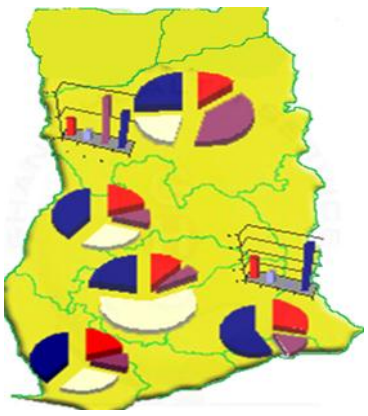
District Information Utilization Manual (draft)

November 2011



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Acknowledgements

The need for the development of this manual arose as a result of the development and roll-out of the District Health Information Management System (DHIMS) software in all districts at the beginning of 2007. The system enabled districts to collect and analyse their routine service data. As a result, districts had adequate and relatively good quality data available to them. The challenge was how to use the available data for service planning and management. Several districts expressed the wish to have some guidance in the use of information for decision-making at the local level. *Using Information to Improve Health Service Delivery at the District Level* is a response to such calls.

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List of Abbreviations

AFP	Acute Flaccid Paralysis
AIDS	Acquired Immune Deficiency Syndrome
ALOS	Average Length of Stay
ANC	Antenatal Care
ART	Ante Retroviral Therapy
BCC	Behaviour Change Communication
BMC	Budget Management Centre
BOR	Bed Occupancy Rate
CBV	Community-Based Volunteer
CBSV	Community-Based Service Volunteer
CD1	Communicable Disease Form 1
CD2	Communicable Disease Form 2
CHO	Community Health Officer
CHPS	Community-based Health Planning Services
CHV	Community Health Volunteer
CSO	Civil Society Organisation
D&C	Dilatation and Curettage
DHIMS	District Health Information Management System
DHMT	District Health Management Team
DHS	Demographic and Health Survey
FP	Family Planning
GDHS	Ghana Demographic Health Survey
GHS	Ghana Health Service
HIS	Health Information System
HIM	Health Information Management
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HMN	Health Metrics Network
HSDS	Health Service Database System
ICD	Institutional and Clinical Care Division
IDSR	Integrated Disease Surveillance and Response

IPT3	Intermittent Prophylactic Treatment (3rd Dose)
KAP	Knowledge Attitude and Practice
LSS	Life Saving Skills
MDA	Ministries Departments and Agencies
MICS	Multiple Indicator Cluster Survey
MIS	Management Information System
MVA	Manual Vacuum Aspiration
NHIS	National Health Insurance Scheme
NGO	Non-Governmental Organisation
PLWHIV	People Living With HIV
PMTCT	Prevention of Mother to Child Transmission
PNC	Post Natal Care
RCH	Reproductive and Child Health
RED	Reach Every District (Child)
SAM	Service Availability Mapping
SMILE	Safe Motherhood and Infant Life Education
STG	Standard Treatment Guidelines
SRA	Stores Receipt Advice
STI	Sexually Transmitted Infections
TB	Tuberculosis
TBA	Traditional Birth Attendant
TT	Tetanus Toxoid Vaccine
WIFA	Women In Fertility Age

Background

The primary purpose of an information system in any organisation is to provide information for decision-making. There can be no effective management without relevant information. Health services management requires essential and reliable information that indicates current levels of health status and the performance of the services at the various levels and periods. This is essential for prudent management and decision-making.

Due to the increasing and competing demands for resources, there is the need to utilize information for good management practices to ensure effective and efficient health service delivery. It is therefore essential that attention be paid to the processes of information collection and management to ensure that decisions are based on relevant and reliable evidence.

There is also the need to provide evidence and justification for the utilization of resources and support provided by health partners and stakeholders.

In the last decade the health sector has implemented several strategies to improve the health information system. There has been improvement in the availability of human resource for health information especially at the district level. This has been due to the training of health information officers at the Kintampo Rural Health Training School with the graduates posted mainly to the district health administrations to manage health information at the district level.

Also, to facilitate data management and reduce the heavy burden inherent in the manual system, a database tool the "District Health Information Management System (DHIMS)" was developed and deployed. The DHIMS system is designed to enhance data management and facilitate the generation of reports required at the district level. Additionally, three manuals *(1) Using Data for Decision-Making; (2) Building Quality from Data Collection to Presentation; (3) Benchmarking in the Health Sector* were developed. The purpose of these manuals was to provide guidance for the collection, analysis, interpretation and presentation of routinely collected data at the district and regional levels.

With the development and implementation of the above strategies, an improvement in the health management information system was expected at the district level. However, an

assessment of the performance of the health information in 2007 using the Health Metrics Network (HMN) assessment tools indicated that one of the major challenges of the health information system was the non-utilisation of data for decision-making at various levels of the health system. The findings indicated that information use was generally limited to the routine compilation and reporting of sector-wide indicators in response to demands of periodic review processes such as quarterly and annual reviews. Little priority is given to the use of information for planning and decision-making relating to service delivery at the lower levels. This obviously leads to inappropriate decisions, poor targeting of vulnerable groups, inefficient allocation and use of resources and poor health outcomes.

To promote the use of information to ensure evidence-based decision-making, the HMN recommends the principle that information should be made a core part of the day-to-day management of health system planning and delivery. To facilitate the implementation of this principle at the district level it was decided to provide another tool that will prompt district health management teams to focus on their core management and technical functions through the use of information and be guided to make appropriate decisions towards efficient day-to-day planning and delivery of their health service activities, hence the development of this manual.

Purpose of the manual

The purpose of this manual is to provide guidance and guidelines to district health staff for planning and making managerial and operational decisions at the district level. It is intended to be used as a guide by district health management teams towards proactive decision-making to improve health service delivery, prevent or reduce operational problems and to ensure quality of care to the population. It can also be used as a monitoring tool by the regional health administration and programme managers.

The manual is expected to act as a stimulus to action by the district health management team. It is however not intended as a detailed “how to do it” manual.

It is also expected that it will be used as an instruction manual for training district health staff. The manual should be kept in all DHMT offices as a resource material.

General Objective

To enable DHