur/cap	Cen/prov/local,4yrs
Tanzania	1998	7 sectors/recur/cap	Central, 3 years
Uganda	1992	All sectors/recur/cap	Central/local,3 yrs
Nigeria			

*Source: Houerou & Taliercio 2002*

- **Preconditions for implementing MTEF**
  - Strong political support
  - MOF /NPC's willingness/commitment: clear understanding of MTEF and incentives; strong leadership within MOF
  - Compliance of Line ministries: proper incentives (discretion & policy prioritization)
  - Capacity building for MOF and line ministries

#### **Sector-Wide approaches (SWAP)**

- SWAp is an approach to [international development](#) that "brings together [governments](#), [donors](#) and other [stakeholders](#) within any sector. It is characterized by a set of operating principles rather than a specific package of policies or activities. The approach involves movement over time under government leadership towards: broadening policy dialogue; developing a single sector policy (that addresses private and public sector issues) and a common realistic expenditure program; common monitoring arrangements; and more coordinated procedures for funding and procurement." (*World Health Organization, World Health Report 2000*).
- Another definition for SWAp is provided by Foster (2000:9) as: 'All significant funding for the sector supports a single sector policy and expenditure programme, under government leadership, adopting common approaches across the sector, and progressing towards Government procedures to disburse and account for all funds.'
- Traditionally, aid to developing countries has been provided in the form of self-contained projects, each funded by their own donor.
- In the 1990s this approach began to attract criticism for being donor-driven (i.e., reflecting donor rather than country priorities) and leading to fragmentation and duplication.
- It was recognized that many individual projects posed unrealistic demands on developing countries' limited economic and human resources.
- In response, the international community began to reform its methods of aid delivery and the Sector-Wide Approach (SWAp) emerged.
- Under the SWAp, project funds contribute directly to a sector-specific umbrella and are tied to a defined sector policy under a government authority.
- In essence, a SWAp calls for a partnership in which government and development agencies change their relationships (to clearer government leadership). They interact more together in the formulation of policy, and less on the details of its implementation.

- Key characteristics of the SWAp should include:
  - The partner government clearly leads and owns the programme; and
  - A common effort by external partners to support that programme, including provision of all or a major share of funding for the sector, in support of the government's unified policy and expenditure programme.
- Over time, some SWAps progress towards using government procedures for implementation and the disbursement of funds.
- In practice, most programmes are in the process of drawing in diverse channels of funding, making the coverage of the sector more comprehensive, bringing ongoing projects into line with sector priorities, developing common procedures and placing increased reliance on government for management. Where SWAps are appropriate, they can help to promote greater local involvement, accountability and capacity in partner countries.
- However, SWAps are not possible in all cases: certain preconditions in the macroeconomic, policy and institutional environment are necessary.

### **Key issues and challenges**

- First and foremost, a SWAp explicitly mandates the ministry of health with the leadership. However, this role has been partly problematic owing to limited leadership capacity (e.g. Rwanda), poor relationship with the ministry of finance (e.g. Mozambique), slow shift of ownership (e.g. Cambodia), change of senior management (e.g. Zambia), little ministry of health leverage to secure additional funds (e.g. the United Republic of Tanzania), and low priority of cross-sectoral collaboration.
- Second, a SWAp emphasizes strengthened health sector management through the development or adaptation of management tools, combined with strengthening of implementation capacity. For example, under SWAps greater attention is given to health sector planning, financial management, and improved health information systems. SWAps also tend to emphasize strengthening district level management capability within existing decentralization policies (e.g. Ghana, Uganda and the United Republic of Tanzania).
- Third, under a SWAp, recipient governments and donors only fund activities in the national health sector plan. Donor funds are pooled and earmarked for high priority activities, such as essential health package (e.g. Uganda, Tanzania). Importantly, pooled donor funding supports government budgets, giving a much needed boost to recurrent expenditures (1). Furthermore, donors are responsible for synchronizing their own planning, review and monitoring processes with government systems, and give long-term projections of aid pledges
- Fourth, monitoring and evaluation of the health sector become institutionalized under a SWAp. The “one voice” of donors has strengthened their position to create conditions. The once or twice yearly joint review meeting is an important instrument providing an open forum to review the progress and performance of the health sector. These large meetings are complemented by more frequent meetings with key development partners. The success of these processes depends mainly on the people involved and their experience, expertise and sensitivity to developing partnerships.

### **Global Economic Recession**

- The health sector in Africa is financed from a multiplicity of sources, both public and private. The public sources include; Government revenue, loans and grants,

insurance, donors financing; while the private sources include; user charges, private insurance and employer financed schemes.

- In most African countries, particularly in sub Saharan Africa, donor financing has constituted a huge part of health sector financing, particularly for key public health interventions for HIV/AIDS, Tuberculosis, Malaria, Immunizations etc
- Recession simply means decreased economic activity marked by reduced spending, decline in a country's GDP and a negative economic growth for two or more quarters.
- A full blown American recession began in early 2008, sending reverberation and shock waves around the world. The subsequent collapse of the economic industries has sent shock waves to other sectors including health sector.
- The onset of the global economic recession has posed a threat to health sector financing due to declining government revenue, reduced donor commitment in fulfilling donor obligations ( since donor countries are worst hit by the recession), low coverage rate of social health insurance etc The resultant charging of user fee will deny access to health care for the impoverished population who are also hit by unemployment/ employment loss, reduced remittance from relatives abroad etc; also caused by the recession
- Consequently, this may retard or even reverse the progress toward attainment of development goals e.g. millennium development goals {MDG), global polio eradication initiatives (GPEI), Roll Back Malaria (RBM) etC

## **Subject 2.2: Economic Evaluation in Health Care**

**Aim:** To update the skills of the participants on effective and sustainable and efficient methods identification alternatives in management of resources.

### **Objectives:**

- To introduce participants to the use and application of economic evaluations in PHC
- Enhance participants knowledge of cost analysis, cost effectiveness analysis, cost benefit analysis and cost utility analysis

**Learning outcomes:** After completing instruction in this subject (whether after a single classroom session or following a series of related classroom sessions), participants should be familiar with and able to use the following knowledge and skills.

- Know the basic application of economics in health care and PHC
- Understand the basic elements of different means of assessing health care effectiveness, including cost effectiveness analysis, cost benefit analysis, and cost utility analysis
- Be able to apply the different methods of economic analysis in managing scarce resources for PHC activities within the scope of their responsibilities

### **Topics:**

- T1. Introduction to the uses, methods and approaches of economic evaluation
- T2. Cost analysis in health care
- T3. Cost effectiveness analysis
- T4. Cost benefit analysis
- T5. Cost utility analysis

## **Economic Evaluation Topic 1: Introduction To The Uses And Applications Of Methods Of Economic Evaluation**

### **Objectives:**

- To help participants describe the methods of economic evaluation
- To describe how the three methods can be used in PHC programmes
- To help participants to understand the role of economic evaluation in PHC

**Definition:** Economic evaluation is the use of applied analytic methods to identify, measure, value and compare the cost and outcome of alternative interventions.

### **Why use Economic Evaluation methods?**

- Resources are scarce, but wants are unlimited
- Trade off must be made
- Opportunity cost is what you give up in order to gain something else

### **The objective of Economic Evaluation is**

- To facilitate the use of scarce resources to maximize health outcomes
- To give value to decision making
  - planning phase
    - choose between competing alternatives
    - determine whether the programme might provide value for money
    - inform efficient allocation of resource between programmes
  - evaluation phase
    - determine whether a programme provide good value
    - decide whether to continue, expand, reduce, or end a programme or health intervention to make best use of resource

### **Advantages of economic evaluation**

- forces the allocation and quantification of information
- organizes and systematizes information
- integrates the economic and epidemiologic aspects of intervention to provide understanding of trade offs
- emphasizes the scarcity of resources
- makes explicit the returns on the health interventions

### **Disadvantages of economic evaluation**

- requires the quantification of factors that may not be easily quantified
- can only incorporate a limited number of factors
- involves methodological challenges for rigorous application

### **Core principles of economic evaluation:**

- Assesses :
  - cost of intervention
  - outcome or benefit of an intervention
- Adopts a perspective to understand cost and benefit
  - Patient: Cost of not feeling well, medicine , consultation fees, transportation to clinic, duration of the visit, travel time to and from the clinic

- Employer: cost of lost productivity at work because of sick leave
- Health authority: cost of treating the patient
- Society: cost of all the above

### **Common application of economic evaluation in Public health**

- **Cost studies**
  - **Programme cost analysis**
    - Estimates the total cost of a programme
    - Reported as cost per patient, cost per service provided
    - Uses: Budgeting; Accountability ( program cost, efficiency)
    - Basis for a full economic evaluation
  - **Burden-of-disease analysis**
    - Is the cost of illness or infection
    - Estimates the total cost attributable to a disease/event: Direct (medical and non medical costs); Productivity losses
    - Reported as total annual cost, average cost per patient, cost per infection or episode
      - Can indicate the potential benefit of public health intervention
- **Cost-outcome studies**
  - **Cost effectiveness analysis**
    - Compares net cost of an intervention to net outcome achieved
    - Measures effectiveness in health outcome achieved;
      - E.g per cases of HIV infection averted, per case of pneumonia successfully treated
      - Allows comparison of interventions that achieve the same health outcome
      - Note: “cost effectiveness ≠cost savings”
  - **Cost-utility analysis**
    - Expresses measure as the number of life years saved or adjusted to account for loss of quality or disability
    - Allows comparison of different interventions
    - E.g. Provision PMTCT and polio vaccination
  - **Cost-benefit analysis**
    - Expresses all benefits, such as health outcomes and lives saved, in monetary terms
    - Allows comparison of disparate programmes with a wide range of health and non health outcomes E.g. VCT and secondary education

## Economic Evaluation Topic 2: Cost analysis

**Aim:** to improve Participants knowledge and understanding of cost analysis

### Objective:

- To list the various types of costs needed to be counted in calculating the cost of a programme
  - To identify the sources of cost data
  - Explain the importance of adjusting cost
  - Describe the ways of adjusting costs
- 
- **Definitions**
    - **Cost:** cost has been defined from various perspectives:
      - Financial cost: expenditures financial inflows and outflows, observed costs
      - Economic cost: true resource consumption and real cost
    - **Economic Cost analysis:** The systematic collection, categorization and analysis of costs associated with a disease or an intervention, and its outcome to inform decision making.
- 
- **Uses of cost analysis**
    - Accountability: To learn how available resources are being utilized
    - Assessing efficiency:
      - Are outputs appropriate, given the level of input?
      - Comparing interventions that are equally effective e.g number of HIV cases averted through VCT is equal to the cases averted through screening of blood products
    - Assessing priorities: Do spending levels reflect health priorities?
    - Projecting cost: What resources are needed to achieve public health objectives?
    - Assessing equity: To examine how health resources are distributed across the population (e.g. urban/rural expenditure per capita)
    - Establishing basis for full economic evaluation: In combination with effectiveness measure
- 
- **Steps in conducting a Cost analysis**
    - Frame the cost analysis:
      - Define the problem to be analyzed
      - There are six key items to identify: the problem, the audience, the perspective of the evaluation, the intervening option,, health outcome measure and lastly the time frame or analytic horizon
    - Conduct a cost inventory:
      - Ensure accurate and complete collection of relevant cost data
      - Develop a classification system that is relevant, recognizable, mutually exclusive, exhaustive
      - Decide what to include and what to exclude
    - Choose a costing method
      - Ingredient approach and micro-costing: using a cost inventory ( a list of all individual items to be included in costing)
      - Activity based costing: first make a list of all the activities that make up the intervention, then proceed with the ingredient approach

- Macro-costing: here the cost inventory is a list of budget categories or other large cost categories
  - Collect cost data
    - Primary data collection: medical records, accounting and payroll system, questionnaires, observational surveys
    - Published literature
    - Expert opinion
- NB: always determine which cost is considered (perspective): provider, public sector, employer, patient and family, society etc
- Adjust costs:
    - Adjustment are made to have comparable costs
    - Often related to changing values of cost over time
    - Adjustment methods
      - Inflation: an increase in price over time
      - time preference e.g. N1000 is preferred to N1000 next year
    - NB: discounting is important when you know the discounting rate
    - annuitization of costs: to evaluate the cost attributable to an intervention during a year

## Economic Evaluation Topic 3: Cost-Effectiveness Analysis

### Objectives:

- To help participants understand and describe the information needed to conduct cost-effectiveness analysis, CEA
- To describe the cost effectiveness ratio measures and
- To understand when to use cost-effectiveness ratios

### Cost-Effectiveness Analysis, CEA

- **What is CEA?**
  - Estimates the cost and outcomes of an intervention (discounted from present value)
  - Expresses outcomes in natural health units: infections averted, years of life saved
  - Derives a cost- effectiveness ratio:
    - Numerator: net cost (costs- any savings)
    - Denominator: unit of health outcomes
- **Why do a CEA:**
  - Inform decision makers: when resources, priorities must be set, choices must be made
  - To determine the efficient use of resources in terms of cost for a specific health outcome
  - To maximize the total aggregate health benefit conferred on a society
  - To determine if :
    - a program provides value for money spent
    - strategies within a programme provide more value for the money spent
    - a more expensive program is worth the additional cost

### Identifying and measuring outcomes

Programme	Intermediate measures	Final measures
Morbidity	Number of persons screened	Number of diseases cases
Mortality	Number of hospital re-admissions	Number of deaths
Disability	Number of assisted living days	Number of chronic disabilities

- **Cost effectiveness ratios (CER's)**
  - It is the Net cost divided by net health outcome
  - CER's provide information to decision makers
  - Give quantified cost and benefits, is the programme worthwhile?
  - Important because CEA is subjective, relative
- **Types of CER's**
  - Average cost-effectiveness ratio (ACER)
    - Used to evaluate the average cost per health outcome for a **single** disease programme
    - Used to allocate resources between **independent** programmes e.g Hepatitis vaccination Vs HIV testing
    - Not used to evaluate mutually exclusive (competing) strategies
  - Marginal cost effectiveness ratio (MCER)
    - Ratio of additional cost to outcomes obtained from one additional unit of an intervention
 
$$\frac{\text{Cost of strategy A}^+ - \text{Cost of strategy A}}{\text{Outcome of strategy A}^+ - \text{Outcome of strategy A}}$$

- Examine effects of scale (within a single program): To determine if cost per health outcome increase or decrease as the programme changes size?
- Incremental cost effectiveness ratio (ICER):
  - Ratio of additional costs outcomes obtained when one intervention is compared to the next most effective intervention
 
$$\frac{\text{Cost of strategy B} - \text{Cost of strategy A}}{\text{Outcome of strategy B} - \text{Outcome of strategy A}}$$
- Suitable for mutually exclusive intervention
  - Patient level: e.g BP monitoring
  - Global level e.g Targeted Vs universal HIV screening
- Suitable for allocation of resources

## Economic Evaluation Topic 4: Cost Benefit analysis, CBA

CBA puts a monetary value on both the cost of the programme and its output. This produces information that is more appealing to policy-makers, especially those concerned about assuring value for money.

- Expresses all benefits, such as health outcomes and lives saved, in monetary terms
- Allows comparison of disparate programs with a wide range of health and non-health outcomes:
  - Voluntary counseling and testing programme Vs secondary education
  - Provision of Antimalarials Vs building of houses
- However, the greatest problem with this approach is that it is very difficult to assign a monetary value to changes in a person's health e.g. should the value of someone's life in a developing country be worth less than the life of someone living in a developed country.
- There are currently two primary economic methods of measuring benefits within a CBA:
  - The cost of illness (COI) approach
  - The contingent valuation (CV) approach
- The COI approach involves the measurement of benefits by using two components.
  - Averting direct cost: which values the benefit of treating or preventing the disease by the change in the net cost of health care associated with its treatment
  - Aversion of indirect cost: which is the value of lost earnings attributable to that disease
- Limitations of COI:
  - Direct cost analyses generally ignore the fact that cost of care does not reflect the full benefit of care to the patient.
  - COI may inaccurately recommend that life-prolonging treatment should never be pursued, since allowing a patient to die is frequently the least expensive alternatives
  - Indirect cost are poor measure of a human being's value, especially of work that is not compensated (e.g. education, home-making, child rearing)
  - Assigning monetary values to a human being's life may lead to assumption that a wealthier individual's life has a greater value than a poor person's life.
- CV approach, on the other hand, allows the user of the service ( and in some cases the community as a whole) to indicate for themselves how they value a particular service by asking people's willingness to pay (WTP) to obtain that service (or, less commonly, their willingness to accept(WTA) the lack of the health service)
- Limitation of CV:
  - Philosophical challenges: desire of individual should not be the major determining factor in choosing to publicly subsidize a good or service
  - It's easy to say you would be willing to pay substantial sum to obtain a service, but when actually asked to pay that amount, many people will not
  - Logistical challenges: carrying out surveys of sufficient size may be too expensive and sophisticated

## **Economic Evaluation Topic 5: Cost - Utility Analysis (CUA)**

### **Objectives:**

- To describe cost utility analysis
- To explain how cost utility analysis relates to cost-effectiveness analysis
- Define quality-adjusted life years (QALYS) and disability-adjusted life years (DALYS)
- To explain how QALY's and DALY's are used in cost utility analysis

### **Cost utility analysis**

- A non-monetary measure
- It measures:
  - Benefits as expressed as the number of life years saved adjusted to count for the loss of quality from morbidity of the health outcome or side effects from the intervention
  - Cost per life years saved to account for the different levels of quality or disability e.g QALY gained

### **Cost-utility analysis (CUA) Vs Cost-effectiveness analysis (CEA)**

- Outcomes:
  - CEA measures cost related to a specific health-related outcome e.g cost per life years saved
  - CUA measures cost related to Quality-adjusted health outcome e.g cost per QALY saved
- Comparability:
  - CEA allows comparison of strategies that have the same health outcome
  - CUA allows comparison of strategies that may have different health outcome

### **QALYs: What are they?**

- Quality adjusted life years:
  - Life years adjusted for less than perfect quality of life
  - A year of life in a health state adjusted by the utility (quality of life) associated with that health state
  - Estimated using quality of life weights: Weight from 0 to 1, where 0 is the value associated with death, and 1 is the value associated with perfect health

### **Methods of calculating QALY**

- Time trade-off : Choose between living X years in less than optimal health or living fewer years in perfect health
- Standard gamble: choose between living in less than optimal health or taking a treatment that will give them perfect health (with probability, p) or death ( with probability 1-p)
- Ranking exercise: compare different health states with each other and with death
- Indirect elicitation of preferences: using data from a population sample to measure utilities associated with different combinations of conditions, ask people to classify health states according to conditions associated with them, and apply the utilities accordingly

- **NB:**
  - Methods to generate QALY should yield a continuum of different health states with utility weight from 0 to 1.
  - The utility weight of each health state expresses the fraction of a healthy year that is equivalent to a full year in the health state.
  - It's not safe to assume that QALY's from different studies can be used together
  - Sources of QALY weights include published studies, CUA databases, surveys with health utility instrument, or your own research
- **Advantages of QALY**
  - Estimated to reflect people's preferences
  - Often used in European and US CUA's
- **Disadvantages of QALY**
  - Often not comparable across countries
  - Not available for many conditions

### **DALYs: What are they?**

- Disability adjusted life years:
  - 1 DALY= 1 year of healthy life lost
  - Includes healthy life lost as a result of premature death and disability from different health outcomes
  - Estimated using disability weights: weight from 0 to 1, where 0 is health and 1 is death

### **DALY's: where do they come from?**

- Goal: to measure how disabled people are by a disease or condition
- DALY+ years lost from premature death + years lived with disability
- Years lived with disability= years X disability weight of the condition
- Disability weight are generated by a panel of experts who compare the value of condition of different amounts of time in different health states for different numbers of people
- Sources of disability weights: global burden of disease study , Dutch and Australian burden of disease studies
  - **Advantages of DALY's**
    - Readily available disability weight for many conditions
    - Endorsed by the United Nations and the World bank
    - Often used in CUA in developing countries
  - **Disadvantages of DALY's**
    - Not designed to reflect people's
    - May be misunderstood
  - **Limitations**
    - Discounting rates: social Vs Individual
    - Age weighting: young Vs adult individuals
    - Good Vs bad health : inequity
    - Gender inequality

**Example of a skills station for this topic**

- What do the following Cost effectiveness ratio terms mean?
  - Average cost effectiveness ratio (ACER)
  - Marginal cost Effectiveness (MCER)
  - Incremental cost effectiveness (ICE)
  
- Syphilis is a sexually transmitted infection (STI) which if not detected and treated early, in pregnancy, can result in the infection affecting the fetus. Thus the need for screening for syphilis very early in pregnancy for early treatment, if detected. The table below shows some screening strategies (A, B, C & D), the various yields of the screening strategies in addition to the cost of screening.
  - Complete the table below
  - Advice the Government which is about to adopt a new screening strategy, considering the cost implication

Strategies ranked in order of effectiveness	Cases per client	Cost per client	Additional cost per client(A)	Additional cost (savings) per client (B)	ICER (cost [savings] per case averted )(B/A)
Strategy A	0.031	N4.06	-	-	-
Strategy B	0.017	N7.51			
Strategy C	0.014	N7.27			
Strategy D	0.004	N9.29			

### **Subject 2.3: Effective Financial Management Systems in PHC**

**Aim:** To update the knowledge and skill of the participants on methods ensure probity and accountability in managing PHC funds.

**Objective:**

- To identify the major rules and regulations that govern financial activities in PHC
- To identify and define key financial management concepts
- To help participants use existing financial resources as effectively as possible
- To increase participants awareness of the types and uses of cost control and reduction
- To enhance participants' capacity to plan, prepare, analyze, and critique PHC financial activities

**Learning outcomes:** After completing instruction in this subject (whether after a single classroom session or following a series of related classroom sessions), participants should be familiar with and able to use the following knowledge and skills.

- Know the primary rules and regulations that govern financial activities in PHC
- Be able to incorporate the techniques in the expenditure process for PHC activities within the scope of their responsibilities
- Know the key elements of basic financial statements (budgets, income statements, balance sheets, cash flow statements)
- Know the basic techniques in financial management, including cost and revenue forecasts and tracking
- Be able to distinguish between and utilize different cost categories (e.g., fixed and variable costs, operating costs, overhead costs, direct and indirect expenses)
- Be able to distinguish between and utilize different income categories (e.g., current income, deferred income, programme income, donor sources, public income)
- Know the basic differences between cash and accrual accounting
- Be able to distinguish between and utilize different balance sheet categories (e.g., assets, liabilities, equity and retained income)
- Be able to track and allocate key financial items (e.g., tracking variable costs, calculating depreciation schedules for capital expenditures, tracking and allocating fixed costs within periods and over time)
- Calculate basic key figures from financial data (e.g., percentages, ratios, and trends), as well as calculate and summarize changes in key figures
- To be able to conduct basic budgeting for PHC activities within the scope of their responsibilities, including creating initial budgets and adjusting budgets over time
- Be able to prepare basic budgets and financial reports for relevant authorities (e.g. internal use, public agencies, donors)

**Topics:**

- T1. Fundamentals of financial management systems in PHC
- T2. Strategies for reducing and controlling costs in PHC
- T3. Budgeting and expenditure tracking in PHC

## Finance Topic 1: Fundamentals of Financial Management Systems In PHC

**Aim:** by the end of this session participants should be able to

- Understand the concepts and define key terms used in financial management
- Identify the various types of financial information needed in PHC

### Definition of terms:

- Accounting is concerned with collecting, analysing and communicating economic information.
- Finance: is concerned with the ways in which funds are raised and utilised.
- Management accounting: concerned with the provision and use of [accounting](#) information by managers within organizations
- Financial management:
  - Involves controlling, conserving, allocating, and investing the organization's resources, including personnel, equipment, supplies, and the non-monetary contributions of volunteers and donations.
  - It goes beyond the traditional accounting focus on recording and reporting of financial transactions, to focus on analysis and decision making

### Financial information

- Users of financial information:
  - The user can be divided into internal and external.
  - It includes: Owners, Donors, Analysts, Managers, Employees; Government Regulatory bodies; and Member of public.
- Qualities of financial information
  - Relevance: predictive value, confirmatory value, timeliness
  - Faithful representation: verifiable, neutral and complete
  - Understandable: to users who have a reasonable knowledge of economic activities and financial accounting
  - Comparability: (including consistency)
  - Constraints:
    - Materiality
    - Benefit and cost
- Elements of financial statement:
  - Balance sheet : measures and reports financial position ( Assets and Liabilities)
  - Statement of operations: measures and reports financial performance (Income and Expenses)
  - Statement of cash flow: measures and reports financial position (Movement between the opening and closing cash balance)
- Tools for comparing financial statement
  - Trend: comparing increase/ decrease between periods
  - Ratios: it relates one figure to other figure e.g. amount expended on health care/ Number of people accessing the facility

### Some Rules in accounting

- Going concern concept: assumes that the organisation will continue operation for foreseeable future.
- Accrual concept: matching revenue with expenses

- Consistency concept: consistent is better than precise
- Prudence concept: hold that the financial statement should err on the side of caution

**Instrument for the control of government funds:**

- Finance (control and management) act, 2004
- Financial regulations revised to 2008
- Public procurement act amended 2009
- Public service rule
- Allocation of revenue act, 1982
- Annual appropriation law
- Issuance of warrant before expenditure
- Establishment of anti corruption agencies

**Example of a skills station for this topic**

- Enumerate the various sources of government revenue in the federal Government of Nigeria
- Are the revenue sources of the state and the federal government the same? Please give reason(s) for your answer.

## Finance Topic 2: Strategies For Reducing and Controlling Costs In PHC

**Objectives:** at the end of this topic, participants should be able to

- To explain the concepts of cost control and cost reduction.
- Identify various elements of costs to be controlled.
- Discuss major techniques used in cost control and cost reduction
- Apply the techniques to various cost elements

### Definition of terms

- Cost is the value of goods purchased or services rendered.
- Control: restraint, authority, a check, command, regulation, etc.
- Reduce : to bring back, to restore to an old state, to bring into a new state, to put back into a normal condition or place, to change to another form, etc
- Reduction: act of reducing or state of being reduced, diminution, lowering of price, subjugation: changing of numbers or quantities from one denomination to another.
- Cost control or cost reduction is the executive regulation or actions to minimize cost of operations through the use of cost accounting. It is an integrated activity set up by management to minimize costs without reducing product quality or service delivery.

### Cost control and versus Cost reduction

- **Similarities:**
  - Focus on minimization of cost;
  - concern for efficient use of resources;
  - both require target setting
- **Differences:**
  - Cost control involves provision of guidelines to incur cost; authority for approvals, expenditure limits, administrative structure, and top management responsibility.
  - Cost reduction is the actual activities concerned in minimizing cost according to management policy or guidelines provided.

### Objectives of cost reduction and cost control

- To reduce service costs
- To reduce volume of expenditure
- To improve activities in other areas
- To meet competitive pressures
- To reduce wasteful spending.
- To improve productivity or efficiency.
- To comply with organizational objectives

### Process of cost reduction

- A clear definition of the organization structure.
- Properly defined power and authority.
- Functional budgetary control system.
- There must be a defined standards set.
- Defined procedures for purchasing.
- There should be monitoring system.
- There must be adequate tools.

- There must be budget discipline.
- Necessary staff must be put in place.
- Defined methods of investigation.
- Product / service reviews.
- Create awareness among staff.
- Analyze of competitive activities and cost structure.
- Classification of cost elements.
- Define the reporting system.

### **Techniques in cost reduction/control**

- **Accounting control:**
  - Quantitative measures of cost control. Figures and mathematical models or probabilities are used to interpret the effect of control on various activity levels. Thus:
    - Budgeting
    - Cost benefit analysis
    - Marginal costing and break- even Analysis.
    - Classification of costs.
    - Cost accumulation, apportionment, and absorption
- **Administrative control:**
  - This method relate to qualitative measures required for cost control.
  - It describes the basic things to do during cost control exercise. Thus:
    - Management policies, rules and regulations.
    - Planning
    - Identification of cost drivers
    - Classification of costs.
    - Inventory policy.
    - Pricing of products / services.
    - Purchasing / procurement system.
- **Planning as a control technique**
  - Define management policies.
  - Set administrative structures.
  - Define cost centers.
  - Preparation of job descriptions
  - Initiate awareness campaign
  - Identify principal budget factors.
  - Design relevant forms.
  - Set performance standards.
- **Identifying cost drivers**
  - Managers are to identify factors responsible for operation cost or service delivery to determine the best factor mix. Thus, operation or service cost may be driven by
  - Competition, government policies, cost structure, demand, technology, economic climate, market conditions, exchange rates, nature etc.
- **Classification of cost**
  - Costs may be classified into :
    - Controllable and uncontrollable
    - Fixed and variable costs.
    - Direct and indirect costs.
      - Direct cost: Materials, Purchases, resource utilization

- Indirect cost: plant and equipment, overhead ratios, allocation methods
  - Operation and overhead costs.
  - Capital and revenue costs
  - Production, selling, distribution, and administrative costs
- **Capital expenditure**
  - Adequate approval procedures, authorization acquisition and allocation.
  - Record keeping (use fixed assets register).
  - Good internal control system
- **Tools**
  - These are pieces of technical equipments used by staff for daily maintenance operations. the administrative controls :
  - Create separate tools store.
  - Assign reliable staff to the store.
  - Tools must be signed for.
  - Maintain register of tools
  - Insure maintenance store.
- **Material control**
  - Co-ordination of departments for buying, receiving/inspecting,
  - Storage/ issue of materials.
  - Centralization of purchasing and appointment of competent staff.
  - Planning and scheduling of material requirements.
  - Standardization materials specification should be encouraged.
  - Classification and coding of materials.
  - Form design for materials
  - Provide good storage facilities.
  - Set minimum and maximum stock reorder levels.
  - Set good internal control system
  - Feed back / feed forward
  - Apply Pareto 80/20, ABC, FIFO/ LIFO, weighted average etc.
  - Review alternative source of supply, substitutes, product life cycle, market structure, etc.
- **Perpetual inventory control**
  - Inventory records kept by the stock control department in respect of each stock. It is usually maintained in loose leaf or card showing :
  - Description of the material
  - Code number of components or parts
  - Location and unit of measurement
  - Quantity received and issued
  - Outstanding orders or appropriation
  - Balance in stock.
  - Stock taking and surprise checks
- **Measures to reduce stock:**
  - Determine stock levels using statistical methods.

- Compare stock or turnover with those of competitors
- Stop ordering for stagnant materials
- Relate stock movement with production schedule

**Pricing:** Wrong pricing/costing strategies or policies can make product prices to be too high.

Activities required are review of:

- Product state
- Analysis of market position
- The cost structure
- Management policy
- The marketing mix
- Competitive activities
- Government and other environmental factors.
- Operation/Product design or workflow

### **Investment appraisal**

- Payback period
- Return on capital invested
- The net present value
- Internal rate of return
- Weighted average cost of capital, etc.

### **Labour cost**

- Authentication of payroll.
- Ensure all staff have relevant employment papers
- Use clock cards or time sheets.
- Segregate payroll duties
- Use appropriate remuneration system
- Reduce idle time
- Introduce good incentive scheme

### **Budgeting as an accounting control**

- Compare current budget with actual performance.
- Note the variances and investigate them
- maintain budget discipline
- Ensure participation

### **Problems of cost control**

- Lack of commitment and management will to the right thing.
- Inadequate manpower for the job.
- Measurement of success cannot be determined easily.
- Assessment of improvement facilities in relation to output is difficult to make.

### **Example of a skills station for this topic**

The national TB manager has just been asked by the FMOH to review the budget from the National Center for TB to avoid a repeat of last year's crisis. Last year, the Center had budget

of \$300,000 but ran out of money before the year was over. As a result of the budget shortfall, the Center failed to pay for training activities, outreach activities and basic supplies. The accountant justified the budget crisis by saying that a lot of expenses came from paying bonuses and miscellaneous expenses which he did not explain. The TB manager did not believe the accountant's explanation because the budget level has stayed also stable, or decreased in the 3 years. In addition, the patient load has stayed also stable. This year, the TB manager wants to make sure that the situation does not repeat itself.

The hospital accountant has just prepared this years' budget for the TB program and wants you to review it before sending to the MOH. This year, the National Center for TB is going to receive money from 5 different donors to pay for drugs, equipment, and training workshop for TB doctors, supplies and supervision visits. All the donors have clearly spelled out how they want their money to be spent. The accountant is very concerned that if FMOH sees all the sources of funding, they might reduce the government contribution to the TB budget. However, he does not know how to proceed with this issue given that the donors have already told MOH how much money they are contributing to the program. Here is a draft budget for your review.

### Discussion questions

1. What are the key things that the national TB manager should pay attention to?
2. Based on this draft budget, identify 2-3 critical questions for the accountant.
3. What other places of information do you need in order to understand the appropriateness of this budget?

Line Item	Total Budget Required for Activities	Amount Committed from Donors					
		GTZ	European Union	WHO	Red Cross	USAID	Total
Travel for Supervision visits	\$100,000	\$0	\$0	\$10,000	\$0	\$30,000	\$40,000
Supplies	\$50,000	\$0	\$0	\$0	\$0	\$0	\$20,000
Communication	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Drugs	\$70,000	\$50,000	\$40,000	\$0	\$0	\$0	\$90,000
Microscopes	\$20,000	\$0	\$0	\$0	\$20,000	\$10,000	\$30,000
Salaries & Benefits	\$300,000	\$50,000	\$0	\$0	\$0	\$0	\$50,000
Training Workshops	\$80,000	\$0	\$0	\$10,000	\$0	\$10,000	\$20,000
Consultants	\$10,000	\$0	\$15,000	\$0	\$0	\$20,000	\$35,000
Miscellaneous	\$70,000	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$700,000</b>	<b>\$100,000</b>	<b>\$75,000</b>	<b>\$20,000</b>	<b>\$20,000</b>	<b>\$30,000</b>	<b>\$500,000</b>

## **Finance Topic 3: Budgeting and Expenditure Tracking**

### **Objectives: To**

- Enhance participants knowledge of the concept and practice of budgeting
- Identify and discuss areas of challenges in budgeting

### **Budgeting**

The main purpose of any management is to ensure that the resources of its organization are effectively and efficiently utilized for the accomplishment of the organizational goals and objectives. To carry out this purpose, detailed plans of action are prepared for the functions, activities and departments of an organization etc

### **Definitions:**

- The process of preparing these detailed plans of action is called budgetary planning.
- When monetary or financial values are attached to the developed plan of action, it becomes a budget

### **Tips in budget preparation**

- The budget and proposal copy must be mutually reinforcing. A reader should never be surprised by finding any line item in the budget not referred to in the narrative plan of operations.
- Budgets should be reasonable. ....
- Create a budget by analyzing the tasks needed to complete each activity.
- Avoid lump sum requests; be as detailed as possible.
- Allow for inflation.
- Follow the funding source guidelines. Do not hesitate to call a funding source with specific questions about allowable costs...
- Include In-kind contributions as a legitimate budget item.
- Don't forget Basic budget items: Personnel, fringe benefits, travel, equipment, materials, other facilities & administrative costs.

### **Communicating the budget**

- Managers should talk to all their staff and involve them
- What does the budget contain and why?
- What part does each stakeholder have to play?
- A need to inform the team on which way we should be heading

### **Budget Manual**

It is a document which sets out:

- The responsibilities of the persons engaged in budgeting and budgetary control
- The budgeting routine
- The forms and records required for budgeting and budget control.

### **Types of budget**

- Long-Range Budgets- e.g. capital budgets dealing with the acquisition of building and equipment normally cover several years
- Operating/Recurrent Budget- The annual operating budget may be divided into quarterly or monthly budgets.

- Continuous or Rolling Budget- this budget is usually a 12-month budget that rolls forward one month as the current month is completed.

### **Budgeting techniques**

- Static Budgeting
- Flexible Budgeting
- Incremental Budgeting
- Zero Based Budgeting

### **Purposes of a budgeting system**

- Planning
- Facilitating Communication and Coordination
- Allocating Resources
- Controlling Profit and Operations
- Evaluating Performance and Providing Incentives

### **Problems related to budgeting**

- Variances are due to changing circumstances
- Poor forecasting: managerial performance
- Well documented plan may inhibit flexibility
- Because of delays and lags in the budget planning process and approval, it may have little values as a guide to current operations.....
- During inflationary period, if there is no enough room for flexibility, the whole budget becomes meaningless.
- Budgetary Slack: Padding the Budget

### **International aspect of budgeting**

- Firms with international operations face special problems when preparing a budget. The likely problems are:
  - Fluctuations in foreign currency exchange rates.
  - High inflation rates in some foreign countries.
  - Differences in local economic conditions.

### **Dos and Don'ts of budgeting**

- Do involve the whole team in budget process
  - The more that people are involved, the more they are committed
- Do invest sufficient time to do it properly
  - Don't underestimate its importance
  - If budgets are too low, you will be trying to achieve the impossible
  - If budgets are too high, you will deprive other departments of valuable resources.....
- Do have a culture of continued review and revision
  - Revise budget in the light of what has actually happened
  - For example, reforecast every quarter
- Don't just add a percentage on last year's figures: Next year may not be the same!.. What will change?
- Don't build in slack: Budget on a realistic basis.

- Don't spend 'up to' budget: Is an expense still necessary? Is there an alternative, cheaper method?

**Issues in budgetary control**

- Responsibility accounting
- Flexible budget
- Controllable and non controllable items
- Significance of variance
- Setting control limit

**Example of a skills station for this topic**

**Sources of revenue:** There are various sources of revenue available to an organization. You are required to itemize and discuss any other independent sources of revenue open to your organization.

**Analysis of financial information**

Variable	2006 (million)	2007 (million)	2008 (million)	2009 (million)
No of People immunized	45	75	100	130
No of missed children	5	11	10	15
Outright rejection	1	2	2	3
Target Population	100	125	150	200

**Requirement**

1. Use the information in the table above to calculate:
  - a. Trend for all the variables
  - b. Ratio using target population as the denominator
2. Provide the likely reasons for your result in 1 above
3. Flexible budget

	BUDGET N	ACTUAL
Variable	3/unit	40,000
Fixed Cost	1/unit	9,000
OUTPUT	10,000 units	12,000 units

**Required**

- a. Prepare a flexible budget and obtain the variance based on the actual output.
- b. Give the likely reasons for the adverse variance obtained in the figure above

**4. Salary scale in public service**

	STEP						
GRADE	1	2	3	4	5	10	17
1	150	200	250	300	350	600	900
2	250	350	450	550	650	750	850
3	400	600	800	1000	1200	2200	3600
4	550	800	1050				
5	700	1000	1300				
10	2000	2600	3200				
17	5000	6200	7400				

**NB :**

To compute a step in a salary grade level, one can use this formula

$$B + (n - 1) i$$

Where B is the basic or starting salary

n is the required step and

i is the incremental late on the grade

Required: Fill in the missing figures

## **MODULE 3: LEADERSHIP AND MANAGEMENT**

### **Subjects**

Subject 3.1 Team Building

Subject 3.2 Effective Motivational Leadership

Subject 3.3 Human Resource Management.

Subject 3.4 Supportive Supervision in PHC

### **Subject 3.1: Team Building**

**Aim:** To outline the skills required to build effective teams

**Objectives:** To help PHC managers become effective team leaders and team members

**Learning outcomes:** After completing instruction in this subject (whether after a single classroom session or following a series of related classroom sessions), participants should be familiar with and able to use the following knowledge and skills.

- Know the importance of team work in PHC programme and activities
- Be able to use team work in solving PHC problems within the scope of participants' responsibilities
- Be able to create effective teams
- Be able to function as an effective team leader and/or team member

#### **Overview**

- **Benefits of Team Building**
  - Successful team building will
  - improve the way team members interact,
  - improve their ability to solve problems,
  - increased efficiency tends to boost morale and productivity,
  - Decrease stress, turnover and operating costs.
  
- **Characteristics of Team Building**
  - They operate with clearly defined goals and expectations.
  - Their leaders lead by example, not by virtue of job titles.
  - Their members are allowed a great deal of personal freedom to get the job done.
  - They make decisions in groups.
  - They share information.
  - They set high standards for themselves.
  - They are self-disciplined.
  - They acknowledge one another's contribution and support.
  
- **Team Building Requirements**
  - Before an effective team can be developed, the organizational environment itself must foster teamwork.
  - Accordingly an effective organization must:
    - Share a vision or sense of purpose that all its employees can articulate.
    - Develop a structure appropriate for the organizational environment (e.g., a structure that works for a bank may not work for a fire department).
    - Align employees so that everyone is going in the same direction

## **Subject 3.2: Effective Motivational Performance Leadership**

**Aim:** To help participants appreciate the critical role and importance of leadership in effective management and achievements of primary health objectives and goals, while providing knowledge and understanding of “what works” in leadership types and styles;

### **Objectives**

- To facilitate an overview of leadership capabilities.
- To encourage participants to redefine their leadership capabilities
- To enhance leadership for effective management of staff succession.
- To enable participants to share practical experiences using case illustrations.

**Learning outcomes:** After completing instruction in this subject (whether after a single classroom session or following a series of related classroom sessions), participants should be familiar with and able to use the following knowledge and skills.

- Know the basic principles and theories in motivational leadership
- Know how the how motivational performance leadership can inspire subordinates to work with sustained zeal and determination
- Be able to apply this principle to achieve effective human resource for PHC activities within the scope of their responsibilities
- To be able to work as both an effective leader and an effective follower in relevant contexts

### **Discussion points**

- Overview and review of leadership concept, types and styles.
- The role of leadership initiative in crisis management
- Leading performance for productivity
- Strategic leadership in health planning and management
- Communicating as a leader.
- Leadership and project management
- Leadership and motivational financial management.

### **Motivation**

- Welfare package allowances
- Training
- Conducive environment
- Good working relationship
- Empowerment
- Availability of good equipment and machines to use
- Productivity award

### **What is Leadership?**

- Leadership is a process by which you as a health professional influence others (medical staff, patients, community and stakeholders) to accomplish the required activities & steps.
- Leading should be motivating, coherent and cohesive.

### **The Health Professional as a leader**



### **To effectively plan and manage work & resources**

- Develop & share the vision
- Plan work
- Maximise resources
- Make decisions with the information you have
- Flexible enough to change direction

### **To lead people**

- Provide clear guidance
- Build a team
- Acknowledge your team mates
- Provide feedback
- Always set a good example

### **To guild future leaders**

- Hold people accountable, including yourself
- Delegate to individuals and teams
- Coach individuals and teams
- Encourages development and publicly reward high performance in staff members

Leading is not about what you can achieve on your own it is about inspiring your people to be the best then can be at what they do.

- Nurses
- Doctors
- Pharmacists
- Physiotherapists

### **Quality of a good leader**

- Vision, Courage, Exemplary character, Enthusiastic about their work and their people..
- People Skills, Confident, Knowledgeable, Respect.....
- Functions in an orderly and purposeful manner in situations of uncertainty.....
- Focused in spite of challenges, Committed to excellence etc

### **Leading your people to achieve the millennium development goals**

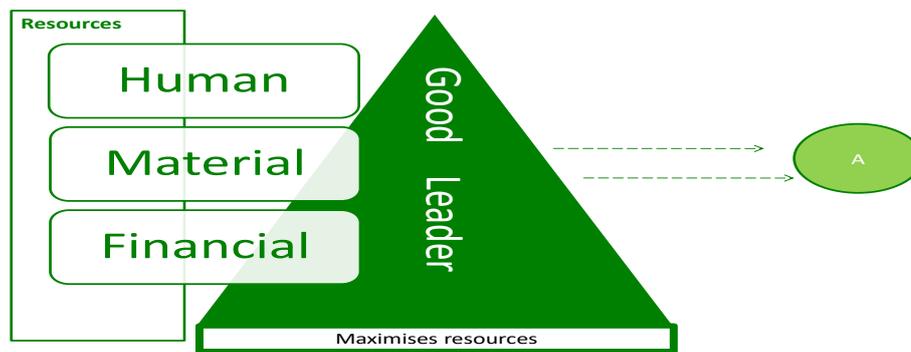
- Leaders do not command excellence, they build excellence.
- Excellence is "being all you can be" within the bounds of doing what is right for your organization.
- To reach excellence you must first be a leader of good character.

- You must do everything you are supposed to do.

### What the outcomes of effective leadership?

- Excellent results
- Motivated staff
- Build future leaders

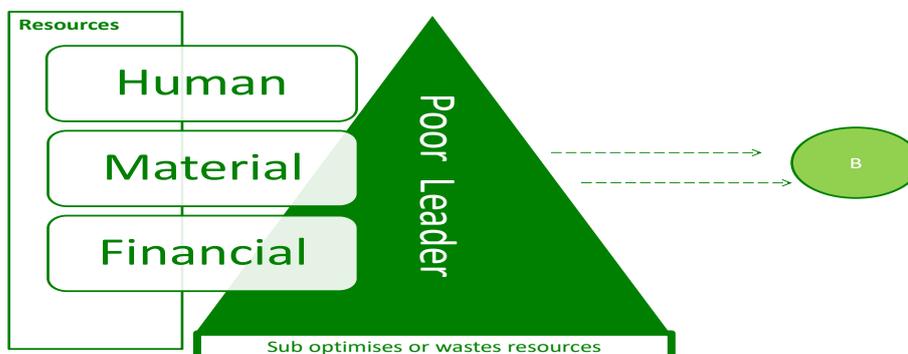
### Resource Management (effective leadership)



### What are the outcomes of ineffective leadership?

- Lack of vision, Poor time management, Limited resource management skills.....
- Inadequate communication skills, Not developing leaders, Poor delegation.....
- Poor coaching, Limited supervision, Bureaucratic bottlenecks .....

### Resource Management (ineffective leadership)



### Functional leader



## Leadership Roles

Leader role	Manager role	Facilitator role
<ul style="list-style-type: none"> <li>This is the best role if the task is setting direction for your members staff with the aim of helping them to see the bigger picture</li> </ul>	<ul style="list-style-type: none"> <li>This is best, when the task is setting limits on work, delegation, or defining deadlines.</li> </ul>	<ul style="list-style-type: none"> <li>This is best when the task is complex, requiring the assistance of a number of other people outside your staff base to complete</li> </ul>

## Performance Leadership

- Performance Leadership:
  - Is a systematic result oriented approach to management and leadership for high productivity.
  - This approach consolidates the fundamentals of management and leadership within the Public sector and then builds on staff existing abilities by increasing the effectiveness of their capabilities.
- Performance Leadership system
  - Organizational Capabilities (What is done?):-focused on the development of *core processes* that vital to the a performing Civil Service
  - People Development (How things are done?):-focused on *core competences*, attitudes that a vital to the performing Civil Service
  - Knowledge Development (How improvements are sustained?):-focused on *core business intelligence* e.g. knowledge sharing, innovations and continuous learning.



Performance Leadership System

## System Leader



- **Types of Leadership**

- Charismatic/Transformational Leadership.

- Contingency Leadership.
- System Leadership
  - Sustained improvement over time that moves an entire system, raising the average level of quality and performance while decreasing variation among units and engaging people.

- **The Philosophy (Leadership by Performance Expectations)**

- Leadership by PM is both a philosophy and a process
- Setting clear objectives impacts on performance
- Appropriate channeling talent and effort for productivity
- Effectiveness versus efficiency

## Effectiveness vs. Efficiency

Effectiveness	Efficiency
Doing the right thing (DRT).	Doing things right (DTR).
Annual appraisal evaluation. (APER)	Holding regular departmental/sectional meetings.
Delegating tasks	Support task process.

## Performance Leadership Communication: Benefits versus Resistance

Benefits	Resistance
To maintain focus.	Lack of time.
To build relationships and nurture talents.	Fear of causing morale problems.
Gather information for effective evaluation and decision making.	Not observed anything substantial to discuss about.
Measure gaps and allocate appropriate training.	Unsure of how to approach and guide the discussion.

### **Subject 3.3: Human Resource Management (HRM)**

**Aim:** To provide a platform for healthcare managers to understand human resource issues in health care management while increasing participants' understanding of the strategic human resource management (SHRM) framework.

#### **Objectives**

- To identify the critical roles and responsibilities in human resource management.
- To help participants understand the critical importance of performance management in human resource framework.
- To enhance participants' understanding in the effective implementation of the new SHRM framework.

**Learning outcomes:** After completing instruction in this subject (whether after a single classroom session or following a series of related classroom sessions), participants should be familiar with and able to use the following knowledge and skills.

- Know the basic strategies in HRM
- Be able to incorporate these strategies for effective management of HR for PHC activities within the scope of their responsibilities

#### **Topics**

- T1. Overview and implementation of strategies for HRM framework.
- T2. Talent management and succession planning
- T3. Recruitment and career progression
- T4. Fundamentals and toolkits for strategic negotiations
- T5. Staff motivation reward systems and sanctions
- T6. Performance evaluation and staff appraisal.
- T7. Overview of strategic human resources management concepts and principles

#### **Overview**

- Organization is an entity which comprises of human beings bounded by rules and aiming at the achievement of some goals.
- The most important element in an organization is the human beings.
- Human resource refers to the skills, knowledge, talents and creative energy of people within an organization.
- That the work force in an organization have necessary skills and knowledge is not a guarantee for high performance
- The resources must be managed to bring about desired level of performance.

#### **Definition**

- Human resource management could be defined as the coherent policies and practices that are put in place to manage people either individually or collectively in organizations.
- The overall aim is for the organization to attain success through people.

#### **Human Resource Function**

- Employee sourcing
- Training and development

- Reward system
- Performance appraisal
- Manpower planning
- Discipline
- Developing productive and harmonizing relationship
- **Employee Sourcing**
  - This comprises of recruitment, selection and placement.
  - Recruitment refers to attracting potentials candidates, and sensitizing them to apply.
    - Steps in recruitment
      - establishment of vacancy(ies)
      - job description
      - man specification
      - deciding on method of reaching out
- **Selection**
  - Screening or sifting of the best candidate for the job out of the pool of potential candidates.
  - Methods of selection are:
    - Interview
    - Test
    - Documentary evidence
    - Medical test.
- **Placement:** This refers to assigning appropriate duty to the selected candidate and conducting induction to acquaint him with organization.
- **Training and Development**
  - Ensuring that the gap between expected and actual level of performance is closed.
  - Finding out training needs and ensuring that appropriate programs are attended to provide necessary skills and knowledge
  - Ensuring staff growth along career path
  - Making succession plans.
- **Reward System**
  - Salary plans and administration starts from human resource section.
  - Determining the relative worth of each job and appropriate remuneration.
  - Ensuring equal pay for equal work.
  - Also determining necessary allowances and benefits to the staff.
- **Performance Appraisal**
  - Having a good system of evaluating individuals on team of workers.
  - Ascertaining that the performance rather than the individual is being assessed.
  - Set targets and benchmark with actual performance.
  - State standard to ensure objectivity.
- **Manpower Planning**
  - Conduct staff audit from time to time to ensure no wastage and no shortage.

- Check that the staff have the right skills and knowledge
- It involve conducting job analysis
- The skills required for each job
- The right number of people are found in the various job sections
  
- **Effective Communication**
  - In the Public service our product is service to the public.
  - Hence we need the skill for effective communication.
  - We produce ideas, information, policies, etc.
  - However it is pertinent to note that the service has its style and language of communication.
  
- **Human Resource (HR) Data management system using Information Communication Technology (ICT)**
  - The HR unit of every organization generates a lot of data especially on personal records of staff.
  - HR practice is not left out of application of ICT to their work.
  - The computer serves as an instrument for processing and storing of records.
  - Some organizations are already practicing paperless office.
  
- **Discipline**
  - Having rules and regulation guiding work and its procedure and ensuring compliance
  - There should be attached punishment to the rules for non-compliance.
  - It requires fairness to all. This is very important for every organization.
  
- **Developing Productive and Harmonious Relationship**
  - In any organization these two groups must coexist harmoniously to excel. That is the employer or the management and employees or their union.
  - Prevent unfair labor practices.
  - Develop and promote effective communication to avert strikes and lockout
  
- **Ensure Judicious use of Personnel:** The organization should have human resource policies in these areas:
  - Performance management
  - Staff training and development
  - Staff welfare
  - Good conditions of service
  - Health and safety
  - Discipline.
  
- **Importance of Human Resource Management**
  - Effective and efficient use of resources.
  - Ensuring that each person employed is qualified.
  - The growth of organization through the growth of individual.
  - Compete effectively with others in the industry.
  - Ensures job satisfaction
  - Leads to high performance.
  - Reduce absenteeism and turnover.
  - Human being the most dynamic asset of an organization

- Promotes team work and team spirit among employees.

- **Challenges of HR**

- No two individuals behave alike.
- Human being cannot be treated like machine.
- Human beings are insatiable, so difficult to please.
- Even when some individuals want to perform on the job they are met with obstacles.
- Every line manager or operational manager is a potential HRM, however not everyone has that understanding, thus leading to lack of cooperation.
- Improvement of organization through the workforce.

- **Gender and HRM Practice**

- Gender refers to male and female. These are the only sexes.
- Statistics have demonstrated that one sex is usually more represented in organization. This is not to campaign for the employment of one but to explain that each sex be given equal opportunity. There should be no discrimination on the basis of sex.
- All vacancies should be made open for the two sexes. This will make for equal participation of all. Even in our policy formulation there should not be any form of discrimination. The policies must be strictly adhered to.

- **Conclusion**

- Human resource management is a very important aspect of the administration of an organization.
- It deals with effective utilization of human resource.
- The human resource of an organization is the most valuable asset.
- If properly managed can take the organization to greater height.

### **Subject 3.4: Supportive Supervision in PHC**

**Aim:** To develop the supervisory skills of middle level managers in relation to PHC service delivery

#### **Objectives**

- To promote and inculcate the spirit of supportive supervision as part of human resource management in PHC
- To describe the various supervisory styles and tools used in PHC

**Learning outcomes:** After completing instruction in this subject (whether after a single classroom session or following a series of related classroom sessions), participants should be familiar with and able to use the following knowledge and skills.

- Know the techniques of supervision known as supportive supervision
- To appreciate the role of supportive supervision in motivating frontline PHC workers
- Be able to incorporate this technique in supervising PHC activities within the scope of their responsibilities.

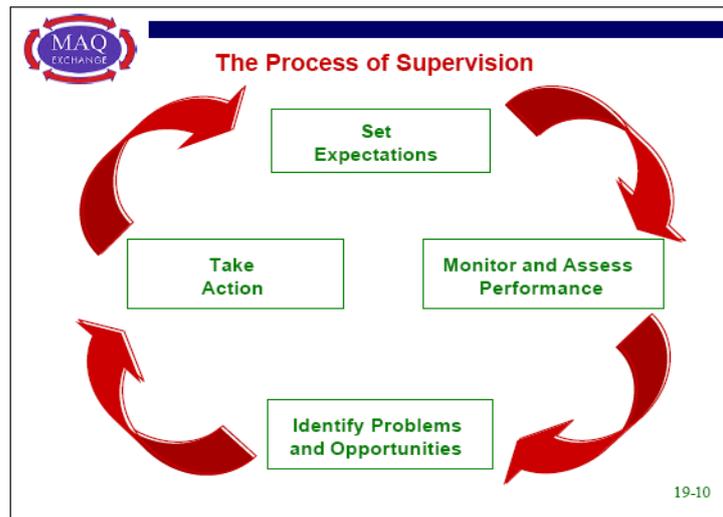
#### **Topics:**

- T1. Introduction
- T2. Supervisory styles/methods
- T3. Supportive supervision in primary health care

## Supportive Supervision Topic 1: Introduction

### What does supervision mean?

- Supervision is a process of keeping surveillance over the assigned.
- Supervision thus, is an aspect of implementation process of a program or an activity. The implementation process itself entails – appropriate organizational structure and staff mix, presence of an effective leadership with supervisory activities and a set standard for evaluation and control.
- Supervision reinforces quality outcomes at all levels by focusing on provider motivation and improvement of efficiency of the whole organization.
- It focuses on tasks performances while the duo of monitoring and evaluation on the other hand target activities and set objectives respectively.
- All three, supervision, monitoring and evaluation are interrelated as to are geared towards improving quality in the health care system.
- Careful and regular supervision is increasingly identified as a factor which impacts profoundly on quality of service delivery, while the supervisors play a vital role in keeping staff / health facility in touch with policy developments, treatment protocols etc, field and service delivery realities are transferred back from the staff through the supervisors to help guide and inform on policies.
- Without supervision, staff easily feels unappreciated and insecure which in turn leads to disenchantment with and resistance to the transformation process in the health sector.
- It has therefore been recognized that supervision is a critical part of human resource management for the delivery of basic health services and stands as one of the key approaches to improving the quality of health care and the performance of health care providers especially given the labour intensive nature of health service delivery.
- **Key functions and tasks of supervision**  
Supervision in health professions consists of three (3) basic functions that include:
  - **Management**
  - **Education**
  - **Support**
- All three are geared towards provider and patient/client safety and the promotion of professional development of the health care worker.
- Further dissection of these broad functions is as shown below
  - Plan and coordinate supervision activities
  - Set performance objectives, manage conflict, deploy staff, develop work teams and improve staff motivation
  - Assess skills, provide guidance and training Interpret, use and share data/ information
  - Manage supplies and equipments
  - Identify and solve problem
  - Communicate effectively and provide constructive feedback
- The four (4) basic tasks of supervision are encompassed in the functions described above. The circular description of these tasks emphasizes the ongoing nature of the process of supervision as seen in the figure below



This slide presents a generic process for supervision, that can be used regardless of the programming framework or methodology that is being used overall.

- Set Expectations- existence of clear expectations or standards against which performance and results can be measured
- Monitor and assess performance – once the guidelines / standards are set , the task of gauging the extent to which they are met becomes an ongoing activity
- Identify problems and opportunities- where there are gaps between expectation and results, the supervisor facilitates a team process for examining potential causes and possible solutions
- Take action- supervisor helps marshal resources , motivates and supports providers to implement intervention and activities to address performance gaps or opportunities for improvement

## Supportive Supervision Topic 2: Supervisory Styles/Methods

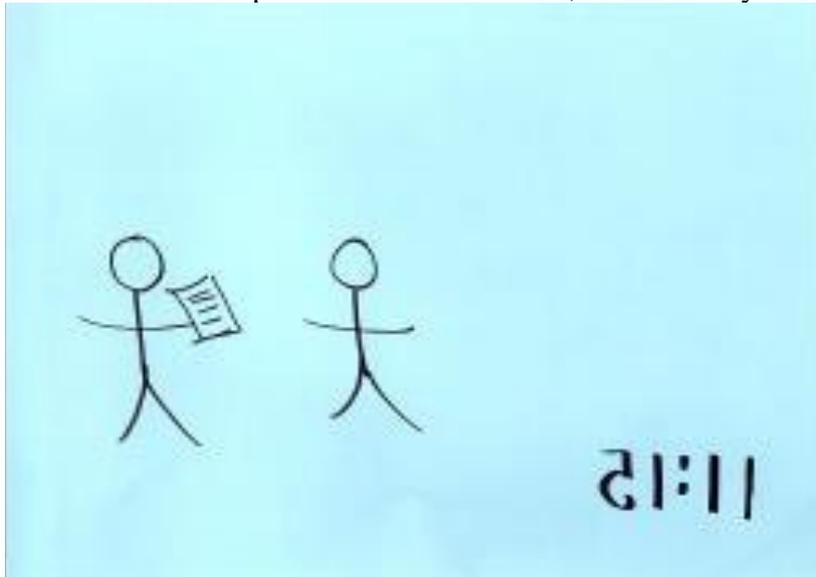
- Traditional/ typical supervision
- Supportive supervision

### Traditional/ Typical Supervision

- This style of supervision is best illustrated as below:



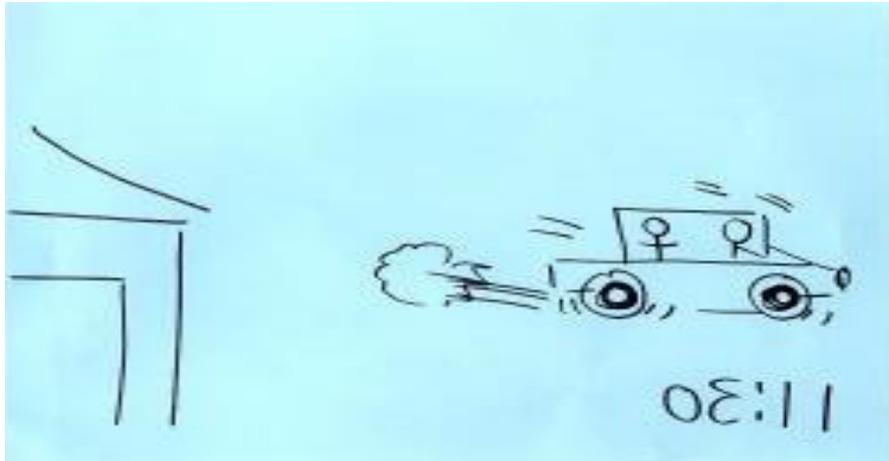
- .....supervisor arrives at health facility, usually unannounced or communicates with in-charge when decision to supervise is taken which is, when already on his way.



- .....few minutes, hurriedly walks through the health facility, sometimes may ask to see reports/ registers.



- .....may mention findings to in- charge, no solutions proffered, rather tells staff to take note or in-charge to prevent further recurrence, signs visitors' book.



- .....zooms off with a promise of revisit, time not known. LOOKS FAMILIAR?!!
  - It looks / feels like an inspection rather than facilitation
  - Visits are often stand alone, rarely reference is made to previous or future visits
  - Focus is mostly on fault finding / blame apportioning to individuals rather than faults in the process.
  - Resources for supervisory activity , such as transportation ,are frequently unavailable ,resulting in infrequent and episodic visits
  - Problem solving is episodic and reactive most instances, supervisors lack authority to take action such as help solve a problem, reward good performance and sanction poor performance. This limits their credibility with supervisee
  - supervision often centers around the visit, with the supervisor as the key actor
  - it is not goal and result oriented thus has been adjudged as highly ineffective supervision style

## Supportive Supervision Topic 3: Supportive Supervision in PHC

### What is Supportive Supervision?

- It refers to a range of measures to ensure that personnel carry out their activities effectively through direct, personal contact on a regular basis to guide, support and assist designated staff to become competent and to meet expected standards in their work. It expands the scope of supervision methods by incorporating self assessment and peer assessment as well as community input.
- It represents a major change from traditional approaches to supervision.
- it is not an inspection, rather a process of facilitating staff to become competent in their designated tasks
- An approach that is non punitive, sets out to identify gaps and competence to be corrected or used/ praised
- does not focus on specific area but a wide range of activities
- Use of multidisciplinary teams to conduct supervision
- Use of tools and guidelines to conduct a structured visit
- Additional training for supervisor

### Comparison between Traditional and Supportive supervision

Action	Traditional supervision	Supportive supervision
Who performs supervision	External supervisors designated by the service delivery organization	External supervisors designated by the service delivery organization; staff from other facilities; colleagues from the same facility (internal supervision); community health committees; staff themselves through self-assessment
When supervision happens	During periodic visits by external supervisors	Continuously: during routine work; team meetings; and visits by external supervisors
What happens during supervision encounters	Inspection of facility; review of records and supplies; supervisor makes most of the decisions; reactive problem-solving by supervisor; little feedback or discussion of supervisor observations	Observation of performance and comparison to standards; provision of corrective and supportive feedback on performance; discussion with clients; provision of technical updates or guidelines; onsite training; use of data and client input to identify opportunities for improvement; joint problem-solving; follow-up on previously identified problems
Activity after supervision encounters	No or irregular follow-up	Actions and decisions recorded; ongoing monitoring of weak areas and improvements; follow-up on prior visits and problems

### The Purpose of Supportive Supervision

- Many approaches have been proposed to improve the quality of health services (for example, quality assurance), the supportive supervision approach improves services by focusing on meeting staff needs for management support, logistics and training and

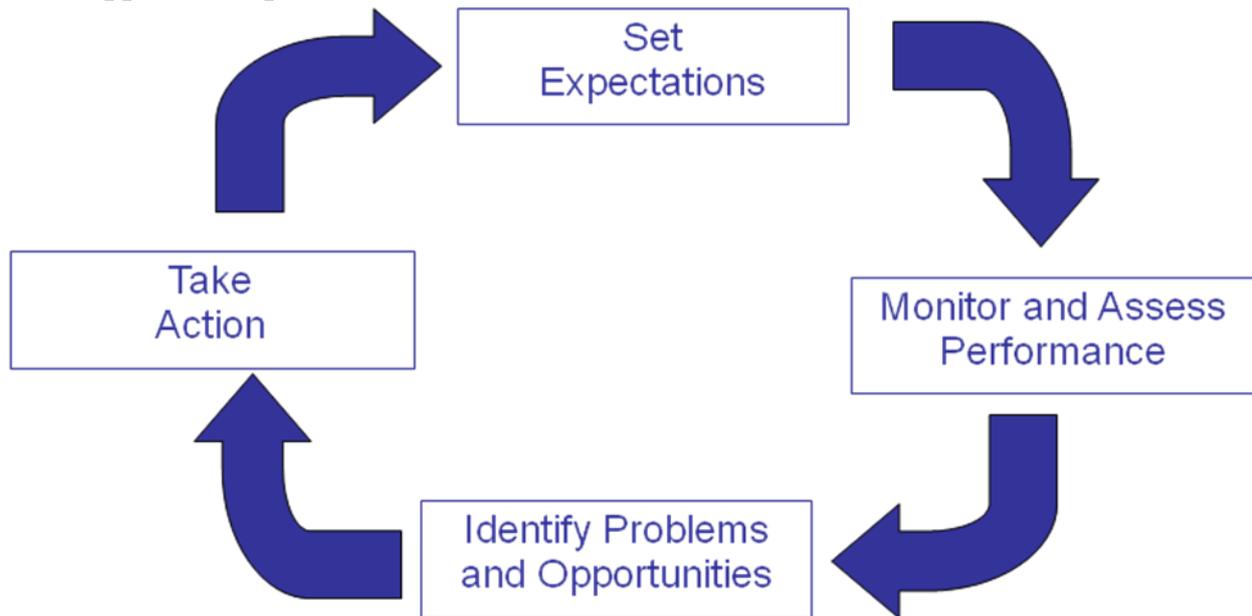
continuing education .Using short checklists enables supervisors to provide guidance on the technical aspect of the services, which combined with a client – centered outlook, results in high-quality primary health care.

- Overall, supportive supervision sets out to do the following:
  - Make sure set objectives are appropriate
  - Make sure staff adjust to difficulties encountered on the job
  - Help develop staff motivation
  - Help staff to improve performance
  - Promote efficient, effective and equitable health care

### **Components of Supportive Supervision**

- The approach of supportive supervision requires the following to allow for success Documented and well known standards of expected performance which help to serve as baseline against which actual performance is measured.
- The standard for core determinants for performance such as knowledge, attitude and skills of providers and other mostly neglected ones such as work environment, support system and necessary tools to carry out tasks need to be clearly stated.
- New thinking about who does supervision and how and when it occurs. A key concept in supportive supervision is that it is implemented by multiple parties and at different levels including officially designated supervisors, informal supervisors, peers and health care providers they.
- Expanding the notion of who supervises has directly impacted on when and where supervision occurs.
- Motivation on the part of supervisors and staff alike to adopt new behaviors. This includes mutual respect during meetings to promote cooperation, treating problems as ‘our problem’ rather than supervisors assuming an accusing stand.
- Use of locally appropriate and tested tools. These help to ensure all key areas are covered and findings are documented. It also helps to confirm that standards are met.
- Supportive supervision requires time and investment to establish and take root.
- The commitment of top management and some decentralized decision –making authority
- Integration into existing human resource management systems rather than creation of a parallel system to ‘work around’ problems.

### The process of Supportive Supervision



- It encompasses the key functions/ tasks of supervision as stated above. It is an ongoing, continuously occurring performance which involves:
  - Stating objectives
  - Preparing guidelines and tools
  - Conducting frequent and regular planned visits
  - Carrying out a performance appraisal and reviewing against stated objectives
  - Recognizing gaps and opportunities
  - Solving problems using systemically analyzed performance issues and providing on the job training when required
  - Giving a two way and timely feedback in clear and specific areas

### The 3 Levels of Supportive Supervision

- External supervision- the supervisor is designated from outside the health facility/ office usually from a higher level in the system, carries out site visits at scheduled periods.

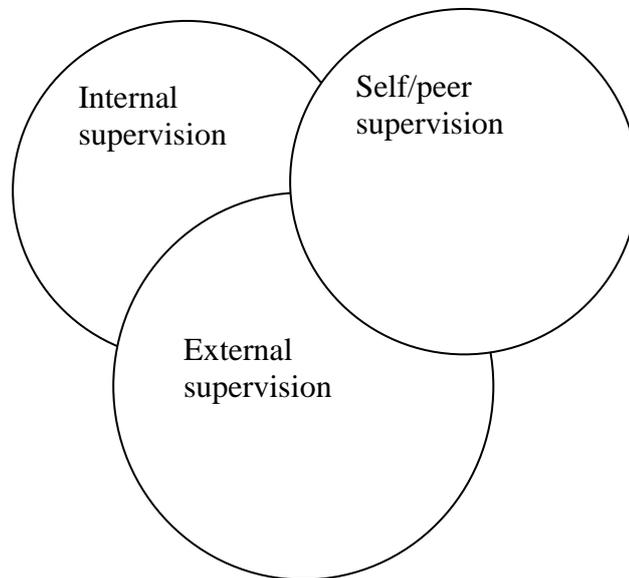
## Stages of Supervision

s/no	Stages	Activities	Objectives
1	Stage one	Preparation for supervision	Study available documented standards; Identify priorities Prepare supervision schedule
2	Stage two	Supervision proper	Establish contacts Review objectives and targets Observe workers as they perform tasks Identify gaps Report to health team/ committee
3	Stage three	Follow up on supervision	Clarify objectives and targets Joint organization of training programmes if needed Effect changes where necessary Prepare and circulate supervision report

### Expected Competence of a Supervisor

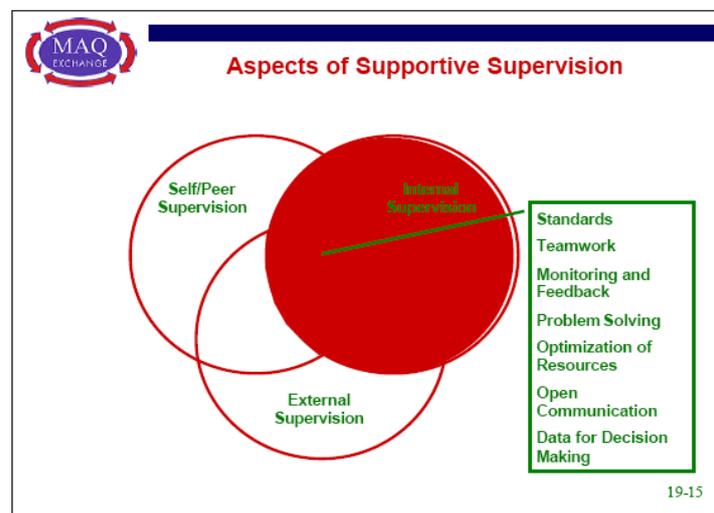
- **Leadership:** A competent supervisor is trained (including people and technical competence) and able to develop a leadership style that will allow staff to grow and develop while getting things done. Able to delegate authority. The supervisor facilitates decision making and problem solving.
- **Communication:** He seeks to understand and be understood, understands the goals, objectives and mission of the system/ organization and communicates same to staff. He creates a welcoming environment where 2- way communication exists.
- **Coaching and empowerment:** Shares knowledge with staff gives honest recognition of good work and gives credit for ideas/ contributions in front of others. Capable of identifying training needs, promotional potential as well as disciplinary needs in staff
- **Motivating and interpersonal skills:** Treats staff with respect and promotes participative work environment. Welcomes ideas/ suggestions and put them to practice.
- **Internal supervision:** a process in a particular facility or department to oversee performance of individuals and the quality of service delivery. An internal structure for on-going supervision is created and should encompasses , broadly:
  - Clinical services:
    - guidelines and protocols should be put in place
    - periodic checks to be sure these are being observed
    - often done through peer discussion groups
  - Management activities:
    - assessing resource management
    - monitoring particular services through the information system
- **Self- and / or peer supervision** - a process by which individuals monitor and improve their own skills and performances and that of their colleagues. Clear performance expectations are set.
- **Post consultation self assessment forms** are valuable. Monitoring and quality improvement becomes a routine part of health workers' jobs.

- It is not a stand alone process as external supervisors serve as facilitators by leading planning and problem solving.
- These are usually organized by in-charge or other health workers themselves.



- Standards
- Teamwork
- Monitoring and feedback
- Problem solving
- Optimization of resources
- Open communication
- Data for decision making

These 3 levels / mechanisms of supervision are simultaneous, complementary and overlapping.



Supervision can and should occur in several ways. Individuals and teams should supervise themselves and each other, as peers. The most experienced individual within a team or facility should provide continuous technical support, shown here as internal supervision. And external supervision by one individual or team should support health

**The ‘Ten Commandments of Supportive Supervision’**

- Thou shalt involve all team members in planning the process
- Thou shalt communicate plans with all concerned

- Thou shalt allocate role/ assign responsibilities
- Thou shalt always link supervision with work
- Thou shalt provide for feedback
- Thou shalt play a supportive supervisory role , not a punitive role
- Thou shalt make on-the-job training an integral part of your supervisory role
- Thou shalt be in touch with programme focal persons on regular basis
- Thou shalt listen
- Thou shalt be firm and fair and share mutual respect with supervisees

## **Tools used in supportive supervision**

- **Structured Checklist**

- A checklist is a tool applied during supportive supervision.
- It is a succinct choice of essential elements drawn from each program or function.
- The list contains key observable features signifying that the most important resources and activities are in place.
- Examples include: is the vaccine refrigerator operating? Are the vaccines appropriately stored in it? Are HIV rapid tests kits adequate in stock? Is service statistics report completed on time?
- Why do you need a checklist?
- Checklists help organize the work of supervisors to make it regular and reliable.
- Supervisees find this objective process motivating , because it helps them identify and address the highest priority problems by focusing on the critical inputs and processes required to deliver the essential PHC services .
- They know what is expected of them and when they have met those expectations.
- By jointly reviewing a checklist, a supervisor and staff member follow a systematic process that structures supervision.
- Both can feel assured that if all features of a checklist are in place, the function or program is performing up to expected standards.
- Alternatively, missing elements require attention and serve to highlight gaps.
- Thus supportive supervision using checklists allows both supervisor and staff to see the full integrated set of services that happen at the facility.
- This approach is more reflective of client needs and of the way providers must work in the many situations where specialization is not an option.
- How do you develop a supervisory checklist?
- Like a series of indicators processes (providing a given service) , to outputs (how many people access or use the service), to outcomes (the benefits of the service provided) , to impact (the overall effect on wellbeing). , the supervisory checklist should evolve from measuring inputs (things you need to do the activity) to

- **Self assessment guidelines**

- Self assessment guidelines encourage staff to review how they perform daily tasks and serve as a catalyst for analyzing the problems they identify.
- The guides contain key questions based on international clinical and service standards.
- They also highlight client – provider interactions and other client concerns.

- **Written report of the supervision encounter**
  - This is a written summary of the supervisory encounter, based on an agreed format, it extracts the key findings both of progress and of problems for the attention of higher level management.
  - The written report serves as an assured mechanism of information sharing with higher level functionaries.
  
- **Feedback**
  - This refers to the act of giving information to a person about his or her performance, related to a task or a behavior. It is best done as a **SPECIFIC, TIMELY COMMUNICATION** of information about performance following a supervision encounter.
  - The feedback message/ information should:
    - Describe **BEHAVIOUR** i.e what the person did. Clear and specific statements, non-judgemental, based on positive intent and directed towards behavior that the receiver can do something about
    - Describe **IMPACT** i.e. how the supervisor and/ others reacted to the action / behavior .
    - **CONSEQUENCES** : describes what may happen in the future as a result of the action/ behavior
  
- **Forms of feedback**
  - On-going feedback : done on an on-going basis , it refers to agreements made in work plan conversations and on data collected during monitoring
  - Corrective feedback : provided when performance does not meet expectations , it focuses on gaps between expected and observed performance
  - Positive feedback: when performance meets or even exceeds expectations. Most effective and motivating when it is not combined with corrective feedback

### **Challenges to the supportive Supervision approach**

- Lack of a Comprehensive and clear policy on supervision.
- The conduct of supervision is often left to the initiative of different program managers who often relegate tasks to spare moments.
- Resistance to change
- Requires time and investment to establish
- Lack of locally appropriate and tested tools
- Lack of commitment from top management

### **Conclusion**

- Supportive Supervision using a checklist or workers' performance guidelines that can easily be modified/ updated is a real contribution to realizing the Primary Health Care principles embodied in the Alma Ata Declaration.
- Reports as well as a 2- way feedback guides management of resources as well as service provision and quality care.
- Full participation at all levels is central to the philosophy of supportive supervision.
- Ultimately a more competent and satisfied staff providing improved health care for all will be the result.

## Recommendations

- There is need to have a written policy on supervision so as to guarantee an improvement in the PHC.
- Key elements of a supervision policy include:
  - Appointment of a generalist supervisor to oversee each facility.
  - Facility staff should know the Person to whom they are accountable to and who carries their concerns to higher levels.
  - Adequate time must be formally allocated for preparation, travel, visits, report writing and follow up activities.
  - Regular scheduled visit, reliably fixed to enable staff plan and interact with supervisor during visits. This allows for full discussion and educational activities.
  - Reliable transport either dedicated or through allocation of other vehicles in accordance with supervisory schedule.
  - A written report of supervisor's findings and actions taken, both for progress and problems to inform higher level management.
  - Clear authority and responsibility given to designated supervisor by the policy as well as resources to carry out the supervision role which includes making decisions to implement changes in management and design of services.
  - Authority also given to mobilize support to address high-priority problems, this enables rapid response to problem and avoids bureaucratic delays.
  - Change can be daunting and threatening, but it is an important ingredient in improving PHC.
- Supportive supervision requires motivation and behavior change on the part of supervisors and staff alike.
- Supervisors themselves must be convinced of the need for and value of the supportive supervision approach. They are the catalysts and models for a sustained change.
- Supervisors need to use strategies to overcome resistance to change and in turn adapt the work environment to reinforce the change. They in turn need support and positive reinforcement from various angles such as community organizations and professional associations, to sustain supportive supervision.
- Supportive supervision should receive resources (both time and investment) to develop staff capacity to implement it.
- External supervisors should engage in more facilitative and team based activities while health providers themselves regularly perform self and peer supervision. This aims to develop supervisor's skills, orient staff to its tools and methods upgrade the technical/ clinical skills a supervisor.
- Locally appropriate and tested tools should be provided for the supervision encounter. Preparing it may involve stakeholders and it is based on defined standards of practice.
- Top management must be committed to sustain the approach of supportive supervision
- Senior managers must be visibly involved and support the approach of supportive supervision
- Supportive supervision should be integrated into existing human resource management system rather than as an isolated intervention / parallel system, should work with the current system for sustainability Documentation of impact of supportive supervision and its cost will help to provide a stronger case for advocacy for the expansion of the approach.

### **Example of a skills station for this topic**

- Is there any link between supervision to program performance? Ask participants to break into 3 groups. Following a brief discussion let them generate ideas and present in plenary
- Give participants pieces of cards and each should itemize
  - in a logical sequence various steps involved in supportive supervision. Select about 6 persons to read what they have written
  - Merits and de merits of the different styles of supervision
  - Importance of feedback and report in supervision process
  - Qualities of a good supervisor
  - Describe clearly the relationship between supervision , monitoring and evaluation
  - Ask participants to compare between traditional and supportive supervision based on the following headings: who does supervision, when does supervision occur, what happens during supervision encounter and what happens after the supervision encounter

## **MODULE 4: COMMUNICATION, DECISION MAKING, ADVOCACY, AND PARTNERSHIP**

### **Subjects**

- 4.1 Communication skills
- 4.2 Decision making
- 4.3 Advocacy and Negotiation
- 4.4 Partnership Development

## **Subject 4.1: Communication Skills**

**Aim:** To strengthen the communication skills of PHC managers

### **Objectives**

- To provide a general overview of communication within the context of PHC and the role of health managers in communication
- To equip health managers with basic communication skills for the provision of effective health services
- To prepare health managers to address the communication needs in the PHC setting

**Learning outcomes:** After completing instruction in this subject (whether after a single classroom session or following a series of related classroom sessions), participants should be familiar with and able to use the following knowledge and skills.

- Understand the importance communication skills for PHC managers
- Describe the role of the health manager in different elements of communications (e.g., written communication, public speaking, presentations, public relations)
- Identify target audiences and understand their key characteristics
- Utilize the basic elements of communication activities within PHC
- Adapt communication techniques depending on the characteristics of a target audience
- Plan communication interventions in PHC
- Integrate communication components within PHC plans.

### **Topics**

- T1. Introduction
- T2. Communications to change behavior
- T3. Communications models for health
- T4. Role of the PHC manager in communications
- T5. Planning communication interventions
- T6. Communications in support of PHC service delivery
- T7. Presentation techniques
- T8. Public relations and customer relationship management

## **Communications Topic 1: Introduction**

Communication is ordinarily a simple phenomenon, but fast becoming a complex subject of technology. It can refer to several things. In popular usage, it is the transmission of messages from one source to another.

### **Aims of communication**

- To establish and disseminate the goals of a policy
- To propagate the plans for the achievement of set goals
- To effectively coordinate resources, human and material
- To create a conducive climate for interaction, collaboration and cooperation
- To place a group in a position to relate smoothly with the external public

### **Effective communication**

- The purpose of effective communication is to change the behaviour of clients and the community.
- This leads to increased demand and acceptance as well as community participation in health programmes.

### **Communication introduction**

- Communication refers to the process of relaying messages in a way that is effective and resulting in a response.
- The communication process is inseparable from the management aspects of an organization.
- Good and effective communication promotes teamwork. Personal relationships within a team can be difficult but poor communication can worsen them.
- Achieving a common understanding is very crucial for the success of any partnership.
- To arrive at a common understanding, there has to be good and effective communication, where messages are conveyed with a shared meaning in a two-way manner between the parties involved.
- Often, conflict arises because of barriers to communication. Such barriers could be difference in perception, lack of knowledge, prejudice or bias, among others.
- Health workers need systematic ways of delivering and receiving messages to parents by the health worker to facilitate a change in client/parent behaviour

### **Needs**

- All team members and staff should be clear whether their views are well taken care of and should be encouraged to do so.
- A message or communication should be clear whether provided orally or written and simple language should be used.
- Conflicts are common, and they should be resolved in a way that will achieve constructive results.

### **The communication process**

- The following are the characteristics of a communication process:
  - Communication involves people; to understand communication, you first have to try and understand people.
  - Communication involves shared meanings; this suggests that, in order for people to communicate, they have to agree on the definitions of the terms they are using.

- Communication is done through symbolic gestures, sounds, signals, letters, numbers, charts, graphs and words. However, all these only represent or approximate the ideas they are meant to communicate.

### **Essence of communication**

- To successfully execute a policy, those to implement must be properly briefed on the objectives of the policy
- The briefing must be fully assimilated by all
- Workers commitment is contingent on their understanding of the essence of the policy
- High degree of efficiency in implementation generates public confidence in a policy.

### **Crucial elements of communication**

- Sender- source of origin of a message or version of it.
- Message- the transmitted information
- Medium- the method of transmission of a message
- Receiver- the source which receives a message.

### **Relationships between elements**

- The elements are inter-related making the subject a process
- Without any of them, Communication cannot take place.
- A sender who wants to communicate with a receiver must have a message which must be passed through a medium

### **Basic/strategic policy information**

- Purpose of a policy-What informed it?
- Structure of implementation body-organization
- Importance of each unit, section etc
- Significance of Communication flow within and outside the Organization- systems approach.

### **Communication Patterns**

- Patterns can be:
  - Uni-directional (one-way) or bi-directional (two-way)
  - Upward – bottom up flow
  - Downward – pushing down directive
  - Crosswise – among peers
- Efficacy of every pattern depends on
  - Time
  - Social system

### **Communication flow**

- **Downward communication:**
  - This is the most frequently used type of communication.
  - Communicating downward can help the manager spell out objectives, change attitudes and mould opinions.
  - However, there is a tendency to misuse this type of communication, especially when there are no efforts to encourage response through upward communication.

- The downward communication without an upward response is compared to a “one-way street”. In other words, messages flow from one direction (from sender to recipient), without a feedback system.
- **Upward communication:**
  - This is communication which flows upwards from a client and/or subordinate to the supervisor or manager.
  - It enhances the sharing of opinions and experiences in the process of planning, implementation, monitoring and evaluation.
  - Unlike downward communication, upward communication allows decision-making to take place at the grassroots level, managers being supporters and catalysts in this process.
- **Horizontal communication:**
  - In this type of communication, there is lateral communication (i.e. between people working at the same level in the organization).
  - Messages in horizontal communication usually relate to task coordination, problem-solving, information-sharing and conflict-resolution.
  - In addition, an established horizontal communication in the district health management system could serve as a basis for collaboration, liaison and networking with all related sectors, government and non-government agencies, political leaders and multinationals and donor agencies.

### **Communication channels**

- These are the paths through which a message is transmitted from the sender to the receiver. For example, these can include telephone and radio.
- Can be formal or informal
  - Written- memos, circulars, petitions etc
  - Oral- meetings, seminars, telephones etc
  - Sign/Symbol- forms of body language
  - Note: Grapevine- rumour, gossips, amebo.com
- With the advent of e-mail and Internet, networking is rapidly becoming a major type of horizontal communication flow that knows no borders.
- Wherever there is an existing telephone or radio connection and a computer, linking up to e-mail and the Internet is possible at little expense and is in almost all cases recommended.

### **Interpersonal communication barriers**

- A communication barrier is anything that stops a message from reaching its destination.
- Various factors can cause communication breakdowns. These include:
  - poor appearance
  - strong emotions
  - prejudice or bias
  - jumping to conclusions
  - stereotyping
  - differences in perception
  - lack of fundamental knowledge
  - lack of interest
  - use of vague or very technical language
  - faulty communication lines
  - too many assumptions made by the receiver

- un-conducive atmosphere/environment
- no terms of reference and/or lack of written instructions
- failure by subordinates to judge accurately what should be in reports to superiors or failure to communicate at all
- lack of informal or formal opportunities as a barrier to upward communication
- Use of different communication systems, including formal and informal methods, will facilitate understanding between the sender and the receiver of the message within an organization.

### **Managers play an active role in communication**

- To be a successful health manager, you must have good communication skills.
- By communicating effectively, you and your staff will be able to share experiences and have the same understanding about various issues.
- To achieve this, there must be a two-way open and mature interaction between you and your subordinates and colleagues. In this way, you will be able to solve any confusion and differences without causing any long-lasting ill feelings.

### **Understanding techniques**

- Understanding is the ability to interpret the communicator's message.
- Understanding is usually influenced by factors that surround the communication environment. The following techniques help you to understand:
  - Learn to reach conclusions by deduction (inference).
  - Reading helps you to become knowledgeable about different issues and also to increase your vocabulary.
  - Asking questions and asking for feedback.
    - Feedback is the response a receiver gives to the sender of the message.
    - Feedback can be satisfactory or completely unsatisfactory. It may also be misleading. Unfortunately, the sender may also expect to hear, read or see something other than the truth.
    - In giving feedback, always consider the circumstances of the sender and the sort of response he/she wishes you to make. Consider:
      - What is the first thing the sender wants to know?
      - What are the essential elements to be included?
      - What action do you want to influence which the recipient should take?
- Think carefully about how you use the language and how you express yourself.
- There are always positive ways of saying things and getting things done.

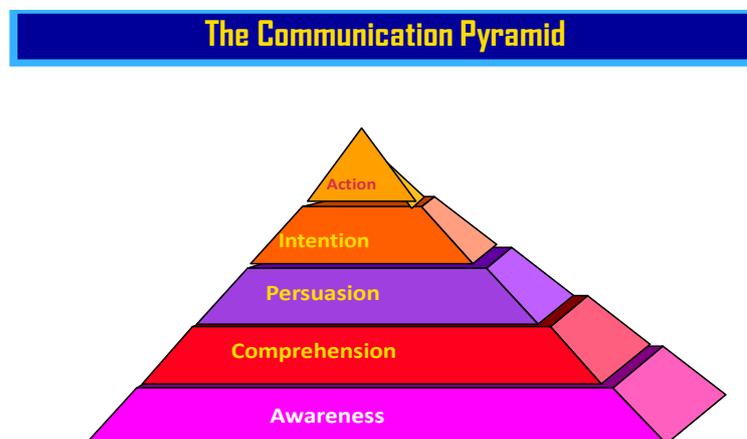
## Communications Topic 2: Communicating to Change Behaviour

### Key concepts

- Advocacy: Advocacy is the process of enlisting the support of individuals and key organizations responsible for formulating policies, making decisions and allocating funds.
- Social mobilization: Social mobilization is a process of gaining and sustaining the involvement of all stakeholders in order to take action to attain a common goal.
- Programme communication: A research-based process made up of activities to address the knowledge, attitudes and behaviour needs of different groups
- Behaviour Change Communication: A process of providing information and education to the health providers and beneficiaries of the immunization services so as to change and sustain positive behaviour.
  - Involves not only disseminating information
  - But also supporting target audiences to comprehend messages
  - Develop a favorable attitude towards the action recommended by the message
  - Change of individual attitude that hopefully will lead to the adoption of the recommended behaviour.
  - After they adopt the new behaviour, target audience still need support to maintain the said new behavior
- Interpersonal Communication: A face-to-face communication between two or more persons in which people involved have eye-to-eye contact with each other.
- Mass Media: Channels of sending information to reach different people at the same time

### Communications pyramid

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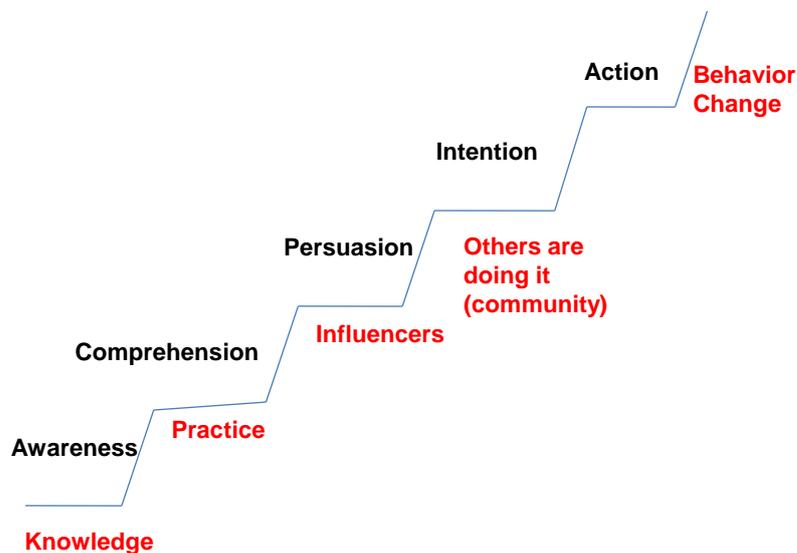
This pyramid shows that usually, target audiences of communication activities are not at the same level of knowledge or perception of the issue or the problem which requires a behavior change; some may not be aware of it, others may already have a good understanding of it, others may be persuaded and perhaps intending to act.

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## Steps to changing behaviour

### Steps to behavior Change



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### Communication to change behavior:

- Involves not only disseminating information
- But also supporting target audiences to comprehend messages
- Develop a favorable attitude towards the action recommended by the message
- Change of individual attitude that hopefully will lead to the adoption of the recommended behaviour.
- After they adopt the new behavior, target audiences still need support to maintain the said new behavior

### Effective communication

- Effective communication is a two-way process whereby you send a message and receive feedback.
- Message could be to get things done, pass on and obtain information, reach decisions; achieve joint understanding and develop relationships.
- The purpose of effective communication is to change the behaviour of parent/client and community (Behavioural change is very critical to achieving increased demand for immunization services).

### How to ensure effective communication

- Listen – this is the beginning of understanding
- Break down socio-cultural barriers
- Maintain eye to eye contact
- Find out what the client/parent already knows
- Acknowledge what the client/parent says or indicates – **don't condemn beliefs**
- Be clear in your mind what you want to say
- Ask open-ended questions (eg. Questions beginning with *what, why, how* etc)
- Use language/expressions that the client/parent understands
- Understand the nature of your target audience

- Deliver the message distinctively – **KISS!** (Keep it short and simple!). No ambiguities
- Be patient - Don't be in a hurry
- Follow up and get immediate feedback

### **Qualities of effective communication**

- Friendliness
- Simplicity
- Timeliness
- Truthfulness
- Good Listening

### **Categories of communication**

- Verbal: Use of the spoken word between the sender and receiver
  - Greeting warmly
  - Acknowledging concerns & positive actions
  - Talking warmly and respectfully
- Non Verbal: Use of body language – Eye contact and gestures
  - Warmly welcoming clients with a smile
  - Showing attitude through posture and facial expression
  - Paying attention and being patient with clients
  - Encouraging a friendly atmosphere

**NB:** Both verbal and non verbal methods are needed for effective communication

## Communications Topic 3: Communication Models for Health

### Models of communication

- **Social Cognitive Theory:** emphasizes the fact that people are influenced by their environment and vice-versa. It therefore explores the relationship between individuals and their environments.
- **Communication Theory:** focuses on how different types of communication influence behaviour.
- **Community Organization and Other Participatory Models:** focus on community-driven approaches to assessing and solving health and social problems.
- **Social Marketing:** entails using social marketing techniques to influence the voluntary behaviour of the target audience for health benefits. It includes reinforcing behaviour with incentives and other rewards.

### Addressing the concerns of clients/ parents

- A person may come to a health facility or outreach site for some reasons other than immunization
- Respond to the parent's concern first by providing advice or treatment and then screen for immunization
- Address the concerns by correcting any misconceptions

### Communicating essential health messages

- Keep messages simple & straight to the point
- Give only one or two messages at a time

(Too lengthy talks have been given as one of the reasons for non attendance at immunization sessions)

NB: Example of key messages

### Six Key Messages about Immunization

1. What vaccine(s) was given and the number of visits a child still needs in order to be fully immunized or the number of doses a woman receiving tetanus toxoid still needs.
2. What side effects may occur and how to treat them
3. The date of next immunization
4. The Place and time of next immunization
5. Bring the child for immunization even if he/she is sick
6. Take good care of the Health Card and to bring it every time the woman and /or her child come to a health facility

### Communicating with groups

- People gathered in:
  - Health facility waiting for services
  - Community meetings e.g. town hall/market square meetings
  - Religious meetings
  - Professional/Social Meetings etc
- Provides opportunity for communicating health messages e.g. HIV/Aids, immunization, maternal & child health
- Provides an effective way to obtain and give information
- Communicate with Groups through Group Discussions, dialogues

### **Group Discussion Techniques**

- Address the shared interest of the Group
- Deal with Group members' concern at the outset
- Find out the group's knowledge of the health topic
- Invite questions from the group members
- Share your knowledge of the health topic
- Share stories and experiences
- Sing songs or encourage people to make up their own songs
- Put on short plays about issues e.g. maternal health, immunization, HIV/Aids etc
- Guide them to come up with local solutions to identified problems
- Use visual aids

### **Involving the Community in Communicating Health Messages**

- The Community is a receiver of health messages
- Major channel of communicating health messages to parents and caregivers, associations etc.
- Community involvement in communicating health messages brings about ownership
- The community can communicate health messages through:
  - Community meetings
  - During community dramas/open air theatre
  - Using town/village announcers
  - During religious events
  - During festivities
  - During market days/trade fairs, etc.

### **Involving the Community in Planning Health Services**

- Establish good working relationships with community/religious leaders, social mobilization committees and the people
- Learn from the community
- Organize and encourage participatory community planning and action for improving positive health behaviour e.g. demand for immunization services, increased use of ITNs, abstinence or condom use, hand washing, healthy nutrition practices etc.

### **Brainstorming**

1. If in your LGA, PHC service delivery is of good quality and active in its outreach to the target population, is communication needed? **(Yes/No). EXPLAIN**
2. If in your LGA, the quality of PHC service delivery is poor, is communication needed? **(Yes/No). EXPLAIN**
3. Communication is a periodic function of the PHC manager. **(True/False). EXPLAIN**

## **Communications Topic 4: Role of the PHC Manager in Communications**

### **Communication Functions of Health Staff**

- Communication is an **INTEGRAL COMPONENT** of all health programmes.
- Communication is a **CONTINUOUS** function of the health Manager/workers
- Health Managers/workers interact with a variety of audiences daily
- Health Managers/workers need to acquire communication skills to effectively deal with the various audiences

### **Buzz group exercise**

- Identify the different communication settings and audiences that the health manager communicates with on a continuous basis

### **Target Audiences for Communication**

- **Health workers** – Service Providers: - nurses, midwives, CHWs, Laboratory staff, Vaccinators etc
- **Management** – HODs, Senior staff at all levels
- **Other related Departments/Ministries/Agencies** – Education, Information, Women Affairs, National Orientation, etc
- **Medical & Health Institutions** – Schools of Nursing, Health technology, Midwifery etc
- **Development Partners, Donors & other local Partners** – State & LGA Task Forces, ICC, etc
- **Public/Private sector organizations** – NGOs, FBOs, CBOs, private medical & health practitioners, etc.
- **Community Leaders** – Traditional & Religious leaders, etc
- **Media** – Local & Mass media
- **Caregivers** – Parents, grand parents, in-laws etc.

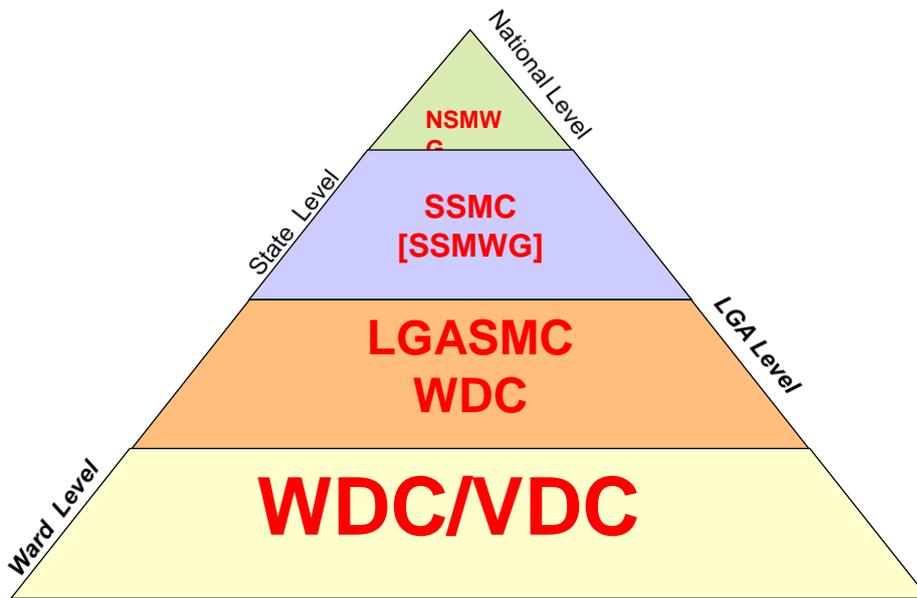
### **Role of Health Officer in Communication**

- Ensure that effective communication takes place between him or his staff with the target audiences.
- Ensure the integration of communication into all health plans - include key activities for communication in overall health work plan and program activities.
- Facilitate the training for all partners for effective participation in communication for health programmes

### **Role of PHC Manager in Communication**

- Advocate for resources to support communication skills building for HWs and for training of health educators to support Health communication.
- Include communication line-items in Health budgets
- Ensure the existence of management structures for health communication

## STRUCTURES OF COMMUNICATION FOR PHC



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### Communication Environment of the Health Manager/Officers

- Types of communication: Internal, External; Vertical, Horizontal
- Advocacy with policy makers
- Communicating with media

### Communicating with staff

- What? - Policies, guidelines, objectives, roles, success stories, programme update, Resolve conflicts
- Outcomes - Informed, motivated, satisfaction, trust, productive
- Mechanism/channels - Meetings, memos, newsletters, e mails, briefings, phone-calls, text messages, internet messages, one-on-one discussions, grapevine
- Feedback, keeping people informed

### Advocating with Policy/Decision Makers

- Effective presentations
- Have facts on the programme
- Use charts and graphs
- Tell success stories
- Know what you want to ask for
- Provide feedback and follow up

### Skills and Principles

#### Skills

- Facilitation
- Presentation
- Conflict resolution
- counseling

- IPC/human relations

### **Principles**

- Dialogue vs lecture
- Be a counselor: to facilitate change
- Be an interpreter: help understand policies
- Be a facilitator: get information out
- Be a motivator: offer reward and recognition

### **Interpersonal Communication (IPC) in Health Service Delivery**

IPC occurs in all components of PHC, but is particularly needed:

- During advocacy efforts
- Between communicators at all levels and partners
- Between health workers providing PHC services and caretakers seeking health services; history taking, counseling, dialogue with patients, during vaccination sessions
- Between mobilizers/volunteers and parents/caregivers
- When managing rumors and disease outbreaks
- When addressing issues affecting special groups

## Communications Topic 5: Planning Communication Interventions

### Steps in Planning Communication Interventions



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#### Why conduct a situation analysis?

- Data collected for PHC programme situation analysis should provide information for communication planning.
- To learn more about target audiences, their attitudes and practices as well as means to reach them with information.

#### Communication Situation Analysis

- **Behavioral analysis:** What are attitudes and behaviors of various audience groups; problem behaviour, behaviour to promote, barriers to desired behaviors, Use a mix of qualitative and quantitative techniques to reveal this.
- **Audience analysis:** Target specific audience groups that need special attention. Learn about their demography, religion, language, culture, and behavioral patterns.
- **Channel analysis:** Determine which type of communication channel is acceptable to and appropriate for each audience group.

#### Sources of data for Communication Planning

- KAP Surveys
- Surveillance/Epid data
- Monitoring data (RI & SIAs)
- Coverage data (RI & SIAs)
- Others?

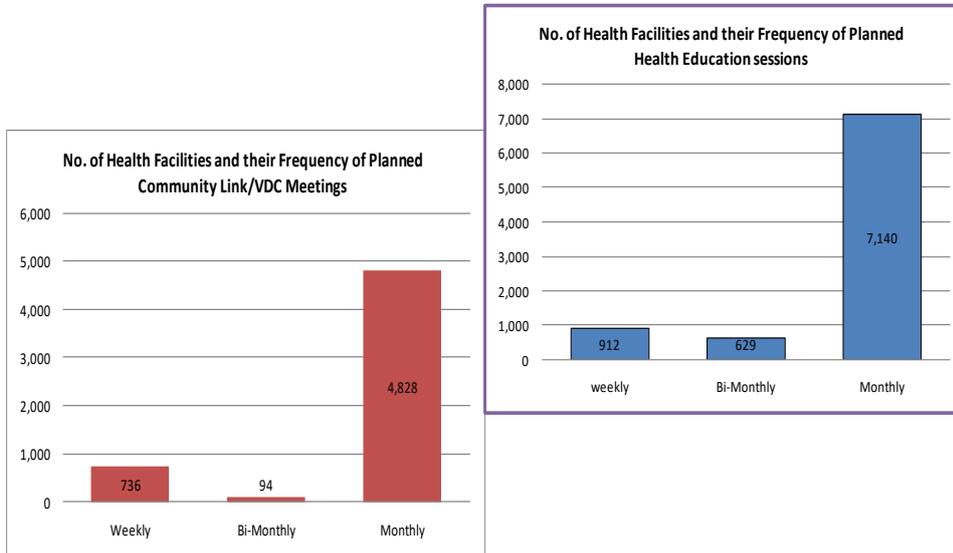
# Nigeria 2008 KAP Data

## Attitude

Reasons	Reasons for refusing to vaccinate children %											
	Total	Bauch	Jigaw	Kadun	Kan	Katsina	Kebbi	Borno	Sokoto	Plateau	Yobe	Zamfara
Fear of side effects/ Vaccine safely07	52	51	73	49	73	50	49	39	48	46	60	37
Don't trust vaccines	36	28	60	18	32	33	29	36	41	30	44	43
Religious beliefs	22	16	24	6	18	11	13	24	10	28	65	27
No confidence in vaccinators	16	21	28	5	26	13	3	7	23	9	27	20
Too many rounds	9	9	37	3	3	10	1	5	3	2	25	4

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## No of Health Facilities and frequency of Planned Community Link Activities Jan-Apr 2009



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### Community Link Activities

## Community Link Activities

- **Most States do not have plans for Community Link activities**
  - Out of the 22,876 HFs conducting RI in the country only 5,658 (25%) have plans for Community link meetings
  - 38% (8,681) HF have plans to conduct HE sessions.
- Only 13 States had a report for community Link between Jan-April 2009
- Community Link committee Meetings
  - Out of the 13 States with reports
    - less than 50% of planned meetings were conducted in 7 States
    - In only 2 states were more than 95% of meetings planned meetings conducted.
- **Health Education Sessions**
  - Similarly for Health Education Sessions
    - Less than 50% of planned HE sessions were conducted in 5 States
    - 3 states had more than 95% of HE session conducted (Jan-Apr)

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### Setting Communication Objectives

- To help measure communication outcomes and its contribution to PHC programmes.
- Should focus on specific behaviours that need to be changed or promoted using situational & behavioral analysis
- Should be developed in conjunction with PHC programme objectives
- Should be SMART

Baseline	Objective	Activities	Indicator
68% of parents feel that immunization is necessary to keep their children healthy	90% of parents feel that immunization is necessary to keep their children healthy by the end of 2010	Community meetings House to house visits by Mobilizer	Proportion increase in number of parents that feel that immunization is necessary to keep their children healthy

### Determine Communication Strategies

These communication Strategies include:

- Advocacy
- Social Mobilization
- Behaviour Change Communication
- Capacity Building

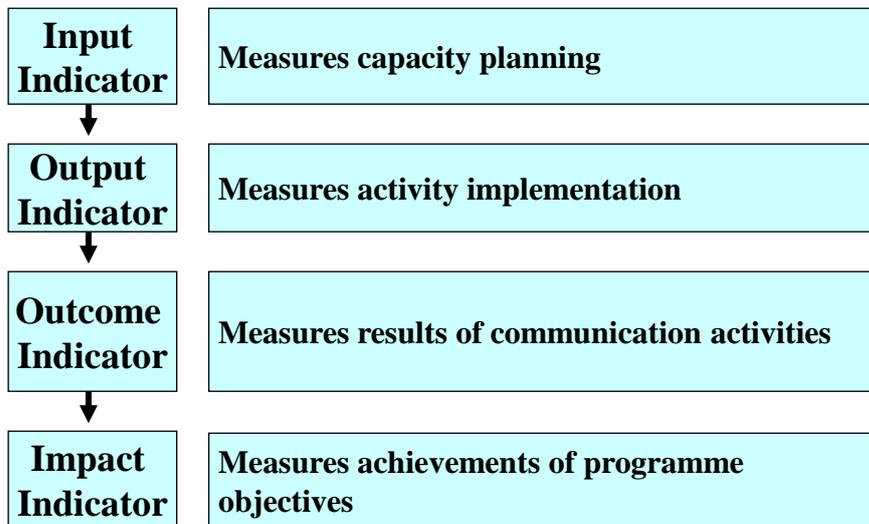
## Develop Communication Plan

Communication Objective:			
Strategy	Target Audience	Activities	Indicators
Advocacy			
Social Mobilization			
Media			
Programme Communication			

### Evaluating Communication Programmes

- Evaluate communication interventions as part of the overall programme evaluation
- Evaluation should be based on impact and outcome indicators in relation to changes in knowledge and behaviour
- Evaluation report should provide recommendations to improve programme performance and suggest way forward

## Types of communication indicators



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## Examples of communication indicators

Activity	Input Indicator	Output Indicators	Outcome Indicators	Impact Indicators
Train HWs in IPC to improve completion of immunization	Funding Training module Trainers	HW scoring 3/5 on IPC No of HWs trained	Proportion of Mothers who know when to return.  Proportion of Mothers who complete immunization	Reduction in drop-out rates
CHWs mobilised to track defaulters	Facility registers	Children visited  Children on HF list	Children vaccinated  Children visited	Reduction in drop-out rates

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## More Examples of Indicators in Community Link

Examples of Communication Indicators	Type of Indicators
Proportion of HF's with plans for linking Services with the community	In-put
Proportion of clients who are satisfied with attitude of health workers	Outcome
Proportion of HF's supported with local Resources	Outcome
Proportion of drop-outs referred for immunization	Outcome
Proportion of care-takers who can state number of visits required to complete immunization	Out-put
Proportion of community groups mobilized in support of PHC services	output

## **Communications Topic 6: Communication in Support of PHC Service Delivery**

### **Communication in Support of PHC**

- Addressing hard to reach populations
- Communication for disease surveillance
- Communication for SIAs
- Communication for immunization safety
- Communication for introduction of new treatment regimes and new vaccines
- Communication for REW

### **Communication support for REW**

- Five main operational components:
  1. Re-establish outreach vaccination
  2. Supportive supervision
  3. Links between community and service
  4. Monitoring for action
  5. Planning and management of resources
- **Re-establish Outreach Services**
  - Engage community in planning and implementation of immunization outreach.
  - Encourage HW to inform communities about services ( e.g. build HW IPC skills during training & supervision)
  - Negotiate with and disseminate information on outreach to communities (e.g. dates, times, location)
  - Broadcast outreach schedule through local media.
  - Share reports with decision-makers to show how outreach improves coverage and can reduce disease burden
- **Supportive Supervision**
  - Ensure that HW are communicating appropriate messages to caregivers and completing child health report records correctly during vaccination sessions
  - Include communication questions in supervisory checklist and during exit interviews
  - Discuss key messages and improving interaction between the HW and community
- **Links between Community and Service**
  - Enhance community ownership by ensuring its involvement in planning and utilization of immunization services
  - Improve interaction of health worker and client at every point where services are provided to the public.
  - Identify and develop links/partnership with community structures e.g. religious groups, women's groups, NGOs, traditional leaders
- **Monitoring and Use of Data for Action**
  - Ensure that data analysis includes details on communication and behavior-related reasons for apathy and refusals to health care services.

- Share health data with health educators and involve them in data analysis, micro-planning, work plan development and supervision

### **In Summary**

- Communication is a continuous function of the Health manager
  - The health manager has to constantly communicate to effectively manage PHC programmes.
- In order to communicate effectively, the Health manager needs to understand key communication concepts, develop and use certain communication skills
- Health Managers should use communication skills to relate effectively with caregivers, media, the community, political and traditional/religious leaders.
- Communication is key for:
  - Positive behaviour change
  - Creating and sustaining demand and acceptance for health services
  - Reducing unwholesome health practices
  - Health Managers should ensure communication is included in every health activity plan
  - Poor Communication could ruin a health programme

### **Conclusion**

- The overall goal of health communication is:
  - To promote Primary Health Care services
  - To increase acceptance of health services through addressing the knowledge base of households and communities on the benefits of PHC services
  - Ensure an sustain full utilization of PHC services provided in the community
  - To sustain high level advocacy of policy makers, traditional and religious institutions
- Effective communication is critical to achieving improved primary health care service delivery and commensurate healthy citizenry through positive behavioural change.
- Effective information management requires an articulated dissemination plan

## **Communications Topic 7: Presentation Techniques**

**Aim:** To empower the health worker on the various ways to present his/her findings

### **Objectives**

By the end of this topic, participants will be able to:

- Describe some important presentation techniques
- Enumerate the relative advantage of this presentation techniques
- Outline the qualities of a good presentation

### **Communication in practice**

- To communicate, is to transmit messages among sources
  - Two main formal ways
    - Oral-public speaking
    - Written-report writing
- NB: Body language is informal

### **Oral presentation technique (Public speaking)**

- **Public Speaking: Main Purpose**  
Some generally identified purposes
  - To persuade/convince/convert
  - To inform / educate/enlighten
  - To instruct/direct/coordinate
  - To entertain/amuse/attract
- **Public speaking forms**
  - Addresses/presentations
  - Speeches/Discussions
  - Brainstorming sessions
  - Religious sermons
  - Telephone calls
  - Public announcements
  - Story telling
  - Family gathering or the meeting of a club, association or organization

#### **NB: Presentations/Addresses**

- conferences featuring
  - Remarks: opening and closing
  - Presentation: papers and lectures
  - Addresses: welcome as well as keynote.
  - Vote of thanks
- political party events
  - rallies, processions, congresses/ conventions.

- **Brainstorming**
  - A technique for generating ideas for the solution of a problem Can take place at a Seminar /Workshop where participants examine the different dimensions of a topic in groups
- **Interviews/Debates**
  - In many forms, these take the question and answer form for interviews & the pros/cons format for debates. They occur mostly during:
    - Recruitment / promotion exercises
    - Media Programmes
    - Interrogations by law enforcement agencies /law courts
- **Religious Sermons:** Exhortations at places of worship where a cleric puts across messages or general prayer sessions , ‘incantations’ in a ritual, hymn or prayer to invoke or praise a deity
- **Telephone call:** A chat or conversation between 2 people through a telephone line or a conference call- which involves more than 2 people at the same time
- **Public Announcement:** Via town crier- a designated person who goes round a city to disseminate messages. With technology, mobile vans are more in use now
- **Story Telling:** E.g. Folk Tales- Tales by moonlight in traditional societies . Citations of poems & riddles /jokes can also fall in here.

### **Public Speaking: Outline**

- Introduction- establish the theme & attract listener’s interest
- Main Text- concentrate on main points/answer anticipated questions
- Summary- restate the key points in the speech
- Conclusion- make final statement, also compliment audience

### **Context**

- Appearance- poise & confidence
- Tone of voice- appropriate volume
- Body language
  - hand gestures
  - facial expression
- Style of diction- avoid extraneous words like em, Really, you know
- Visual aid- display on boards/power point screen

### **Written Presentation Technique (Report writing)**

#### **Forms of Report writing**

- Daily- weather
- Periodic - Weekly, Monthly, Quarterly, Annual
- Progress - 100 days in office,
- Special- Security briefs, APER
- Memo – Between operatives, FEC

- Law –compilation of court judgments
- Hansard- House of Assembly proceedings

### **Purpose of Report Writing**

- To persuade/convince/convert
- To inform / educate/enlighten
- To instruct/direct/coordinate
- To entertain/amuse/attract.
- To document/record

### **Steps/Stages in report writing**

- Gathering of Data- intelligence phase
- Identification of relevant facts
- Alignment- order of presentation
  - Linkages
  - flow

### **Structure**

- Title page
- Acknowledgment
- Table of Contents
- Covering memo
- Abstract/Executive Summary(sometimes immediately after title page)
- Introduction- background/rationale
- Methodology
- Main Text- with titles of sections
- Conclusion
- Recommendations
- Appendices-references, tables, figures

### **Outline**

- As in Public Speaking where the speech is written-Introduction, main body, summary, conclusion
- In the professions, some standards exist
- E.g. Law –IRAC: Issue, Rule, Analysis, Conclusion

### **Qualities of a good report**

- Relevant to the target audience
- Clear- no ambiguity
- Concise-exact to the point
- Complete- nothing left out
- Correct-accurate & verifiable

### **Conclusion:** To write or to speak?

- Is the communication urgent- can it wait for the operative to draft a speech/report?
- Will it be an advantage if the communication is a permanent record?
- Does it involve detailed figures & statistics
- What is the strength of the speaker?

## **Communications Topic 8: Public Relations and Customer Relationship Management**

### **Implementing Customer Relationship management**

- A good public relation, PR, is a powerful tool that can make a vital contribution to organizational success.
- Learn to distinguish between effective pr and cheap publicity gimmicks in order to build a solid, respected reputation with your key audiences.

### **Understanding the basics**

- Public Relations describe the way issues and messages are communicated between an organization and the public.
- It is the discipline that looks after corporate reputation.
- The aim of public relations is to win understanding and support from, and to influence the opinions and behavior of, an organization's key audiences.
- This is achieved through a planned, sustained set of activities

### **Building reputation**

- The true purpose of public relation is to create a well-deserved reputation.
- That may involve offering excellent customer care, communicating effectively with your audiences, and showing social responsibility towards your workforce, the local community, and the environment.
- Cheap publicity gimmicks designed to deceive the public, or glitzy activities aimed at diverting attention from poor organizational behavior give public relations a bad name and have no place in an effective public relations campaign.

### **Anticipating events**

- Effective public relation is about anticipating tomorrow's issues, rather than apologizing to staff and the public for poor decisions that have been made.
- By harnessing public relations skills you will not only be able to act to improve the reputation of your organization, but you will also be able to show your colleagues what public relations can do to make their jobs easier.
- Demonstrate how public relations can help the human resources department improve employee communications.
- Prove the worth of public relation in supporting marketing activity.
- Ensure that the chief executive know that good public relations can build better investor relationships and thereby help the share price.

### **Achieving a good outcome**

- The outcome of effective public relations is a good, well-deserved image based on a genuine commitment to provide excellent service and to be a good, caring employer and a responsible organization.
- Cheap publicity creates an image without substance.

### **Taking a strategic approach**

- Long-term, strategic public relations planning are far more effective than uncoordinated flurries of activity.
- Map out your public relations campaign so that your purpose is clear, activity can be planned, progress monitored, and outcomes measured.

### **Understanding strategy**

- To achieve a proactive approach to public relations, you will need to produce a public relation strategy.
- Your strategy must support your organization's corporate strategy, as well as linking with your company's marketing strategy.
- Because of this, it can be helpful to involve those responsible for corporate and marketing strategy when planning public relation strategy.
- They can help explain the organization's wider strategy, while you can explain to them how public relation can be used to support corporate goals.

### **Setting Objectives**

- The first step in strategic planning is to establish objectives, a set of goals that define what you want to achieve.
- These might focus on improving your organization's reputation, raising its profile, or building stronger relationships with key groups, for example.
  - Clear objectives will help you to reach your target, to chart progress, to measure results and to assess effectiveness.
  - Set objectives at the outset, but make sure that you allow ample time for this. all public relation activity that you undertake will be aimed at achieving these goals. points to remember
- Objectives should be clear, specific, unambiguous, quantifiable, and incorporate a time frame.
- To ensure that they remain relevant, objectives should be revised periodically.
- If objectives are to be effective, they should be demanding yet achievable.

### **Identifying target audiences**

- Most organizations will have several audiences or "publics", so a strategic approach to public relation involves clearly identifying all of them. some will be regarded as more important than others. audiences might include:
  - Customers;
  - Staff;
  - Media;
  - Public;
  - Investors/shareholders;
  - Market analysts;
  - Other stakeholders;
  - The local community;
  - Local, regional/state, or national/federal government.

### **Defining key messages**

- Every organization will have key corporate messages that need to be conveyed. You might, for example, want to tell everyone how innovative your organization is, or how caring.
- In addition to these, there will be a sub-set of messages personalized for each principal audience.
- When launching a new product, for example, investors will want to be told of any impact on the share price.

- The media and the community's focus of interest may be on the environmental impact. Try to give the audience information tailored to its particular needs and viewpoint.

### **Achieving objectives**

- Strategic public relation involves considerable research, planning, and discussion: how will you meet your objectives? what ideas do you have for conveying the desired messages to your principal audiences.
  - Draw up a series of ideas to help you met each of your objectives.
  - Calculate the cost of each idea, decide which ones you will implement, then produce an activity timetable.
  - Include details of who will be responsible for each activity, with start and completion dates.
- Hold regular meetings with those involved in implementation so that you can chart progress and solve any problems.

### **Documenting the plan**

- Public relation strategy is a written document, not a set of ideas to be carried around in your head.
- Writing down your strategy also helps you to focus on what you need to achieve, how, and when.
- Record details of you key publications, along with the principal messages per audience.
- You will also need to include you objectives, and – in broad terms – your ideas for achieving them.
- Specify what measures you will use to evaluate success and set a date for an interim evaluation.
- The final part of the strategy is your activity timetable.

### **Assessing effectiveness**

- Measuring effectiveness is an important element of strategic public relation. The aim of measuring is to assess whether or not objectives have been achieved.
- Use questionnaires, focus groups, and other research methods to measure whether your messages have reached their target and achieved the desired outcome.
- You may need to conduct research before a public relation campaign, as well as afterwards, to obtain an accurate measure of shifts in behavior or attitude.
- Use evaluation to learn which tactics and techniques worked, and which did not. This knowledge will help you to be more effective next time.

### Measuring the Effectiveness of a Public Relation Campaign

Indicator	How to Measure Effectiveness
Reach	<ul style="list-style-type: none"> <li>• How well did the message reach the target audience?</li> <li>• What is the proof?</li> </ul>
Knowledge	<ul style="list-style-type: none"> <li>• How well informed and educated is the audience about the company and its products?</li> <li>• How do we know?</li> </ul>
Understanding	<ul style="list-style-type: none"> <li>• Has the audience grasped the message?</li> <li>• How can we tell?</li> </ul>
Preference	<ul style="list-style-type: none"> <li>• Has favour increased with the target audience?</li> <li>• How do we know?</li> </ul>
Attitudes	<ul style="list-style-type: none"> <li>• Has the audience's view been altered in a positive way?</li> <li>• Is there any evidence of this?</li> </ul>
Opinions	<ul style="list-style-type: none"> <li>• Have people's opinions changed in the way that was intended?</li> <li>• How do we know?</li> </ul>
Behavior	<ul style="list-style-type: none"> <li>• Has target audience behaviour altered in the intended way?</li> <li>• How do we know?</li> </ul>

### Communicating with staff

- Good public relations start at home.
- Committed and helpful staff creates a good image, so regard employees not just as a workforce, but as a principal target audience.
- Nurture staff commitment through effective employee communication involving genuine dialogue.

### Keeping staff informed

- Use public relation techniques to help you achieve a genuine and meaningful relationship with staff.
- Employees need to know what is going on in their organization and should be kept informed at an early stage of developments that will affect them.
- Tell employees about new staff, promotions, job opportunities, new products and services, high-profile marketing activity, financial results, and future plans. effective internal communication is in everyone's interests.

### Creating a real dialogue

- Recognize the benefits of sharing information and create a genuine, open, two-way communication channel between staff and management.
- Staffs are sometimes skeptical of internal communication because it is often used merely to delivery bad news, such as redundancies.
- Distrust is understandable if staff receive nothing but company propaganda. Staff wants to hear all news, good and bad, presented in a straightforward and honest way.
- Ensure that the information flow is two-way. All team members can provide valuable insights. Encourage them to feed ideas to managers.

### **Undertaking a communications audit**

- You may be surprised at how staff regard the effectiveness or otherwise of your organization's internal communication. Find out what your staff thinks. Where are the information blockages? Are you telling staff too much or too little? Do they understand and believe the corporate messages? Demonstrate to staff that their views are important. Send out a questionnaire, phrasing questions so that you can identify where the problems are. Act on the findings. Draw up an action plan, share it with staff, and then implement it.

### **Managing your corporate reputation**

- A good corporate image is founded on substance, and its creation should be more than a cosmetic exercise.
- Assess your current image carefully, draw up an action plan to tackle weak areas, and then work hard to maintain your reputation.

### **Conducting an image audit**

- Find out how your audiences perceive you, using research methods such as questionnaires and focus groups.
- Combine this with an audit of your main methods of communication. Look for unintentional messages. What messages is conveyed by a dirty delivery van, for example? Examine every aspect of your work that communicates something about your organization, including premises, policies, and customer care. Ask yourself, "with only this to go on, what would I think of us as an organization?"

### **Engendering trust**

- Organization with good reputations is trusted. It pays to engender trust because:
  - people are more likely to do business with you;
  - they are more likely to buy your shares;
  - you attract better staff;
  - the media and the public trust you to tell the truth;
  - You are more likely to be believed in times of adversity.

### **Producing an action plan**

- Having identified the shortcomings in your image, you now need to tackle these weaknesses by devising practical ideas and incorporating them into a workable action plan aimed at improving perceptions.
- Ensure that every action in your plan is assigned to a named person with the skills, the authority, and the time to carry it out.
- Give those responsible for implementation a sufficient budget, and agree on a start and a completion date.
  - Bring them together for a briefing; they need to be able to see the big picture and understanding the reasoning behind the need for action.
- Ask for process updates so that you can monitor implementation.

### **Maintaining a reputation**

- It can take years to build a good image, but a reputation can be destroyed in seconds.
- Work to maintain your hard-won image.

- Show staff that you value them, treat them well, and communicate openly with them.
  - Unhappy staff tells their friends how dissatisfied they are, thus damaging your reputation as a good employer.
  - Disaffected staff also tends to provide poor service, which will erode your good image.
- Provide excellent customer care so that people have no cause to complain; when complaints do occur, make sure that you handle them swiftly, fairly, and courteously.

### **Creating an overlap**

- Maintain a successful reputation, there must be an overlap between the identity that an organization seeks to create and the image it has with the public, so that their experience of the organization tallies with the way in which it is publicized.

### **Caring for customers**

- Excellent customer care is at the very core of effective public relation. your reputation depends upon it. aim to attain 100% customer satisfaction by training staff, introducing a customer charter, and taking prompt action to rectify mistakes.

### **Delivering excellent service**

- One of the best ways to build or enhance a good image is to work hard at getting your customer care right. Conversely, ignore customer care and you will damage your reputation.
- It is surprising how few staff seem able to provide good service naturally. most need training. Additionally, they must feel committed and motivated.
- Check that staff knows what is expected of them. produce a set of measurable service standards and incentivize staff to meet them.

### **Developing a customer charter**

- Draw up a customer charter that tells customers what they can expected from you and what you will do if you fail to keep your promise.
- Provided that you deliver on your customer charter commitments, this can be an excellent way of enhancing your reputation and giving people confidence in you.
- Specify how quickly you will answer the phone; reply to letters, faxes and e-mails; and delivery orders.
- Produce a clear, fair complaints procedure and a returns policy for faulty or unwanted goods. Make sure that you give people confidence to do business with you time and again.

### **Being accommodating**

- Adopt a “can do” attitude.
- Sometimes an organization’s rules and regulations, policies, and procedures get in the way of good customer service. Insisting that all enquiries are submitted in writing is an example of an inflexible and unfriendly rule.
- Check your own rules for customer friendliness: are they entirely necessary? be prepared to be flexible where you can.

- Train staff to be genuinely helpful and to accommodate all reasonable customer requests. Go that extra mile to make a customer happy. total customer satisfaction should be the goal of all staff.

### **Points to remember**

- Policies and procedures should never be used as an excuse not to help a customer.
- The value of “people passion” should never be underestimated: staff who genuinely care make a huge difference to reputation, and a passion for their work will enhance an organization’s image.
- Staffs who are treated well will be champions of an organization: those who are treated badly will become critics.

### **Planning a campaign**

- Campaigning is becoming increasingly popular as a method of raising an organization’s profile and building a positive image. Plan your campaign carefully, launch it in a blaze of publicity, and know how to sustain it until your objectives are achieved.

### **Addressing the fundamentals**

- Organizations may campaign in support of a consumer issue, or they may join forces with other organizations to mount a trade campaign to promote their industry or to lobby local, national, or international government on an issue that affects their industry.
- Before contemplating a campaign launch, consider all the issues. Decide on your objectives (what you want to achieve); target (whom you want to influence); and tactics and techniques (how you will achieve your objectives). You should also examine the strengths and weaknesses of your case, gather your facts, and anticipate opposing arguments.

### **Naming your campaign**

- It is always advisable to name your campaign. This can help turn a rather nebulous set of objectives into an entity with its own distinct identity, making it easier for supporters to identify with your cause.
- Campaign names should be apt, memorable, and preferably short.
- Add further character to your campaign by designing a logo and visual identity that can be used on stationery and other materials to help promote and reinforce the campaign aims.
- A slogan that encapsulates the campaign aims in a snappy way is also a good idea.

### **Producing materials**

- Most campaigns require some type of literature aimed at informing and educating, persuading and winning support, and publicizing aims.
- This might include a campaign leaflet setting out your case; posters and other promotional material; and balloons, badges, pens, and carrier bags stamped with the campaign slogan.
- A campaign video is a good way of spreading the word.
- If you wish to encourage supporters to join in the campaigning activity, produce a campaign pack outlining how they can demonstrate their support, and provide fact sheet containing the information they will need when speaking out in your favour.

**Sustaining interest**

- By mapping out campaign activity well into the future, you will ensure that your campaign does not peter out after a successful launch.
- Make a timetable of the activities you will undertake in the weeks and months after the launch.
- Create opportunities to attract publicity and spread the campaign message.
- Do research and publicize the findings.
- Think of ideas for photo calls. Mount displays and exhibitions. Start a petition.

## Subject 4.2: Decision Making

**Aim:** Describe key elements that arise in the decision making process

**Objectives:** Help PHC managers recognize and overcome decision making pitfalls

**Learning outcomes:** After completing instruction in this subject (whether after a single classroom session or following a series of related classroom sessions), participants should be familiar with and able to use the following knowledge and skills.

- Appreciate the critical role of decision making in PHC programming and activities
- Know the basic techniques in decision making process.
- Be empowered on how to make informed decisions within the scope of their activities.

### Decision making issues

- Given an assumptions that we want a pro-active operative who can:
  - Identify the real purpose of an assignment
  - Distinguish management from administration
  - Adopt a knowledge-driven approach
  - Appropriately deploy resources
  - Embrace innovation
  - Be fair but firm
- Decision making is the strategy to use to meet the above desire.
- Nature and Meaning of Decision making
  - Desire and capacity-Opportunity cost
  - Not just economic but all matters e.g. Work-load and time limitation
  - Academic Definitions: Paolo & consensus
- Common Techniques
  - Random methods – flipping of the coin
  - Subjectivity of validating a predisposition
  - Accepting an option which appears correct
  - Divination- prayer, astrology, revelation
  - Acquiescing to a person in authority or an ‘expert’

### Importance of casual approach

- There can be similar issues, yet different decisions are made because:
  - People often have different viewpoint
  - People are differently endowed
  - Speed of response to stimuli differs from person to person
  - Some people rely on precedent
- The question then arises, how should decisions be made?
  - Calculated endeavour- should be a true test
  - Approaches by Professions & Service groups e.g. Media, Law & Rotary  
Coverage of events by the Media
  - Rules of Practice and Ethics of Journalism on balance and objectivity
  - To treat facts as sacred
  - To be impartial by reflecting all the sides of a story with equal emphasis
  - Settlement of disputes through the due process of law.

- The Principles of natural justice must be followed: audi alteram partem- hear the other side
- nemo judex in causa sua- do not be a judge in your own cause
- Offering service in Rotary:
  - Rotarians are enjoined to follow the 4-way test
    - Is it the truth?
    - Is it fair to all concerned?
    - Will it build goodwill and better friendship?
    - Will it be beneficial to all concerned?
- Is Rotary's prescription persuasive for general application?
  - Starting point- event different from process
  - To take a decision is an event
  - To make a decision is a process which involves inter-related segments of events
  - Choice is only one of them
  - Process does not begin or end with choice
- Detailed segments of events
  - Dewey: 3steps-Problem, Solutions, The Best.
  - Simon: 3steps-Intelligence, design, choice
  - Archer: 9steps-Monitor, Define, specify, Diagnose, Develop, Establish, Appraise, Choose, Implement

### **Communicating decisions**

- Communication and Decision Making are different but inseparable.
- A decision not communicated is not made.
- A decision poorly communicated is worse.
- Communication is thus an integral part of the decision making process.
- Communication must be effective & timely
- Employ correct channel(s)-upward, downward or horizontal, verbal, written or sign for each target audience
- Grapevine- rumour/gossip, amebo.com

### **Decision Making Types**

- Vickers – the art of judgment: divided into 3:
  - Reality.....state of affairs
  - Action.....what needs to be done
  - Valued.....what is most desired
- Simon & others: 2 broad divisions
  - programmed.....structured, precedent
  - non-programmed....new issues

### **Decision Making Model: Three (3) Popular Schools of thought**

- Rational Comprehensive : for substantive issues
- Incremental :for actions in phases
- Mixed Scanning: as a combination or for preference.

### **Significance of decision making theory**

- Other theoretical frameworks: e.g., Conflict, Group & Elite are of limited application,
- Conflict inapplicable at all times

- Group emphasizes
  - inter , not intra
  - ignores the individual
- Elite is arrogant & myopic
- Decision making is for all-individuals, groups etc.

## Hierarchies in Decision making

LEVEL OF MAKER	TYPE
Top Management	Policy
Senior Management	Programming
Medium Management	Interpretative
Skilled workmen	Routine
Semi-skilled workmen	Automatic
Unskilled workmen	Vegetative

### Uniqueness of decision making

- Other techniques like MBO depend on it
- Accommodates Active and Passive modes
  - a decision to act is a decision
  - a decision not to act is also a decision
- Decision making is thus fundamental

### Contentions

- What about when people are neutral/silent
  - neutrality/silence are decisions
- What about the law of the motion of matter?
  - what will be will be
  - existentialists: Choice is the redeeming feature of humanity
- Is decision making an entirely human affair
  - what about Machine made decisions?
  - lab test in health care
  - soil test in road construction
  - audio-visual recorders/ in broadcasting
  - voice amplification by microphones
- What makes decision making significant when it is not entirely a human affair?
  - Cybernetic decision making dimension
  - Systems information control generated by who or what.
  - Communication ratios & overloads
  - Aggregates human & machine decisions

### Challenges in decision making

- In spite of many public bodies, governance remains tedious because:
- Subsisting public cynicism- no faith in govt. from time.
- Patrimonial/Representative Bureaucracy- competitive ethnicity distorts rationality
- Politicization of Public Policy- spoils of office/ political bias breeds bad decisions.
- Supervision of Public Authorities
  - Combative oversight functions of the legislature
  - Executive interference in management functions by Parent Ministry/Board
  - Technicality of judicial review of admin actions
- Inadequate funding/Inexplicable budgeting style
- Poor implementation posture

### **Suggestions**

- Back-up Structured Approach to accommodate new decisions
- Encourage Discretion and Initiative
  - In spite of guidelines, the personal initiative of every actor is crucial.
  - Otherwise operators would be ‘robots’
- Match Delegated Responsibility with Authority;
  - do not countermand arrangements of delegates
  - avoid role confusion
- Allow Division of Labour and specialization
  - recognize all contributors
- Decentralization: Grant Local Autonomy
  - allow officials to make on the spot decisions but limit to local issues
- Insist on Uniformity in Operations
  - same structures & objectives can ensure best practices.
- Institutionalize Systems Approach
  - governance has many stakeholders
  - it is thus a network of many parts
  - the malfunctioning of any one part can be fatal
  - government as the main organ needs to integrate all
- Legality of decisions
  - be mindful of the due process of law embrace natural justice
  - have a strong legal department - Prescott V Birmingham City Corporation
- Evolve pro-active image making
  - do not ignore public opinion
  - synergise public relations & SERVICOM

### **Summary**

- Everybody is a decision maker
- There are different hierarchies of decisions, but every decision is important
- Machines are also decision makers
- Decision making can be active or passive
- Public bodies can rely on the concept because it lays bare the actions & inactions of every actor in an enterprise
- Humanity must make calculated decisions to avoid eternal regret.

**Conclusion:** An effective manpower development programme on decision making should make the participants adopt a result-oriented service delivery posture and:

- develop greater skills for problem analysis and decision making.
- appreciate change rather than reacting to it.
- rapidly form judgments
- discard inertia and selective perception of issues
- identify better ways of collaborating to achieve same goal.

### **Subject 4.3: Advocacy and Negotiation**

**Aim:** To outline the skills required to be an effective negotiator

**Objectives:** To help PHC managers become effective advocates and negotiators

**Learning outcomes:** After completing instruction in this subject (whether after a single classroom session or following a series of related classroom sessions), participants should be familiar with and able to use the following knowledge and skills.

- Know the basic technique in advocacy and negotiation
- Know how the importance of advocacy and negotiation skills in pursuing the objectives of PHC
- Be able to apply advocacy skills in generating support of policy makers, opinion leaders, and other stakeholders for PHC activities.
- Be able to apply negotiation skills in obtaining resources for PHC activities within the scope of their responsibilities

#### **Topics**

T1. Advocacy

T2. Negotiation

## **Advocacy and Negotiation Topic 1: Advocacy**

### **Introduction**

- As Nigeria celebrates its 50<sup>th</sup> Anniversary of Nigeria's Political Independence, from the health perspective, Nigeria is yet to find freedom from basic ailments and diseases usually associated with under-developed countries.
- It is still battling with basic health problems: Cholera, Tuberculosis, Malaria, Polio , Childhood Obesity & Malnutrition, Diabetes & Hypertension, HIV/AIDS, challenges related to Smoking, Female Circumcision, Early Marriage
- Advocacy and Negotiation can be veritable tool for the health sector to mobilize the needed resources for it to respond to these challenges effectively.

**NB:** You get the reputation you choose to project,

- It is no use thinking that good deeds on their own are enough.
- These days, you can no longer carry on your "business" quietly.
- There is so much public and media attention on our lives and on efficient corporate performances
- All leaders have to accept the desirability of speaking up for themselves, their firm, people and their field of activity.
- Dealing with the public and the media, earning their trust is a task that may not come easily or naturally.

### **Therefore for effective Programme Policy and Advocacy**

- It is important to master the skills because "There is no second chance to make the first impression".
- Public speaking is a significant part of the job, so attention must be paid to Advocacy and Negotiation skills.
- There is the demand that we must learn to be sensitive to Local Cultures!
  - Religious,
  - Tribal/ethnic;
  - Gender

### **Importance of Relationships in Advocacy**

- Who you know (social power) is more important than what you know (expert power) and what you can do!
  - This seals deals/agreements faster!
- This is a popular tactic in many parts of the country, which is why people of influence feature prominently in negotiations.
- In most places, it is impossible to conclude negotiation with the wife in the absence of the husband.
- In the Polio vaccine controversy, Traditional, Religious & Opinion Leaders, Popular artistes, the Sultan's endorsement are central.
- Their children are often vaccinated openly with polio vaccine as confirmation of their endorsement PE campaign

### **Overview on Advocacy**

- There are different approaches to advocacy work. These can be broadly categorized into two, namely the use of confrontational and non-confrontational techniques.

- Confrontational techniques involve non-consultative means such as strikes, demonstrations, road blocks, etc, leading to conflict between the advocate and the target audience. This can sometimes lead to non-achievement of objectives and break in the dialogue/communication process.
- The non-confrontational approach establishes sustainable relations and constant dialogue between the advocate and the target audience.
- The non-confrontational techniques include consultation, negotiation and lobbying.
- To advocate is to promote or support a given course/cause.
- Advocacy is a type of problem solving approach designed to protect personal or legal rights and to ensure dignified existence.
- In our case, we are here to seek ways of promoting a dignified, efficient and affordable Primary Health Care services to the Nigerian masses.
- In executing a skillful advocacy implementation plan, we learn to identify and define problems and a well thought out Action Plan so that results can be measured.
- Some outstanding health campaigns which we have been carried out using effective advocacy in this country include:-
  - Small pox campaigns
  - Polio immunization
- Advocacy for the intervention of the Political and Religious Leaders upheld the benefits of medical expertise and quickly restored the confidence of the people in most parts of the country.

### **Questions to ponder/Discuss?**

- What lessons have we learnt from the experiences of the Polio Campaign to endear us to the services of the Primary Health Care official to us?
- What role did our different cultural values play against this campaign in the end?
- Did the experience create a more positive image for your selves as advocates of improved health care?
- What is the sustainable Primary Health Advocacy plan doing on a daily, weekly, monthly, yearly basis?
- What is the motivation and empowerment for the Primary Health Care worker who probably works longer hours to change age-old habits/to enthrone the primary care?
- What special skills and competencies for the Primary Health Care worker? Do they speaker the local Language?
- How is the community-involved on a continuous basis in the face of numerous emerging challenges?

### **Sustainable Public Health Campaigns with effective negotiation and advocacy**

- Several decades ago, the authorities or the Public Health worker was without challenge of
  - environmental sanitation,
  - Setting out of Housing Schemes,
  - The handling of food in the markets etc.
  - Even the District Officer upheld his verdicts.
  - What is happening today?
- Provision of health care services at all level If done on a sustainable basis, with Effective Negotiation and Advocacy for stakeholders commitment and support with adequate resources, we shall soon be on the way to reconstructing the health structure that will serve us better.

## **Advocacy and Negotiation Topic 1: Negotiation**

### **What is negotiation?**

- Negotiation is a two party transaction whereby both parties intend to resolve a conflict.
- Negotiation is the process of getting the best terms once the other side starts to act on their interest – Mark H. McCormack
- Negotiation is a means of achieving one's goals in every relationship regardless of the circumstances – Gerard Nierenberg
- Negotiation is a basic means of getting what you want from others – Robert Fisher & William Ury
- In summary, negotiation is any activity that influences another person.

### **Negotiation - Principles & Process**

- Volkema (1999) defines Negotiation as “Communication between two or more parties to determine the nature of Future Behaviour”
- It is a process involving communication or interaction.
- Involves two or more parties with conflicting goals or interests.
- The objective is to reach an agreement or reconciliation -to find a mutually acceptable solution to an issue”.
- During the process each party is influenced by the attitude and style of the other stakeholder's skills.
- It may not always end up in bad feelings or angry behaviour, particularly if the parties are co-operative and not confrontational.
- The Golden Rule from the “Five Minute University” is that you must recognize: ”People will not Negotiate with you unless they believe you can Help them or Hurt them”

### **Negotiation Tactics**

- Everything is Negotiable!
- Armed with adequate knowledge & skills you will always have favourable “outcomes”.
- Effective Negotiation means making effective/constructive inputs into the nature of future behaviour between you and your family, you and your friends, you and other critical stakeholders.
- Timing is important,
- Showing off the goods.
- The product is so good it sells itself.
  - Exaggerated first offers/ silence.
  - Seller: Top range going for N80.
  - Buyer: MM, hope colours wont fade? Silence!
  - Seller: The price probably goes down.
- Social Development issues.
- Location of Public Facilities: Utilities, Hospitals, Clinics, etc.(Greater Interaction)

### **The tree of demands and interests**

- Often, when we state a demand [e.g. ‘I want the coconut’], we ignore the underlying interests.

- It is similar when we see the ripe fruit of the mango tree. We focus only on the fruit – the demand – ignoring what lies underneath the tree and which may prevent us from attaining our goal if we don't pay attention to it.
- The red ants that live underneath the tree represent the underlying interests and must be dealt with.
- This is especially important if the ants represent the interest of others that need to be taken into consideration if we are to reach our goal
- If we first pay attention to the ants, we will be better positioned to get to the mango.

### **Difference between demands and interests**

- Often, during an argument, people state their demands instead of sharing their underlying interests
- Demands are what people state they must have
- Interests are the values, hopes, aspirations, underlying principles, concerns, etc. that are often hidden underneath the demand.
- If we argue only at the level of demands, it is very difficult to meet our goals and may not get to the heart of the problem
- Instead, if we negotiate based on an understanding of our interests and those of the other person, we will have more information about what we both want and need. We will be better equipped to develop ideas to resolve our problem.
- Example, two children arguing over a coconut.
- The negotiation umbrella [environment]
- When we are at the negotiation table, we are trying to uncover interests and create ideas to satisfy our interests
- As we uncover interests, we discover new ideas and each new idea we create may cause us to discover yet another interest of one of the parties in the negotiation
- Negotiation is not strictly a linear process but is somewhat cyclical.
- This process does not occur in a vacuum. The environment in which we negotiate is critical to the success of the negotiation
- The environment is like an umbrella that protects us from outside forces. The umbrella represents the effective communication and good working relationships that must exist for us to be able to negotiate
- If we are having trouble at the negotiation table, it usually means that our umbrella is leaking and we need to repair it before we can return to the negotiation table
- So we must step away from the table, work on communication and relationship issues, ensure that the umbrella is in good working condition, and then we can resume our negotiation.

### **Points to remember when negotiating**

- Your attitude in any negotiation should be to seek a win-win situation
- Allow individuals to explain their feelings and encourage them to put the problem in perspective
- Try to understand the other person's point of view, interests, concerns and limitations
- Be open to meeting each other halfway and compromise
- Use the brainstorming process to develop ideas that could resolve your problem
- Effective communication creates a positive environment for negotiation
- Effective negotiation is built on understanding of each other's position and allowing a space for compromise.

### **The art of negotiation**

- The best outcome of negotiations occur when both parties win
- Sometimes negotiations fall short of this ideal and only one side will win or both will lose
- Despite its limitations, negotiation is the most effective tool for realizing common interests while compromising conflicting interest
- There are two approaches or postures to negotiation: a win-lose approach or a win-win approach
- The win-lose approach assumes that there is a limited amount of key resources or a 'fixed pie' situation and that one of the parties will want to be the winner; both parties may want more than half of what is available
- The win-win negotiation approach is based on the belief that one party's gain will not be at the other party's expense. Discussion and mutual exploration of alternatives is key to arriving at a win-win situation.

### **How to become a win-win negotiator**

- Avoid certain words or phrases which might cause other party irritation, be humble.
- Resist counteracting immediately to proposals put forward by the other side.
- Use fewer reasons for backing up your position.
- Set aside some time after the negotiation to reflect on the lessons learned.

### **Conclusion**

- Negotiation is a non-confrontational advocacy skill that establishes sustainable relations through constant dialogue between parties in conflict
- The environment in which we negotiate is critical to the success of the negotiation

## **Subject 4.4: Partnership Development**

**Aim:** To teach participants how to develop sustainable partnerships for the provision of high quality care within PHC settings

### **Objectives:**

- To describe the concept of partnership development within the context of PHC
- To describe critical steps involved in developing and maintaining partnerships
- To describe the challenges and benefits of partnership development

**Learning outcomes:** After completing instruction in this subject (whether after a single classroom session or following a series of related classroom sessions), participants should be familiar with and able to use the following knowledge and skills.

- To appreciate the critical role of partnerships in meeting PHC objectives
- To know how to create effective partnerships within the PHC system
- Be able to mobilize and sustain potential partners for PHC programmes and activities within the scope of their responsibilities

## **Introduction**

The efficiency and effectiveness of health services are influenced by the quality of management and leadership of health managers as well as by effective partnership with other stakeholders in the health system. Leadership and management is one of the areas that need strengthening among PHC managers. The managers and their team need the skills to enhance collaboration with all partners, including NGOs and the private sector. The need for the mobilization and involvement of community at all stages cannot be over-emphasized. This session examines the leadership and managerial roles to be played by PHC managers and how they can build a successful team. It considers the main factors involved in strengthening partnership and collaboration among various actors and how to improve coordination between them. The session also underscores the importance of community participation in health management and the need to enhance it.

Multi-sectoral collaboration is one of the prerequisites of primary health care (PHC). In order to provide quality services in the district, PHC managers need to work collaboratively with their colleagues, who may include individuals from other government departments within the district, as well as people from other organizations, which may be public and private, whether or not belonging to the health sector. In this session you will explore in detail the importance of partnership in the district. It is necessary to consider the character of various organizations and the community. Organizations differ in many ways, and knowing something about the character of organizations will help you to foster partnership with them. The issues to be addressed in this session concern the types of partners you may need to collaborate with and the approaches that may exist which can be used to foster partnership.

### **What is Partnership/Collaboration?**

- Partnership means voluntary joint action or decision-making in a harmonious and supportive way, for a common goal and outcome.
- It involves all players or stakeholders at district level who, through their actions, will influence health services delivery at any of the health delivery points in the district.
- Partnership and collaboration will be used interchangeably.

## **Types of Partnership**

- There are two types of partnerships described in this session.
  - The first type of partnership is between organizations providing health and health-related care in a district.
  - The second type is between organizations providing health and health-related care and the community.

## **Why Partnership?**

- Isolated efforts have limited impact because experiences, expertise and lessons learnt are neither shared nor concentrated.
- With effective collaboration, each organization can focus on its strongest areas.
- By cooperating with interested parties, PHC team may be able to provide broad-based and high quality health services to those who need them.

### **GROUP WORK/ACTIVITY**

**Partnership has always been advocated as important for actors in health and health-related areas. Please provide the information requested below.**

**(i) Give examples of partnerships currently in place in your community and how they influence the health of the population.**

**(ii) List reasons why partnership or collaboration between organizations in your community may be beneficial.**

**(iii) List cases and reasons why collaboration may not be the best option.**

## **Advantages of partnership in health care**

- When resources are scarce there is an obvious need to share the limited resources.
- Partnership makes the most efficient and effective use of resources while avoiding duplication.
- Significant health problems always have environmental, social, economic, political and legal determinants. These multiple determinants of health problems may only be addressed through combined efforts by various sectors.
- Through collaboration, organizations may identify common areas of interest and they may pursue activities in similar standards. Eventually they may develop common policies and thus increase a common sense of direction.
- Monitoring of progress is easier when efforts and technology are harmonized.
- Combined health interventions or programmes may be more responsive to specific health needs of a particular area or community than multiple isolated efforts.
- Exchange of data, information and networking may improve the approaches of individual partners and sustain the capacity of large programmes that cover many areas. Such exchange and sharing of information may make an organization avoid mistakes, learn from the problems and successes of others, and avoid wasteful and unnecessary activities. It may also benefit the design, implementation and evaluation of programmes in all kinds of fields including health, education, home-based care, etc.

- Maintenance of equipment may be both convenient and inexpensive when technical inputs are made compatible.
- When organizations coordinate, they can assign activities to those organizations that are best qualified to carry out those activities, thus putting an end to duplication of services. This should free both funds and personnel to take on new activities, thereby broadening the scope of the services provided.
- Collaboration brings greater influence. When all service-providers speak with one strong voice, they are much more likely to be heard, respected and answered.

In summary, collaboration among partners builds solidarity and reduces unnecessary competition and uncertainties among stakeholders while addressing major health problems. Therefore, organizations need to remove doubts they may have about each other if they are to establish and develop a spirit of cooperation.

### **Approaches to Partnership**

It is important to understand the range of approaches in developing inter-agency partnership. Approaches to develop partnership include organizational-bureaucratic approach, mutual agreement and development of networking to link organizations.

- **Organizational-bureaucratic approach**
  - The organizational-bureaucratic approach lays emphasis on control systems whereby management uses its techniques of control, direction and planning to influence other people to come together.
  - Some policies, rules and regulations created by government and other large organizations are meant to achieve more collaboration.
  - For example, a policy on the control of epidemics such as cholera or plague influences organizations to work together.
- **Mutual agreement**
  - Mutual agreement as an approach sees organizations as different, competing and decentralized, but these features are also seen as positive.
  - Coordination in this form is not through imposition from above, but rather through mutual negotiation or informal mechanisms.
  - Coordination can be achieved by agencies adjusting their activities to those of other organizations.
  - Organizations have their own interests to pursue and try to influence decisions of other agencies through manipulation, bargaining or negotiation.
  - For example, while working with the community a health care organization may wish to adjust its working regulations to fit with those of the community in order to work with them.
- **Development of Networking**
  - In all health care organizations, there are individuals and institutions that have connections or channels of influence with other individuals or institutions. This leads to the development of organizational networking.
  - Management has to devote time and attention to these lateral and horizontal approaches and not to concentrate only on activities within the structure of the organization.
  - For example, inter-personal relationship may influence a link within organizations which were once not working together.

### **Factors Facilitating Partnership**

- Promoting partnership may be difficult and there are usually obstacles or constraints in the way.
- There are also factors that make it easier to achieve your aims. It is good to know what factors encourage partnership. Knowing those factors may help you to create the right climate for partnership and to recognize opportunities for collaboration when they arise.
- Examples of factors that promote partnership between organizations include:
  - Clear purpose and commitment to inter-organizational partnership by all partners. This is sometimes called “political will”.
  - Partnership at all levels. Partnership is easier to achieve if there is a national framework for facilitating a similar process at regional, district and community levels.
  - Partnership is facilitated by decentralization. Decentralization provides district managers with decision-making authority over resources that facilitate partnership.
  - Joint planning makes a useful contribution to partnership because planners join in efforts to identify and agree on problems, setting objectives, identification of resources, budgets, timetables and procedures.
  - Sometimes formal rules, regulations and procedures indicate where different agencies can make common use of resources such as finance, personnel and transport. Agencies in various sectors should review their policies and regulations to make provision for collaboration and joint decision-making procedures.
  - Inter-sectoral coordination can be further encouraged when workers at various levels maintain contact with workers at similar levels in other organizations. Such “lateral” contacts should be encouraged both in formal and informal ways. When regular contacts exist between many individuals in different organizations they form a network to facilitate partnership.
  - In many respects, effective partnership depends on the development of a collaborative style of interpersonal relationship both within and between organizations. There is also a need to trust others and reward initiatives of individuals fostering partnership.
  - It would help if health information systems use indicators that measure progress in key areas of PHC activities, health status and quality of life contributed by multiple agencies. Feedback of this information will eventually direct policies in similar direction.
  - If organizations are already used to innovation and inquiry to guide their inter-agency partnerships it will be easier to establish partnership.

### **Constraints to Partnership**

- If you intend to work together, it is important to foresee and identify possible problems of collaboration and seek ways of solving them.
- Problems in collaboration are related to differences in organizational structures, cultures, procedures (e.g. financial, administrative) and professional ideologies and values.

### **Examples of constraints to partnership:**

- Problems related to organizational purpose and structure
  - Different policy priorities held by different organizations. For instance, interests and priorities of individual districts and local organizations are sacrificed when collaborating with large international organizations that have their own agenda.
  - Establishing relationships with local partners is difficult when partners are still under central control and are lacking autonomy.
  - Partnership is further made difficult when agency boundaries are different. A diocese may have facilities spread out over several districts and regions, while a

particular PHC team is only interested in providing health facilities in its own district or community.

- Some organizations may view partnership as a threat to their established role or responsibility, or causing a loss of autonomy or abdication of their leadership role. These fears exist in every organization but they tend to be most pronounced among weak or young organizations.
- Problems related to differences in procedures  
Organizations operate according to their own management and planning systems and procedures that may be incompatible with those of other organizations. Such different systems include:
  - Planning horizons and cycles
  - Budgetary cycles and procedures
- Problems related to finances
  - Collaboration may be difficult because many organizations have insufficient resources to be used in joint programmes and the considerable costs involved in establishing and maintaining collaboration.
  - Even those who have enough resources to commit may find it difficult to share them with others because of differences in funding sources, funding mechanisms and flow of finances. This is due to the regulations which give guidance on how the funds should be used.
- Problems related to professional differences  
Professional differences that may come in the way of collaboration include:
  - Differences in ideologies and values
  - Professional self-interest and concern for threats to autonomy
  - Conflicting views about the roles and views of health service users
- Problems related to status and organizational culture
  - Organizational members may hesitate to collaborate because they may fear loss of autonomy and bureaucratic control.
  - Mistrust and conflict may further be based on differences in organizational culture (an example may be the difference in attitude toward family planning between the government and religious organizations).
  - Donors and NGOs often compete for access to national policy-makers and specific districts or communities.
  - Fear of revealing secrets or weakness. Organizations may feel that they have to share innovative ideas and methods, which they believe give them advantage over the competition, or they may fear that their weaknesses will be exposed. These issues of competition and pride must be taken into account.
  - Fear of being used. Managers of some organizations may worry that another organization will use them for its own benefit. Making effort to open communication channels and to understand the interest of other organizations can minimize these fears.

### **How to improve partnership among organizations**

- In order to improve partnership among organizations, the PHC managers/PHC teams should call a meeting, propose draft agenda and suggest organizations that might send a representative to the meeting. During the meeting:
  - Allay the fears and highlight the advantages of partnership
  - Establish working procedures of the group, such as frequency of meetings and sharing of information through reports

- Conduct a function allocation exercise to see who is currently doing what and to identify gaps and redundancies
- Define the key areas for coordination, and specify the desired changes and expected results
- Record the discussions and agreements reached
- Set a date for next meeting.

### **Techniques to influence relationships**

- The following techniques can be used in the process of influencing relationships:
  - Personal informal interactions, e.g. hospitality: lunch, visits and entertainment
  - Co-opting or incorporating individual groups or organizations to boards or advisory committees
  - Bargaining on the exchange of valued scarce resources
  - Agreeing on common pricing standards
  - Contractual agreements
  - Technological advancement through training, exchange of information and joint research.
- Collaboration/partnership will only take place if someone takes the initiative and perseveres. It requires a persistent effort.
  - If no collaboration is taking place in your district, or community it may be that no organization has recognized the need for it or is willing to lead the coordination effort.
- This provides PHC managers with an opportunity to take the lead. When a PHC manager does so, it will be effective if it guides the process rather than trying to control it. It takes a lot of time and effort to initiate and maintain partnership or collaboration.
- Try to keep the effort from being abandoned before the benefits can be realized. PHC managers/team members who are responsible for initiating partnership need to have skills in negotiation, problem-solving and teambuilding.

## **MODULE 5: HEALTH CARE DELIVERY**

### **Subjects**

- Subject 5.1 Principles and Practice of Epidemiology
- Subject 5.2 Introduction to Biostatistics in Epidemiology
- Subject 5.3 Integrated PHC Delivery
- Subject 5.4 Quality in Health Care Services
- Subject 5.5 Customer Service Delivery

## **Subject 5.1: Principles and Practice of Epidemiology**

**Aim:** To update the knowledge of MLM on the principles, practice of and application of epidemiology in PHC setting

### **Objectives:**

- To give an overview of public health and its functions
- To trace the historical evolution of epidemiology and its relation to current health situations
- To acquaint participants with the basic terms and concepts used in epidemiology
- To provide health managers with knowledge of epidemiological tools and their applications
- To guide participants on how to design and conduct epidemiological studies
- To empower participants on how to investigate and manage common outbreaks in Nigeria
- To give an overview of non communicable diseases epidemiology

**Learning outcomes:** After completing instruction in this subject (whether after a single classroom session or following a series of related classroom sessions), participants should be familiar with and able to use the following knowledge and skills.

- Know the basic concepts and uses of epidemiology and epidemiological tools
- Be able to define key epidemiological concepts
- Appreciate the critical role of epidemiology in prioritisation of health care problems at the community level
- Be able to apply epidemiological skills in planning, managing and controlling priority health care problems within the scope of their responsibilities

### **Topics:**

- T1. Introduction to public health and evolution of epidemiology
- T2. Basic definitions, concepts, aims, and uses of epidemiology
- T3. Epidemiological tools
- T4. Introduction to study design
- T5. Investigating and managing outbreaks
- T6. Epidemiology of non-communicable diseases

## Epidemiology Topic 1: Introduction to Public Health

The term public health evokes different ideas and images.

- Is it a profession, a discipline, or a system?
- Is it concerned primarily with the health care of the poor?
- Does it mean working in an urban clinic or providing clean water and sanitation?
- C.E.A Winslow in 1920, defined public health as:

“The science and art of preventing disease, prolonging life and promoting physical health and efficiency through organized community efforts for the sanitation of the environment, the control of communicable infections, the education of the individual in personal hygiene, the organization of medical and nursing services for the early diagnosis and preventive treatment of disease, and the development of the social machinery which will ensure to every individual a standard of living adequate for the maintenance of health, organizing these benefits in such a fashion as to enable every citizen to realize his birthright of health and longevity.”

Selected Unique Features of Public Health
<ul style="list-style-type: none"> <li>• Use of prevention as a prime intervention strategy</li> <li>• Grounded in a broad array of sciences</li> <li>• Basis in social justice philosophy</li> <li>• Link with government and public policy</li> </ul>

Some Differences Between Public Health and Medicine
<b>Public Health</b> <ul style="list-style-type: none"> <li>• Primary focus on population</li> <li>• Public service ethic, tempered by concerns for the individual</li> <li>• Emphasis on health promotion and disease prevention</li> <li>• Reliance on many sectors</li> </ul>
<b>Medicine</b> <ul style="list-style-type: none"> <li>• Primary focus on individual</li> <li>• Personal service ethic, conditioned by awareness of social responsibilities</li> <li>• Emphasis on diagnosis and treatment, care for the whole patient</li> <li>• Reliance on health care system</li> </ul>

A Summarized History of International Public Health	
400°C	Hippocrates present causal relation between environment and disease
1 <sup>st</sup> century AD	Romans introduce public sanitation and organized water supply system
14 <sup>th</sup> century	Black Death leads to quarantine and cordon sanitaire
Middle Ages	Colonial expansion spreads infectious disease around the world
1750 – 1850	Industrial Revolution results in extensive health and social improvements in cities in Europe and the United States
1850 – 1910	Great expansion of knowledge about the causes and transmission of communicable diseases
1910 – 1945	Reductions in child mortality establishment of schools of public health and international foundations and intergovernmental agencies interested in public health
1945 – 1990	Creation of World Bank and other UN agencies; WHO eradicates smallpox, HIV/AIDS pandemic begins, Alma Ata Conference gives emphasis to primary health care, UNICEF leads efforts for universal

	childhood immunization greater attention to chronic diseases.
1990 – 2005	Priority given to health sector reform equity health and development impact of and responses to globalization, cost effectiveness, public private partnership, and use of information and communications technologies.

### Historical evolution of epidemiology:

- Although epidemiologic thinking has been traced from Hippocrates (circa 400 B.C.) through Graunt (1662), Farr, Snow (both mid-1800's), and others, the discipline did not blossom until the end of the Second World War.
- The contributions of some of these early and more recent thinkers are described below.
- Hippocrates (circa 400 B.C.)
  - Attempted to explain disease occurrence from a rational, instead of a supernatural viewpoint.
  - In his essay entitled “On Airs, Waters, and Places,” Hippocrates suggested that environmental and host factors such as behaviours might influence the development of disease.
- John Graunt,
  - A London haberdasher who published his landmark analysis of mortality data in 1662.
  - He was the first to quantify patterns of birth, death, and disease occurrence, noting male-female disparities, high infant mortality, urban rural differences, and seasonal variations.
- William Farr
  - Began to systematically collect and analyze Britain’s mortality statistics.
  - Farr, considered the father of modern vital statistics and surveillance, developed many of the basic practices used today in vital statistics and disease classification.
  - He extended the epidemiologic analysis of morbidity and mortality data, looking at the effects of marital status, occupation, and altitude. He also developed many epidemiologic concepts and techniques still in use today.
- John Snow
  - Was conducting a series of investigations in London that later earned him the title “the father of field epidemiology.”
  - Twenty years before the development of the microscope, Snow conducted studies of cholera outbreaks both to discover the cause of disease and to prevent its recurrence.
  - Because his work classically illustrates the sequence from descriptive epidemiology to hypothesis generation to hypothesis testing (analytic epidemiology) to application, we will consider two of his efforts in detail.
  - Snow conducted his classic study in 1854 when an epidemic of cholera developed in the Golden Square of London.
  - He began his investigation by determining where in this area persons with cholera lived and worked.
  - He then used this information to map the distribution of cases on what epidemiologists call a spot map. His map is shown in Figure 1.1.
  - Because Snow believed that water was a source of infection for cholera, he marked the location of water pumps on his spot map, and then looked for a relationship between the distribution of cholera case households and the location of pumps. He noticed that more case households clustered around Pump A, the Broad Street pump, than around Pump B or C, and he concluded that the Broad Street pump was the most likely source of infection.

- Questioning residents who lived near the other pumps, he found that they avoided Pump B because it was grossly contaminated, and that Pump C was located too inconveniently for most residents of the Golden Square area. From this information, it appeared to Snow that the Broad Street pump was probably the primary source of water for most persons with cholera in the Golden Square area.
- He realized, however, that it was too soon to draw that conclusion because the map showed no cholera cases in a two-block area to the east of the Broad Street pump. Perhaps no one lived in that area. Or perhaps the residents were somehow protected.
- Upon investigating, Snow found that a brewery was located there and that it had a deep well on the premises where brewery workers, who also lived in the area, got their water. In addition, the brewery allotted workers a daily quota of malt liquor. Access to these uncontaminated rations could explain why none of the brewery's employees contracted cholera.
- To confirm that the Broad Street pump was the source of the epidemic, Snow gathered information on where persons with cholera had obtained their water. Consumption of water from the Broad Street pump was the one common factor among the cholera patients. According to legend, Snow removed the handle of that pump and aborted the outbreak.
- Snow's second major contribution involved another investigation of the same outbreak of cholera that occurred in London in 1854. In a London epidemic in 1849, Snow had noted that districts with the highest mortalities had water supplied by two companies: the Lambeth Company and the Southwark and Vauxhall Company. At that time, both companies obtained water from the Thames River, at intake points that were below London.
- In 1852, the Lambeth Company moved their water works to above London, thus obtaining water that was free of London sewage.
- When cholera returned to London in 1853, Snow realized that the Lambeth Company's relocation of its intake point would allow him to compare districts that were supplied with water from above London with districts that received water from below London. The data in Table 1.1 show that the risk of death from cholera was more than 5 times higher in districts served only by the Southwark and Vauxhall Company than in those served only by the Lambeth Company. Interestingly, the mortality rate in districts supplied by both companies fell between the rates for districts served exclusively by either company. These data were consistent with the hypothesis that water obtained from the Thames below London was a source of cholera. Alternatively, the populations supplied by the two companies may have differed on a number of other factors which affected their risk of cholera. To test his water supply hypothesis, Snow focused on the districts served by both companies because the households within a district were generally comparable except for Water Supply Company. In these districts, Snow identified the water supply company for every house in which a death from cholera had occurred during the 7-week period.
- This further study added support to Snow's hypothesis, and demonstrates the sequence of steps used today to investigate outbreaks of disease. Based on a characterization of the cases and population at risk by time, place, and person, Snow developed a testable hypothesis.
- He then tested this hypothesis with a more rigorously designed study, ensuring that the groups to be compared were comparable. After this study, efforts to control the epidemic were directed at changing the location of the water intake of the Southwark and Vauxhall Company to avoid sources of contamination.

- Thus, with no knowledge of the existence of micro-organisms, Snow demonstrated through epidemiologic studies that water could serve as a vehicle for transmitting cholera and that epidemiologic information could be used to direct prompt and appropriate public health action.
- In the mid- and late-1800's, many others in Europe and the United States began to apply epidemiologic methods to investigate disease occurrence.
- At that time, most investigators focused on acute infectious diseases.
- In the 1900's, Epidemiologists extended their methods to non infectious diseases. The period since the Second World War has seen an explosion in the development of research methods and the theoretical underpinnings of epidemiology, and in the application of epidemiology to the entire range of health-related outcomes, behaviours, and even knowledge and attitudes.
- Finally, during the 1960's and early 1970's health workers applied epidemiologic methods to eradicate smallpox worldwide. This was an achievement in applied epidemiology of unprecedented proportions.
- Today, public health workers throughout the world accept and use epidemiology routinely.
- Epidemiology is often practiced or used by non-epidemiologists to characterize the health of their communities and to solve day-to-day problems.

## Epidemiology Topic 2: Basic Definitions, Concepts, Aims, and Uses of Epidemiology

### Overview

- The word epidemiology comes from the Greek words epi, meaning “on or upon,” demos, meaning “people,” and logos, meaning “the study of.”
- Many definitions have been proposed, but the following definition captures the underlying principles and the public health spirit of epidemiology:

“Epidemiology is the **study** of the **distribution** and **determinants of health-related states or events** in **specified populations**, and the **application** of this study to the control of health problems.”

This definition of epidemiology includes several terms which reflect some of the important principles of the discipline. As you study this definition, refer to the description of these terms below:

**Study:** Epidemiology is a scientific discipline, sometimes called “the basic science of public health.” It has, at its foundation, sound methods of scientific inquiry.

**Distribution:** Epidemiology is concerned with the frequency and pattern of health events in a population. Frequency includes not only the number of such events in a population, but also the rate or risk of disease in the population. Pattern refers to the occurrence of health-related events by time, place, and person characteristics.

#### Time Place and Person characteristics

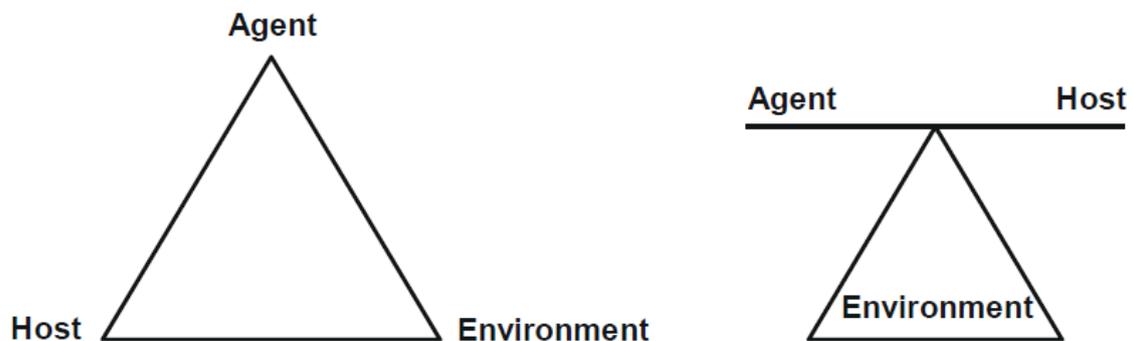
Characteristics	Description
Time	include annual occurrence, seasonal occurrence, and daily or even hourly occurrence during an epidemic
Place	include geographic variation, urban-rural differences, and location of worksites or schools
Person	include demographic factors such as age, race, sex, marital status, and socioeconomic status, as well as behaviours and environmental exposures.

This characterization of the distribution of health-related states or events is one broad aspect of epidemiology called descriptive epidemiology.

- **Descriptive epidemiology**
  - provides the **What, Who, When,** and **Where** of health-related events.
  - **Determinants:** Epidemiology is also used to search for causes and other factors that influence the occurrence of health-related events.
- **Analytic epidemiology**
  - attempts to provide the *Why* and *How* of such events
  - by comparing groups with different rates of disease occurrence and with differences in demographic characteristics, genetic or immunologic make-up, behaviours, environmental exposures, and other so-called potential risk factors.

- **Health-related states or events.**
  - Originally, epidemiology was concerned with epidemics of communicable diseases.
  - Then epidemiology was extended to endemic communicable diseases and non-communicable infectious diseases.
  - More recently, epidemiologic methods have been applied to chronic diseases, injuries, birth defects, maternal-child health, occupational health, and environmental health.
  - Now, even behaviours related to health and well-being (amount of exercise, seat-belt use, etc.) are recognized as valid subjects for applying epidemiologic methods.
- **Application.**
  - Epidemiology is more than “the study of.” As a discipline within public health, epidemiology provides data for directing public health action.
  - However, using epidemiologic data is an art as well as a science. Consider again the medical model used above:
  - Similarly, an epidemiologist uses the scientific methods of descriptive and analytic epidemiology in “diagnosing” the health of a community, but also must call upon experience and creativity when planning how to control and prevent disease in the Epidemiologic Triad: Agent, Host, and Environment
  - The epidemiologic triangle or triad is the traditional model of infectious disease causation. It has three components: an external agent, a susceptible host, and an environment that brings the host and agent together. In this model, the environment influences the agent, the host, and the route of transmission of the agent from a source to the host.

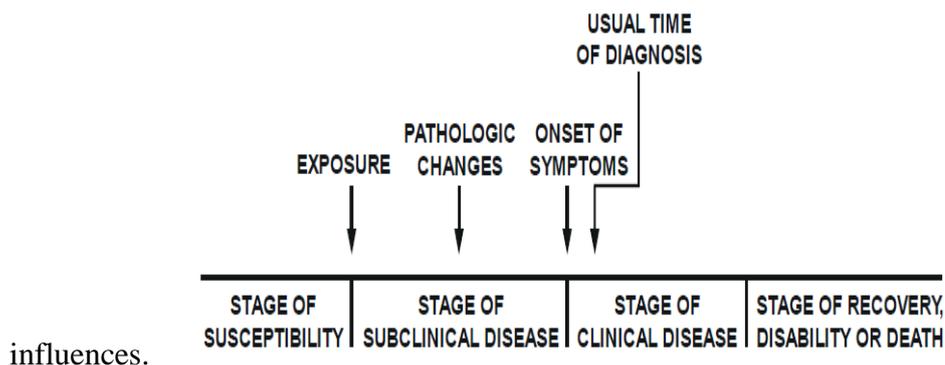
#### Epidemiologic triangle and triad (balance beam)



- **Agent factors**
  - Agent originally referred to an infectious micro organism—virus, bacterium, parasite, or other microbe. Generally, these agents must be present for disease to occur. That is, they are necessary but not always sufficient to cause disease.
  - As epidemiology has been applied to non infectious conditions, the concept of agent in this model has been broadened to include chemical and physical causes of disease. These include chemical contaminants, and physical forces, this model does not work well for some non-infectious diseases, because it is not always clear whether a particular factor should be classified as an agent or as an environmental factor.

- **Host factors**
  - Host factors are intrinsic factors that influence an individual's exposure, susceptibility, or response to a causative agent.
  - Age, race, sex, socioeconomic status, and behaviours (smoking, drug abuse, lifestyle, sexual practices and contraception, eating habits) are just some of the many host factors which affect a person's likelihood of exposure.
  - Age, genetic composition, nutritional and immunologic status, anatomic structure, presence of disease or medications, and psychological makeup are some of the host factors which affect a person's susceptibility and response to an agent.
- **Environmental factors**
  - Environmental factors are extrinsic factors which affect the agent and the opportunity for exposure.
  - Generally, environmental factors include physical factors such as geology, climate, and physical surroundings; biologic factors such as insects that transmit the agent; and socioeconomic factors such as crowding, sanitation, and the availability of health services.
- **Natural History and Spectrum of Disease**
  - Natural history of disease refers to the progress of a disease process in an individual over time, in the absence of intervention.
  - The process begins with exposure to or accumulation of factors capable of causing disease.
  - Without medical intervention, the process ends with recovery, disability, or death.
  - Most diseases have a characteristic natural history (which is poorly understood for many diseases), although the time frame and specific manifestations of disease may vary from individual to individual.
  - With a particular individual, the usual course of a disease may be halted at any point in the progression by preventive and therapeutic measures, host factors, and other

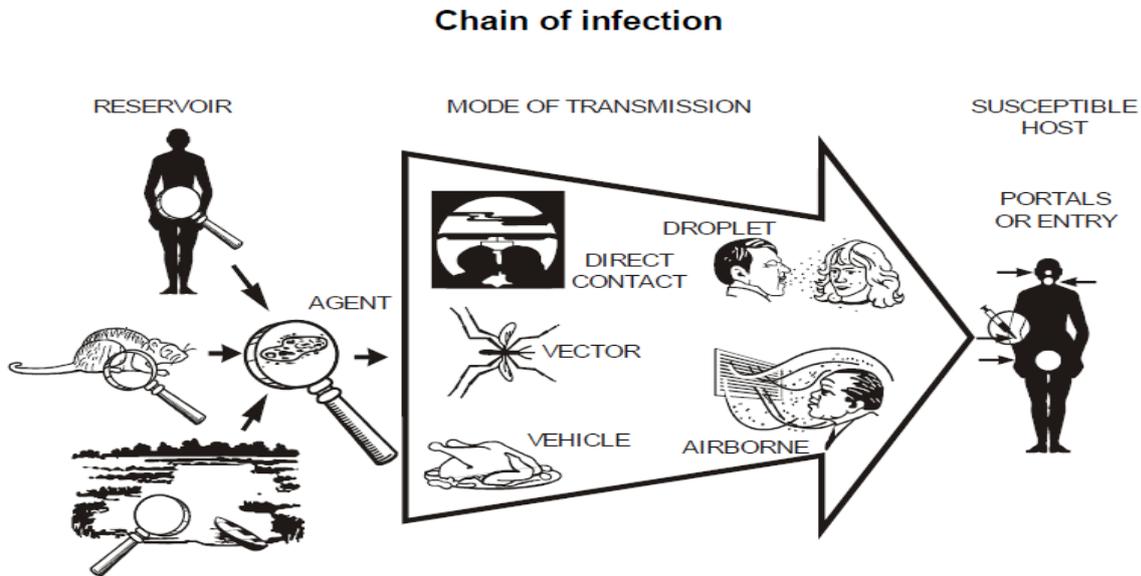
**Natural history of disease**



- Infectivity refers to the proportion of exposed persons who become infected.
- Pathogenicity refers to the proportion of infected persons who develop clinical disease.
- Virulence refers to the proportion of persons with clinical disease who become severely ill or die.

- **Chain of Infection**

- As described on the traditional model (epi triad) illustrates that infectious diseases result from the interaction of agent, host, and environment. More specifically, transmission occurs when the agent leaves its reservoir or host through a portal of exit, and is conveyed by some mode of transmission, and enters through an appropriate portal of entry to infect a susceptible host. This is sometimes called the chain of infection and is illustrated in the Figure below



- **Reservoir**

- The reservoir of an agent is the habitat in which an infectious agent normally lives, grows, and multiplies.
- Reservoirs include humans, animals, and the environment.
- The reservoir may or may not be the source from which an agent is transferred to a host.
- For example, the reservoir of *Clostridium botulinum* is soil, but the source of most botulism infections is improperly canned food containing *C. botulinum* spores. Human reservoirs.
- Many of the common infectious diseases have human reservoirs. Diseases which are transmitted from person to person without intermediaries include the sexually transmitted diseases, measles, mumps, streptococcal infection, most respiratory pathogens, and many others.
- Smallpox was eradicated after the last human case was identified and isolated because humans were the only reservoir for the smallpox virus.
- Two types of human reservoir exist:
  - persons with symptomatic illness
  - carriers
- A carrier is a person without apparent disease who is nonetheless capable of transmitting the agent to others. Carriers may be
  - Asymptomatic carriers, who never show symptoms during the time they are infected
  - Incubatory or convalescent carriers, who are capable of transmission before or after they are clinically ill.

- A chronic carrier is one who continues to harbour an agent (such as hepatitis B virus or *Salmonella typhi*—the agent of typhoid fever) for an extended time (months or years) following the initial infection.
- **Animal reservoirs.**
  - Infectious diseases that are transmissible under normal conditions from animals to humans are called zoonoses.
  - In general, these diseases are transmitted from animal to animal, with humans as incidental hosts.
  - Such diseases include brucellosis (cows and pigs), anthrax (sheep), plague (rodents), trichinosis (swine), and rabies (dogs).
- **Environmental reservoirs.** Plants, soil, and water in the environment are also reservoirs for some infectious agents. Many fungal agents, such as those causing histoplasmosis, live and multiply in the soil.
- **Portal of exit:** Portal of exit is the path by which an agent leaves the source host. The portal of exit usually corresponds to the site at which the agent is localized. Thus, tubercle bacilli and influenza viruses exit the respiratory tract, schistosomes through urine, cholera vibrios in feces,
- **Modes of transmission**
  - After an agent exits its natural reservoir, it may be transmitted to a susceptible host in numerous ways.
  - These modes of transmission are classified as:
    - Direct: Through Direct contact; Droplet spread
    - Indirect: Airborne; Vehicle borne; Vector borne; Mechanical; Biologic
- In direct transmission, there is essentially immediate transfer of the agent from a reservoir to a susceptible host by direct contact or droplet spread.
- Direct contact occurs through kissing, skin-to-skin contact, and sexual intercourse
- Droplet spread refers to spray with relatively large, short-range aerosols produced by sneezing, coughing, or even talking.
- In indirect transmission, an agent is carried from a reservoir to a susceptible host by suspended air particles or by animate (vector) or inanimate (vehicle) intermediaries.
- Most vectors are arthropods such as mosquitoes, fleas, and ticks. These may carry the agent through purely mechanical means. For example, flies carry *Shigella* on appendages; fleas carry *Yersinia pestis* (agent that causes plague) in the gut and deposit the agent on the skin of a new host.
- In mechanical transmission, the agent does not multiply or undergo physiologic changes in the vector.
- Vehicles that may indirectly transmit an agent include food, water, biologic products (blood), and fomites (inanimate objects such as handkerchiefs, bedding, or surgical scalpels).
- As with vectors, vehicles may passively carry an agent—as food or water may carry hepatitis A virus—or may provide an environment in which the agent grows, multiplies, or produces toxin—as improperly canned foods may provide an environment in which *C. botulinum* produces toxin.
- Airborne transmission is by particles that are suspended in air.
  - There are two types of these particles: dust and droplet nuclei.

- Airborne dust includes infectious particles blown from the soil by the wind as well as material that has settled on surfaces and become re-suspended by air currents.
- Droplet nuclei are the residue of dried droplets. The nuclei are less than 5  $\mu$  (microns) in size and may remain suspended in the air for long periods, may be blown over great distances, and are easily inhaled into the lungs and exhaled. Tuberculosis, for example, is believed to be transmitted more often indirectly, through droplet nuclei, than directly, through droplet spread.
- **Portal of entry**
  - An agent enters a susceptible host through a portal of entry.
  - The portal of entry must provide access to tissues in which the agent can multiply or a toxin can act.
  - Often, organisms use the same portal to enter a new host that they use to exit the source host.
  - For example, influenza virus must exit the respiratory tract of the source host and enter the respiratory tract of the new host.
  - The route of transmission of many enteric (intestinal) pathogenic agents is described as “feco-oral” because the organisms are shed in feces, carried on inadequately washed hands, and then transferred through a vehicle (such as food, water, or cooking utensil) to the mouth of a new host.
  - Other portals of entry include the skin (hookworm), mucous membranes (syphilis, trachoma), and blood (hepatitis B).
- **Host**
  - The final link in the chain of infection is a susceptible host.
  - Susceptibility of a host depends on genetic factors, specified acquired immunity, and other general factors which alter an individual’s ability to resist infection or to limit Pathogenicity.
  - An individual’s genetic makeup may either increase or decrease susceptibility.
  - General factors which defend against infection include the skin, mucous membranes, gastric acidity, cilia in the respiratory tract, the cough reflex, and nonspecific immune response.
  - General factors that may increase susceptibility are malnutrition, alcoholism, and disease or therapy which impairs the nonspecific immune response. Specific acquired immunity refers to protective antibodies that are directed against a specific agent.
  - Individuals gain protective antibodies in two ways:
    - They develop antibodies in response to infection, vaccine, or toxoid; immunity developed in these ways is called active immunity.
    - They acquire their mothers’ antibodies before birth through the placenta or they receive injections of antitoxins or immune globulin; immunity that is acquired in these ways is called passive immunity.
- **NB:** The chain of infection may be interrupted when an agent does not find a susceptible host. This may occur if a high proportion of individuals in a population are resistant to an agent.
  - These persons limit spread to the relatively few who are susceptible by reducing the probability of contact between infected and susceptible persons. This concept is called herd immunity.
  - The degree of herd immunity necessary to prevent or abort an outbreak varies by disease.

- In theory, herd immunity means that not everyone in a community needs to be resistant (immune) to prevent disease spread and occurrence of an outbreak.
- In practice, herd immunity has not prevented outbreaks of measles and rubella in populations with immunity levels as high as 85 to 90%.
- One problem is that, in highly immunized populations, the relatively few susceptible persons are often clustered in population subgroups, usually defined by socioeconomic or cultural factors.
- If the agent is introduced into one of these subgroups, an outbreak may occur.

## Uses of Epidemiology

Epidemiology and the information generated by epidemiologic methods have many uses.

These uses are categorized and described below:

- Population or community health assessment. To set policy and plan programs, public health officials must assess the health of the population or community they serve and must determine whether health services are available, accessible, effective, and efficient.
- Individual decisions. People may not realize that they use epidemiologic information in their daily decisions. When they decide to stop smoking, take the stairs instead of the elevator, order a salad instead of a cheeseburger with French fries, or choose one method of contraception instead of another, they may be influenced, consciously or unconsciously, by epidemiologists' assessment of risk.
- Completing the clinical picture. When studying a disease outbreak, epidemiologists depend on clinical physicians and laboratory scientists for the proper diagnosis of individual patients. But epidemiologists also contribute to physicians' understanding of the clinical picture and natural history of disease. Similarly, epidemiologists have documented the course of HIV infection, from the initial exposure to the development of a wide variety of clinical syndromes that include acquired immunodeficiency syndrome (AIDS). They have also documented the numerous conditions that are associated with cigarette smoking—from pulmonary and heart disease to lung and cervical cancer.
- Search for causes. Much of epidemiologic research is devoted to a search for causes, factors which influence one's risk of disease. It has been said that epidemiology can never *prove* a causal relationship between an exposure and a disease.

Nevertheless, epidemiology often provides enough information to support effective action.

### Epidemiology Topic 3: Epidemiological Tools

- Epidemiology uses certain tools to be able to answer questions and provide a perspective of an event and this helps in decision making.
- The basic tools of epidemiology are Ratios, Proportions and Rates
- **RATIO**
  - A *ratio* is any quotient obtained by dividing one quantity by another.
  - The numerator and denominator are generally distinct, and neither is a subset of the other.
  - Example: In a population of 10, the ratio of females to males may be 6 to 4, or 1.5.

$$\text{Ratio: } \frac{6 \text{ females}}{4 \text{ males}} = 1.5$$

- **Proportion**
  - A *proportion* is a ratio in which the numerator is included in the denominator.
  - Example: Gastro enteritis Outbreak in Nakowa village, 2004

Symptom	Yes	No	DK/missing	%
Vomiting	139	23	8	85.80
Diarrhea	131	28	11	82.39
Stomach pain	123	15	32	89.13
Fever	83	44	43	65.35
Headache	71	47	52	60.17
Other	34	117	19	22.52

- **RATE**
  - A *rate* is (usually) a proportion which relates events to a population base over a given time.
  - Everyone in the denominator must be at risk of entering the numerator.

$$\text{Rate} = \frac{\text{No. of events or cases in a specified time}}{\text{Average pop. in same area during that time}} \times 10^n$$

	<u># New Cases</u>	<u>Population</u>
Village A	58	4,500
Village B	35	7,000

Example:

Calculate rates per 1000, so that we can compare the magnitude of the problem in these two villages.

	<u># New Cases</u>	<u>Population</u>	<u>Rate per 1000</u>
Village A	58	4,500	$(58/4,500)*1000$ = 13
Village B	35	7,000	$(35/7,000)*1000$ = 5

- Placing events in the context of a denominator allows comparison between populations, an essential feature of measuring disease frequency.

**Uses of the tools:**

Attack rate

$$\frac{\text{No. of new cases during an epidemic period}}{\text{Population at start of the period}}$$

Secondary attack rate

$$\frac{\text{New cases among contacts of known cases}}{\text{Size of contact population at risk}}$$

Hepatitis A outbreak following wedding party at Lafiya village

$$\text{Attack rate} = \frac{\text{New cases during an epidemic period}}{\text{Population at start of the period}}$$

	<b>Fell ill</b>	<b>Total</b>
Ate salad	43	54
Did not eat salad	3	21

**How do you calculate the attack rates?**

Hepatitis A outbreak following the wedding party at Lafiya village

$$\text{Attack Rate} = \frac{\text{New cases during an epidemic period}}{\text{Population at start of the period}}$$

	<b>Ill</b>	<b>Total</b>	<b>Attack rate</b>
Ate salad	43	54	= (43/54) 80%
Did not eat salad	3	21	= (3/21) 14%

$$\text{Case Fatality Rate} = \frac{\text{Deaths in a time period due to disease}}{\text{Cases of that disease}}$$

“The proportion of cases of a specified condition which are fatal within a specified time”

Example: Cholera

**Summary table showing information on cholera in S. A., 1981 – 1984**

	30/09/08 – 31/07/81	1/08/81 – 5/08/82	6/08/82 – 31/07/83	1/08/83 – 27/07/84
Confirmed	3786	11141	7638	1977
Estimated Suspected Treatment	30,000	50,000	20,000	5434
Reported Death	42	218	62	20

(Source, SA National Dept. of Health)

**How do you calculate the CFR?**

Summary table showing information on cholera in S. A., 1981 – 1984

	30/09/08 – 31/07/81	1/08/81 – 5/08/82	6/08/82 – 31/07/83	1/08/83 – 27/07/84
Confirmed	3786	11141	7638	1977
Estimated Suspected Treatment	30,000	50,000	20,000	5434

Reported Death	42	218	62	20
CFR (%) On proven Cases	1.1	2.0	0.8	1.0

(Source, SA National Dept. of Health)

- Draw backs of Rates:
  - Denominator
    - Good denominator data may be unavailable.
    - An accurate denominator may not be possible for cases obtained from surveillance.
    - Small populations make rates erratic.
  - Numerator
    - May be over- or under-counted because:
      - Variations in case definition.
      - Reporting completeness or accuracy.

## Epidemiology Topic 4: Introduction to Study Design

Epidemiological studies can be classified as either

- Observational or
- Experimental.

### Observational studies

- Observational studies allow nature to take its course: the investigator measures but does not intervene. They include studies that can be called descriptive or analytical:
  - A descriptive study is limited to a description of the occurrence of a disease in a population and is often the first step in an epidemiological investigation.
  - An analytical study goes further by analysing relationships between health status and other variables.
- Apart from the simplest descriptive studies, almost all epidemiological studies are analytical in character.
- Pure descriptive studies are rare, but descriptive data in reports of health statistics are a useful source of ideas for epidemiological studies.
- Limited descriptive information (such as that provided in a case series) in which the characteristics of several patients with a specific disease are described but are not compared with those of a reference population, often stimulates the initiation of a more detailed epidemiological study

### Experimental studies

Experimental or intervention studies involve an active attempt to change a disease determinant – such as an exposure or behaviour – or the progress of a disease through treatment, and are similar in design to experiments in other sciences.

Type of study	Alternative name	Unit of study
<b><i>Observational studies</i></b>		
Descriptive studies		
Analytical studies		
Ecological	Correlational	Populations
Cross-sectional	Prevalence	Individuals
Dace-control	Case-reference	Individuals
Cohort	Follow-up	Individuals
<b><i>Experimental studies</i></b>		
<b><i>Intervention studies</i></b>		
Randomized controlled Trials	Clinical trials	Individuals
Cluster randomized Controlled trials		Groups
Field trials		
Community trials	Community intervention studies	Healthy people Communities

### Descriptive studies:

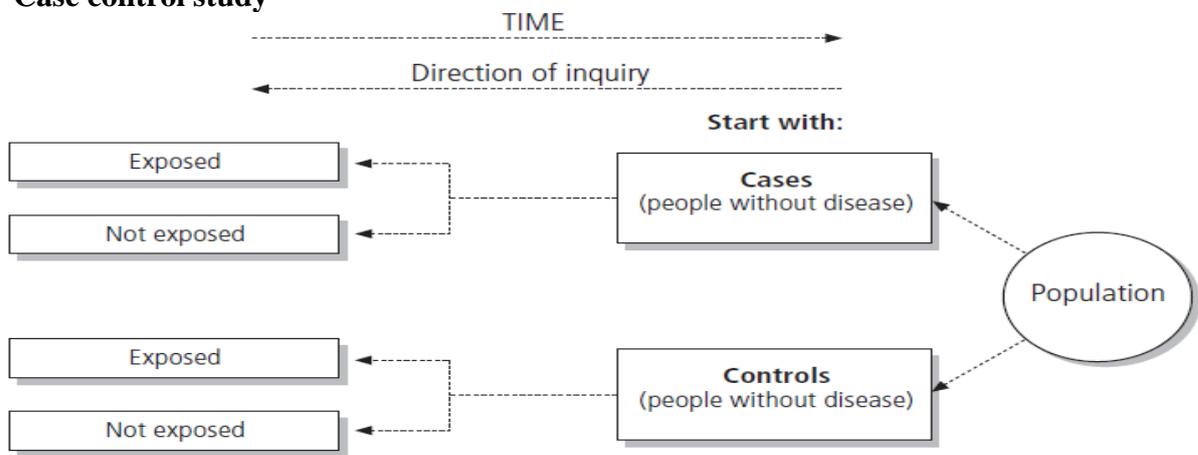
- We have learnt the definition of epidemiology as study of the *distribution* and determinants of health-related states in specified populations and the application of this study to the control of health problems.
- Descriptive epidemiology is really looking at the DISTRIBUTION part of definition
  - *Who* is affected by disease?

- *Where* and *when* do cases occur?

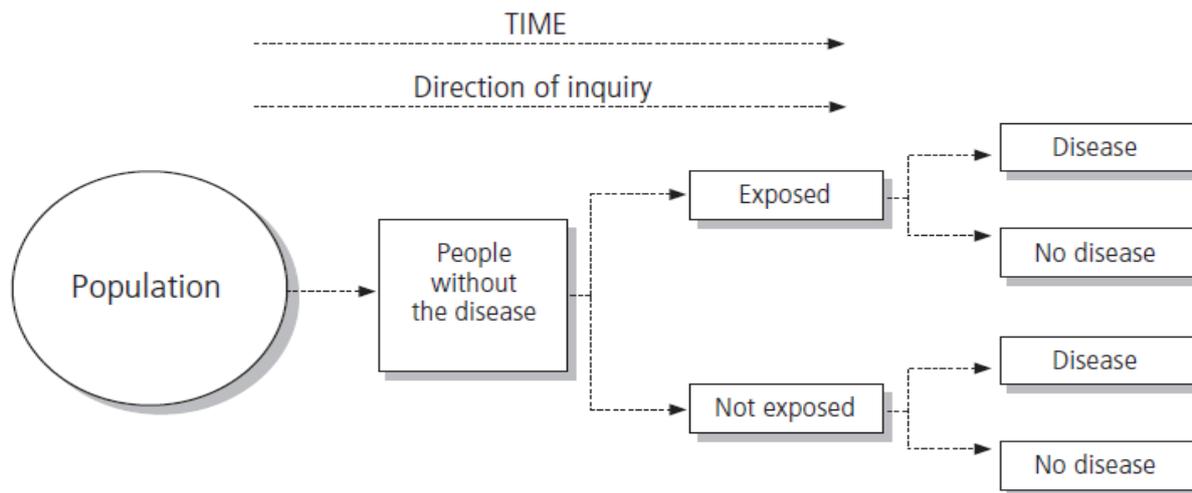
Such questions are useful for both outbreak detection and other roles of disease surveillance (e.g. outbreak preparedness)

- Importance of Descriptive Epidemiology:
  - Assess disease trends
  - Determine presence of epidemic
  - Hypothesis generation
  - Guide design of analytic studies
  - Guide policy
  - Focus immediate control measures by person/place/time
  - Generate hypotheses about risk factors
  - Plan for outbreak prevention/preparedness
  - Improve disease/outbreak surveillance

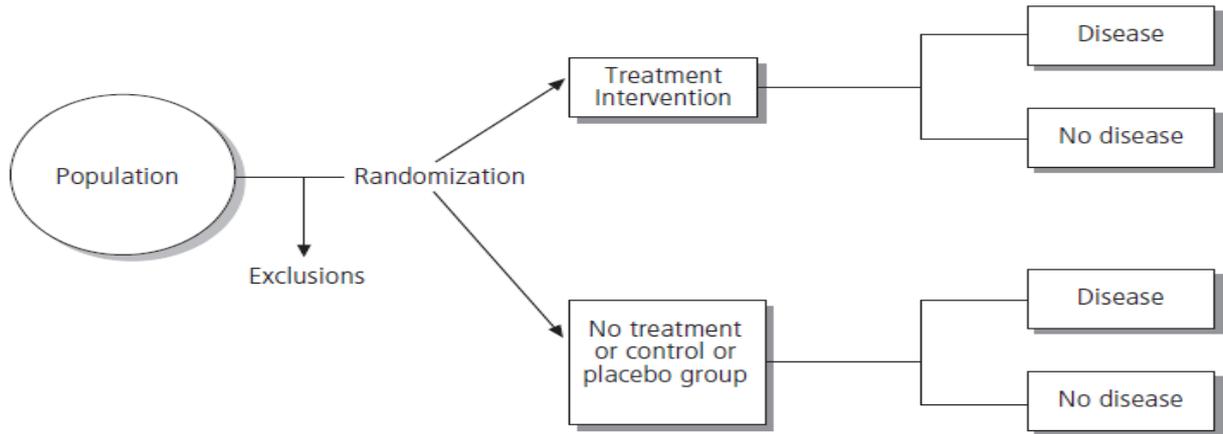
### Case control study



### Cohort Study



## Randomized controlled trial



## Epidemiology Topic 5: Investigating and Managing Outbreaks

### Uncovering Outbreaks:

- Outbreaks may be detected when routine, timely analysis of surveillance data reveals an increase in reported cases or an unusual clustering of cases.
- In a health department, we may detect increases in or unusual patterns of disease from the weekly tabulations of case reports by time and place or from the examination of the exposure information on the cases reported.
- Nonetheless, most outbreaks come to the attention of health authorities because an alert clinician is concerned enough to call the health department.
- Members of affected groups are another important reporting source for apparent clusters of both infectious and non-infectious disease.
- Why Investigate Possible Outbreaks

Health departments investigate suspected outbreaks for a variety of reasons. These include

- the need to institute control and prevention measures;
  - the opportunity for research and training;
  - program considerations; and public relations,
  - political concerns, and
  - Legal obligations.
- **Control/prevention**
    - The primary public health reason to investigate an outbreak is to control and prevent further disease.
    - Before we can develop control strategies for an outbreak, we must identify where the outbreak is in its natural course:
      - Are cases occurring in increasing numbers or is the outbreak just about over?
      - Our goal will be different depending on the answers to these questions: If cases are continuing to occur in an outbreak, our goal may be to prevent additional cases. Therefore, the objective of our investigation would be to assess the extent of the outbreak and the size and characteristics of the population at risk in order to design and implement appropriate control measures.
  - On the other hand, if an outbreak appears to be almost over, our goal may be to prevent Outbreak in the future. In that case, the objective of our investigation is more likely to be to identify factors which contributed to the outbreak in order to design and implement measures that would prevent similar outbreaks in the future.
  - The balance between control measures versus further investigation depends on how much is known about the cause, the source, and the mode of transmission of the agent . Table 6.1 illustrates the relative emphasis as influenced by how much we know about these factors.

### Steps of an Outbreak investigation

1. Prepare for field work
2. Establish the existence of an outbreak
3. Verify the diagnosis
4. Define and identify cases
  - a) Establish a case definition
  - b) Identify and count cases

5. Performed descriptive epidemiology
6. Develop hypotheses
7. Evaluate hypotheses
8. As necessary reconsider/refine hypotheses and execute additional studies
  - a) Additional epidemiology studies
  - b) Other types of studies – laboratory, environmental
9. Implement control and prevention measures
10. Communicate findings

- The steps described above are in a conceptual order.
- In practice, however, several steps may be done at the same time, or the circumstances of the outbreak may dictate that a different order be followed.
- For example, control measures should be implemented as soon as the source and mode of transmission are known, which may be early or late in any particular outbreak investigation.

## Epidemiology Topic 6: Epidemiology of Non-Communicable Diseases

- A *Non-communicable Disease* is a disease that is not spread through contact.
  - Are caused by how people live, conditions they are born with, or environmental hazards.
  - Are not spread by contact because most are not caused by germs. Instead they are the breakdown in body cells and tissues.
  - Types
    - Degenerative Diseases: Cause further breakdown, or degeneration in body cells and tissues as they progress
    - Chronic Diseases:
      - Are present either continuously or off and on over a long period of time
      - May develop as a result of a person's lifestyle behaviors or substances in a person's environment
    - Diseases Present at Birth
      - *Genetic Disorder*- one in which the body does not develop or function normally because of an inherited problem
      - *Birth Defect*- disorders of the developing and newborn baby, causes unknown
    - **NB:** In most cases there are no cure for either genetic disorders or birth defects
    - Diseases Resulting from Lifestyle Behaviors
      - *Risk Factors* are certain characteristics that increase a person's chances of developing the disease.
      - Many diseases are the direct or indirect result of harmful lifestyle behaviours. Healthful lifestyle behaviours, on the other hand, can help prevent or control certain diseases and disorders.

## Non-Communicable Disease

- Diseases Caused by the Environment
  - Many diseases are caused by hazards in the environment
  - Examples of harmful substances that may be present in the environment: Fumes for chemicals, second hand smoke, radon, asbestos



### **Levels of Prevention**

- Primary
  - Elimination of risk factors
  - Primordial prevention
- Secondary
  - Screening
  - Treatment to maintain blood glucose
- Tertiary
  - Prevent complications
    - Blindness, kidney failure, coronary thrombosis, gangrene of lower extremities etc

## **Subject 5.2: Introduction to Biostatistics in Epidemiology**

**Aim:** To empower participants with knowledge and skills of biostatistics and its application to health care delivery

### **Objectives:**

- To introduce participants to basic concepts and terminologies of statistics
- To give an overview of descriptive methods in statistics
- To update the knowledge of health managers in data management
- To describe the various techniques of sampling
- To enable appreciate the application of statistics to health care

**Learning outcomes:** After completing instruction in this subject (whether after a single classroom session or following a series of related classroom sessions), participants should be familiar with and able to use the following knowledge and skills.

- Know the basic concepts of statistics as applied to public health
- Be able to obtain relevant data, both as samples and as comprehensive data
- Know the most important elements of basic statistics and be able to apply them to activities within the scope of their responsibilities
- Be able to calculate basic statistics from relevant data, including measures of central tendencies (mean, median, mode), distribution statistics (range, minimum, maximum, standard error, variance).
- Be able to use basic descriptive plotting methods for relevant data e.g., histogram, line charts, bar charts, pie charts, frequency polygram).
- Be able to utilize the statistical data in decision making process within the scope of their responsibilities

### **Topics:**

- T1. Introduction to biostatistics definition and concepts
- T2. Introduction to descriptive statistics
- T3. Data collection, analysis, and presentation
- T4. Sampling techniques
- T5. Application of statistical tools in PHC

## Biostatistics Topic 1: Introduction to biostatistics definition and concepts

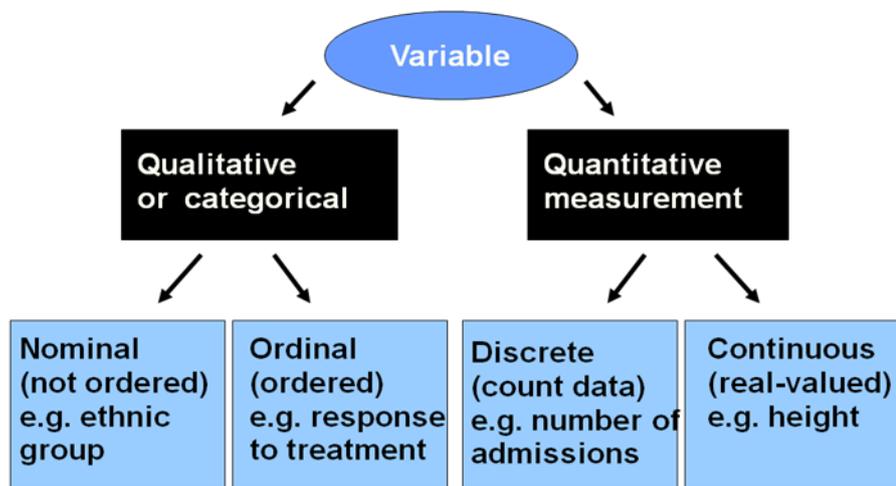
### Definitions

- Statistics
  - Explores the collection, organization, analysis, and interpretation of numerical data
  - Biostatistics has a focus on the biological and health sciences
  - Paints a picture with numbers
  - Allows comparison and interpretation
  - Provides data for decision making purposes
- Data: A group of numbers. The raw material of statistics, data may be collected from measurements or counting.
- Variable: A characteristic which can be represented by different values for different members of a population or sample
  
- **Scales of Measurement**
  - Scales provide information about the characteristic being measured by placing it into a category
  - The scale used affects the type and amount of information that can be obtained from the data
  - There are four scales of measurement:
    - Nominal
    - Ordinal
    - Interval
    - Ratio
- Nominal Scale
  - Classifies persons or things based on the characteristic being assessed
  - No information is given on quantity or amount
  - *Examples:* Gender (male, female); Urban and rural
- Ordinal Scale
  - Classifies persons or things based on the characteristic being assessed
  - Indicates “more than” or “less than”
  - Does not indicate how much more or how much less than
  - *Example:* grading of anaemia as ‘mild’, ‘moderate’, ‘severe’
- Interval Scale
  - Classifies persons or things based on the characteristic being assessed
  - Indicates “more than” or “less than” *and* the magnitude of the observation
  - No indication of a zero point
  - *Example:* Temperature
- Ratio Scale
  - Classifies persons or things based on the characteristic being assessed
  - Indicates “more than” or “less than” *and* the magnitude of the observation
  - Zero point is indicated
  - *Examples:* height, weight

### Rate, ratio and proportions

- Proportions
  - The quotient of 2 numbers
  - Numerator is a sub-group of the population in the denominator
  - Numerator is always Included in the denominator
  - Proportion ranges between 0 and 1

- Percentage = proportion x 100
- Rate
  - The quotient of 2 numbers
  - Measures the probability of occurrence of an event over time
  - Numerator: number of events
  - Denominator: Population at risk for event in numerator observed for a given TIME.  
Examples include, morbidity rates, attack rates, prevalence rates, incidence rates mortality rates and natality rates
- Population: consists of the totality of the observations with which we are concerned.
- Sample: a subset of a population.
- Summary of variable types:



## Biostatistics Topic 2: Introduction to descriptive statistics

### Why summarize data

- Better understand the distribution of the disease
- Present the data to others Generate hypotheses about causation

### Measures of Central Tendency

#### Overview

- Measures of central tendency are used to describe the data in the sample by giving an idea of the center and the distribution of the data.
- There are three common measures of central tendency: mean, median and mode.
- **Formula:** The mean is the only measure with a specific formula to follow.

$$\bar{x} = \frac{\sum x}{n}$$

- Mean
  - The mean is simply the arithmetic average of the data and is calculated by taking the sum of all values in the number set and dividing that total by the number of values in the dataset.
  - The mean is the most commonly used measure of central tendency.

$$\bar{x} = \frac{\sum x}{n}$$

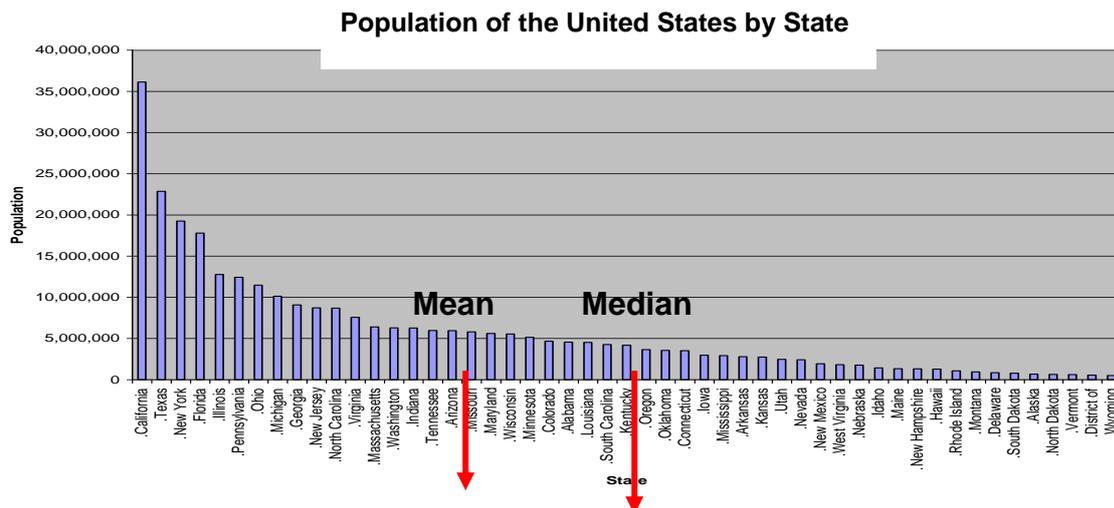
- Median
  - The median is the 50<sup>th</sup> percentile of the values in a dataset and represents the literal middle of the data.
  - The median is found by arranging all values in the dataset in numerical order and then choosing the middle value.
  - If the number of values in a dataset is even, take the mean of the two middle numbers to find the median.
  - The median is resistant to skewing, the result of an outlier causing the mean of the data to shift either to the left or to the right.
  - It is not affected by extreme values like the mean is and it is more representative of the center of data when data is asymmetrical.
- Mode
  - The mode represents the value that is found most frequently in a set of numbers, though it is not often used.
  - Note that: it is possible to have more than one mode.

- In the following set of numbers, {8 7 8 8 9 6 5 6 4 6 7}, the mode is both 8 and 6, since each is included in the dataset three times. This dataset is referred to as bimodal because it has two modes.
- It is also possible not to have a mode in a set of numbers. In the following set of numbers, {5, 4, 9, 7, 6, 3, 8}, there is no number which occurred more frequently than any other. Therefore, there is no mode.

- **Comparison of mean, median, and mode**

- When you are told to average the data, it is generally expected that you will take the mean.
- Technically, however, the average could refer to the mean, the median, or the mode of the data.
- The mean is able to give us the most information about the dataset as a whole, especially when paired with the standard deviation.
- Therefore, we prefer to use the mean when we can.

Let's consider skewed data. Look at the graph of the population distribution by state in the United States.



- The states with on the left side of the histogram have a significantly larger population than other states.
- Because of this, we expect the mean to be higher in value than the median.
- The calculated mean in this sample is 5,811,968.706, which is just marked on the graph above. The median is 4,173,405, also marked on the graph.
- The mean in this example is greater than the median.
- A general rule to follow is that if the data is skewed either to the left or to the right, the median represents the data better than the mean.
- If a sample is normally distributed, the mean and median will be nearly the same.
- With symmetrical data, the mode will be similar as well.
- The mode, rarely used, it can easily be misinterpreted and is not used in statistical tests.
- When the sample size is small, however, the mode may represent the data most accurately.
- It is possible that in bimodal data, the modes will be a more accurate description as well.

- The mode is also frequently used to describe qualitative data. For example, you might find a modal diagnosis, or use the mode to describe medical diagnoses by stating the diagnosis that was seen most frequently over a given period of time.

## Measures of Dispersion

### Overview

- Measures of dispersion describe variability of data in a sample by describing the spread of the data.
- Formulas:

$$\text{Range} = \text{maximum} - \text{minimum}$$

$$\text{Interquartile Range} = \frac{3(n+1)}{4} - \frac{(n+1)}{4}$$

$$\text{Variance} = s^2 = \frac{1}{(n-1)} \sum_{i=1}^n (x_i - \bar{x})^2 \quad \text{OR} \quad \frac{n \sum x_i^2 - (\sum x_i)^2}{n(n-1)}$$

- In the previous section, we discussed methods of describing the center of the data.
- Now we shall examine ways to describe the spread of the data, or how far that data is from the center point.
- **Range**
  - The range of the data is the difference between the smallest observation (minimum value) and the largest observation (maximum value) in a set of data.
  - The range is calculated by finding the difference between the maximum value and the minimum value in a set of data.

$$\text{Range} = \text{maximum} - \text{minimum}$$

- **Inter quartile Range (IQR)**
  - The interquartile range is the difference between the 25<sup>th</sup> percentile (1<sup>st</sup> quartile) and the 75<sup>th</sup> percentile (3<sup>rd</sup> quartile) in a set of data.
  - This measurement gives an idea of the middle 50 percent of the observations and is, therefore, less likely to be influenced by outliers or extreme values.

$$\text{IQR} = \frac{3(n+1)}{4} - \frac{(n+1)}{4}$$

- **Variance (s<sup>2</sup>)**
  - The variance represents the amount of spread or variability around the mean of a set of data.
  - Because the variance is in units squared, we find the standard deviation to describe our data in the proper units.

- The symbol  $s^2$  is used when we are referring to the variance of a sample and the symbol  $\sigma^2$  when we are referring to the variance of a population.
- We will almost never know the variance of a population unless we are given a proportion.

$$s^2 = \frac{1}{(n-1)} \sum_{i=1}^n (x_i - \bar{x})^2 \quad \text{OR} \quad \frac{n \sum x_i^2 - (\sum x_i)^2}{n(n-1)}$$

- **Standard Deviation (s)**

- The standard deviation of a set of data is the square root of the variance. It describes the average distance of all observations from the mean of the sample and is used as variability is, to describe the spread of the data.
- A large standard deviation represents a wide spread because the observations are far from the mean. When we refer to the standard deviation of a population, we use the symbol  $\sigma$ .

$$s = \sqrt{s^2}$$

- **Standard Error (SE)**

- The standard error is the standard deviation of the sampling distribution of the means, rather than the observations themselves.
- The smaller the standard error, the closer any given sample mean is likely to be to the true population mean.

$$SE = \frac{s}{\sqrt{n}}$$

### Biostatistics Topic 3: Data Collection, Analysis, And Presentation

#### Frequency distribution

- One of the simplest examinations of the distribution of a disease is simply to list, for each value of a variable, or groupings of the variable, the number of times that observation occurs in the study population.
- This is the frequency distribution and can be displayed as a table, as a bar chart (qualitative data), as a histogram (quantitative data), or as a frequency polygon (quantitative data).

#### Line list Example

ID	Village	Age (m)	Sex	Onset	Vaccinated	Age vaccinated (m)	Vitamin A	Diarrhea	Pneumonia	Died
1	A	130	M	1/1/1995	Y	11	N	N	N	N
2	A	10	F	1/1/1995	N		N	Y	N	Y
3	A	35	M	2/1/1995	Y	10	Y	N	N	N
4	A	50	M	2/1/1995	Y	9	Y	N	N	N
5	A	34	F	3/1/1995	Y	10	Y	N	N	N
6	A	63	M	3/1/1995	U		N	N	Y	N
7	A	18	F	5/1/1995	Y	8	Y	N	N	N
8	A	53	F	6/1/1995	Y	10	Y	Y	N	N
9	A	19	F	7/1/1995	Y	15	Y	N	Y	N
10	B	37	M	7/1/1995	Y	10	Y	N	N	N

**Example of a skills station for this topic**

**The table below shows the distribution of 1000 Household by their source of Water.**

Water source	Number of persons	Percentage
River	347	34.7
Lake	235	23.5
Bore hole	428	42.8
Total	1000	100.0

**Task:** present data provided in the above table in a Bar chart.

## Biostatistics Topic 4: Sampling Techniques

Once the population has been identified and the size of the sample determined, we need to decide how we are going to choose the sample from the population.

- Sampling is a process by which we study a small part of a population to make judgments about that population. We sample as a part of our daily lives.
- Whenever we want to learn about health in the community or practices in the health system, we need to draw samples since it would be impractical to collect data on every person or event.
- In drug use surveys we need to draw samples to select facilities to survey, prescriptions to study, or patients to observe.
- If we wanted to know about TB patients in primary care facilities in a country we would probably get the wrong impression of the real situation if we only surveyed the five health centers closest to the central office of the Ministry of Health because these would likely be better than the average.
- If we wanted to examine prescribing in a health center we would be misled if we surveyed the first 20 cases attending on a Monday morning. So, to get a representative sample we would need to ensure that all facilities or patients can be included in the survey.

**Two categories of sampling methods:** Non-probability sampling & Probability sampling

### Non probability sampling

This can be divided in to the following

- Convenience sampling is a method by which, for convenience sake, the study units that happen to be available at the time of data collection are selected in the sample. This is the least representative sampling method.
- Quota sampling is a method by which different categories of sample units are included to ensure that the sample contains units from these categories. For example, a quota sample of patients from a health center might include 10 patients with ARI, 10 with diarrhea, and 10 with malaria.
- Both of these methods may be used in operational research studies. When measuring prescribing and dispensing times or in assessing patient understanding, a convenience Sample of patients may be the only practical method. A quota sample may be used for males and females to ensure that both genders are observed or interviewed.
- Non-probability samples may not be representative of the reference population. However, we often need to use these methods when:
  - We have inadequate sample frames or
  - When a time constraint exists which force us to use them.
- Advantages: Easy, Quick, Inexpensive
- Disadvantages
  - Not representative of the population
  - Difficult to quantify the precision of our estimate
  - May not be able to make inferences about the larger population

### Probability sampling

- Simple random sampling: This is the most common and the simplest of the sampling methods.
- In this method, the subjects are chosen from the population with equal probability of selection.

- One may use a random number table, or use techniques such as putting the names of the people into a hat and selecting the appropriate number of names blindly.
- Computer programs can draw simple random samples from a given population.
- The simple random sample has the advantages that it is easy to administer, is representative of the population in the long run, and the analysis of data using such a sampling scheme is straightforward.
- The disadvantage is that the selected sample may not be truly representative of the population, especially if the sample size is small.

### **Systematic sampling**

- In systematic sampling, sample units are selected from a numbered list of all units in the study population by using a regular interval, starting from a random starting point.
- To calculate the sampling interval, divide the size of the list by the desired sample size. For example, if we want to select 20 health centers from a list of 46 in our sampling frame, our sampling interval would be  $46/20 = 2.3$ .
- The first facility chosen in this case can be either 1, 2 or 3, which are all the possible sampling units within the first sampling interval.
- This is selected by
  - choosing a random number between 0 and 1 (with at least 3 digits after the decimal point),
  - multiplying this random number by the sampling interval, and
  - Rounding this result upward to get the number of the first facility. For example, if the random number chosen is 0.183, the first unit for the sample is  $0.183 \times 2.3 = 0.421$  which rounds upward to 1, so the first facility on the list is chosen for the sample.

### **Stratified Sampling**

- When the size of the sample is small and we have some information about the distribution of a particular variable (e.g. gender: 50% male/ 50% female), it may be advantageous to select simple random samples from within each of the subgroups defined by that variable.
  - By choosing half the sample from males and half from females, we assure that the sample is representative of the population with respect to gender.
- When confounding is an important issue (such as in case-control studies), stratified sampling will reduce potential confounding by selecting homogeneous subgroups

### **Cluster sampling**

- In many administrative surveys, studies are done on large populations which may be geographically quite dispersed.
- To obtain the required number of subjects for the study by a simple random sample method will require large costs and will be inconvenient.
- In such cases, clusters may be identified (e.g. households) and random samples of clusters will be included in the study; then every member of the cluster will also be part of the study.
- This introduces two types of variations in the data
  - Variations between clusters and
  - Variations within clusters
 This will have to be taken into account when analysing data.
- Sampling, probability proportional to size

- Numbered list of all units is performed consecutively, not starting over at each new division or cluster
- Sampling interval is calculated, random starting point selected
- Advantages:
  - Able to make inferences about the larger population
  - Able to quantify the precision of our estimate
- Disadvantages:
  - Takes more time, costs more
  - Need precise information about each group of units
- Units are chosen at regular intervals using the consecutive numbers, i.e. some divisions or clusters will have multiple units chosen, and some may have none chosen (if unit is smaller than interval)
- This method targets divisions or clusters that have a larger number of units per division.
- Epidemiologist wishes to sample employees of hospitals to estimate number of employees who are HIV positive
- A Region has 8 hospitals with varying number of employees per hospital.
- The Researcher decides to sample  $M=3$  hospitals (clusters) with probability proportional to size

Hospital	#employees	Cumulative Range
1	1200	1 - 1200
2	450	1201 - 1650
3	2100	1651 - 3750
4	860	3751 - 4610
5	2840	4611 - 7450
6	1910	7451 - 9360
7	400	9361 - 9760
8	3200	9761 - 12960
<b>Total</b>	<b>12,960</b>	

**To sample 3 hospitals by PPS we use systematic sampling**

**$12,960 \div 3 = 4320$  (= sampling interval)**

**(1) Random number between 1 and 4320 = 1391 (Hospital 2)**

**(2) Calculate 2 other hospitals using the sampling interval**

**$1391 + 4320 = 5711$  (Hospital 5)**

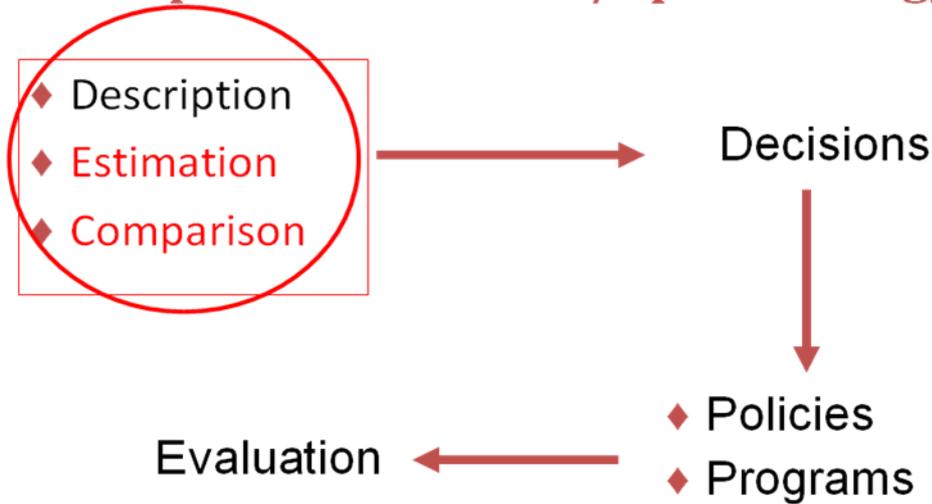
**$5711 + 4320 = 10031$  (Hospital 8)**

**(3) PPS sample consists of Hospitals 2, 5, and 8**

### Multistage Sampling

- Many studies, especially large nationwide surveys, will incorporate different sampling methods for different groups, and may be done in several stages.
- In experiments, or common epidemiological studies such as case-control or cohort studies, this is not a common practice.

## Discipline of Statistics/Epidemiology



- Estimation: examples
  - Proportion of 2 year old children who are fully vaccinated
  - Proportion of drivers using seat belts
  - Growth status of children
  - Mean blood pressure of adults
  - Proportion of persons with HIV
- Comparison
  - Are urban and rural rates of a disease or risk factor different?
  - Is a specific exposure associated with increased risk of disease?
  - Is this vaccine effective?
  - Have I achieved my target immunization level?
  - Does District X have a higher rate of anemia in children than District Y?

### **Subject 5.3: Integrated PHC Delivery**

**Aim:** To enable participants appreciate the need for an integrated PHC approach to disease control in Nigeria

#### **Objectives:**

- To update participants' knowledge of current integrated PHC approaches
- To describe the Integrated Disease Surveillance and Response (IDSR) strategy and its operationalization in Nigeria
- To update knowledge of emerging and re-emerging infectious diseases
- To introduce the concept of quality of care in PHC

**Learning outcomes:** After completing instruction in this subject (whether after a single classroom session or following a series of related classroom sessions), participants should be familiar with and able to use the following knowledge and skills.

- Know the various programme initiatives aimed at improving maternal and child health in the country
- To know the goals and objectives and the strategies employed by these programmes
- Be able to integrate these initiatives within the ward health system and general PHC activities within the scope of their responsibilities

#### **Topics:**

- T1. Integrated Disease Surveillance and Response (IDSR)
- T2. Emerging and re-emerging diseases
- T3. Current PHC approaches: IMCI, IMNCH, Midwifery Service Scheme, Focus ANC, REW, Elimination of Neonatal Tetanus

## **Integrated PHC Topic 1: Epidemiology of priority diseases in Nigeria (IDSR)**

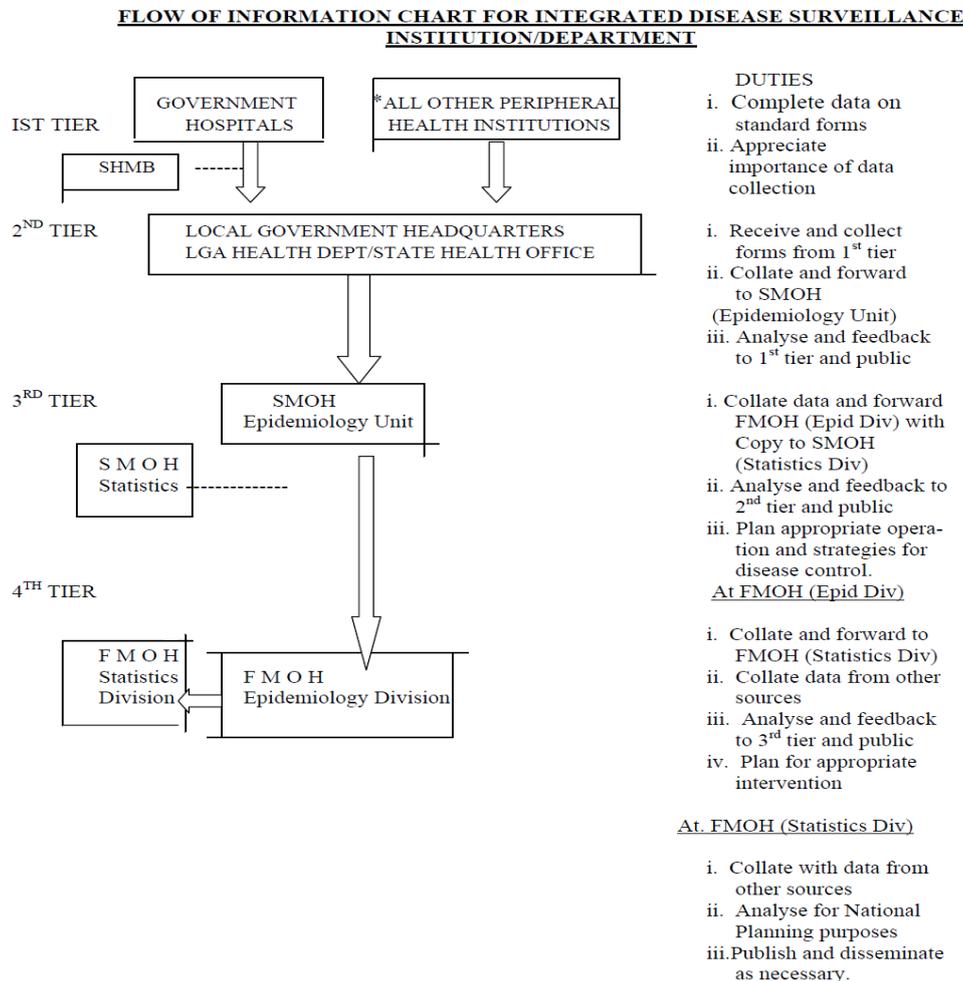
### **Introduction**

- Communicable diseases are the most common causes of death, disability and illness in the African Region.
- Surveillance data can guide health personnel in the decision-making needed to implement the proper strategies for disease control and preventing future cases.
- In September 1998, the 48th World Health Organization -Regional Committee adopted integrated disease surveillance as a regional strategy for strengthening weak national surveillance system and efficacious response to priority communicable diseases for the African region.
- What is integrated disease surveillance?  
In an integrated system:
  - The LGA level is the focus for integrating surveillance functions. This is because the LGA is the first level in the health system with full-time staff dedicated to all aspects of public health.
  - All surveillance activities are co-ordinated and streamlined. Rather than using scarce resources to maintain separate vertical activities, resources are combined to collect information from a single focal point at each level.
  - Several activities are combined into one integrated activity and take advantage of similar surveillance functions, skills, resources and target populations. For example, surveillance activities for acute flaccid paralysis (AFP) can address surveillance needs for neonatal tetanus, measles and other diseases.
  - Surveillance focal points at the LGA, State and national levels collaborate with epidemic response committees at each level to plan relevant public health response actions and actively seek opportunities for combining resources.
- Goal and Objectives of integrated disease surveillance and response  
**Goal:**
  - The goal of IDSR is to improve the ability of LGA to detect and respond to diseases and conditions that cause high rates of death, illness and disability in the LGA's catchments.
  - By strengthening skills and resources for integrated disease surveillance and response, improved health and well being for the communities in the LGA can result.**General objectives:**
  - The general objective of the IDSR strategy is to provide a rational basis for decision-making and implementing public health interventions.
  - To facilitate implementation of IDSR,
- WHO/AFRO has proposed to countries a system of simplified tools and response actions that could contribute to efficient and timely decision-making.
- To that end, integrated disease surveillance and response seeks to:
  - Strengthen the capacity of countries to conduct effective surveillance activities
  - Integrate multiple surveillance systems so that forms, personnel and resources can be used more efficiently and effectively
  - Improve the use of information for decision making
  - Improve the flow of surveillance information between and within levels of the health system
  - Improve laboratory capacity to identify pathogens and monitor drug sensitivity
  - Increase the involvement of clinicians in the surveillance system.
  - Emphasise community participation to detect and respond to public health problems

- Strengthen the involvement of laboratory personnel in epidemiological surveillance.

● **Flow of information under the IDSR in Nigeria**

The chart below gives a systematic illustration of the flow of information under IDSR:



**KEY**

➡ Direct Routine Communication

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SMOH - State Ministry of Health

FMOH - Federal Ministry of Health

SHMB - State Hospital/Health Management Board

\*Include all Local Government Health Institutions, (e.g. Missions)

Teaching Hospitals, Private Hospitals and Institutions and Armed Forces/Police Institutions.

- **How can IDSR contribute to epidemic preparedness?**
  - When outbreak of an infectious disease occurs or is detected, there is no time to conduct initial training or assemble supplies.
  - All efforts must be focused on meeting the needs of patients and contain the outbreak in the community.
  - Being prepared for an emergency situation can ultimately save lives. In cases where epidemic preparedness plans have been in place, timely detection of outbreaks has been followed by prompt and appropriate response actions.
  - Because epidemiological surveillance collects data for describing and analysing health events, it provides skills and information for early detection of outbreaks leading to enhanced preparedness for emergency situations. For example, an LGA's epidemic management committee can define each level's role in outbreak response in advance.
  - Limited resources are maximised by combining resources for training, demonstration and setting aside adequate supplies of equipment, vaccines, drugs and supplies.
  
- **How is surveillance functions described in these guidelines?** These guidelines assume that all levels of the health system are involved in conducting surveillance activities for detecting and responding to priority diseases and conditions and include the following:
  - Step 1 - Identify cases. Using basic, standard case definitions identify priority diseases and conditions.
  - Step 2 - Report suspected cases or conditions to the next level. If this is an epidemic prone disease, or a disease targeted for elimination or eradication, investigate and respond immediately.
  - Step 3 - Analyze and interpret data. Compile the data and analyse it for trends. Compare information with previous periods and summarise the results.
  - Step 4 - Investigate and confirm suspected cases and outbreaks. Take action to ensure that the case or outbreak is confirmed including laboratory confirmation wherever it is feasible. Gather evidence about what may have caused the outbreak and use it to select appropriate control and prevention strategies.
  - Step 5 - Respond. Mobilise resources and personnel to implement the appropriate outbreak or public health response.
  - Step 6 - Provide feedback. Encourage future co-operation by communicating with levels that reported outbreaks and cases about the investigation outcome and success of response efforts.
  - Step 7 - Evaluate and improve the system. Assess the effectiveness of the surveillance system, in terms of timeliness, quality of information, preparedness, thresholds, case management and overall performance. Take action to correct problems and make improvements.
  
- **Surveillance functions at each level:**
  - There is a role for each surveillance function at each level of the health system. The levels are defined as follows:
    - Community: Represented by basic village-level service providers such as trained birth attendants, village leaders, school teachers, village health workers, or similar care providers.
    - Health facility: For surveillance purposes, all institutions with outpatient or/and in-patient facilities are defined as a "health facility". *(this should include both public and private health institutions)*

- LGA: The LGA is the lowest administrative unit and is the level responsible for primary health care implementation
  - State: The intermediate level of government is responsible for supervision and provision of technical support to the LGA.
  - National level: This is the federal level where policies are set with coordination of technical support.
  - *Laboratory: In an integrated system, some laboratory services are available at each level guided by a national level system of quality assurance and linked to reference laboratories for specific diseases.*
- **How can LGAs strengthen surveillance and response?**
  - Nigeria has completed assessment of the national surveillance system using an assessment tool developed by WHO/AFRO. \
    - The assessment has been used to prepare a five-year national plan and states' annual plan.
    - LGA may update its profile to decide which priority activities can take place to improve surveillance and response capacity.
  - LGA can also use a matrix (table) of surveillance functions and skills to describe their role in the surveillance system.
    - The matrix describes a complete system in which all the skills and activities are in place.
    - Each level supports activities at other levels and reinforces the opportunity for successful decision-making at corresponding levels and functions.
    - In a developing system, the matrix provides a systematic framework for improving and strengthening the system.
  - Practical uses of the matrix include:
    - Ensuring that all necessary functions and capacities have been identified
    - Establishing accountability to provide a basis for assigning functions to appropriate levels and determining what capacities should be present
    - Developing activities and training for human resource development
    - Managing and monitoring programs
    - Planning for surveillance and laboratory personnel, supplies and materials.
  - Moreover, the matrix illustrates several key assumptions about surveillance systems.
    - If one or more of the elements at each level is not present or is being performed poorly, the risk of failure increases for achieving surveillance and control objectives.
    - An effective system will be supported at each level from the levels above and below.
    - A complete system minimises any delay in taking public health actions.
    - The functions of detection, analysis, investigation, response, feedback and evaluation are interdependent and should always be linked.
  - The matrix below defines the surveillance functions and how they are achieved at each level of the health system.

## DETECT AND RESPOND TO PRIORITY DISEASES

	<b>1.0 Identify</b>	<b>2.0 Report</b>	<b>3.0 Analyse and Interpret</b>
	<i>Note: Laboratory steps apply to each level with access to laboratory services</i>		
<b>Community</b>	<ul style="list-style-type: none"> <li>Use simple case definitions to identify priority diseases or conditions in the community</li> </ul>	<ul style="list-style-type: none"> <li>Know which health events to report to the health facility and when to report them</li> </ul>	<ul style="list-style-type: none"> <li>Involve local leaders in observing and interpreting disease patterns and trends in the community</li> </ul>
<b>Health Facility</b>	<ul style="list-style-type: none"> <li>Use standard case definitions to identify and record priority diseases or conditions that present in:                             <ul style="list-style-type: none"> <li>- inpatient and outpatient services</li> <li>- community reports</li> <li>- private sector reports</li> </ul> </li> <li>Use standard protocols to process laboratory specimens</li> <li>Collect and transport clinical specimens for laboratory investigation</li> </ul>	<ul style="list-style-type: none"> <li>Report case-based information for immediately notifiable diseases</li> <li>Report data gathered from inpatient and outpatient services</li> <li>Report summary data to LGA</li> <li>Report laboratory results from target sites for selected diseases</li> </ul>	<ul style="list-style-type: none"> <li>Prepare and periodically update graphs, tables and charts to describe time, person and place for reported diseases and condition</li> <li>Identify and report immediately any disease or condition that:                             <ul style="list-style-type: none"> <li>- exceeds an alert/epidemic threshold or</li> <li>- occurs in locations where it was previously absent or</li> <li>- occurs more often in a population group than previously or</li> <li>- presents unusual trends or patterns</li> </ul> </li> <li>Interpret results. Discuss possible public health action with LGA team</li> <li>Observe changes in trends during routine analysis of laboratory results</li> </ul>
<b>LGA</b>	<ul style="list-style-type: none"> <li>Maintain activities for collecting routine surveillance data in a timely way</li> <li>Review records of suspected outbreaks</li> <li>Distribute specimen collection kits for special surveillance activities</li> </ul>	<ul style="list-style-type: none"> <li>Support health facilities in knowledge and use of standard case definitions for reporting priority diseases and conditions</li> <li>Make sure health facility staff know when and how to report priority diseases and conditions</li> <li>Promptly report immediately-notifiable diseases to the State level</li> <li>Report laboratory results of priority diseases to the State level</li> </ul>	<ul style="list-style-type: none"> <li>Define and obtain data for ensuring accurate denominators</li> <li>Aggregate data from health facility reports</li> <li>Analyse case-based data by person, place and time</li> <li>Calculate rates and thresholds</li> <li>Compare current data with previous periods</li> <li>Prepare and periodically (weekly for some diseases) update graphs, tables and charts to describe time, Person and place for reported diseases and conditions</li> <li>Make conclusions about trends, thresholds and analysed results</li> <li>Describe risk factors for priority disease or conditions</li> <li>Each laboratory should analyse its own data</li> </ul>
<b>State</b>	<ul style="list-style-type: none"> <li>Maintain activities for collecting routine surveillance data in a timely way</li> <li>Support/conduct special survey to obtain information about reported outbreaks</li> <li>Distribute specimen collection kits for special surveillance activities</li> <li>Advocate and allocate resources for identification of priority diseases</li> <li>Support LGA in knowledge and use of standard case definitions</li> </ul>	<ul style="list-style-type: none"> <li>Support reporting priority diseases and conditions</li> <li>Make sure LGA and health facility staff know when and how to report priority diseases and conditions</li> <li>Promptly report immediately-notifiable diseases to the national level</li> <li>Report laboratory results of priority diseases to the LGAs and national level</li> </ul>	<ul style="list-style-type: none"> <li>Define and obtain data for ensuring accurate denominators</li> <li>Aggregate data from LGA reports</li> <li>Analyse case-based data by person, place and time</li> <li>Calculate rates and thresholds</li> <li>Compare current data with previous periods</li> <li>Prepare and periodically (weekly for some diseases) update graphs, tables and charts to describe time, person and place for reported diseases and conditions</li> <li>Make conclusions about trends, thresholds and analysed results</li> <li>Describe risk factors for priority disease or conditions</li> <li>Each laboratory should analyse its own data</li> </ul>
<b>National</b>	<ul style="list-style-type: none"> <li>Establish steps for surveillance</li> <li>Conduct special survey to gather information about reported cases, outbreaks or unusual events</li> <li>Define and update surveillance needs and implement training for and other support to each level</li> <li>Advocate for adequate resources to support the identification and reporting of cases</li> <li>Set policies and procedures with Central Public Health Laboratory (create co-ordination mechanism)</li> <li>Use national reference laboratories for maintaining quality control and standards</li> </ul>	<ul style="list-style-type: none"> <li>Set policies and procedures for reporting priority diseases and conditions.</li> <li>Include private sector laboratories in the reporting network</li> <li>Support reporting activities throughout the system</li> <li>Receive report of priority diseases and conditions</li> <li>Report surveillance data on priority diseases to WHO and other partners</li> </ul>	<ul style="list-style-type: none"> <li>Set policies and procedures for analysing and interpreting data</li> <li>Aggregate data received from State reports</li> <li>Make sure each level uses appropriate denominators for analysis</li> <li>Interpret trends from national perspective</li> <li>Adapt or define alert/epidemic thresholds</li> <li>Provide training resources for analysing and interpreting data</li> <li>Analyse data by time, person and place</li> <li>Analyse map and stratify data by State and LGA and other factors</li> <li>Make conclusions based on analysis results</li> <li>Define public health analysis skills appropriate to each level of personnel in the system</li> </ul>

4.0 Investigate <i>Note: These steps assume appropriate laboratory capacity</i>	5.0 Prepare and Respond	6.0 Provide Feedback	7.0 Evaluate and Improve the System
<ul style="list-style-type: none"> <li>Support case investigation activities such as informing the community of the problem, case finding, collecting of specimens and other activities</li> </ul>	<ul style="list-style-type: none"> <li>Participate in selecting response activities</li> <li>Participate in response activities</li> <li>Mobilise community resources appropriate for response activities</li> </ul>	<ul style="list-style-type: none"> <li>Give feedback to community members about reported cases and prevention activities</li> </ul>	<ul style="list-style-type: none"> <li>Determine if action took place as planned</li> <li>Participate in evaluating the community response to the public health action</li> </ul>
<ul style="list-style-type: none"> <li>Take part in investigation of reported outbreaks</li> <li>Collect, package, store, and transport specimens for laboratory testing</li> <li>Use investigation and laboratory results to confirm the outbreak</li> <li>Process and record laboratory results</li> <li>Provide the results to clinical staff and patients</li> </ul>	<ul style="list-style-type: none"> <li>Treat cases and contacts according to standard case management guidelines</li> <li>Use appropriate infection control measures</li> <li>Carry out public health response with the LGA level</li> <li>Mobilise community involvement in the response</li> <li>Advocate for resources</li> </ul>	<ul style="list-style-type: none"> <li>Give feedback to community members about outcome of reported cases and prevention activities</li> </ul>	<ul style="list-style-type: none"> <li>Monitor timeliness and completeness of reporting routine and case based information to the LGA level</li> <li>Evaluate preparedness and timeliness of response activities</li> <li>Evaluate appropriateness and effectiveness of case management</li> <li>Take action to improve reporting practices</li> <li>Take action to improve readiness for timely response to outbreak</li> <li>Maintain contact with community for improved preparedness and prevention activities</li> <li>Monitor the interval between receipt of specimens in the lab and reporting of results</li> <li>Monitor quality of laboratory results</li> </ul>
<ul style="list-style-type: none"> <li>Arrange and lead investigation of reported cases or outbreaks</li> <li>Assist health facility in safe collection, packaging, storage and transport of laboratory specimen for confirmatory testing</li> <li>Receive and interpret laboratory results</li> <li>Determine if the reported outbreak is confirmed</li> <li>Report the confirmed outbreak to the State level</li> </ul>	<ul style="list-style-type: none"> <li>Convene epidemic management committee and plan response</li> <li>Conduct training for epidemic management activities</li> <li>Plan timely community information and education activities</li> <li>Alert nearby areas and LGAs about the confirmed outbreak</li> <li>Select and implement appropriate outbreak and other public health response</li> <li>Provide logistic support to health facility level</li> <li>Mobilise community for response</li> </ul>	<ul style="list-style-type: none"> <li>Alert nearby areas and LGA about outbreaks</li> <li>Give health facilities regular and periodic feedback about routine control and prevention activities</li> </ul>	<ul style="list-style-type: none"> <li>Monitor and evaluate program targets and indicator for measuring quality of the surveillance system</li> <li>Monitor and evaluate timeliness and completeness of reporting from health facilities in the LGA</li> <li>Monitor and evaluate timeliness of response to outbreak</li> <li>Monitor routine prevention activities and modify them as needed.</li> </ul>
<ul style="list-style-type: none"> <li>Arrange and lead investigation of reported cases or outbreaks</li> <li>Assist LGA and health facility in safe collection, packaging, storage and transport of laboratory specimen</li> <li>Receive and interpret laboratory results</li> <li>Determine if the reported outbreak is confirmed</li> <li>Report the confirmed outbreak to the National level</li> </ul>	<ul style="list-style-type: none"> <li>Hold epidemic management committee meeting and plan response</li> <li>Conduct training for epidemic management activities</li> <li>Alert nearby and States about the confirmed outbreak</li> <li>Select and implement appropriate outbreak and public health response</li> <li>Provide logistic support to health facility level</li> <li>Support LGAs to mobilise community for response</li> </ul>	<ul style="list-style-type: none"> <li>Alert nearby LGAs and states about outbreaks</li> <li>Give LGAs regular and periodic feedback about routine control and prevention activities</li> </ul>	<ul style="list-style-type: none"> <li>Monitor and evaluate program targets and indicator for measuring quality of surveillance system</li> <li>Monitor and evaluate timeliness and completeness of reporting from and LGAs in the state</li> <li>Monitor and evaluate timeliness of response to outbreak</li> <li>Monitor routine prevention activities and modify them as needed.</li> </ul>
<ul style="list-style-type: none"> <li>Alert laboratory and support its confirmation activities: transport media, transport of specimens</li> <li>Support activities for investigating reported outbreaks: supplies, logistics, budget</li> <li>Collaborate with international authorities as needed during outbreak investigations</li> <li>Notify WHO/partners about confirmed outbreak</li> <li>Process specimens for investigation and send timely results as required to each level</li> <li>Request additional specimen as needed</li> <li>Take part in epidemic response team</li> </ul>	<ul style="list-style-type: none"> <li>Set policies and procedures for responding to cases and outbreaks of priority diseases and conditions</li> <li>Support epidemic preparedness and response activities</li> <li>Report and disseminate results of outbreak response in bulletins, media, press releases and briefings</li> </ul>	<ul style="list-style-type: none"> <li>Give feedback about response activities to each level</li> <li>Give State regular, periodic feedback about routine control and prevention activities</li> <li>Develop and periodically distribute national newsletters/ bulletin for epidemiology and public health to all stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>Establish and disseminate policies and procedures for monitoring surveillance &amp; outbreak response activities</li> <li>Establish policies and practices for supervising surveillance and outbreak response activities</li> <li>Evaluate surveillance and response activities and implement as appropriate: <ul style="list-style-type: none"> <li>Monitor and evaluate program targets and indicators for measuring quality of surveillance system</li> <li>Monitor and evaluate timeliness and completeness of reporting from States</li> <li>Monitor and evaluate timeliness of national support for outbreak response</li> <li>Monitor and evaluate effectiveness of State and LGA outbreak response activities</li> </ul> </li> <li>Monitor routine prevention activities and modify as appropriate</li> <li>Monitor laboratory quality assurance and control at all levels</li> </ul>

• **Which diseases are to be included?**

The Federal Ministry of Health selected twenty-one communicable diseases and conditions for integrated disease surveillance and response. The diseases were selected on the basis of one or more of the following:

- Are top causes of high morbidity and mortality in the country (for example, malaria, pneumonia, diarrhoeal diseases, tuberculosis, and HIV/AIDS);
- Have epidemic potential (for example, CSM, measles, yellow fever and cholera);
- Surveillance required internationally (for example, plague, yellow fever and cholera);
- Have available effective control and prevention interventions for addressing the public health problem they pose (for example, onchocerciasis);

- Can easily be identified using simple case definitions; and
- Have intervention programmes supported by WHO for prevention and control, eradication or elimination of the diseases (for example, Guinea worm, Poliomyelitis, Leprosy)

<b>Twenty Two Selected Diseases</b>
<b>Epidemic-Prone Diseases</b>
Cholera Measles Cerebro Spinal Meningitis Viral haemorrhagic fevers (e.g. Lassa fever) Yellow Fever Highly Pathogenic Avian Influenza (HPAI) – Human
<b>Diseases Targeted for Eradication and Elimination</b>
Poliomyelitis Dracunculiasis Leprosy Neonatal tetanus Lymphatic Filariasis
<b>Other Diseases of Public Health Importance</b>
Pneumonia in children less than 5 years of age Diarrhoea in children less than 5 years of age HIV/AIDS Malaria Onchocerciasis Sexually transmitted infections (STIs) Severe Acute Respiratory Disease (SARD) Tuberculosis Diarrhoea with blood (shigella) Pertussis Hepatitis B Plague

- FMOH/WHO recommended case definitions for reporting suspected priority diseases or conditions from the health facility to the LGA
- FMOH/WHO recommends that health facilities use the following surveillance case definitions for reporting suspected cases of priority diseases and conditions to the LGA level.

<b>Epidemic-prone diseases</b>	
<b>Cholera</b>	Any person 5 years of age or more who develops severe dehydration or dies from acute watery diarrhoea, Any patient above the age of 2 years with acute watery diarrhoea, in an area where there is an acute outbreak of cholera,
<b>Measles</b>	Any person with fever and maculopapular (non-vesicular) generalised rash and cough, coryza or conjunctivitis (red eyes) or any person in whom a clinician suspects measles. A measles death is a death occurring within 30 days of onset of the rash.
<b>Cerebro-spinal Meningitis</b>	Any person with sudden onset of fever (>38.5°C rectal or 38°C axillary) and one of the following signs: neck stiffness, altered consciousness or other meningeal signs.
<b>Viral hemorrhagic fevers (Lassa fever)</b>	Any person with severe illness, fever, with or without sore throat and at least one of the following signs: bloody stools, vomiting blood, or unexplained bleeding from gums, nose, vagina, skin or eyes.
<b>Yellow fever</b>	Any person with sudden onset of high fever (>39°C rectal or 38°C axillary), followed by jaundice within two weeks of onset of first symptoms.
<b>Highly Pathogenic Avian Influenza : HPAI (human)</b>	Any person with fever (>38°C) and one or more of the following: cough, sore throat, shortness of breath with history of contact with sick or dead birds or contact with suspected or confirmed case of Avian Influenza
<b>Diseases targeted for eradication and elimination</b>	
<b>Poliomyelitis</b>	Any child less than 15 years of age with a sudden onset of paralysis (AFP) or a person of any age in whom the clinician suspects polio.
<b>Dracunculiasis</b>	Any person with a history of skin lesion and emergence of Guinea worm within one year of the skin lesion.
<b>Leprosy</b>	Any person with hypopigmented patches and loss of sensation over the patches (excluding patients released from treatment).
<b>Neonatal tetanus</b>	Any newborn with a normal ability to suck or cry during the first two days of life, and who, between 3 and 28 days of age, cannot suck normally, becomes still or has convulsions or both.
<b>Lymphatic filariasis</b>	Any person in an endemic area with lymphoedema, elephantiasis or hydrocoele with or without microfilaria ( <i>W. bancrofti</i> ) in night blood sample

<b>Other diseases of public health importance</b>	
<b>Diarrhoea in children less than 5 years of age</b>	<p><b><i>Diarrhoea with some dehydration:</i></b> Any child less than 5 years of age with diarrhoea and two or more of the following:</p> <ul style="list-style-type: none"> <li>– restless or irritable</li> <li>– sunken eyes</li> <li>– drinks eagerly, thirsty</li> <li>– skin pinch goes back slowly</li> </ul> <p><b><i>Diarrhoea with severe dehydration</i></b> Any child less than 5 years of age with diarrhoea and two or more of the following:</p> <ul style="list-style-type: none"> <li>– lethargic or unconscious</li> <li>– sunken eyes</li> <li>– not able to drink or drinking poorly</li> <li>– skin pinch goes back very slowly</li> </ul>
<b>Diarrhoea with blood (<i>Shigella: dysentery</i>)</b>	Any person with diarrhoea and visible blood in the stool.
<b>Pneumonia in children less than 5 years of age</b>	<p><b><i>Pneumonia</i></b> Any child aged 2 months up to 5 years of age with cough or difficult breathing and</p> <ul style="list-style-type: none"> <li>– breathing 50 breaths per minute or more in an infant 2 months up to, 1 year</li> <li>– breathing 40 breaths or more per minute for a child aged 1 to 5 years</li> </ul> <p><b><i>Severe Pneumonia</i></b> Any child age 2 months up to 5 years with cough or difficult breathing, and with any general danger sign, or chest indrawing, or stridor in a calm child. General danger signs are: unable to drink or breast-feed, vomits everything, convulsions, lethargy or unconsciousness.</p> <p>Infants less than 2 months with fast breathing 60 breaths per minute or more</p>
<b>AIDS</b>	Any person with fever or diarrhoea of one-month duration or more, or loss of more than 10% body weight with positive HIV laboratory result.
<b>Severe Acute Respiratory Disease (SARD)</b>	Severe acute unexplained respiratory illness with fever $\geq 38^{\circ}\text{C}$ plus cough or sore throat.

<p><b>Malaria</b></p>	<p><b><i>Uncomplicated malaria</i></b> Any person with fever or fever with one or more of the following; headache, back pain, chills, sweats, myalgia, nausea and vomiting diagnosed clinically as malaria.</p> <p><b><i>Confirmed uncomplicated malaria</i></b> Any person with fever or fever with one or more of the following; headache, back pain, chills, sweats, myalgia, nausea and vomiting and with laboratory confirmation of diagnosis by malaria blood film or other diagnostic test for malaria parasites.</p> <p><b><i>Malaria with severe anaemia</i></b> Any child 2 months up to 5 years with malaria and with severe palmar pallor, if an outpatient, or with a laboratory test confirming severe anaemia, if an inpatient.</p> <p><b><i>Severe malaria</i></b> Any person hospitalised with a primary diagnosis of malaria and confirmed by a positive blood smear or other diagnostic test for malaria.</p> <p><b><i>Malaria in Pregnancy</i></b> <i>A pregnant woman with fever, headache, weakness, pallor (anaemia &lt;11g/dl) in a malaria endemic area.</i></p>
<p><b>Onchocerciasis</b></p>	<p>In an endemic area, any person with fibrous nodules in subcutaneous tissues or with leopard skin.</p>
<p><b>Sexually transmitted infections (STIs)</b></p>	<p><b><i>Genital ulcer syndrome (non-vesicular)</i></b> Any male with an ulcer on the penis, scrotum, or rectum, with or without inguinal adenopathy, or any female with ulcer on labia, vagina, or rectum, with or without inguinal adenopathy.</p> <p><b><i>Urethral discharge syndrome</i></b> Any male with urethral discharge with or without dysuria</p>
<p><b>Plague</b></p>	<p>Any person with sudden onset of fever chills, headache, severe malaise, prostration, and very painful swelling of lymph nodes, or cough with bloodstained sputum, chest pain, and difficulty in breathing.</p>
<p><b>Pertussis</b></p>	<p>Any person with history of severe cough and any one of the following cough persisting for more than two weeks, fits of coughing and cough followed by vomiting</p>
<p><b>Hepatitis B</b></p>	<p>Any person with fever, malaise, anorexia, vomiting and abdominal discomfort associated with jaundice and confirmed by laboratory investigation</p>
<p><b>Tuberculosis</b></p>	<p><b><i>Smear-positive pulmonary tuberculosis</i></b> Any patient with cough for 3 weeks or more and:</p> <ul style="list-style-type: none"> <li>– at least 2 sputum specimens positive for acid-fast bacilli by microscopy, or</li> <li>-- 1 sputum specimen smear positive for acid-fast bacilli and radiographic abnormalities consistent with active pulmonary tuberculosis as determined by the treating medical officer, or</li> <li>– one sputum specimen smear positive for acid-fast bacilli and one sputum specimen culture positive for acid-fast bacilli.</li> </ul>

- **Report priority diseases and conditions**
  - Ensuring reliable reporting of surveillance data throughout the system is important so that programme managers, surveillance officers and other health workers can use the information to:
    - Identify problems and plan appropriate responses
    - Take action in a timely way
    - Monitor disease trends in the area
    - Evaluate effectiveness of interventions
  
- **Know how often to report priority diseases and conditions**
  - National policy recommends that data from the LGA and health facilities are reported immediately, weekly, monthly, quarterly or yearly as applicable.
  - These guidelines recommend two kinds of reporting:
    - *Immediate reporting*: Report information about an individual case when an epidemic-prone disease is suspected and requires immediate notification. Also report case-based information for diseases targeted for elimination or eradication or when an action threshold is crossed.  
Note: Some epidemic-prone diseases have specific reporting requirements depending on national policy. For example, leprosy is reported quarterly. CSM, cholera, yellow fever and measles cases and deaths should be reported weekly.
    - *Routine summary reporting*: Routinely report the total number of cases and deaths seen in a given period (for example, monthly or weekly). These totals are analysed and the results used to monitor progress toward disease reduction targets, measure achievements of disease prevention activities in the LGA, and identify hidden outbreaks or problems so that early action can be taken.
  
- **Record information in clinic registers and patient charts**
  - Each LGA or health facility has its own procedures for recording the patient's diagnosis.
  - For immediately notifiable diseases, contact the LGA immediately and provide information about the patient. As a follow-up, complete an Immediate/case-based reporting form (IDSR 001) and send it to the LGA.
  - To collect daily summaries, a clinician, nurse, or CHO records the diagnosis in the ward register.
  - Other staffs such as a nurse or records clerk visits the ward daily to tally the cases and deaths for each diagnosis.
  - Each month, the daily totals are summarised and reported to the LGA level as required.
  - Another method is when the clinician records the patient's diagnosis in a patient record.
  - Other health workers review the charts and tally cases and deaths, which are then used to compile weekly or monthly summaries.
  
- **To ensure that case of priority diseases and conditions are recorded correctly:**
  - Take steps to ensure that all health workers know the standard case definitions recommended by national policy.
  - Establish or modify existing procedures so that all health workers will be able to apply the standard case definitions in detecting or suspecting cases or outbreaks.
  - Highlight with staff those diseases or conditions that require immediate reporting for case-based surveillance. For example, all the health workers should be aware of the

epidemic-prone disease for which one case is a suspected outbreak requiring immediate action.

- Depending on the recommendations for a specific priority disease or condition, as soon as an epidemic-prone disease is suspected, ask the patient about additional cases in the home, work place or community.
  - Identify the focal person at the health facility who will be responsible for tracking priority diseases and reporting them as required.
  - If the disease is one that requires immediate reporting, specify how the information should be reported to the LGA through the fastest means possible.
  - For the LGA, specify how the LGA should notify the State and National levels. Use facsimile, telephone, electronic mail, telegrams, personal messages, or other rapid communication methods.
  - Identify sources in the community who will be able to report suspected cases of priority diseases to the health facility. Examples of community sources include: Patent medicine dealer/pharmacist, School teachers, Private clinics, Village leaders, Religious leaders, Traditional healers, Trained birth attendants or other community health workers.
  - Provide the community sources with information about the priority diseases you are interested in monitoring through surveillance. Give enough information about the disease so that the community source can refer cases to the health facility, or notify the health facility when unusual or unexplained health events occur.
- Use standard methods for reporting priority diseases
    - In an integrated system, streamlining reporting allows for data to be reported efficiently by using a minimum number of forms and reporting contacts.
    - Rather than requiring health facilities to provide reports using several forms for different disease control and prevention programs, data about the priority diseases can be reported on a single form (wherever feasible).
    - Case-based information can be reported first verbally.
    - Then written information is provided on a case reporting form.
    - Summary data is reported on monthly summary reporting forms.
  - Report immediately notifiable diseases or unusual events promptly
    - There are four conditions under which the immediate notification is to be made viz ;
      - when there is an outbreak of any disease or condition
      - when there is a confirmed or suspected case of Yellow fever or lassa fever
      - When the epidemic threshold is exceeded for measles, cholera, or CSM.
      - When there is a case of any of the diseases targeted for eradication and elimination (Dracunculiasis, Neonatal Tetanus, Poliomyelitis - AFP)
    - When any of the above situations occurs, report to the next level immediately using the fastest possible means. This may be by e-mail, fax, courier or verbally.
    - The immediate/case based reporting form should be completed and sent to the next level immediately.
    - Remember that making a verbal report is not a substitute for Form IDSR 001. The verbal or written notification should reach the LGA within 48 hours from when the case was first seen at the health facility.
    - After the initial verbal report is made and the immediate/case based reporting form is completed, (if more than five cases of the reported disease are seen, use the line list and report).

- When no more new cases are occurring, the weekly reporting for outbreaks is to be continued for three consecutive weeks. For the epidemic prone diseases weekly reporting should be continuous.
  - The health worker who completes the form should record his or her name and the date the form was sent to the LGA.
  - Make two additional copies of the form. Submit the original to the LGA. Keep one copy at the health facility. Use the second copy as a laboratory transmittal slip if a laboratory specimen is taken. Send the copy of the Immediate/case-based reporting form with the specimen to the laboratory.
  - Use Immediate/case-based reporting forms and line- lists when any case of the following diseases (CSM, Cholera, Measles, Yellow Fever, Avian influenza and Lassa fever) occur i.e enter the information about each case on an individual Immediate/case –based investigation form and use a line list to record the cases.
- Report weekly summary data routinely
    - Routine weekly reporting is to be made for only SIX diseases. (Tetanus, Lymphatic Filariasis, Leprosy, Polio/AFP, Dracunculiasis). This is to be effected using IDSR 002. These diseases are to be reported on even when no cases are detected.
- Report routine (monthly) data
    - Each month, the health facility calculates the total number of cases and deaths due to priority diseases and conditions seen in the health facility. The summary totals are recorded on a form and sent to the LGA.
    - The LGA aggregates the totals from all the health facilities that had submitted their reports.
    - The LGA summary totals are then sent to the State Ministry of Health

## **Integrated PHC Topic 2: Emerging and Re-emerging Diseases**

### **Introduction**

- A newly emerging disease is a disease that has never been recognized before. HIV/AIDS is a newly emerging disease, as is severe acute respiratory syndrome (SARS), Nipah virus encephalitis, and variant Creutzfeldt-Jakob disease (vCJD).
- Re-emerging, or resurging, diseases are those that have been around for decades or centuries, but have come back in a different form or a different location. Examples are West Nile virus in the Western hemisphere, monkey pox in the United States, and dengue rebounding in Brazil and other parts of South America and working its way into the Caribbean.
- Deliberately emerging diseases are those that are intentionally introduced. These are agents of bio terror, the most recent and important example of which is anthrax.
- Newly emerging, re-emerging, and deliberately emerging diseases are all treated much the same way from a public health and scientific standpoint.

### **Factors that influence the Emerging and Re-emerging diseases**

- Approximately 75 percent of emerging pathogens are zoonotic, that is, communicated by animals to humans.
- When humans encroach Multiple factors, including economic development and land use, human demographics and behaviour, and international travel and commerce and climate change (global warming) contribute to the emergence and re-emergence of infectious diseases.
- Almost all of these factors reflect in some measure the encroachment of human civilization on the environment and on the microbial species that inhabit our environment.
- The human species lives in a delicate balance with microbial species; there is an ever present tension between the two.
- If we perturb this balance, microbes almost always figure out a way to counterbalance the effect.
- Lyme disease emerged as we developed the land near forests;
- Changes in social structure and human behaviour contributed to the emergence of HIV/AIDS; and
- Monkey pox emerged in the United States when people started adopting exotic pets such as Gambian rats.
- Approximately 75 percent of emerging pathogens are zoonotic, that is, communicated by animals to humans.
- When humans encroach upon a rainforest, they become exposed to viruses and other microbes that they otherwise would not have encountered. HIV/AIDS, avian influenza, monkey pox, SARS, and Ebola are all the result, to a greater or lesser extent, of interactions with animals that led to the emergence and re-emergence of deadly diseases.
- Two fundamental characteristics of microbes allow them to circumvent our attempts to control them.
  - Whereas human generations occur approximately every two decades, those of microbes occur in minutes, allowing them to rapidly replicate. Microbes also can mutate with each replication cycle.
  - Their ability to replicate and mutate gives them the advantage of selectively circumventing human interventions, be they antimicrobials, vaccines, or public health measures.
- In our battle with microbes, we have a number of factors in our armamentarium.

- First of all, we have an intellect and a will. We use these to implement public health measures, biomedical research, and technological advances. In essence the human species uses its intellect and will to contain, or at least strike a balance with, microbial species that rely on genes, replication, and mutation.

## **Grouping of Emerging and Re-emerging diseases**

### **Group I—Pathogens Newly Recognized in the Past Two Decades**

Acanthamebiasis  
 Australian bat lyssavirus  
 Babesia, atypical  
 Bartonella henselae  
 Ehrlichiosis  
 Encephalitozoon cuniculi  
 Encephalitozoon hellem  
 Enterocytozoon bienersi  
 Helicobacter pylori  
 Hendra or equine morbilli virus  
 Hepatitis C  
 Hepatitis E  
 Human herpesvirus 8  
 Human herpesvirus 6  
 Lyme borreliosis  
 Parvovirus B19

### **Group II—Re-emerging Pathogens**

Enterovirus 71  
 Clostridium difficile  
 Mumps virus  
 Streptococcus, Group A  
 Staphylococcus aureus  
 Tuberculosis (MDR)  
 Malaria

### **Group III—Agents with Bioterrorism Potential**

- Bacillus anthracis (anthrax)
- Clostridium botulinum toxin (botulism)
- Yersinia pestis (plague)
- Variola major (smallpox) and other related pox viruses
- Francisella tularensis (tularemia)
- Viral hemorrhagic fevers
  - Arenaviruses
    - LCM, Junin virus, Machupo virus, Guanarito virus
    - Lassa Fever
  - Bunyaviruses
    - Hantaviruses
    - Rift Valley Fever
  - Flaviruses
    - Dengue
  - Filoviruses

- Ebola
- Marburg

### **NIAID—Category B**

- Burkholderia pseudomallei
- Coxiella burnetii (Q fever)
- Brucella species (brucellosis)
- Burkholderia mallei (glanders)
- Chlamydia psittaci (Psittacosis)
- Ricin toxin (from Ricinus communis)
- Epsilon toxin of Clostridium perfringens
- Staphylococcus enterotoxin B
- Typhus fever (Rickettsia prowazekii)
- Food- and waterborne pathogens
  - Bacteria
    - Diarrheagenic E.coli
    - Pathogenic Vibrios
    - Shigella species
    - Salmonella
    - Listeria monocytogenes
    - Campylobacter jejuni
    - Yersinia enterocolitica
  - Viruses (Caliciviruses, Hepatitis A)
  - Protozoa
    - Cryptosporidium parvum
    - Cyclospora cayatanensis
    - Giardia lamblia
    - Entamoeba histolytica
    - Toxoplasma
  - Fungi
    - Microsporidia
- Additional viral encephalitides
  - West Nile virus
  - LaCrosse
  - California encephalitis
  - VEE
  - EEE
  - WEE
  - Japanese Encephalitis virus
  - Kyasanur Forest virus

### **Category C**

Emerging infectious disease threats such as Nipah virus and additional hantaviruses.

Priority areas:

- HIV/AIDS Include: AIDS (1981);
- Severe acute respiratory syndrome-associated coronavirus SARS (March 2003);
- Lassa (1950s, 1969);
- Marbug (1967);
- Ebola (1976);

- Legionellosis (Penn., 1976);
- Lyme (Conn., 1977);
- Rift Valley;
- West Nile;
- Venezuelan equine encephalitis; etc.
- Tuberculosis;
- Dengue; (Buruli & Yaws);
- Malaria,
- Drug resistant STIs; E coli; Salmonella; Influenza.
- Tick-borne hemorrhagic fever viruses
- Crimean-Congo Hemorrhagic Fever virus
- Tick-borne encephalitis viruses
- Yellow fever
- Multidrug-resistant TB
- Other Rickettsias
- Rabies
- Prions
- Chikungunya virus
- Swine flu

## **HIV / AIDS**

- HIV/AIDS was first described in the scientific literature in June 1981. Because the AIDS pandemic is now more than 20 years old, it will soon be considered one of the fundamental matrix diseases.
- However, in 1981, it was truly an emerging disease.

### **The global AIDS epidemic**

- Since the beginning of the epidemic, almost 60 million people have been infected with HIV and 25 million people have died of HIV-related causes.
- In 2008, some 33.4 million [31.1 million-35.8 million] people living with HIV, 2.7 million [2.4 million-3.0 million] new infections and 2 million [1.7 million-2.4 million] AIDS related deaths.
- In 2008, around 430 000 [240 000-610 000] children were born with HIV, bringing to 2.1 million [1.2 million-2.9 million] the total number of children under 15 living with HIV.
- Young people account for around 40% of all new adult (15+) HIV infections worldwide.
- Sub-Saharan Africa is the region most affected and is home to 67% of all people living with HIV worldwide and 91% of all new infections among children
- In sub-Saharan Africa the epidemic has orphaned more than 14 million children

## Regional statistics

	People living	New HIV	AIDS-	Adult HIV
<b>Sub-Saharan Africa</b>	22.4 million [20.8–24.1 million]	1.9 million [1.6–2.2 million]	1.4 million [1.1–1.7 million]	5.2% [4.9%–5.4%]
<b>South and South-East Asia</b>	3.8 million [3.4–4.3]	280, 000 [240 000–	270, 000 [220 000–310	0.3% [0.2%–0.3%]
<b>East Asia</b>	850, 000 [700 000–1.0	75, 000 [58 000–88	59, 000 [46 000–71	<0.1% [<0.1%]
<b>Latin America</b>	2.0 million [1.8–2.2	170, 000 [150 000–	77, 000 [66 000–89	0.6% [0.5%–0.6%]
<b>North America</b>	1.4 million [1.2–1.6	55, 000 [36 000–61	25, 000 [20 000–31	0.4% [0.3%–0.5%]
<b>Western and Central Europe</b>	850, 000 [710 000–970 000]	30, 000 [23 000–35 000]	13, 000 [10 000–15 000]	0.3% [0.2%–0.3%]
<b>Eastern Europe and Central Asia</b>	1.5 million [1.4–1.7 million]	110, 000 [100 000–130 000]	87, 000 [72 000–110 000]	0.7% [0.6%–0.8%]
<b>Caribbean</b>	240, 000 [220 000–260 000]	20, 000 [16 000–24 000]	12, 000 [9300–14 000]	1.0% [0.9%–1.1%]
<b>Middle East and North Africa</b>	310, 000 [250 000–380 000]	35, 000 [24 000–46 000]	20, 000 [15 000–25 000]	0.2% [<0.2%–0.3%]
<b>Oceania</b>	59, 000 [51 000–68 000]	3, 900 [2900–5100]	2,000 [1100–3100]	0.3% [<0.3%–0.4%]
<b>Total</b>	<b>33.4 million</b> [31.1–35.8]	<b>2.7 million</b> [2.4–3.0]	<b>2 million</b> [1.7–2.4]	<b>0.8%</b> [<0.8%–0.8%]

Source: *AIDS epidemic update* December 2009

### HIV prevention

- The percentage of HIV-positive pregnant women who received treatment to prevent transmission of the virus to their child increased from 33% in 2007 to 45% in 2008.
- Latest data indicate that fewer than 40% of young people have basic information about HIV and less than 40% of people living with HIV know their status.
- The number of new HIV infections continues to outstrip the numbers on treatment—for every two people starting treatment, a further five become infected with the virus.

### HIV treatment

- More than 4 million people in low- and middle-income countries had access to HIV treatment at the end of 2008, up from 3 million at the end of 2007.
- This represents an increase of 36% in one year and a 10-fold increase over five years.
- An estimated 700 000 people received treatment in high-income countries in 2008, bringing the global total to at least 4.7 million.
- Despite considerable progress, global coverage remains low: in 2008, only 42% of

those in need of treatment had access (compared with 35% in 2007).

- In 2008, only 38% of children in need of treatment in low-and middle income countries received it.

### Antiretroviral therapy (ART) coverage, 2008

Geographic region	People receiving ART,	People needing ART,	ART coverage, Dec.	People receiving ART,	People needing ART,	ART coverage, Dec.
Sub-Saharan Africa	2.9 million	6.7 million	44%	2.1 million	6.4 million	33%
Latin America and the Caribbean	445 000	820 000	54%	390 000	770 000	50%
East, South and Southeast Asia	565 000	1.5 million	37%	420 000	1.5 million	29%
Europe, Central and Eastern	85 000	370 000	23%	54 000	340 000	16%
Middle East, North Africa	10 000	68 000	14%	7000	63 000	11%
Total	4 million	9.5 million	42%	2.97 million	9 million	33%

Source: Towards universal access: scaling up priority HIV/AIDS interventions in the health sector: progress report

### Tuberculosis and HIV

- One third of people living with HIV are co-infected with TB.
- Tuberculosis a leading cause of death among people living with HIV and yet is mostly curable and preventable.

### Resource availability and needs

- In 2008, US\$ 15.6 billion was estimated to be available from all sources for HIV.
- UNAIDS estimates that US\$ 25 billion will be needed for HIV services in 2010.

### Serious Acute Respiratory Syndrome (SARS)

- First cases in March 2003 in china.
- Present with fever, cough, chest pain, dyspnoea, lobar consolidation, etc. Study shows it to be due to corona virus.
- Control so far by isolation, surveillance and symptomatic treatment.
- Safety assurance for laboratory procedures involving the specimens.

### Lassa fever

- Outbreaks started to occur in the 1950s but it was not till the attack on American missionaries and the isolation of the virus in 1969 that the name was given; endemic disease of West Africa.
- Reservoir in rat (*Mystomys natalensis*).
- Transmission by contamination with rat excreta or direct blood or secretion of sufferer.
- Control by isolation, contact surveillance & post-exposure prophylaxis with ribavirin; barrier nursing; rat control

### **Marburg Viral disease**

- First cases in 1967 in Marburg, West Germany by contamination with blood, organs and cell cultures of African Green monkeys.
- Several cases have been seen from East and Central Africa.
- Reservoir-host-vector chain yet undetermined.
- Incubation of 3 – 9 days
- Control essentially as for Lassa fever.

### **Ebola Haemorrhagic fever**

- A haemorrhagic fever of East and Central African countries (Congo, etc) that started in 1976.
- Viral cause of the same family as Marbug.
- Transmission by contact with blood or secretions of infected person; but reservoir-vector-host factors not yet fully determined.
- Control as for Lassa except for unknown reservoir and vectors; and not sensitive to ribavirin

### **Tuberculosis**

- Re-emerging as a result of real time deterioration of health and human conditions, rich-poor gap, urban migration and growth in urban slums, multi-drug resistance phenomenon.
- Epidemiology otherwise as before.
- Association with silicosis and HIV/AIDS.
- Control programme by the DOTS; social rehabilitation and now stop TB Initiative.

## Integrated PHC Topic 3: Selected Current PHC Approaches

### 1. IMCI

#### Background:

- Annually, 12.2 million children, aged less than five years die.
- 70% of these deaths are due to five conditions, diarrhea, ARI, measles, malaria and malnutrition.
- Often times, the deaths are due to a combination of these. The contribution of these diseases is given below:
  - ARI 33.7%
  - Malnutrition 29.0%
  - diarrhea 24.7%
  - Malaria 7.7%
  - Measles 9.6%
  - One or more of these conditions 71%

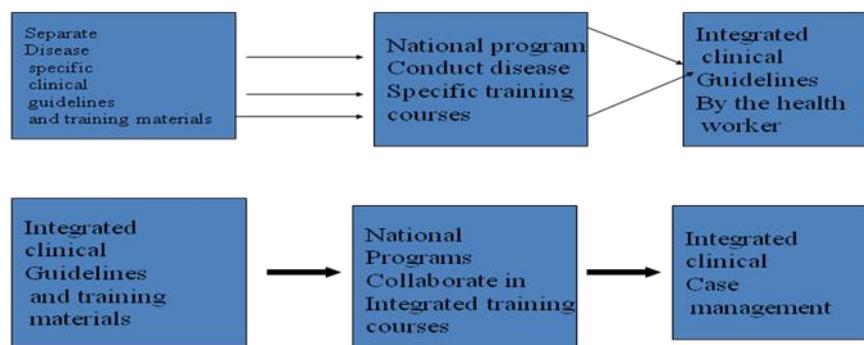
#### Objectives of IMCI:

- To improve the quality of care provided sick children under five years
- To contribute to the reduction of childhood mortality

#### Rationale for IMCI

- Vertical programs developed based on the underlying consideration that:
- Principles of VP based on child's presenting complaints – limited clinical signs, classify and treat. Require few resources.
- Training and management of programs specific for each strategy and program thus vertical EPI, CDD, ARI control etc
- Constraints – administrative, clinical and training methods inefficient.

## Integrated management of childhood illness



### Overlap of symptoms (children aged 2months to 5 years)

Cough and fast breathing	<ul style="list-style-type: none"> <li>• P. Falcifarum malaria</li> <li>• Pneumonia</li> <li>• Severe anaemia</li> </ul>
Abnormally sleepy or difficult to wake	<ul style="list-style-type: none"> <li>• Cerebral malaria</li> <li>• Meningitis</li> <li>• Severe dehydration</li> <li>• Severe hypoxic pneumonia</li> </ul>
Measles	<ul style="list-style-type: none"> <li>• Pneumonia</li> <li>• Ear infection</li> <li>• Diarrhea</li> <li>• Laryngotracheitis</li> </ul>
Severe malnutrition	<ul style="list-style-type: none"> <li>• Confuses diagnosis of pneumonia and severe dehydration</li> </ul>

#### Components of IMCI:

- Improving case management skills of health workers
  - standard guidelines
  - training (pre and in-service training)
  - follow –up after training
- Improving the health system for IMCI delivery
  - essential drugs supply
  - organization of work at the health facilities
  - management and supervision
- Improving key household and community practices

**Key Household and Community Practices:** Is an integrated childcare approach that aims at improving Key household & Community practices that are likely to have the greatest impact on child survival, growth & development.

#### Rationale for CIMCI:

- Many deaths of children occur at home and in the community with inadequate care, many with no contact with health care provider
- Research also suggests that changing a range of home care practices has a cumulative impact, greater than the sum of the individual practices.
- Need to focus on the child and his environment and not just disease/condition affecting him/her
- Behavioral change can make positive difference in the reduction of morbidity and mortality

- Introduces a different way of programming, especially in the light of health reforms/ decentralization efforts
- Need to maximize use of available contacts between health workers/ other extension workers and families and communities
- Health system should support family and community

**Key principles:**

- Convergence
- Community participation
- Equity
- Ownership
- Partnership
- Building upon existing experiences

**NB:**

- There are 19 Key Household and Community Practices that are of importance in providing good home care to ensure child survival, reduce morbidity and promote health and development have been identified
- Recent studies have shown good evidence of most of these key practice
- These key practices can be broadly grouped as follows:

## KHHPs

### Growth Promotion&Developmt

- Exclusive breastfeeding for 6m
- Appropriate complementary feeding from 6m whilst continuing BF up to 24m
- Adequate micronutrients through diet or supplementation
- Growth Monitoring
- Promote mental and psychosocial development
- Birth registration

### Home Management

- Continue to feed and offer more food & fluids when child sick
- Give child appropriate home treatment for infections
- Take appropriate actions to prevent and manage child injuries and accidents

### Disease Prevention

- Proper disposal of faeces, hand washing etc
- Child & pregnant woman sleep under ITN
- Prevent HIV & care for people affected by & or living with HIV/AIDS
- Prevent child abuse/neglect & taking appropriate action

### Care seeking & compliance

- Take child to complete full course of immunisation before 1<sup>st</sup> birthday
- Recognise when child needs treatment outside home and take to HF/HW
- Follow HW advice about treatment, FU and referral
- Birth preparedness & complication readiness (including ANC & TT vaccination during pregnancy)
- Essential Community New born care
- Active participation of men in childcare and reproductive health activities

## 2. **Integrated Maternal, Newborn and Child health (IMNCH)**

- The integrated Maternal, Newborn and Child Health strategy involves the reorganization and reorientation of the health system to ensure the delivery of a set of essential interventions which will provide a continuum of care for women, neonates and children.
- The IMNCH strategy is a holistic approach; it replaces the competing calls for mother or child.
- High coverage of the target groups is one of the goals of IMNCH; as well as the integration of an entire spate of maternal, newborn and child health services, with other key programmes, such as, HIV/AIDS, malaria and immunization.
- A sustained investment and a systematic phased gradation of essential IMNCH interventions, integrated in a continuum of care is required.
- When these interventions are in place the lives of many more mothers, infants and children will be saved.
- The continuum of care has recently been highlighted as a core principle of programmes for maternal, newborn, and child health, and as a means to reduce the burden of half a million maternal deaths, 4 million neonatal deaths, and 6 million children who die between the ages of 1 month and 5 years.

### **Why IMNCH Strategy?**

- In 2000, at the Millennium Summit held in New York, World Leaders pledged to reduce child mortality and improve maternal health among other Goals (Millennium Development Goals) to ensure human development by the year 2015. Since the millennium declaration,
- Nigeria and many other countries are not on track to attaining the targets for reducing child mortality and improving maternal health.
- There are effective interventions to significantly reduce child mortality and improve maternal mortality. The problem is that they are not delivered to the populations in need at high enough coverage (e.g. 80% immunization coverage).
- Efforts have been largely fragmented and have not taken into good account the interdependency of the different stages of life. For instance, what we fail to give to a mother today in terms of health care, could affect the baby yet to be born and may have intergenerational effect that accrue to affect the child in school and his/her ability to attain the fullest potential for development.
- The situation calls for a new approach to doing business in health to improve the health of Mothers, newborns and older children.
- Thus, the **Integrated Maternal, Newborn and Child Health Strategy** and the birth of a partnership for maternal, newborn and child health whose primary aim is to support countries to reduce newborn and child mortality and improve maternal health.

### **What does the IMNCH strategy entail?**

- Focus on care with linkages from home to community to health facility: Health policies, programmes and interventions in the fields of maternal, Newborn and child health will be approached together and incorporated into integrated programmes.
- New and radical way of resource mobilization (or resourcing), coordination and putting into action a minimum range of effective interventions that have been proven to work for the attainment of MDG 4 -Reduce child mortality and MDG 5 – Improve maternal health.
- Re-invigorating the struggle by governments, partners and all stakeholders for attainment of MDGs 4 and 5.

- In 2007, Nigeria began to implement a national Integrated Maternal, Newborn and Child Health (IMNCH) Strategy to fast-track high-impact intervention packages that include nutritional supplements, immunization, insecticide-treated mosquito nets and prevention of mother-to-child transmission of HIV.
- The strategy is to be rolled out in three phases, each lasting three years, and has been designed along the continuum of care model to strengthen Nigeria's decentralized health system, which operates at the federal, state and local levels.
- In the initial phase, covering 2007–2009, the key focus will be identifying and removing bottlenecks, while delivering a basic package of services using community-based and family-care strategies
- The second and third phases of the IMNCH will place greater emphasis on building health infrastructure.
- Over nine years, the strategy aims to **revitalize existing facilities, construct clinics and hospitals, and create incentives –such as dependable salaries, hardship allowances and performance-based bonuses** – that will help retain skilled health professionals in Nigeria's health system.
- 72 evidence-based interventions were identified globally and 61 interventions were identified as being implementable under the Integrated Maternal, Newborn and Child Health strategy package for Nigeria.
- The interventions are organized in three delivery modes. These modes are:
  - Family/community services;
  - population-oriented outreach and schedulable services; and
  - Individual-oriented clinical services. The delivery mode reflects the way the health services are generally organized and delivered.

**Packages of Continuum of Care in Integrated Maternal New-born and Child Health Strategies**

<b>Intervention</b>	<b>Delivery</b>
<p><b>1.1 Family Preventive/WASH Services</b>            Use of ITN by Under-five children            Use of ITN by pregnant women            Use of safe drinking water            Use of sanitary latrine            Hand washing with soap by mothers            Condom use</p> <p><b>1.2 Family neonatal care</b>            Clean delivery and cord care            Putting to breast within 30 minutes of delivery and temperature management            Universal extra community-based care of LBW infants</p> <p><b>1.3 Infant and child feeding</b>            Exclusive breastfeeding for children 0-5 months            Continued breastfeeding for children 6-11 months            Complementary feeding from 6 months            Supplementary feeding for moderately malnourished children (&lt; 2SD)</p> <p><b>1.4 Community Management Illnesses</b>            Oral Rehydration Therapy            Zinc for diarrhea management            Vitamin A - Treatment for measles            Family oriented / Community-based services            Antimalarial treatment</p>	<p><b>Family/Community Services</b></p>

Intervention Mode	Delivery
<p><b>2.1 Preventive care for adolescents and adults</b>  <b>Family planning</b>  <b>2.2 Preventive pregnancy care</b>  <b>Antenatal Care</b>  Tetanus immunization  Deworming in pregnancy  Detection and treatment of asymptomatic bacteriuria  Detection and management of syphilis in pregnancy  Prevention and treatment of iron deficiency anaemia in pregnancy  IPT for malaria  ITN for pregnant women through ANC  <b>2.3 HIV/AIDS prevention and care</b>  PMTCT (testing and counselling, AZT + sd NVP and infant feeding counseling)  Condom use  Cotrimoxazole prophylaxis for HIV+ mother  cotrimoxazole prophylaxis for infants of HIV+ mothers  <b>2.4 Preventive infant &amp; child care</b>  Measles vaccine  BCG vaccine  TT vaccine  OPV vaccine  Pentavalent (DPT-Hib-Hepatitis)  Hib vaccine  Hep B vaccine  Vitamin A - supplementation  ITN for under five through EPI</p>	<b>Population Oriented Schedulable Services</b>

### 3. Focused Antenatal Care (ANC)

Intervention Mode	Delivery
<p><b>3.1 Clinical primary level skilled maternal &amp; neonatal care</b>            Skilled delivery care            Resuscitation of asphyxia newborns at birth            Antenatal steroids for preterm labour            Antibiotics for Preterm/Prelabour Rupture of Membrane (P/PROM)            Detection and management of (pre) eclampsia (Mg Sulphate)            Management of neonatal infections at PHC level</p> <p><b>3.2 Management of Illnesses at Primary Clinical Level</b>            Antibiotics for U5 pneumonia            Antibiotics for diarrhea and enteric fevers            Vitamin A - Treatment for measles            Zinc for diarrhea management            Artemisinin-based Combination Therapy for children            Artemisinin-based Combination Therapy for pregnant women            ART for children with Aids            ART for pregnant women with AIDS</p>	<b>Individual oriented clinical services</b>
<p><b>3.3 Clinical first referral illness management</b>            Basic emergency obstetric and immediate neonatal care (B-EONC)            Management of severely sick children (referral IMCI)            Clinical management of neonatal jaundice            Universal emergency neonatal care (asphyxia aftercare, management of serious infections, management of the VLBW infant)            Management of complicated malaria (2nd line drug)</p> <p><b>3.4 Clinical second referral illness management</b>            Comprehensive emergency obstetric and neonatal care (C-EONC)            Other emergency acute care            Management of complicated AIDS</p>	

- This is an updated approach to antenatal care that emphasizes quality over quantity of visits.
- The approach, focused antenatal care, recognizes two key realities:
  - First, frequent visits do not necessarily improve pregnancy outcomes, and in developing countries they are often logistically and financially impossible for women.
  - Secondly, many women who have risk factors never develop complications, while women without risk factors often do.
- So, when antenatal care is planned using a risk approach, scarce healthcare resources may be devoted to unnecessary care for high-risk women who never develop complications, and low-risk Women may be unprepared to recognize or respond to signs of complications.
- World Health Organization takes the view that every pregnant woman is at risk for complications and that all women should therefore receive the same basic care and monitoring for complications.
- The Program does not recommend relying on certain measures and risk indicators that are routine in traditional antenatal care (such as height, ankle oedema and foetal position before

36 weeks), because they have not been proven to be effective in improving pregnancy outcomes.

### Goals of Focused ANC:

- The approach focuses on evidence-based interventions that address the most prevalent health issues that affect mothers and newborns.
- Each focused antenatal care visit includes interventions that are appropriate to the woman's stage of pregnancy and that address her overall health and preparation for birth and care of the newborn.
- The new approach to ANC emphasizes the quality of care rather than the quantity.
- For normal pregnancies *WHO recommends only four antenatal visits. The major goal of focused antenatal care is to help women maintain normal pregnancies through:*
  - **Identification of pre-existing health conditions**
  - **Early detection of complications arising during the pregnancy**
  - **Health promotion and disease prevention**
  - **Birth preparedness and complication readiness planning**

### Detection and Prevention

- The skilled provider interviews and examines the woman to detect problems that might affect the woman's pregnancy and require additional care.
- Conditions that could severely affect the mother or baby if they are left untreated include HIV, syphilis and other sexually transmitted diseases, malnutrition and tuberculosis (especially in populations where HIV is common).
- Also, conditions such as severe anaemia, vaginal bleeding, pre-eclampsia/eclampsia, fetal distress and abnormal fetal position after 36 weeks may cause or be indicative of a life-threatening complication.
- Early treatment of these conditions can mean the difference between death and survival for the woman and her newborn.
- In addition to early detection and treatment of problems, two simple preventive interventions have proven effective in reducing maternal and neonatal deaths.
  - The first, tetanus toxoid, is a stable, inexpensive vaccine that **helps to prevent neonatal and maternal tetanus**. Tetanus causes about 500,000 neonatal deaths and 30,000 maternal deaths each year.
  - **The second intervention, iron and folate supplementation helps to prevent iron deficiency, the single most prevalent nutritional deficiency affecting pregnant women** ( Iron deficiency can lead to severe anemia, which is associated with preterm delivery, inadequate intrauterine growth, and maternal and fetal deaths).
  - Other interventions included intermittent preventive treatment for malaria, presumptive treatment for hookworm, and iodine supplementation in endemic areas.
- WHO AFRO recommends a multi-pronged approach to reduce the burden of malaria infection among all pregnant women.
  - insecticide-treated nets (ITN),
  - use of Intermittent Preventive Treatment (IPT)
  - case management of malaria illness

- **The general Objective of the strategy is** to contribute to the reduction of malaria related maternal and perinatal morbidity and mortality.
- The specific **Objectives** are:
  - To reduce malaria episodes among pregnant women attending ANC services
  - To contribute to the reduction of maternal anemia amongst pregnant women attending ANC services
  - To contribute to the reduction of low birth weight amongst pregnant women attending ANC services

**The components of the strategy are:**

- Integrating IPT with the following package of interventions within the Safe Motherhood programme.
  - Iron and folate supplementation
  - Deworming
  - Case management
  - ITN
- Increasing awareness at all levels about integrated strategies for control and prevention of malaria during pregnancy
- Ensuring that all health facilities/staff in the country are fully equipped to provide IPT with SP according to national guidelines.
- Regularly assessing the efficacy of the drugs used for IPT.
- Regularly assessing the effectiveness of IPT including monitoring side effects.

**Counseling and Health Promotion**

- Focused antenatal care visits should include time for providers and women to talk about important issues related to nutrition and health during pregnancy, including the following:
  - Danger signs of complications during pregnancy and labour: how to recognize them, what to do and where to get help
  - Nutrition: the importance of good nutrition to the health of the mother and baby; how to get enough calories and essential nutrients for a healthy pregnancy; micronutrient supplements ;importance of iron intake
  - Risks of using tobacco, alcohol, medications and local drugs
  - Rest and avoidance of heavy physical work
  - Family planning: benefits of child spacing to mother and child; options for family planning services following the baby’s birth
  - Breastfeeding: health and practical benefits; exclusive breastfeeding; importance of immediate breastfeeding after birth
  - HIV and other sexually transmitted diseases: the use of condoms for dual protection from pregnancy and disease; other measures for prevention; availability and benefits of testing; and specific issues related to mother-to-child transmission and living with AIDS (after a positive test result.)

**Birth Preparedness and Complication Readiness**

- Focused antenatal care includes attention to a woman’s preparations for childbirth, such as getting the support she will need from her provider, family and community, and making

arrangements for her newborn. The skilled provider and the woman should plan for the following:

- A skilled provider to be at the birth
- The site for the birth and how to get there
- Items needed for the birth, whether it will be at home or in a healthcare facility Money to pay for the skilled attendant and any needed medications
- Support after the birth, including someone to accompany the woman during the birth and someone to take care of her family while she is away.
- In addition, since 15 percent of all pregnant women develop a life-threatening complication and most of these complications cannot be predicted, every woman and her family must be ready to respond to such a problem.
- Every woman should have a plan for the following:
  - A person designated to make decisions on her behalf, in case she is unable to make them
  - A way to communicate with a source of help (skilled attendant, facility, transportation)
  - A source of emergency funds
  - Emergency transportation
  - Blood donors
- Focused Antenatal Care is one of the essential maternal and neonatal care interventions that are evidence-based and was built on global lessons learned on what works to save the lives of mothers and newborns.

#### **4. Elimination of Neonatal Tetanus**

- Tetanus is a vaccine preventable disease cause by a bacterium clostridium tetani which are universally present in the soil. The disease is caused by the action of potent neurotoxin produced during the growth of the bacteria in dead tissues, e.g in dirty wounds or in the umbilicus following non-sterile delivery.
- People of all ages can get tetanus. But the disease is particularly common and serious in newborn babies. This is called neonatal tetanus.
- In 2000, W H O estimates that neonatal tetanus killed about 200000 babies. WHO, UNICEF and UNFPA agreed to set the year 2005 as target date for worldwide elimination of neonatal tetanus.
  - This implies the reduction of neonatal tetanus incidence to below one case per 1000 live births per year in every district.
  - This goal was reaffirmed by the United Nation General Assembly Special Session (UNGASS) in 2002.
- Because tetanus survives in the environment, eradication of the disease is not feasible and high levels of immunization have to continue even after the goal has been achieved.
- To achieve the elimination goal, countries implement a series of strategies:
  - Improve the percentage of pregnant women immunized with vaccines containing tetanus toxoid.
  - Administer vaccines containing tetanus toxoid to all women of childbearing age in high risk areas. This is usually implemented through a three round campaigns approach.
  - Promote clean delivery and childcare practices.
  - Improve surveillance reporting of neonatal tetanus cases.

- **Situation of Neonatal Tetanus Elimination in Nigeria**
  - Nigeria has developed a national plan for MNT elimination. The goal of this plan is to eliminate Maternal and Neonatal Tetanus as a public health problem by the year 2009 in Nigeria.
  - In June 2000, WHO classified the 57 countries that have not yet achieved elimination of NT, using the following three criteria:
    - **Class A:** 22 countries with  $\leq 10\%$  of the districts at high risk, i.e.  $> 70\%$  DPT3. Given their performance then and their operational capabilities, these countries were able to meet the elimination goal in one year, but district assessments to validate elimination had to be done.
    - **Class B:** 18 countries with 11-50% of their districts at high risk. These countries had limited health infrastructures and were advised to implement elimination activities in stages over a three year period
    - **Class C:** 17 countries with  $> 50\%$  of their districts at high risk. These countries had limited health infrastructures, manpower and logistical constraints and in some cases, war, as indicated by DPT3 coverage of  $< 50\%$ . They were advised to phase in elimination activities over three to four years. All the 'Big Four' countries fell into this category, i.e. **Angola, DRC, Ethiopia and Nigeria.**
  - Nigeria has in its routine immunization schedule TT for women of child bearing age (WCBA) and also for pregnant women and the National coverage over the last four years have been less than 50%.
  - A Neonatal Tetanus Baseline Survey was conducted in Kano State in April 2006 and this showed a mortality rate of 5.9 per 1000 live births as compared to a similar study done in 1999 in the same State that reported 20.6 per 1000 live birth. Furthermore a rapid assessment in 3 States (Rivers, Abia and Ogun) was conducted in January 2008 and reported high risk status for all the LGAs in the three States. These reports support the categorization of Nigeria in the Class C risk group.
  - The strategy in Plan of Action (POA) was to be a Phased implementation activity starting from 2007 to 2009 to meet the global and regional goal for MNTE
  - **The POA adopted three main strategies for this elimination:**
    - **Rapidly scaling up the routine uptake of TT antigen**
    - **Supplemental TT administration with IPDs or stand alone campaign for women of child bearing age.**
    - **Propagation of clean delivery practices at both orthodox and other midwives during delivery and neonatal care.**
  - However, this POA had not been implemented mainly due to other competing priorities in the immunization programme particularly polio eradication activities. NPHCDA and Partners are renewing planning for phased MNTE implementation, commencing 2009/2010.

## 5. Midwives Service Scheme (MSS)

- This is a project funded MDG office in collaboration with National Primary Health Care Development Agency to mobilize midwives, including those newly qualified from Nigerian Schools of Midwifery; unemployed midwives and retired but able midwives for deployment to health facilities in rural communities to undertake one year community service.

- The one year service would be mandatory for the newly graduated basic midwives, preparatory to being fully licensed to practice midwifery in Nigeria.
- The purpose of the project is to increase skilled attendance at birth so as to facilitate reduction in maternal, newborn and child mortality and morbidity.
- The scheme came to live after a meeting between the FMOH and the special adviser to Mr President on MCH, chaired by the then Hon Minister of Health Prof Eyitayo Lambo

### **Rationale for Midwives Service Scheme**

- In Nigeria, less than 40 percent of the births take place with assistance of medically trained personnel and immunization coverage ranges between 32.8 – 60%.
- The low coverage rates translate into high rates of child and maternal mortality. That, in turn, acts as a brake on economic growth and contributes to income poverty.
- Over the years, several initiatives and instruments have been introduced to reduce morbidity and mortality among mothers and children. These include Integrated Management of Childhood Illness (IMCI) Strategy, Integrated Maternal Newborn and child Health Strategy (IMNCHs), Integrated Disease Surveillance and response (IDSR), Intense capacity building for health workers and Community Resource Persons (CORPs), and Accelerated Child Survival and Development Strategic Frame Work and Plan of action (2005- 2009) to guide implementation of child and maternal survival intervention by government at all levels.
- However, despite these interventions, gaps still exist.
- These gaps range from infrastructure, access to services, out of pocket expenses and human resource needs for all levels of care.
- The Midwives Service Scheme is therefore set to address the human resource needs for skilled attendants at the primary level of care.
- There is mounting evidence demonstrating the benefit of midwifery care in the reduction of maternal and newborn mortality. It has been shown in different documents and presentations that when the number of midwives increases, the number of women who die decreases.
- Similarly, it has also been demonstrated that women’s satisfaction with care is linked to availability of skilled health worker and to utilisation of services; and reduction of mortality
- In many health facilities across the country, there is shortage of skilled attendants and this has been reported to impact negatively on utilization of services by women. The Midwives Service Scheme would therefore be a significant step in the national effort at improving skilled attendance at delivery and indeed accelerating progress in the attainment of MDGs 4 and 5

### **Overview of the Project**

- This initiative seeks to provide an emergency stop gap to the human resource short of skilled attendance at our primary health care system.
- The trained personnel in this program shall be graduates of Schools of Midwifery.
- The midwives will be trained to offer emergency obstetric and neonatal care service as a referral backup for the midwives at the various primary health care facilities where they will be posted.
- The midwives will include not only the fresh graduates but unemployed/retired midwives who show interest to participate in the program.

- They will offer ante natal, natal, and post natal services, and will be given refresher training courses and additional skills in the management of common childhood illness (that is, Integrated Management of Childhood illness (IMCI) and IYCF.
- This is to offer a continuum of care in a cost effective and impact maximizing ways, thus reducing missed opportunities in the spirit of IMNCH.
- Serving as change agent, They will be expected to promote women's choices on sexuality, marriage, and child birth, and delay the age of girl's sexual initiation and first child birth in order to have a broad based approach to improving maternal and child health.

## **Goal and Objective**

### **Goal**

- To contribute to the reduction of maternal, newborn and child morbidity and mortality in Nigeria.

### **Specific Objectives**

- To increase proportion of pregnant women receiving antenatal care from 60% to 80%
- To improve proportion of deliveries attended to by skilled birth attendants from 36.3% to 72.6%
- To reduce Maternal Mortality from 800 to 250 per 100, 000 live births by 2015
- To reduce the incidence of low birth weight from 14.5% to 10%
- To reduce Neonatal Mortality from 48 per 1000 live births to 18 by 2015
- To expand utilization coverage of FP services from 13% to 50%
- To increase by 70% the proportion of primary health care facilities manned by qualified midwives
- To increase by 35% the proportion of primary health care facilities providing essential/emergency obstetric care (BEOC).
- To ensure that all recruited midwives are trained on LSS and IMCI
- To build effective partnership between community based institutions [CORPS] and facility based health providers in all targeted communities.

### **Expected Outcome**

- Maternal and Neonatal mortalities reduced in line with the MDGs 4 and 5

### **Programme Context**

- 'A skilled attendant is a care provider who has a work ethic, is competent (knowledge, skills and attitudes) and qualified, is regulated and supported by the community and other health care providers, especially medical physicians.
- According to WHO, midwives are the prototype of skilled attendant recommended for normal delivery' [International Conference of Midwives, Brisbane, Australia, July 21-23, 2005]
- In Nigeria, only 36.3% of women received skilled attendance at delivery (NDHS 2003). This has been severally blamed for appalling maternal, newborn and child health outcomes in Nigeria.

- Many facilities in rural areas suffer from lack of health care providers particularly midwives, and efforts at making the states/LGAs to provide appropriate health manpower have largely remained unsuccessful.
- There are about 71 schools of midwifery in Nigeria [26 basic and 45 post-basic], and it is estimated that approximately 2,500 to 3,000 students graduate from these institutions annually, many of them remaining unemployed.
- Depending on budget provisions, it is envisaged that a total of 5,000 midwives would be recruited within the first two years of the scheme to generate the desired impact.
- It is important to note that approximately between two thirds and three quarters of all Nigerian women deliver outside health facilities under Traditional Birth Attendants without medically-skilled attendants present.
- The programme would seek to evolve new strategy for home deliveries to be supervised by midwives under the scheme in collaboration with CORPs whose roles and responsibilities would be clearly defined to cover areas such as Key Household Practices, Birth Preparedness and Community/Social Mobilization.

### **Programme Components**

The programme consists of six broad components:

- Programme Coordination and Management
- Mobilization and Deployment of Midwives
- Training/Capacity Building
- Procurement of Supplies (commodities, equipment etc) and Logistics
- Supervision, Monitoring and Evaluation.
- Exit strategy

### **Programme coordination and management**

- The Midwives Service Scheme is an intervention programme aimed at improving maternal and newborn health outcomes and operating within the context of existing PHC system and the Ward Health System in particular.

### **The Secretariat**

- The secretariat of the programme to be decided by the HMH
- The secretariat will liaise with the Nursing and Midwifery Council of Nigeria and relevant stakeholders to:
  - Obtain relevant information/data on the eligible candidates,
  - Plan for their mobilization, training/orientation and deployment to LGAs.
  - It shall also collaborate with the States and LGAs and Communities in the supervision, monitoring and evaluation of the programme.

### **Management Arrangement**

- The operation of the scheme will be along the following structures:
  - **National level**
    - A National Steering Committee or Core Group to be Chaired by the Hon. Minister of Health with the Executive Director of NPHCDA serving as secretary, and membership drawn from among strategic partners like MDGs Office, Reps of Training Institutions, States/LGAs, WHO, UNICEF, Fed Min of Women Affairs, etc.

- The organ will provide oversight and issue policy guidelines.
  - A Technical Working Group with membership drawn from the FMOH, NPHCDA, NMCN, NYSC, Academia and partners. The organ will be responsible for development of operational plans and guidelines.
- **State level**
  - The IMNCH core technical committee with membership drawn from the SMOH (DPHC, DNS, RH focal persons), NPHCDA Zonal/State Officers, Training Institutions in the State and other key stakeholders.
- **The LGA**
  - The LGA - Primary Health Care Management Committee including the PHC Coordinator/LGA RH Focal person, Training Institutions and participating referral centres in the LGA
- The Community:
  - The Ward Development Committee

### **Implementation Framework**

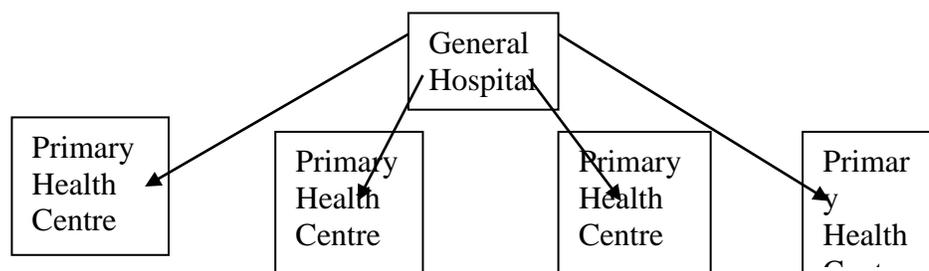
- **Pre-Implementation:**

- Baseline survey and desk review to validate baseline data; Projected number of midwives graduating and unemployed, States, LGAs and Wards with highest maternal and newborn mortality and prioritization of location
- Advocacy and Dialogue with priority states and LGAs
- Dialogue and agreement with stakeholders, NMCN, FMOH, ALGON, etc
- Signing of M.O.U.s with all relevant stakeholders between FMOH/NPHCDA, MDGs and States and LGAs

- **Implementation:**

- **Cluster Model**

- In order to facilitate the establishment of an effective 2 way referral linkage between primary and secondary health care facilities under the MSS project, cluster model approach would be adopted.
- The cluster model would involve
  - the selection of four (4) primary health care facilities based on set criteria and clustering them around a general hospital in a Local Government, also chosen based on agreed criteria; and
  - deploying four (4) midwives to each of the selected PHC facilities to ensure 24 hrs provision of maternal and child health care services and access to skilled attendance at all births so as to facilitate reduction in maternal, newborn and child morbidity and mortality.
- Under the 2009 appropriation, the project would target two thousand and five hundred (2,500) midwives.
- Deploying 4 midwives per facility would mean covering about 625 facilities, and when 4 PHC facilities are clustered around a general hospital, we would need 156 general hospitals thereby having 156 clusters.



### Selection of Clusters.

- A total number of 156 clusters could be distributed either based on equality of 36 states and FCT at 4 clusters per state/FCT or selection based on the burden of MM using disaggregated MMR data .

### Note:

- States should provide Midwives for the General Hospitals
- If the distribution of the clusters is based on equality, there will be about 4 clusters per State
- If distribution of clusters will be based on need, disaggregated data on maternal mortality will be required.
- Selected General Hospitals will be able to provide Comprehensive Emergency Obstetric Care (Caesarean Section, Forceps Delivery, etc.)
- All units in a cluster would be linked through radio communications (radio link, radio messages etc.)

### Summary

• No. Of midwives targeted for mobilization	2,500
• No. Of midwives per PHC facility	4
• No. Of PHC facilities to targeted	625
• No. Of PHC facilities around a Gen. Hospital	4
• No. Of Clusters	156

### Roles of Stakeholders

#### • **Federal Government – for 2009.**

The federal Government shall:

- Pay of allowances of midwives at 30,000/month.
- Conduct Refresher trainings for recruited midwives.
- Provide midwifery kits for each midwife.
- Provide Technical and administrative support to MSS
- Conduct Supervision, Monitoring and Evaluation of MSS

#### • **State Government**

The State Government shall:

- provide shift duty allowances for midwives
- Designate State RH/MCH programme officers as focal persons for the project.
- Sign MOU

- provide monthly supportive supervision
  - provide transport/communication logistics for effective linkage between beneficiary facility and a referral facility (EOC centre)
  - provide conducive training site which shall be the schools of Midwifery
  - provide Security and Logistics for Commodities
  - provide transport allowances
  - provide decent accommodation for midwives in collaboration with LGAs
- **Local Government**
    - The Local Government shall:
      - provide rural posting allowance
      - provide accommodation for midwives in collaboration with the state government
      - Designated LGA RH/MCH programme officer as focal persons for the project.
      - sign MOU
      - be responsible for training and kitting of Community Resource Persons [CORPs]
      - provide Security and Logistics for Commodities
      - provide transport logistics for effective linkage between beneficiary facility and a referral facility (EOC centre)
      - be required to provide monthly supportive supervision
- **Community**
    - Shall be required to have a functional ward and village development committees
    - The ward and village development committees shall mobilize the community for MCH services
    - The beneficiary community shall be required to select Community Resource Persons [CORPs] for training and kitting by the LGA.
    - The beneficiary community shall be required to provide support to the midwives viz-avis acceptance and security.
- **Development Partners/Line Ministries**
    - Renovation of Health Facilities
    - Technical support
    - Provision of medical supplies e.g. Mama kits, Misoprostol, Anti-shock garment, Magnesium sulphate etc

## **6. Reaching Every Ward (REW) Approach**

### Background information

- Nigeria's universal child immunization coverage has remained low over the past decade.
- The reasons for the persistent low coverage can be attributed to weak health structures and systems, inadequate funding by government at all levels and over-dependence on donor funds, withdrawal of such donor funds used in the conduct of ad-hoc immunization campaigns, lack of ownership at the community levels, amongst others.

- The National Immunization Coverage Survey (NICS) of 2003 showed a national DPT3 coverage of 24.8%, with variations from 8.8% in the North West to 45.9% in the South East geo-political zone of the Country.
- This dismal performance of Routine Immunization(RI) has increased the burden of Vaccine Preventable Diseases (VPDs)
- As the country continues to make efforts to increase the RI coverage, great variations in progress exist not only between states but even within States, LGAs and Wards.
- The general slow progress threatens various disease control initiatives and the realization of the Millennium Development Goals (MDG4) of reducing child mortality by two-thirds by 2015.
- This, therefore, raises the need to implement accelerated activities and strategies that will lead to high and sustained RI coverage in order to support the on-going accelerated disease control initiatives.
- Nigeria is a signatory to all global immunization targets of reaching 80% DPT3 coverage in 80% of the districts in developing countries by the year 2005 as set by several international bodies, such as, World Health Assembly (WHA), Global Alliance for Vaccines and Immunization (GAVI), United Nations General Assembly Special Session (UNGASS), Global Immunization Vision and Strategy (GIVS) and Task Force on Immunization (TFI).
- These goals have renewed the commitment of the partners and countries to ensure that every country implements immunization activities focusing on Reaching Every District (RED) strategy, so that all eligible children benefit from immunization.

#### **Definition of REW:**

Reaching Every Ward approach is a strategy aimed at provision of regular, effective, quality and sustainable routine immunization activities in every ward, so as to improve immunization coverage. It focuses at improving the organization of immunization services so as to guarantee equitable immunization for every child.

#### **Components of REW:**

Based on most common barriers to achieving immunisation goals, the REW approach has the following five operational components needed for planning to Reach Every Ward1:

- Planning and Management of Resources.
- Improving Access to Immunization Service Delivery
- Supportive Supervision
- Linking Services with Community.
- Monitoring for Action.

#### **Planning and management f resources**

*Planning should be systematic and have a problem solving approach, analyzing achievements and barriers, assessing what is required against what is available in terms of human, material and financial resources, setting priorities, realistic targets with timelines, conducting regular reviews of implementation and achievements in order to facilitate timely revision of strategies*

The planning process involves identification of all problems encountered that hinder effective delivery of quality RI services and to develop appropriate strategies for solving them. All RI plans should propose solutions to address the following critical issues:-

- How to increase immunization coverage by reaching every child in the ward
- How to maintain the quality of immunization services
- How to reduce dropout rates and missed opportunities

Below is a schematic diagram for the planning process for RI services at H/Fs and ward level.



### Managing resources

**Immunization is the most cost-effective public health intervention, if human, material and financial resources are used efficiently.**

- How to Manage Resources Efficiently
  - Plan and deploy resources according to situation analysis, objective and most appropriate strategies, taking into account what is required and what is available.
  - List and declare all the resources provided by different stakeholders. Include locally mobilized resources, both cash and in kind from either the Local Authority or/and the community)
  - Identify gaps and utilize existing coordination mechanisms at LGA level to raise funds and monitor their implementation
  - Plan for integrated service delivery with other PHC programmes such as Vitamin A supplementation, distribution of insecticide treated nets, for optimal use of available resources such as transport and personnel., without compromising immunization services
  - Distribute resources equitably (where they are needed most) and not equally
  - Conduct regular preventive maintenance of cold chain, equipment and transport
  - Update inventory of equipment annually indicating their models, locations and functioning status
  - Timely returns and accounting for resources used such as funds, equipment, vaccines, syringes & needles etc.

### **Managing Human Resources.**

**It is important to maintain a database of all qualified as well as other health staff, providing immunisation services in all the health facilities. There should be at least one health worker qualified to give injections per health facility. In areas where there is shortage of trained vaccinators, efforts should be made to deploy trained vaccinators from other institutions to support those areas during the planned immunisation sessions. Continuous reorientation of staff should be conducted during supportive supervisory visits.**

## **Improving Access and Utilization of Immunization Service**

### **Improving Access and Utilization of Immunization Service.**

- **Establishing or re-establishing fixed immunization sites.**
  - **Establishing or re-establishing outreach/mobile immunization sites.**
  - **Reducing missed opportunities.**
  - **Reducing drop outs.**
- To reach every eligible child and woman in every ward, including the hard to reach and the under served, it is important to improve access to adequate and quality immunization services.
  - Planning for sustainable and equitable immunisation services need teamwork with community members taking into cognisance geographical accessibility, socio-economic and cultural factors.
    - Access does not equal utilization; there are some factors that can influence adequate utilization of existing immunization services, such as poor quality services and ‘unfriendly’ health staff.
    - Therefore, to improve immunization coverage in every ward, there is a need to establish or re-establish fixed, outreach and mobile immunizations and reduce dropouts and missed opportunities for vaccinations.

### **Establishing or re-Establishing Fixed Immunization Sites.**

- Effective Routine Immunization services means that the services are available to all communities in a sustainable and equitable manner.
- It is essential therefore, that all existing Primary Health facilities, belonging to Government and non Government, should commence the provision of RI services.
- In addition to this, the LGA team (PHCC/ LGA Immunization Officer) should work rapidly with the management of all secondary and tertiary health institutions within their LGAs to also commence provision of RI services.
- The private health practitioners should not be left out. The LGA team, with support from the State team, should hold consultations with viable private and mission hospitals, to be part of the network of facilities that provide RI services to the people.

- The main focus is to ensure that all facilities whether government or private are included in RI planning and that they conduct routine immunization sessions at least twice a month in the initial period, but rapidly progressing to weekly sessions or more.

### **Establishing or re-Establishing Outreach/mobile Immunization Sites:**

- The concept of ‘Reaching Every Ward’ is meant to ensure that no community (no matter how remote it is), is denied the opportunity to enjoy RI services.
- It is therefore important that communities that cannot be effectively accessed by the use of existing fixed immunization sites be reached using outreach or mobile immunization services.
- Thus each Primary Health facility must critically evaluate communities in their catchment areas vis-à-vis distance, terrain, population etc and develop outreach plans to effectively and regularly provide routine immunization services to all communities by either outreach or/and mobile immunization sessions.
- To begin with, all Primary Health facilities in the LGAs should plan for a minimum of two outreach sessions, in different communities in their catchment areas, per month.
- It should be emphasized that all plans for outreach and mobile activities should always have a budget for transport, including transport means, number of sessions, distances from the health facility and fuel costs to and from the immunization sites.

#### **Note:**

*Outreach Immunization Services can be used as a means of creating community demand by providing such services to communities with large population that may not be using existing facilities, though such facilities are less than 5km from the communities*

### **Missed Opportunity**

- Missed opportunity is known to be a significant factor affecting quality of immunization services.
- A missed opportunity occurs when a client attends a health facility where vaccination should be available, does not receive all the vaccines for which he or she is eligible.
- For instance, the national immunization schedule indicates clearly that BCG, OPV0 and HBV1 should be given on the same visit. If during that visit, a child does not receive any or all the three antigens, then he/she is a case of missed opportunity. Such occurrences delay protection and prolong the risk of being infected.
- Generally, missed opportunities for vaccination are a reflection of the weaknesses of the immunization programme capacity to deliver quality immunization services. This could be as a result of:
  - Improper application of the Multi Dose Vial Policy (MDVP)
  - Vaccines not available at all or insufficient to cater for all clients who visited a health facility on agreed days and time of immunization sessions.
  - Other materials such as syringes and needles not available.
  - Poor knowledge of Health Workers on contraindications to immunization, for instance, that fever, common cold, diarrhea, pre-maturity, giving more than two antigens on same day are not contra-indications for immunization.

- Missed opportunity can be reduced by:
  - Encouraging mothers/care givers to always bring the child health card irrespective of the reasons for visiting the clinic or health center
  - Screening clients by checking vaccination cards, vaccination registers, and interviewing mothers during a visit to the health facility or during outreach services to determine her or her child's vaccination status
  - Vaccinating all eligible children at any time using the MDVP, to minimize vaccine wastage.
  - Integrate maternal services, such as antenatal clinics and child health services to run concurrently.

### **Multi Dose Vial Policy (MDVP)**

**OPV, DPT, HBV and TT vaccines, can be opened and used to vaccinate all children/women requiring them at any contact, provided that the vaccines VVM is in stage 1 & 2, there is no evidence of contamination and the expiry date has not exceeded**

### **Drop Outs**

- Drop outs are people who begin the vaccination schedule but fail to complete it.
- If a child does not receive all doses for a specific vaccine required for full protection against a specific disease, the resources that have been used are generally regarded as being wasted.
- The main reasons of drop outs include:
  - Problems relating to dissatisfaction of the quality of service rendered:
  - Long waiting time
  - Lack of courtesy and respect to mothers and care givers by the service providers
  - Illegal and exorbitant fees charged by service providers
  - Lack of empathy and understanding of clients' fears and feelings by health workers
  - Failure to give mothers and care givers correct information on when and why to come back for subsequent vaccines/doses.
  - Poor technique that may lead to adverse events following immunization, such as injection abscesses.
  - Inability of the health facility to provide uninterrupted service delivery due to inadequate and timely provision of bundled vaccines for the catchment area target population.
  - Socio-cultural and administrative barriers such as:
  - Religious beliefs.
  - Decision making authorization on health related issues at the family level
  - Irregular provision of RI sessions at health facilities or outreach/mobiles services.
  - Long distances to Health services.
  - Myths and beliefs associated with immunization
  - Ignorance about the benefits of immunization

- Drop outs can be reduced by:
  - Ensuring quality and un-interrupted services at fixed, outreach and mobile sites
  - Involving traditional leaders, NGOs, Faith Base Organizations (FBOs), Community Based Organizations (CBOs) and Civil Society Organizations (CSOs) in the planning, implementation, monitoring and evaluation of immunization services, with specific roles assigned to each of these community structures.
  - Raising awareness through dialogue at family and community levels in collaboration with all the stakeholders including the community structures
  - Planning, organizing and supporting outreach and mobile services to ensure that all requirements are available in the right proportions and at the right time.
  - Improving dialogue with clients/care givers and providing information on when to come for the next doses and the number of visits required or remaining to get the child or woman fully vaccinated. All this information should be documented on the child health cards.
  - Having adequate and efficient child tracking system.

## 7. Supportive Supervision

**Supportive supervision promotes quality outcomes by feedback, focusing on problem-solving, facilitating teamwork and providing leadership and support empower health providers to monitor and improve their own performance**

- Supervision should be conducted at LGAs, Wards and Health Facilities.
- A supervisory plan should be developed for this exercise and must be data driven to facilitate rational support from higher levels.
- **LGA Level Supervision:**
  - The LGA team should consist of the Director PHC, all assistant Directors PHC, LGA Immunization Officer, CCO, and other key stakeholders within the LGA.
  - The LGA supervisory teams are expected to cluster the Health Facilities and Wards amongst its members for regular daily supervision.

*Note: All vaccination sessions (fixed or outreach) must be supervised by the LGA supervisory team and feedback given to the health facilities*

- **Ward level supervision:**
  - Each political ward will have a supervisory focal person who is charged with the responsibility of supervising all Health facilities conducting RI within the Ward on a daily basis.
- **Health Facility Supervision:**
  - To be conducted by the officer in charge of the health Facility during all immunization sessions at the facility and outreach points.

## Linking Services with Community

- Strengthening the link between community and services can only be achieved through the involvement and effective empowerment of community in the management of the services.

- This will help to improve awareness, stimulate voluntary demand for services and encourage community involvement, participation and ownership.
- Therefore there is need to identify/establish and work with existing local structures to strengthen the link between the community and services provided by the health facilities.

### **Existing Committees**

#### **LGA PHC Development Committee**

- Establish or re-activate LGA PHC Development Committees. They must hold monthly meetings to review RI performance in the LGA.
- The committees shall hold quarterly sensitization meetings and Focus Group Discussions, with emphasis on poor performing immunization catchments areas.

### **Ward Health Committee**

- Establish or re-activate Ward health committees. They must hold monthly meetings to review RI performance in the ward and proffer solutions to identified problems together with community gate keepers.
- The committee shall hold monthly meetings to appraise RI activities in the ward and recommend way forward.
- The committee shall hold quarterly sensitization meetings and Focus Group Discussions, with emphasis on poor performing immunization catchment areas.

### **Village Health Committee**

- Establish or re-activate Village Health Committees. They must hold monthly meetings to review RI performance in the settlements of a respective immunization Catchment area and proffer solutions to identified problems with the community.
- The committee shall hold monthly meetings to appraise RI activities in the settlements of a particular immunization Catchment area and recommend way forward.

**Table of composition and Functions of Various Community–Linked Committees**

<p><b>LGA PHC Development Committee</b></p>	<p><b>Membership</b>                      LGA Chairman - Chairman                      Councilor for Health                      Paramount Ruler                      LGA PHCC                      Rep of Major NGO                      Director of Education/LEA                      Secretary                      Director of Information                      LGA Immunization Officer                      M/E and or DSN Officer                      LGA Health Educator</p>	<p><b>Functions</b></p> <ul style="list-style-type: none"> <li>▪ Coordinate PHC activities in the LGA</li> <li>▪ Approves budget for PHC</li> <li>▪ Institute planning for RI and other PHC activities</li> <li>▪ Carries out supervision and monitoring of RI and other PHC activities</li> <li>▪ Undertake resource mobilization and allocation to RI</li> <li>▪ Coordinate mobilization for RI in the LGA</li> <li>▪ Monitor progress of RI in the LGA</li> <li>▪ Conducts periodic evaluation of impact of RI activities in the LGA.</li> <li>▪ Provide monthly reports of RI to the State Level.</li> <li>▪ Represents the LGA in all health related issues</li> </ul>
<p><b>Ward Health Committee</b></p>	<p><b>Membership</b>                      Ward Councillor Chairman                      Ward Focal Person                      Traditional Leader                      Religious Leader                      Rep of NGO</p>	<p><b>Functions</b></p> <ul style="list-style-type: none"> <li>▪ Coordinate PHC activities in the Ward</li> <li>▪ Support vaccine distribution to HFs</li> <li>▪ Coordinate HF Planning of RI</li> <li>▪ Carries out supervision of RI in HFs.</li> <li>▪ Undertake resource mobilization and allocation to RI</li> <li>▪ Monitor progress of RI in the Ward.</li> <li>▪ Provide monthly report to the LGA.</li> </ul>
<p><b>Village Health Committee</b></p>	<p><b>Membership</b>                      Traditional Leader                      HF In-Charge                      Religious Leader                      Rep of NGO                      School Headmaster</p>	<p><b>Functions</b></p> <ul style="list-style-type: none"> <li>▪ Plan immunization session in the facility</li> <li>▪ Plan outreach and mobile Immunization sessions</li> <li>▪ Carries out community mobilization for immunization sessions.</li> <li>▪ Participate in supervision of immunization sessions (fixed or outreach).</li> <li>▪ Undertake local resource mobilization</li> <li>▪ Appoint local contact person for the HF</li> <li>▪ Participate in Baby tracking</li> <li>▪ Monitor progress of RI in the catchment area.</li> <li>▪ Provide monthly report to the ward/ I.G.A.</li> </ul>

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## Monitoring for Action

### Basic Analysis of Generated Data:

- Vaccination coverage and dropout rates by strategy (fixed, outreach) and by month
- Vaccine wastage rate at health facility level
- Health facility vaccine and injection materials stock outs for each month
- Line list of cases and deaths of children as a result of vaccine-preventable diseases by age, sex, vaccination status and address for each month.
- Number of monthly review meetings held using the analysed data.
- Use of opportunity of review meetings for training of health workers
- Comparing trends of vaccination coverage with VPDs incidence/deaths to see whether there is an increase or reduction of their occurrence.

## Using Generated Data

- Display data as maps, graphs and charts:
- Ensure a wall chart for monitoring coverage and drop-out is kept by each health facility and LGA which must be up-dated monthly.
- Chart vaccination coverage and drop-out rates of each health facility catchment area by strategy by month
- Follow trend of performance of each health facility and LGA
- Use charts and spot maps to indicate cases/deaths of VPDs
- Feedback of analysed data to the communities through VHCs, WHCs and LGA

## PHC Development Committees

### *General Consideration*

#### 1. Primary Data Generation

- Always done at the health facility level
- This is the point of primary data collection and
- It is important to avoid errors at this level as failure to do that will lead to inaccurate data collation and analysis.

The following steps will help in reducing errors.

- The client should be screened on arrival to determine age and the vaccination status.
- The client is then registered in the Immunization register.
- The Immunization registers should be comprehensively filled for each client and for each visit. In particular the date must be recorded for each dose of a specific antigen given in the cells provided.
- ***ALWAYS REMEMBER NOT TO SUBSTITUTE DATE WITH A TICK.*** The reason being that, a tick does not give information on the date the client received the vaccines and when he would be due for the subsequent doses, and therefore difficult to track defaulters.
- The client vaccination card is then completed with date to return for subsequent visit.
- The vaccinator then administers the required vaccines and tallies appropriately in the Tally sheet.
- The tally sheet is summarized at the end of the session and entered in the facility summary form.
- The original copy of the facility summary form is submitted at the end of the last Immunization day for the month to the Ward/LGA
- The health facilities should also submit monthly vaccine utilization report to the Ward/LGA.

#### 2. Getting quality data

- Establish best estimate of the target population of the settlements within the catchment area of each health facility.
- Provide uniform and adequate tally sheets, immunization registers, health facility summary forms and vaccine ledgers to all health facilities and monitor each strategy (fixed, outreach/mobile) separately.
- Keep a checklist to track report submission by health facility and record date report received for follow up with health facilities not/or submitting late.
- Remind health facilities that did not submit reports by the agreed deadline.

- Check records and discuss with health facility staff during supervisory visit.
- Keep copies of all reports sent to the LGA level at the respective health facility for verification when needed.
- Investigate cases and outbreaks of vaccine-preventable diseases (measles, neonatal tetanus, yellow fever, acute flaccid paralysis) according to national procedures.

### **Checking data quality**

- Look for the following data quality problems and take action to improve the quality:
  - Coverage rate over 100% (maybe due to a denominator problem)
  - Large month to month variations in total doses given (may indicate a completeness problem, e.g. were all the tally sheets correctly filled?)
  - Negative dropout rate – may arise as a result of lack of screening for age, immunization status and not tallying correctly.
  - Discrepancy between the numbers of children immunized for a given visit according to the national immunization schedule e.g. DTP1, HBV2 and OPV1.
  - Discrepancy between the total number of children immunized and the total number of vaccine doses used during the reporting period.
  - Decrease in the target population compared to previous years (in most developing countries, the birth rate is increasing, not decreasing).
- Most of these problems can be identified and solved by improving the quality of recordkeeping and reporting (register, tally sheets, reporting forms, child health cards and vaccine ledgers).

### **3. Basic Analysis of Generated Data:**

- Vaccination coverage and dropout rates by strategy (fixed, outreach) and by month
- Vaccine wastage rate at health facility level
- Health facility vaccine and injection materials stock outs for each month
- Line list of cases and deaths of children as a result of vaccine-preventable diseases by age, sex, vaccination status and address for each month.
- Number of monthly review meetings held using the analysed data.
- Use of opportunity of review meetings for training of health workers
- Comparing trends of vaccination coverage with VPDs incidence/deaths to see whether there is an increase or reduction of their occurrence.

### **4. Using Generated Data**

- Display data as maps, graphs and charts:
  - Ensure a wall chart for monitoring coverage and drop-out is kept by each health facility and LGA which must be up-dated monthly.
  - Chart vaccination coverage and drop-out rates of each health facility catchment area by strategy by month
  - Follow trend of performance of each health facility and LGA
  - Use charts and spot maps to indicate cases/deaths of VPDs
  - Feedback of analysed data to the communities through VHCs, WHCs and LGA PHC Development Committees

## **Subject 5.4: Quality in Health Care Services**

**Aim:** To help the participants to appreciate the importance of quality in PHC.

### **Objectives:**

- To promote understanding of the concept of quality
- To acquaint participants with standardization and the development of standards.
- To promote understanding of the concept and techniques of quality improvement.
- To acquaint participants with the techniques in quality assessment.

**Learning outcomes:** After completing instruction in this subject (whether after a single classroom session or following a series of related classroom sessions), participants should be familiar with and able to use the following knowledge and skills.

- To appreciate the techniques used in quality assurance (QA)
- Be able to incorporate QA mechanisms as an integral part of PHC service delivery
- Be able to identify and develop relevant standards for PHC activities within the scope of their responsibilities.

### **Topics**

- T1. Concept and definition of quality
- T2. Standardization and development of standards in quality assurance
- T3. Technique for quality improvement in health care
- T4. Techniques in quality assessment

## Healthcare Quality Topic 1: Concept and definition of quality

### Introduction

- The concept of quality is certainly not unique to health care.
- As consumers we must assess the quality or degree of excellence of a broad range of products and services: whether we are selecting a restaurant, purchasing an article of clothing or making a reservation with an airline etc
- Customers like providers use available information to try the best quality relative to its cost

### Definition

- A multi faceted concept with wide range of meaning depending on the context it is used.
  - “degree of excellence”
  - “superiority of kind”
  - “degree of worth”
  - “Meeting the difference”
  - “conformance to specification”
  - “Fitness for purpose”
  - “Doing the right thing right, right away”
- Totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs.
- The extent to which possible improvement in health status is realized.
- Quality is not an assessment of a state of medical science but rather an assessment of the application of existing knowledge.

### Evolution

- **Hippocratic era:**
  - “do no harm” connotes that the right things must be done in the process of management of patient
- **Florence Nightingale era:** ( during the Crimean war 1860)
  - Observed high mortality among military personnel (patients) in Crimean hospitals due to **hospital acquired infection**, more than the casualties sustained
  - She developed a uniform format for collecting and presenting hospital statistics to compare death rates and beds used by diagnostic criteria
- **Edward Codman era**
  - In 1900 the collection & evaluation of systematic information on the end result of patient care activities (end result analysis) in Masachusset GH
  - Instituted a one-year follow-up of all surgical patients: diagnostic accuracy, technical success or adverse effects
- **Edward Martins era**
  - In 1917 suggested the establishment of American college of surgeons to implement Codman’s “end result” idea
  - The college was formally established in 1917
    - Published minimum standard for hospitals which contained first formal requirement for the review and evaluation of the quality of patient care.
- **Confidential enquiry in UK (1930’s)**

- Confidential reports that require assessors to comment on the cause of death & identify those that were in their views avoidable
- **Joint commission on hospital accreditation of hospitals (JCAH) in US**
  - In 1957: the American college of surgeons, the American college of physicians, the American hospital association and the Canadian medical association all joined to form the JCAH
  - JCAH's function was to oversee minimum standards of quality care
  - In 1980: JCAH broadened its scope to become joint commission on accreditation of health care organization (JCAHO)
- **National quality control in UK**
  - In 1969: The national quality control in clinical chemistry, hematology and bacteriology was established; resulting in reduction in variation in laboratory results in different laboratories
- **Era of Total Quality management (TQM)**
  - In 1980, the Royal College of General Practitioners in UK set out to develop a framework for defining and auditing standards of care.
  - Four main facets of performance were identified: professional value, accessibility, clinical competence and ability to communicate
  - Auditing of practice using a variety of methods including the sampling of records, vide taped consultations and interviews
- **Current status**
  - quality of care has taken regional and international dimensions
  - Many countries have now institutionalized quality as integral part of their health care delivery system
- **Nigeria:**
  - Establishment of Society for Quality in Healthcare in Nigeria
  - Quality survey by NPHCDA in 2000
  - 1<sup>st</sup> conference on quality of health care 2009

## **Dimensions of health care quality**

### **Donabedian model**

- Donabedian classified the aspect of care into:
  - Structure
  - Process
  - Outcome
- Structure; is defined as “the relatively stable characteristics of the providers of care, of the tools and resources they have at their disposal, and of the physical and organizational settings in which they work”
- Outcome:
  - Is the effect of care on the health status of patients and populations.
  - It can include improvements in social and psychological functioning as well as improvements of physical and physiological well being.
  - The patient's satisfaction with care and change in their knowledge could be included

## Maxwell model

- Robert Maxwell looked at quality care from six (6) perspectives :
  - Effectiveness
  - Acceptability
  - Efficiency
  - Access
  - Equity
  - Relevance
- **Acceptability:**
  - How humanely and considerably is the treatment/service delivered?
  - What does the patient think of it?
  - What would/does an observant third party think of it? (How would I feel if it were my nearest and dearest?)
  - What is the setting like? Are privacy and confidentiality safeguarded?
- **Efficiency:**
  - Is the output maximized for a given input or (conversely) is the input minimized for a given level of output?
  - How does the unit cost compare with the unit cost for the same service/ treatment elsewhere?
- **Access:**
  - Can people afford to get this treatment/service when they need it?
  - Are there any identifiable barriers to service-for example, distance, and inability to pay, waiting lists, and waiting times-or straightforward breakdowns in supply?
- **Equity:**
  - Is this patient or group of patients being fairly treated relative to others?
  - Are there any identifiable failings in equity-for example, are some people being dealt with less favourably or less appropriately in their own views than others?
- **Relevance:**
  - Is the overall pattern and balance of services the best that could be achieved, taking account of the needs and wants of the population as a whole?

## Ovreitveit model

- John Ovreitveit looked at quality care from three (3) dimensions:
  - Clients
  - Providers
  - Managers
- **Clients;** issues that have to do with privacy, confidentiality, continuity, safety, efficiency information etc are of concern to the clients
- **Providers:**
  - Issues that have to do with amenities, safety, cleanliness of working environment, supervision, training and development etc are of concern to the providers.
- **Managers:**
  - Almost all the dimensions above are of concern to manager's since
  - They are responsible for the management of the entire health system

## **Healthcare Quality Topic 2: Standardization and development of standards in quality assurance**

### **Standardization**

- As an initial step agree on the level of standard: minimal , maximal or optimal
- For Quality care, standard should be either optimal or above optimal
- Therefore, Standards provide the operationalized definition of quality of care
- Standardization is the process of providing yard sticks for measuring performance

### **Setting standards**

- Standards can be Implicit or explicit
- Implicit or empirical standard: when a practitioner is asked to use his judgment & provide an expert opinion
- Explicit or normative standard: when its set by national/ professional bodies

### **What are standards for?**

- provide a clear direction for services
- know whom to do business with
- promote a shared vision and understanding
- Form a baseline for local service specifications
- Provide a basis for monitoring, inspection, evaluation and future planning.

### **Who are standards for?**

Standards are for all stakeholders:

- Purchasers (HMO)
- Providers (organizations)
- Users(clients)
- Carers (Professionals)
- Other agencies (banks, insurance companies)
- The regulators (SMOH)
- members of the general public

### **How are standards set?**

- Get a written document policy
- Identify policy officer for each standard
- Make a brief on content, process & style
- Subject draft standards to rigorous scrutiny & consultations
- Invite stakeholders to share perspectives
- Plan a process for continuous improvement & review of the standard

### **Implementing standards**

- Accreditation: working with providers to ensure that they can & do meet standards before services are purchased
- Forced Vs voluntary accreditation
- Develop tools that translate the standards into indicators that measure attainment against the standards and make sense to providers



## **Healthcare Quality Topic 3: Technique for quality improvement in health care**

### **Definition**

- Quality Improvement (QI) can be defined as all the activities that contribute to
  - defining,
  - designing,
  - assessing,
  - monitoring, and
  - improving the quality of healthcare
- QI activities can be performed as part of the accreditation of facilities, supervision of health workers, or other efforts to improve the performance of health workers and the quality of health services
- QI established upon 4 core principles:

### **Core principles of QI**

- Clients: to meet the needs and expectations of clients and communities
- System and processes: understand the service delivery system & its key service processes for improvement
- Measurement: To analyze processes, identify problems, and measure performance
- Teamwork: Team approach to problem solving and quality improvement

### **Total Quality Management**

- TQM is a management approach for an organization, “a cost effective system for integrating the continuous improvement effort of people at all levels in an organization to deliver product & services which ensure customer satisfaction”- Delliotte (1990)
- The aim is to reduce variation from every process so that greater consistency of effort is obtained
- TQM views an organization as a collection of processes
- The organizations must strive to continuously improve these processes by incorporating the knowledge and experiences of workers.
- The objective of TQM is "Do the right things, right the first time, every time" (prompt & error-proof)

### **Basic Principles of TQM**

- Satisfy the customer : users, company philosophy, internal customer, chain of customers
- Satisfy the supplier: external supplier, internal supplier, get better work, empower workers
- Continuous improvement: working smarter (not harder); worker suggestion; quality methods

### **Processes in TQM**

- Management commitment: plan do, check/study & act
- Employee empowerment: training, suggestion scheme
- Fact based decision making: team oriented problem solving

- Continuous improvement: attain maintain & improve standards
- Customer focus: service relations, customer driven standards

### How to implement TQM

- Assess organization's current reality
- Identify tasks to be done
- Create necessary management structures
- Develop strategies for building commitment
- Design mechanisms to communicate the change
- Assign resources

### In Japan, TQM comprises 4 processes:

- Kaizen – "Continuous Process Improvement": make processes visible, repeatable, measurable
- Atarimae Hinshitsu – "things will work as they are supposed to" ( a pen will write)
- Kansei – study the way the user applies the product to improvement the product itself.
- Miriyokuteki Hinshitsu – "things should have an aesthetic quality" (E.g a pen will write in a way that is pleasing to the writer)

### Basic elements of a QI Plan

- Stating clearly the purpose & the principles
- Specifying the aims and objective:
  - definitive description of what the plan is to achieve
- Delineate the design & the structure
  - This gives your program infrastructure and accountability
  - It involves setting up of QI Committee and mechanisms to measure and improve care.
  - Monthly meeting with minutes recorded for documentation of activities will be necessary.

### QI Team

- **Functions**
  - Monitor and evaluate **high volume, high risk** services
  - Develop practice guidelines based on reasonable medical evidence; include requirements to update periodically and to use as educational tools for providers
  - Provide for process to coordinate the continuity of care
  - Detect over and underutilization practices
  - establish standards for patients to access the health care system, i.e. routine, urgent, emergency care

### Accountability

- If the QI committee is accountable to a governing body, an annual report should be prepared and presented on the QI Program.
- This report should include activities and results from the past year and a plan for the next year

- The governing body will review the QI Plan and provide their approval based on it's meeting the principles and goals established.
- Delineate scope of the programme: perhaps four main component:
  - Continuous Quality Improvement – the ongoing monitoring and evaluation (at all levels)
  - Client and patient satisfaction
  - Special Quality Improvement Activities
  - Professional/Provider Credentialing
- Consumers/consumer groups
- Organizational leadership
- Professional organization
- General public
- NHIS (scheme, staff,)
- Other Government agencies

## **Healthcare Quality Topic 4: Techniques in Quality Assessment**

### **Introduction**

- The purpose of quality assessment is to promote the improvement of programmes. The quality of health care services provided can be assessed through a number of processes. It can be done by using the already existing documentation tools available at the facilities”

### **Question**

- How can quality measurement in health care transcend the evaluation of technical performance?
- What are those aspects of health care and health caring that matter to people?
- How can they be measured?

### **Reasons for Quality assessment**

- Provides new knowledge about health and health care: to learn more about consumers' and patients' preferences, values, and utilities regarding characteristics such as communication, timeliness, responsiveness, and ease of access.
- Promotes development of a valid tool to measure consumers' and patients' assessment of health care, beginning with comparison of their assessments of care in different health plans

### **Why do we assess quality of health care?**

- To standardize the quality of healthcare
- For trustees to decide on the arrangement chosen (per diem/capitation)
- For diagnostic information (compare different treatment & measure effectiveness)
- For self evaluation
- For Renewal of accreditation of Health facility/clinic

### **Forms of Quality assessment**

- Internal audit: observation of examination and treatment methods, comparison with others, observation of organization's ability to act and observation of the feedback from patients
- External audit: such as external peer review and audit,

### **Challenges to Quality assessment**

- Secrecy of patient record: Identity of patients under assessment should be concealed
- Confidentiality of assessment:
  - Free will & commitment of institutions & staff
  - Informed voluntary consent is acquired from those to be assessed.
- Competence of the assessor: experienced & accepted by those to be assessed
- Impartiality of the assessment: objective, impartial & independent
- Assessment & supervision by authorities
- Availability of resources

## **Quality Assessment methods**

- Review of registers & records: check for availability, completeness, timeliness and accuracy
- Clinical audit: visiting team should conduct client case audit using
  - case management guidelines
  - standing orders used by community health workers as useful guides
  - Structured observation of health workers skills
- Health facility audit:
  - involves facility assessment using suitable facility observation checklist
  - done periodically
- Client-oriented provider efficiency COPE: self assessment for self improvement using tools to improve quality of service
- Observation of procedures of assessing & managing a client at various points of service delivery are done correctly
- Client exit interview:
  - offers a quick assessment of quality from the perspective of clients
  - To be done by ward focal person or member of the supervisory team
- Household surveys:
  - could be done at household level to get the perspective of the consumers of health care services
  - The use of questionnaires, in-depth interviews and focus group discussions can be employed
- Also, in July 2000, NPHCDA as part of its quality improvement functions conducted a quality improvement exercise in some Local Government Areas of the North Western Zone of Nigeria using the QUIT (Quality Improvement Team) and COPE (client Oriented Provider Efficiency) Methods

## Subject 5.5 Customer Service Delivery

**Aim:** To outline key issues in customer service delivery

**Objectives:** To help PHC managers create high quality service delivery in their organizations.

**Learning outcomes:** After completing instruction in this subject (whether after a single classroom session or following a series of related classroom sessions), participants should be familiar with and able to use the following knowledge and skills.

- Appreciate the importance of the customer in PHC service delivery, thereby undertaking PHC activities with a “demand side” perspective rather than a “supply side” perspective
- Know modern techniques in customer service delivery
- Be able to organize PHC services with customer focused and customer friendly approaches

### Introduction

- The purpose of establishing any organization both in public and private sectors are to provide services to the public.
- When objectives of an organization are specific to the type of service that will be rendered, it becomes a commitment. Expectations will be high by the end user towards the service that would be given.
- The utilization of the resources in achieving organizational goals is paramount to its survival hence, the quality of services expected by the customers would be high.
- Change, as you may have realized, is ever occurring in all aspect of life. this is the same in the Nigeria public service. There are current global and national changes unfolding in the public sector management.
- The world has become a global village this is as a result of high technology in the area of communication this has increase the level of the awareness of the nation citizen in the area of service delivery.
- The only thing in life that is permanent is change. Our social, economic, religious and more importantly, the political environment s are always changing.
- Since these are the factors that determine way of life of a country populace in terms of expectations, then change must be the first focal point for any service oriented agencies.

### Definition of terms

- **Who is a customer?**
  - A customer or a client is the direct recipient of a service through dealing with service provider. there are two types of customer
    - Internal customer; those that receive service from other divisions within the same organization
    - External customer; those outside the service- provider organization.
  - Service delivery can be defined as the supplying of users with services needed or demanded, mostly by government institutions, private organizations, non-profit organizations or individuals

- **Differences between a client/ customer and a citizen**
  - The customer is distinctly different from a citizen as he/she does not share common purposes with a wider community, but rather seeks to optimize his or her own individual advantage
  - A customer seeks to optimize his or her own individual advantage
  - The customer is free to select another service provider when not fully satisfied with the first.
  - Customers/clients are considered to be the direct recipients of government services via dealings with a service provider.
  - Clients can be further divided into two sub-groups: "internal" and "external".
  - A citizen refers to taxpayers who do not actually benefit directly from a service, but who may draw an indirect benefit and who contribute to it, and thus have an interest in it.

### **Customer centered/ Oriented Service**

- Customer centered/Oriented service delivery is a technique that incorporates customer's concerns at every stage of the service design and delivery processes. this implies that customer's needs and expectations become the organizational principle around which public interest is determined and service delivery is planned (Canadian privy council, 1996)
- **Causes of Poor State of Service Delivery in Nigeria**
  - Inadequate resources,
  - Mismanagement and
  - Misappropriation of fund
  - Inadequate motivation of staff; and
  - Corruption.

### **Towards effective Service Delivery in Nigeria**

- The past Administration of former President Olusegun Obasanjo has taken creditable steps towards service delivery in Nigeria. some of these are:
  - The Kuru declaration
  - The National Economic Empowerment and Development Strategies (NEEDS)
  - Service compact with all Nigerians (Servicom)
  - The anti-corruption law
  - The economic and financial crime commission
- **The Kuru declaration**
  - In February 23-25, 2001, the 4th retreat for Federal Ministers & Permanent Secretaries, hosted by his Excellency President Olusegun Obasanjo took place at the National Institute for Policy and Strategic Studies, NIPSS, Kuru.
  - At the end of the retreat, the participants subscribed to a new national ideology and orientation. These are:
    - To build a truly great African Democratic country, politically united, integrated and stable, economically prosperous, socially organized, with equal opportunity for all, and responsibility from all.

- To become the catalyst of black renaissance and making adequate all embracing contributions, sub-regionally, regionally, and globally.
  - To eschew corruption, slothfulness, nepotism, indiscipline, bitterness, prejudice and other manifestations of anti-social behavior;
  - To critically review the practices and procedures in every ministry and department of the government, this policy thrust is germane to effective service delivery in Nigeria.
- **The National Economic Empowerment and Development Strategies (NEEDS)**
    - NEEDS is Nigeria's home-grown poverty reduction strategy (PRSP).
    - NEEDS in collaboration with the State Economic Empowerment and Development Strategies (SEEDS) constitutes the reasoned response to the challenges of under-development. needs rests on four key strategies:
      - Reforming how government works and its institutions
      - Growing the private sector to be the engine of economic *growth*
      - Implementing a social charter for the people
      - Re-orientation of the people with an enduring African value system
- **SERVICOM: Service compact with all Nigerians**
    - By SERVICOM, it was also agreed that all ministries, parastatals and agencies, and all other government departments will prepare and publish, not later than the July 1, 2004, SERVICOM charters whose provisions will include:
      - Quality services designed around customers' requirements;
      - Set out citizens' entitlements in ways they can readily understand;
      - List of fees payable;
      - Commitment to provision of services within realistic time- frames;
      - Specify officials to whom complaints may be addressed;
      - Publish the details in conspicuous places accessible to the public;
      - Conduct and publish surveys on customer satisfaction.
- **The SERVICOM office is to:**
    - Coordinate the formulation and operation of SERVICOM charters
    - Monitor and report progress and performance under SERVICOM obligations. o carry out surveys of services and customer satisfaction (website).
    - By SERVICOM, it was agreed that all ministries, parastatals, agencies and all other government departments will prepare and publish not later than the 1st July, 2004,
- **SERVICOM charters whose provisions will include:**
    - Provision of quality services designed around customer's requirements;
    - Setting out citizen's entitlements in ways they can readily understand;
    - Listing fees payable and prohibit illegal demands;
    - Commitment to provision of services, within realistic time-frames;
    - Specifying officials to whom complaints may be addressed;
    - Publishing these details in conspicuous places accessible to the public;

- Conducting and publishing surveys of customer satisfaction (SERVICOM brochure 2004).
  - Periodically conduct and publish surveys of citizens to determine levels of customer satisfaction and the extent to which particular ministries and agencies are seen as honouring their SERVICOM commitments; and
  - From time to time, review the commitments contained in their SERVICOM charters and to revise them in the light of experience and further developments
- **Eight drivers of improving service delivery are (schmidt and strickland 1998):-**
    - Timeliness;
    - Knowledge/competence of staff;
    - Courtesy
    - Fairness;
    - Outcomes/results
    - Quality;
    - Quantity;
    - Cost.
- **Key notes:**
    - These drivers cut across all organizations
    - Customers need material service such as: good price, timing, quality and quantity of:
      - Products/service;
      - Equipment
      - Physical comfort;
      - Procedures
      - Routines
      - Staffing;
      - Information.
    - Customers need personal service in terms of the manner in which the material services are divided. personal service consists of the interpersonal aspects in providing service such as:
      - Body language;
      - Verbal communication (polite words);
      - Giving undivided attention;
      - Showing respect for the individual;
      - Being calm and confident.
    - Customers need personal service in terms of the manner in which the material services are divided. personal service consists of the interpersonal aspects in providing service such as:
      - Body language;
      - Verbal communication (polite words);
      - Giving undivided attention;
      - Showing respect for the individual;

- Participatory evaluation provides for the active involvement in the evaluation process of those who have a stake in a product or service.
- Among the usual stakeholders are: customers (beneficiaries);
  - Business partners;
  - Employees;
  - Other service providers;
  - Any other interested parties.
  - Being calm and confident.

### **Ways of improving service delivery**

- There are three ways of improving the quality of services delivered by public organizations and closing the service gap. These are:
  - Connecting people to the services
  - Accessing the service
  - Delivering the required service
- **Some other possible approaches by Nash and Nash (2003) are:**
  - Applying problem-solving approaches;
  - Establishing customer task forces;
  - Citizen's charter having regular meetings with customers and employees;
  - Closing the service gap
  - Regular information to customers and employees by newsletter or other publications;
  - Creating a good reward system;
  - Continuous training;
  - Quality management

## **MODULE 6: COMPUTERS, HEALTH MANAGEMENT INFORMATION SYSTEMS, AND LOGISTICS MANAGEMENT**

### **Subjects**

Subject 6.1 Computer knowledge and applications

Subject 6.2 Health Management Information Systems (HMIS)

Subject 6.3 Logistics and supply management

## **Subject 6.1: Computer Knowledge and Applications**

**Aim:** Equip participants with practical skills needed to use computers to support their daily work as primary health care managers

### **Objective:**

- To acquaint the participants on the basic elements of computers.
- To teach participants how to use key applications software programmes
- Note: The focus of the classroom sessions will be on applications of key computer programmes such as word processing, spreadsheets, and presentation software, as well as access to key on-line resources such as HMIS.

**Learning outcomes:** After completing instruction in this subject (whether after a single classroom session or following a series of related classroom sessions), participants should be familiar with and able to use the following knowledge and skills.

- Understand the basic elements of a computer (e.g., hardware, software, peripherals, operating system, applications software, HMIS software)
- Know how to use key computer applications (e.g., word processing, spreadsheets, presentation software, data base management software)
- Be able to make effective use of computer system in PHC programmes and services within the scope of their responsibilities
- To know where to obtain on-line resources

### **Topic:**

- T1. Basic knowledge of computers
- T2. Software applications and important resources

## Topic 1. Basic Knowledge of Computers

**Definition of computer:** A computer is a machine meant for computing, it is made up of many electronic and electrical parts.

### Features of a computer

- Speed
- Accuracy
- Reliability
- Program implementation

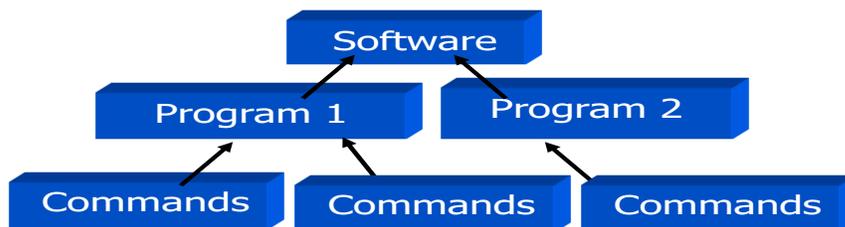
### Definitions

- Data consist of numbers pictures, alphabets, sounds etc
- Data obtained after processing raw data is termed information  
 Raw data  $\xrightarrow{\text{process}}$  information
- Process can be defined as the computation done on the data to generate result. It could be any arithmetic or logical operation done on the data
  - Example: Addition, Subtraction, Multiplication and Comparisons using operators like <, >, =

	<b>Data</b>	<b>Information</b>
1	A collection of facts and numbers	Organized and arranged data
2	Not of much use	Is always useful
3	Gets converted to information	Can also get converted to data

**How does the computer process?**

### Command, Programs, Software



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- The computer needs processing instruction to be given to it for performing the computations.
  - Command: The given instruction
  - Program: Set of instructions
  - Software: Group of many related programs is software. For example, A calculator can be considered as a software where different programs are joined

### **Type of software:**

- Application software: it is a software which has been developed for a specific application.
  - . Example: Word Processors, Accounting Packages, Painting Packages
- System software: it is a software used to work and understand the user given data and instructions to produce the needed information is termed as system software.

### **Functions of these software are:**

- Making the computer ready for the users to work
- Controlling the flow of instructions to the machine

### **Hardware**

- Physical and tangible parts of a computer system.
- Example: **monitor, mouse**

### **Advantages of computers**

- Speed
- Accuracy
- Reliability
- Versatility

### **Disadvantages of computers**

- Incapability to take decisions on their own
- We need to give correct data to generate the desired information (GIGO)
- It requires regular maintenance

### **Computer memory**

- Memory: Capability of a computer to remember data.
- Memory can be:
  - Primary memory
  - Secondary memory
- Memory is used to store both data and information
- Computer's memory can be visualized as a contiguous block of rectangular holes.

### **Definition of Operating system (OS)**

- Operating System is a system software which acts as an interface between the user and the computer hardware
- An Operating System takes care of all the intermediate activities required in accomplishing the task submitted

### **Functions of Operating System**

- It conducts a process called as booting.
- It loads the user program into the memory.
- The data required by the program is also loaded in the memory.
- Interprets the program instructions one at a time.
- Gives instruction to display the result on the monitor.

- Provides the means for the proper use of the resources like memory, input and output devices, etc.
- It acts as a manager for the various resources and allocates (gives) them to various programs and users as and when required by them.
- It co-ordinates the flow of data between the various application programs and the users.
- The operating system software allows the user to interact with the hardware to obtain results.

Therefore, an Operating system is responsible for

- Forwarding the inputs to the processor
- Getting the computation done
- Displaying the result

### **Classification of Operating system**

- Single user Operating system
- Multi user operating system

### **Hardware**

- Different parts of computer
- Input Devices: They are used for taking the data from the users.
  - Example: Keyboard, Mouse, scanner,
  - Magnetic Ink Character Reader (MICR) used in Banks for scanning cheque numbers,
  - Bar code reader (BCR): Used in supermarkets etc, to read the coded price tags on the items.
  - Optical Character recognizer (OCR): used for validating application forms for reading any printed matter
- The Microprocessor (CPU):
  - PCBs contain a number of semiconductor chips. One such chip is the microprocessor.
  - The microprocessor is the heart of the computer and the central processing unit.
- Video Display Unit or the Monitor
- Output Devices: are the devices responsible for giving a display of the output.
  - Example: Plotter or Printer, Monitor

### **Hard disk**

- The hard disk drive is the workhorse of the computer system.
- The hard disk is a collection of platters stacked one above the other.
- These platters have data stored on them.
- Data is stored or retrieved from the disk using a conducting coil called the head.

## Topic 2. Common Software Applications

### Useful Software Packages

- Standard office software: Word, Excel, Powerpoint, Access
- Statistical software: SPSS, EPI Info , Stata, SAS, Epidata, Systat, Statistica,
- HMIS software: Epicalc, Cosas-Immunization surveys

### Introduction to Excel spreadsheets

- One of the best spreadsheet applications.
- Serves as a powerful data management tool.
- Helps to arrange and analyze the data.
- Data can be represented in graphical format.
- An Excel file is called a workbook.
- The intersection of a column and a row is called a cell.
- The address of any cell is the combination of its column label and row title.
- Column width and row height can be changed as per the requirement.
- Cells can be merged and merged cells can be split.
- Borders can be applied to cells.
- You can have only one custom header and custom footer on each worksheet.

### Introduction to Powerpoint Presentation

- AutoContent Wizard provides both the content and the background for a presentation
- PowerPoint XP offers 3 ways to view a slide – Normal, Slide Sorter and Slide Show views.
- Print Preview is useful to visualize how the slides will appear.
- Organization charts can be used to chart out the structure of an Organization.
- Charts can be used to depict data graphically
- **Skill station: Practical session, enumerate the role of computer in health delivery**

### Some useful Web Sites

- [www.who.int](http://www.who.int)
- [www.unicef.org](http://www.unicef.org)
- [www.cdc.gov](http://www.cdc.gov)
- [www.unaids.org](http://www.unaids.org)
- [www.ncbi.nlm.nih.gov/Pubmed](http://www.ncbi.nlm.nih.gov/Pubmed)
- [www.who.int/tdr](http://www.who.int/tdr)
- [www.highwire.org](http://www.highwire.org)

## **Subject 6.2. Health Management Information Systems (HMIS)**

**Aim:** To outline the major elements of health management information systems (HMIS)

### **Objectives:**

- To inform participants of HMIS support available in Nigeria
- To help PHC managers use HMIS to support their primary health care activities

**Learning outcomes:** After completing instruction in this subject (whether after a single classroom session or following a series of related classroom sessions), participants should be familiar with and able to use the following knowledge and skills.

- Know the basic elements of HMIS
- To understand how HMIS can support key elements of PHC service delivery.
- Be able to incorporate, maintain, and sustain HMIS as a mechanism for information generation for decision making in PHC services within the scope of their responsibilities

### **Topics**

T1. Introduction to HMIS

T2. Current situation of national HMIS for PHC

## **HMIS Topic 1: Introduction**

- Availability of accurate, reliable, timely and relevant health information is the most fundamental step towards informed public health action.
- For effective management of health and resources, government at all levels must have interest in supporting and ensuring that health data and information are available as a public good for all stakeholders to utilize.
- Over the years, planning, monitoring and evaluation of health services and programmes have been hampered by dearth of reliable data;
  - Registration of births and deaths is defective.
  - Size, structure and distribution of population are not readily available and therefore it is difficult to calculate simple indicators like crude birth rate, crude death rate at sub-national levels.
- NHMIS is to provide reliable, relevant and timely information to health system's policy makers, managers, professionals, and to the other sectors.
  - The information is for effective decision making, planning, monitoring and evaluation.
  - Primary Health Care represents more than 70% of all organized health care.

## **Objectives of NHMIS**

- To provide information which can be used as a management tool for decision-making
- To assess the state of the health of the population
- To identify major health problems
- To set priorities at all levels
- To monitor the progress towards stated goals and targets of the health services
- To provide indicators for evaluating the performance of the health services / programmes and their impacts on the health status of the population
- To provide information to those who need to take action, those who supplied the data and the general public

## **Sources of health data and information for PHC**

- Population and household census
- Vital events register – records of vital events such as births, deaths, marriages and divorces
- Routine health services data dealing with morbidity and mortality data; immunization, disease treatment, out-patient attendance and admissions
- Epidemiological surveillance data - including immunization records and notifiable diseases
- Disease registers for specific morbidity and mortality
- Community surveys undertaken by Government agencies, International agencies, Non-Governmental Organizations, research groups, etc

## **Example of a skills station for this topic**

1. Select one of the health programmes that is being implemented in your district. Discuss the relevant data/information you would require to effectively monitor its implementation.

2. Identify which information is readily obtainable through the existing health information system and which is not.
3. Explain how you can use the information that is now available to help improve the management of the programme.
4. For the information that you are not able to obtain through the existing health information system, suggest ways in which you could obtain the information.

## HMIS Topic 2: Current Situation of NHMIS for PHC

### • At Community level:

- Lot of health events at the community level remain poorly recorded/collected as data.
- The health events include births, deaths, morbidity, health care from Traditional healers, Traditional Birth Attendants, village health workers, patent medicine vendors among others primary health care activities.
- Data from the community level is expected to be submitted to the health facility covering the area 3 days after the end of the month that is been reported.
- The public at large is often overlooked and underestimated in HIS in Nigeria.
- People have a desire, a need and a right to know about their health as individuals and as a community.
- The more knowledge people have about health issues in their community the better they are prepared to make right decisions and take appropriate actions. For example:
  - Personal behavior and lifestyle decisions – include information on nutrition, use of alcohol, tobacco, sexual behavior, exercise
  - Utilization of health services – decisions on how to use preventive and curative services
  - Participation of health care users in decision making on priority health issues and strategies.

### • Health Facility Level:

- Data from health facilities is often inadequate, incomplete, untimely and very little of the events are captured as generated data
- Information is hardly available on utilization of facilities, morbidity and mortality and on the various components of primary health care
- Provision for data storage is a common challenge at the lower levels, worsened by the absence or low level of information technology for data processing
- Each health facility to send its data to the LGA 2 weeks after the end of the month that is been reported.

### • Health personnel

- Health personnel that are trained in health information are hardly available at the PHC facilities,
- Other health workers who attempt to capture some of this data do not have sufficient orientation or training on health information system.
- Most health workers at the PHC level consider data collation a burden and do not appreciate the relevance of the process to service delivery.

### • Materials for data collection

- Materials required for data collection, compilation, collation and analysis are hardly available at his level.
- Data when collected, compiled and collated, analysis is rarely done.

### • Financial resources for HIS

- Budgetary provision is hardly made for health information system at the health facility and LGA levels
- Therefore simple materials for data collection like cards, forms are often not available for use at the health facilities.

- **Data Analysis**

- Simple analysis that can be useful for decision making at this level is not usually done.
- In some cases data is collected and sent to the next level and copies are not available at the level where they are generated. This practice is a reflection of the poor awareness of the objectives of the Health Information System.
- Information Technology – Computers are hardly available in health facilities and LGA Health Department for data storage and analysis
- Where computers are available skilled personnel for data processing are not available. In the few places with computers maintenance and power supply is a major problem.

- **Data transmission**

- Poor roads and non-availability of vehicles are constraints to timely sending of the data to the next appropriate level
- Electronic transmission of data and information using fax and e-mails is very rare. This contributes to the major problem of timeliness in data submission.

- **Private sector**

- Private sector health data is largely not collected.
- A large proportion of the population patronizes private health facilities. Therefore, If data from this sector remain missing then what is collected is a small fraction of the morbidity, mortality and health services.
  - Health data are not properly kept at most private health facilities and forms used for NHMIS are usually not made available to these facilities to generate the required data.
  - In a survey among private clinics it was found that only 29.7% of the clinics had ever been supplied NHMIS forms and only 10.8% made data returns six months prior to the survey and returns are rarely made to LGA's M&E unit of health department but to SMOH.

- **Disease surveillance**

- At the community and health facility level poor level of awareness of the disease surveillance system results in very poor reporting of priority diseases
- When reported they are often reported late for effective intervention

- **Inter-sectoral data**

- Useful information for planning can also be obtained from other sectors like Education, Agriculture and National Population Commission at LGA level. But this hardly occurs at LGA level. Management of health system is also not totally independent; it responds to activities and changes from the other sectors.

## **Way Forward**

- **Strengthening of NHMIS for PHC**

- For effective NHMIS the lower levels (Bottom) need to be well established and equipped to provide adequate health information on PHC components and services.
- Data and Information generated at the lower level if processed appropriately with completeness and timeliness will provide a basis for informed decisions at the top. There can't be any meaningful information at the top if data is not gathered properly from the bottom.

- **Financing of health data infrastructure**
  - At the LGA level where the bulk of the data within the NHMIS is generated lack of budgetary allocation to HIS is a major obstacle.
  - Advocacy is needed to LGA officials to provide adequate fund for NHMIS. At least 1 – 2 % of capital health budget is expected to be used to fund NHMIS
- **Strengthening of the organizational structure for NHMIS at the bottom**
  - Data from the bottom where most health events and activities occur have to be adequately captured.
  - In view of the low level of health workers available for this service at the community level, community members through the village and ward health committees can play significant roles in nomination of voluntary village health workers who can collect such data.
  - Data can also be collected from community based health workers including traditional birth attendants, patent medicine vendors and voluntary village health workers.
  - At the bottom, Community Based Records need to be kept on;
    - VHW / TBA work and activities
    - Tracer diseases
    - ANC/Family Planning
    - Pregnancy outcome and
    - Deaths
  - At the PHC facility level registers of;
    - Out and In-Patients
    - Family planning
    - Antenatal and maternity
    - Immunization and Child welfare clinic activities

**NB:**

- The Ward health System should be used to strengthen data collection from the bottom.
- The Community Health Extension Workers (CHEWS) are expected to collate data on community-based NHMIS forms from VHWs and TBAs.
- In Ghana Community Based volunteers have been quite useful and are involved in the surveillance system.
- Communities can be involved in data collection and simple processing using simple forms, tables and visual presentations for local data analysis and provision of feedback.
- **Staff training and orientation towards NHMIS**
  - Health personnel need to be trained and health information system should be part of the curriculum for pre-service training of all categories of health workers.
  - Health workers need to have proper orientation on NHMIS and be motivated to play their own roles in data collection, collation, analysis and dissemination.
  - It is desirable to recruit health information officers for health facilities.
  - At LGA level,
    - Regular data analysis should be done which will include comparison of monthly returns on health and health related problems and progress of intervention activities. This should also happen at the ward and health facility levels.

- At the Ward Health Level,
  - CHOs and CHEWs are expected to create awareness about M&E System and mobilize the JCHEWs, TBAs/VHWs and the VDC members to establish the system at community level
- The expected activities will include:
  - Training community – based workers, VDC and WDC on placement of home-based records
  - Ensuring that Clinic master Card for every household is completed
  - Providing community based workers with pictorial records of work and training them on how to fill the records
  - Put in place mechanism for regular collection of filled forms
- **Provision of appropriate information technology for Data and information processing**
  - Data collection, storage, analysis and dissemination is very key for the health sector in particular and the country in general. Therefore, health informatics is very relevant in Primary Health Care.
  - Primary Health Care is usually responsible for programmes directed to the most common health problems and risk groups and thus deals with large number of individuals. This creates a requirement for system with massive data storage space, fast retrieval and cross-linking of data.
  - It is important to get reliable and accurate data from the bottom for any meaningful decision at the top. Computer-based system supporting PHC can result in the following achievements;
    - Increase efficiency of operation of all phases of the process of PHC
    - Improved and expedient recording and communication among health professionals
    - Improved accessibility and timeliness of patient / client information
    - Increase in the quality of health care services provided
    - Improved quality assurance of health care
    - Improved epidemiological surveillance and more reliable health statistics.
- **Strengthening of data flow**
  - Provision need to be made to support data flow upwards and downwards. Upward transmission of data and information can be improved upon by the provision of necessary logistic support and by use of information technology (e.g. electronic-mails). This will improve timeliness and completeness of epidemiological data.
- **Data and Information Dissemination**
  - Data and information generated in PHC in this country is hardly disseminated to make meaningful impact on service delivery and for service and programme evaluation.
  - It is desirable to have at the bottom means of sharing data and information generated at community and facility levels.
  - Each LGA should be able to organize quarterly review workshops where all health facilities present their data with simple analysis of trend, performance and assessment of key health indicators for each quarter.
  - Several indicators have been developed within the context of NHMIS and PHC MIS because of ineffective national data flow policy in Nigeria.
  - The PHC indicators should be measured and assessed regularly at the lowest level possible. These indicators should be available at the Ward or LGA levels. They can be

used to periodically monitor and evaluate intervention programs and routine health care services at the local level.

- At quarterly review meetings information can be shared and lessons learnt from the activities of the various health facilities.
- Each State can also organize such quarterly review meetings with active participation by all LGAs and other stakeholders. Provision of feedback to the communities by health facilities and to health facilities by LGA is very important.
- **Data Collection from private health institutions**
  - Private health facilities like private clinics, pharmacies, patent medicine stores, mission homes and traditional medical practitioners are well patronized by people in this country.
  - Data from this sector is largely not collected. Significant proportion of disease burden is seen by the private health care providers.
  - It is known that about 33% of utilization of formal medical services is accounted for by the private sector.
  - Surveys have shown that 50% of the treated in cases of childhood illness use non-formal health sector particularly patent medicine stores. It is therefore important to start a system that will be able to collect data from the private and non-formal health sectors

## **Conclusion**

Primary Health Care involves finding answers to questions such as the following:

- What are the local health, environmental, and economic problems?
- Who needs help with which problem?
- How can help be provided in ways that are both affordable and acceptable?
- What are the local sources of knowledge and action?

The National Health Management Information System should be able to provide information that will address these questions at the local level. It is important to have an approach to information designed for bottom-up community action. The HMIS should serve the interest of the people and give better opportunities for community oriented decision and action.

## **Subject 6.3: Logistics and Supply Management**

**Aim:** To improve participants' understanding of key processes in procurement and distribution of medical supplies and services

### **Objectives**

- Enhance participants knowledge of key frameworks for managing drugs and other commodities
- Discuss management challenges and best practices today in the procurement and distribution of health commodities.
- Teach participants the core elements of the Logistics Management System (LMS)
- Acquaint participants with knowledge of the Bamako initiative and DRF/CRF

**Learning outcomes:** After completing instruction in this subject (whether after a single classroom session or following a series of related classroom sessions), participants should be familiar with and able to use the following knowledge and skills.

- Know the basic techniques for logistic management
- To appreciate the role of the Logistics Management System (LMS) in the delivery of effective PHC services
- Be able to use the LMS to select, procure, and distribute drugs and other commodities for PHC activities within the scope of their responsibilities
- To be able to use the LMS to support other PHC management activities within the scope of their responsibilities.

### **Topics:**

- T1. Background to Logistic Management System (LMS)
- T2. Selection processes in LMS
- T3. Procurement and distribution in LMS
- T4. Management support systems in LMS

## **Logistics Topic 1: Background to Logistics Management System (LMS)**

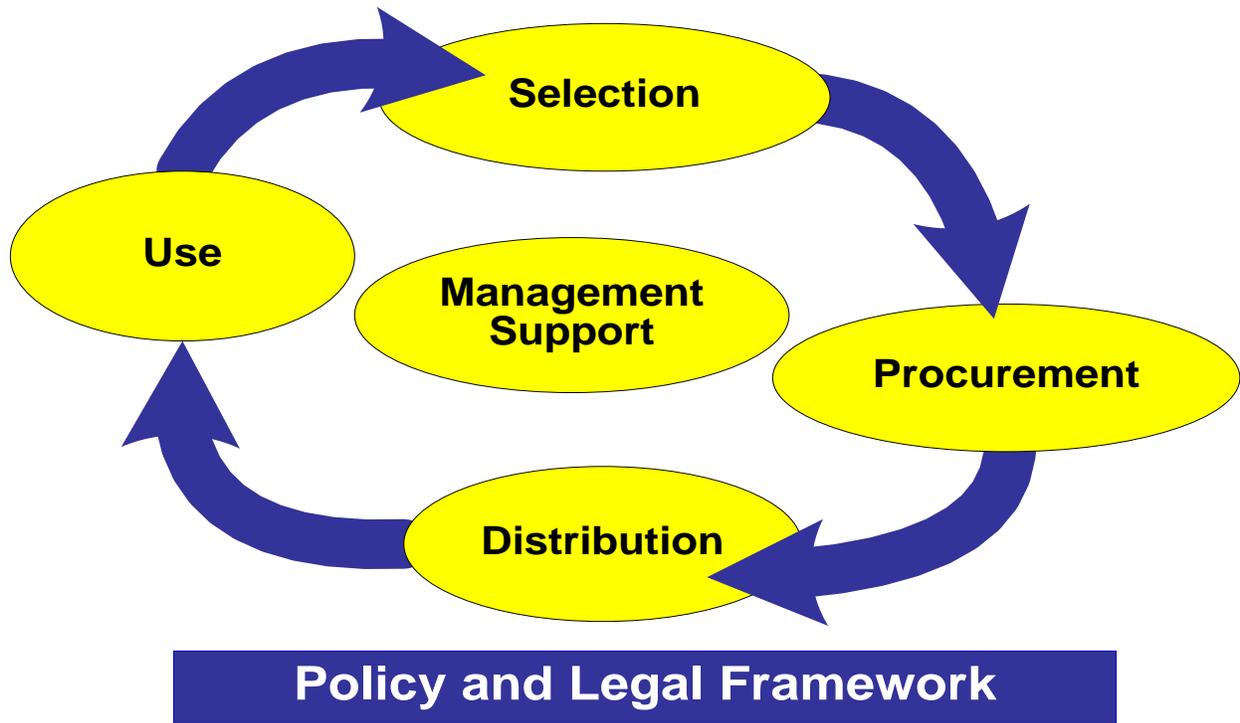
### **Objectives:**

- To discuss the concept of logistic management in PHC
- Enhance participants knowledge of the framework in commodity(drug) management

### **Concept**

- It is imperative to sustain and expand successful intervention, to make it better, more agile, robust and flexible through better management. This can be achieved through several processes. One of which is timely and adequately availability of the appropriate essential resource (Materials, Human, etc ) identified for such intervention(s).
- Thus, supply chain defines/describes the link and relationship among organizations, people, resources and procedures involved in getting commodities to customer (in this case health care consumers).
- Typically supply chain involves partners from manufacturing, transportation, warehousing and service delivery.
- Logistics refers to the specific functions that need to be carried out by each of the supply chain partners such as selecting products, forecasting demand, procuring/ordering, warehousing/storing/managing inventory, transporting from one level to the next until the commodities reach the client and managing data.
- A successful logistic system should fulfill six (6) rights:
  - Procuring the right good
  - In the right quantity
  - In the right condition
  - Delivered to the right place
  - At the right time
  - For the right cost
- To manage a logistic system, a number of activities need to be continually executed and supported.
- Thus, a logistics cycle is the flow of activities and resources that are required to operate an effective logistics system.

## Logistics Management Cycle



### Example of a skills station for this topic

Outline the major elements of practical LMS that would be relevant for your organization

## **Logistics Topic 2: Selection Processes in LMS**

### **Product or commodity selection in PHC**

This is the critical first step in the management of commodities in PHC.

#### **Aim of Product selection**

- To minimize cost
- Improve quality and customer service.

#### **Guides/consideration in product selection**

- Find products that are easy for patients to use, have fewer side effects and require fewer visits to the health centre
- Standardize and limit the list of drugs and supplies
- Eliminate products that require additional accessories
- Eliminate product that are of duplicate nature
- Find products that are easy to administer at the lowest level
- If possible, seek options of fixed dose combination or blister packaging.
- Work with manufacturers to package the products for the lowest level of use.
- Find products that do not require special handling such as cold or cool chains.

#### **Forecasting**

This is the process of estimating how much of the selected products of the programme will need to reach the population to be served. Forecasts are used to reduce planning uncertainties and take advantage of economies of scale.

#### **Forecasting methods**

These differ for different products and different situation. There are three recognized methods for determining the quantities needed to support health programmes.

- **Consumption-based forecasting:** This requires a well functioning LMIS. However, drawbacks include potentially underestimation of the actual need, especially if patients do not get the products due to stock-outs. It is the most preferred.
- **Morbidity-based forecast:** Used mostly for new programs in which there exists no consumption data on which to base the forecast. This method requires rational use of drugs based on the standard treatment guidelines.
- **NB:** In the absence of good logistics data, morbidity statistics, prevalence and incidence rates; demographic data and standard treatment guideline can be used to calculate quality requirement. In most situations, a combination of methods will be used.
- **Adjusted consumption-based forecast:** This method is used when, neither the logistic data nor morbidity data are particularly reliable.

#### **Example of a skills station for this topic**

##### **Selection processes in your workplace**

- Outline the key elements of the current selection process for drugs and other commodities that your organization uses

- Identify bottle-necks in your current selection process
- Explain how you can use elements of the LMS to overcome the bottlenecks you identified, giving reasons for each suggestion.

## Logistics Topic 3: Procurement and Distribution in LMS

### Key components of procurement

- Drug Quantification
- Selection of Procurement procedure
- Tender Management
- Establishing Contract terms
- Assuring drug quality
- Ensuring Adherence to Contract terms

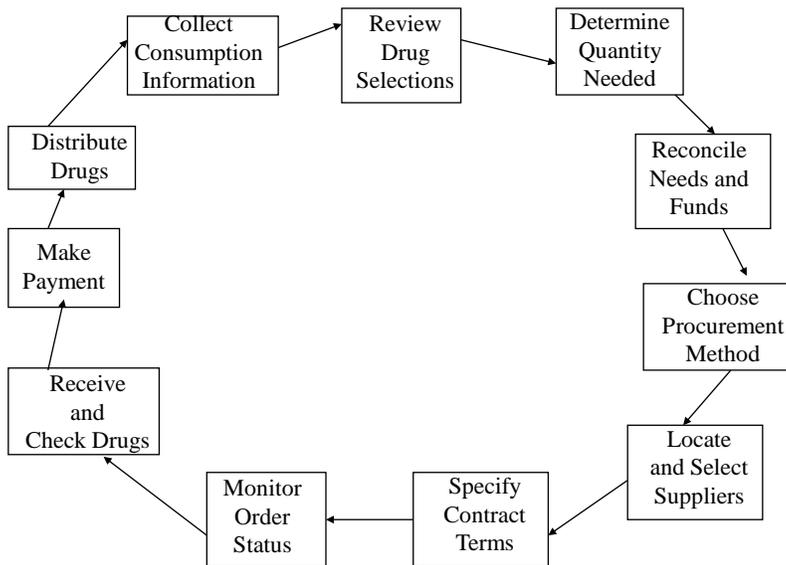
### An effective procurement process should

- Procure the right drugs in the right quantities and at the lowest possible price
- Ensure that all drugs procured meet recognized standard of quality
- Arrange prompt and dependable delivery to avoid shortages and stock outs
- Ensure supplier reliability with respect to service and quality
- Set the Purchasing schedule, Formula for Ordered Quantities, Safety Stock levels, to achieve the **lowest total cost** at each level of the system i.e. set Re-order level, Minimum level, Re-order Quantity, Maximum level in order to avoid stock outs

### Objectives of procurement

- Ensure supplier reliability with respect to service and quality
- Set the Purchasing schedule, Formula for Ordered Quantities, Safety Stock levels, to achieve the **lowest total cost** at each level of the system i.e. set Re-order level, Minimum level, Re-order Quantity, Maximum level in order to avoid stock outs
- Maximize Use of Local Suppliers while seeking low prices, high quality and dependable delivery
- These Objectives should be achieved in the most efficient manner possible.

## Procurement Cycle



### Procurement methods:

- Methods should:
  - Obtain the lowest possible purchase prices
  - Obtain supply of good quality products from reliable of the Supplier who will back it up with adequate services.
  - Minimize Loss of Resources [e.g. funds and goods resulting from adverse influences on procurement decisions and practices]
  - Obtain Optimum Economy in Personnel, time and other resources used in the procurement process
- The critical decision is to select the method, which will achieve these objectives for the particular health care systems or institution at any particular time.
- All drugs needs not be purchased by the same method and one particular method needs not to be used at all times

### Major methods: There are 4 major methods:

- Open Tender:
  - It is open to all interested manufacturers
  - The best/Lowest prices may be obtained by this method.
  - It also promotes local production but
  - It is time consuming and
  - The workload is high.
- Restricted Tender:
  - Interested suppliers must be **approved** and **registered in advance** often through a Formal Pre-qualification Process by the buyer.
  - Such process considers Adherence to Good Manufacture Practices (GMP), Past Supply Performance/Record, Financial viability and related factors.

- This pre-qualification process is open to any supplier that wishes to apply
- Favorable/Moderate prices are obtained here.
- It is less burdensome.
- Competitive Negotiation:
  - Negotiated Procurement/Local Or International Shopping:
  - The buyer approaches or contacts a limited number of known selected suppliers (typically at least 3 in number) for price quotations.
  - Buyer may also bargain with these suppliers to achieve lower prices or service arrangement.
  - This method is most useful for selected items for which “best” supply sources are well known.
- Direct Procurement
  - It is the simplest and quickest but usually the most expensive method
  - It deals with purchasing from single suppliers at the quoted or negotiated prices.

**NB:** Careful selection of reliable, compatible and appropriate suppliers is important for guaranteeing eventual quality and cost of supplies. At the initial stage of developing drug procurement system, it may be best to start with a relatively simple purchasing method, e.g. a combination of negotiation with known suppliers or international procurement and local tendering

### **Purchasing models/mechanisms**

- The most commonly used purchasing models are:
  - Periodic Purchasing : they are two main types of periodic purchasing, namely:
    - Annual Purchasing:
      - It is the simplest model/mechanism
      - But it entails Uneven Workload i.e. workload is high in the early part of the fiscal/year when purchase & contracts are initiated thereafter the procurement staff have little or nothing to do, this is a waste of Human Resources.
      - It is most useful for small programs or new program
      - It requires very high safety stock leading to high inventory costs.
      - It is therefore very costly as a permanent system.
    - Scheduled Purchasing:
      - It is a modification of Annual Purchasing
      - Intervals are cut down to three or six months
      - Provides an even workload for procurement staff &
      - This requires fewer inventories.
  - Perpetual Purchasing:
    - It is more adaptable to changes in demand than the periodic systems.
    - It however, requires skilled management to obtain its cost saving advantages.
    - It requires the lowest safety stock and inventory costs.
  - Modified Optional Replenishment – a modification of the two mechanisms above
- Different combination of these models may be used at different levels of the system or for different drugs.

- Inventory control should therefore consider changes in the purchasing system as program develops.
- Whichever combination of supply system and models used, most public sector drug procurement involves group purchasing whereby the procurement office negotiates contracts for members of a group with similar needs and interests.

**NB: Government funding and accounting may:**

- Not allow the adoption of a superior model or
- Allow the adoption of a less superior model
- Perpetual purchasing is less compatible with government annual budgeting but may be adopted when there is no available fund

**Key principles of Procurement**

- Procurement by generic name (INN – International Non-Proprietary Name): Specify quality standard and not specific brands
- Limitation of procurement to the EDL: Select safe, effective and cost effect drug
- Procurement in bulk: makes for favourable prices
- Formal supplier qualification and monitoring: All suppliers should be pre and post qualified through a process that considers Quality service, Reliability and Financial viability.
- Competitive procurement
- Sole-source commitment: group purchasing where all contracted drugs are from contracted suppliers. Separate deals have to be entered with non-contracted suppliers.
- Order Quantities based on Reliable Estimate of Actual Needs
- Reliable Payment and Good Financial Management
- Transparency and Written procedures
- Separation of key functions: that require different expertise e.g. functions that involve committees, units may include award of contract, selection and qualification approval of suppliers.
- Product Quality Assurance program :
- Establish and maintain a formal system for Product Quality Assurance. This includes:
  - QA product certification
  - Inspection
  - Targeted laboratory test and
  - Report of suspected products
- Annual audit with published results :
- Conduct annual audit to assess compliance with procedure
- Regular reporting of procurement performance indicator
  - Report key procurement performance indicator against targets at least annually
  - Use key indicators
  - Ratio of prices to market price
  - Suppliers Lead-Time - Use key indicator
  - Suppliers Lead-Time Percentage of Purchases made through Competitive Tendering
  - Planned versus Actual Purchases

### **Failure and success of procurement depends on**

- Procurement method chosen and how it fits into the prevailing circumstances
- The Adequacy of Specification of Contract Terms
- The Caliber and Performance of Suppliers selected
- The Reliability of the supply
- Monitoring process &
- The Quality Assurance of drugs/commodities procured

### **Management challenges in procurement**

- Poor estimation of drug needs
- Lack of drug-quality specifications in tender documents
- Incomplete product description in tenders and contracts: leading to receipt of wrong drugs, wrong dosage forms, wrong quantities, wrong packaging and labeling, or wrong language for the country
- Poor monitoring of suppliers: Wouldn't detect problems with lead times and product specifications leading to short supply and wrong drugs
- Non-transparent tender practices: Causes lack of competition, potential for corruption resulting in higher prices and possibly poor quality products
- Port clearance delays: Didn't provide funds for import fees in advance

### **Best practices in procurement**

- Accurate quantification (or forecasting) of drug needs, which requires accurate morbidity and consumption data, including—
- Expertise in tendering and contracting to successfully carry out local and international procurements
- Supplier prequalification system, which mandates that tendering is done only with suppliers proven to have followed quality standards
- System to monitor and evaluate supplier performance: Determines if supplier is meeting terms and conditions of the contract
- Price monitoring: Determines if procurement practices are bringing in prices similar to other health systems
- Donor coordination : Avoids duplication and ordering of unwanted drugs where donors are actually procuring drugs for the health system

### **NB:** Procurement needs to be managed with high degree of flexibility because

- Demand of the product is uncertain. If programme is new and consumption pattern have not been established and lack of data results in speculative forecasts
- Lengthy and inflexible lead-times in the procurement process will inevitably lead to wastages of high-value products
- Technology and prices of these products are continuously

## **Distribution of product or commodity**

### **Aim of distribution:**

- Custom clearing
- Stock control
- Store Management
- Drug Delivery to Depots and Health Facilities

**Stock control:** This is also known as order management. Placing orders for replenishment is a routine logistics activity. This is to ensure that supplies are continuously available. Thus, re-ordering procedures are very important logistic function. The two systems commonly used are:

- Pull system: The personnel receiving the supplies determine the quantities required.
- Push system: The personnel issuing the supplies determine the quantities.

**NB:** None of the two systems above is better than the other. The choice to be made depends on the availability of:

- Staff skills at each level
- Use of information technology
- Adequate products in the system
- General approach to administration
- However, in the following situations, it may be better to use one system or the other:
  - Limited supplies no need for rationing supply – Push
  - Overworked staff at lower level – Push
  - Decentralization reforms, transfer of management responsibility to the lower level – Push or Pull system
  - Highly automated system – Push or Pull

**Store Management:** This is also known as inventory management. This enables storekeepers to manage their stocks – know how much stock to hold? Know when to order? And know how much to order? There are three types of maximum – minimum inventory control systems:

- Forced ordering maximum system
- Continuous review system
- Standard minimum – maximum system

The choice of the inventory system will be dependent on several factors:

- The number of products to be handled in the system
- The strength and flexibility of the transport system
- Workloads of the staff in the system.

**Transportation:** This is an essential function for delivering commodities to the health facility. Some of the system wide strategies for addressing the transportation function include:

- Developing a transportation policy
- Developing a transport resource management plan
- Putting in place a scheduled transport delivery system
- Eliminating parallel or duplicate trips to the same destination
- Outsourcing some or all transportation functions

## **Example of a skills station for this topic**

### **Procurement and distribution processes in your workplace**

- Outline the key elements of the current procurement and distribution process that your organization uses
- Identify bottle-necks in the current procurement and distribution process
- Explain how you can use elements of the LMS to overcome the bottlenecks you identified, giving reasons for each suggestion.

## **Logistics Topic 4: Management Support Systems in LM**

Management support systems consist of the various items needed for the smooth day-to-day management of logistics. These include:

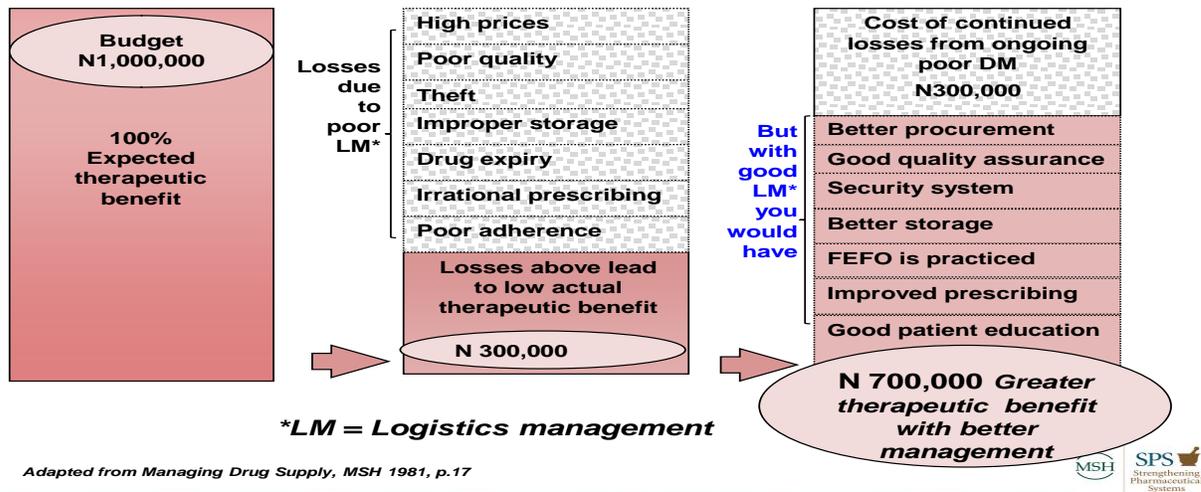
- Logistics Management information system (LMIS)
- Pipeline Monitoring
- Organization and staffing
- Budgeting
- Supervision
- Evaluation

### **Logistics Management Information System (LMIS)**

- LMIS provides information on the stock status, between levels of the health system.
- LMIS can be either paper or other forms of communication to transfer data which can improve day-to-day management of commodities and inform forecasting and procurement decisions.
- In designing LMIS for the management of commodities, a critical step is deciding what information to collect.
  - What data will be collected, by whom, and how often are critical elements in LMIS, and
  - Will depend on the individual situation.
- A logistics management information system uses standard types of forms for recording the essential data items. These are:
  - Stock keeping records such as stock (or bin) cards: these remain at health facility and are used to calculate the amounts requested on transaction records.
  - Transaction records such as requisition and issue vouchers: move between levels of the system, and are used as order forms and to track and confirm shipments between levels, and,
  - Consumption records such as a daily activity record which tallies the amount of each product used or dispensed to patients each day.
- NB: Planning for the LMIS should begin after the initial assessment of the system takes place
  - Assemble an LMIS team of HMIS, LMIS, MAP M&E and MOH representatives to assess the current information system and develop improved systems.
  - Ensure that LMIS systems which are systems for day to day management are not mixed with HMIS systems which serve a broader goal of strategic health planning.
  - Consider hiring a consultant firm, NGO or individual consultant specializing in MIS, particularly if computerized systems are being considered
  - LMIS should be in place before any products are distributed.
  - LMIS should be kept as simple as possible, collecting at minimum the essential data for running the program.
  - LMIS can be manual paper-based systems, automated systems or a combination of the two. The choice of system will depend on in-country system and human

resource capacity; however, where possible opt to automate the system. Automate the system as it will help in managing large number of data

## Waste in Logistics Management Potential for Improvement



### Monitoring

- Logistics monitoring is imperative if programs want to know whether logistics operations are enhancing service delivery, providing enough—not enough -or too much products or whether the logistics organization is aligned with the program goals.
- Through active monitoring and measurement, logistics systems can show achievement of program goals, reduce costs and be instrumental in improved service delivery – which all results in improved consumer confidence in the health care system.
- Successful measurement program is hard work and demands commitment.
- While there are hundreds of ways to track logistics performance, it is important to focus the indicators that have the following characteristics:
  - Quantitative – is measurable
  - Motivates “correct” behavior
  - Defined mutually by the parties concerned
  - Multi-dimensional – balanced between quality, utilization and performance
  - Benefits of the measure outweigh the costs of collection and analysis.
- Most logistics systems in the commercial world
  - Use some form of a metrics or a score-card to measure the operations of the logistics system.
  - These metrics are designed to align the program goals and the contribution of each of the logistics function to the goals.
  - It also usually is holistic, covering measurement of all aspects of logistics performance such as time, cost, quality and others such as productivity.

## **Example of a skills station for this topic**

### **Procurement and distribution processes in your workplace**

- Outline the key elements of the current relationship between logistics management and more general management activities in your organisation
- Identify bottle-necks in the current relationship between logistics management and general management in your organization
- Explain how you can use elements of the LMS to overcome the bottlenecks you identified, giving reasons for each suggestion.

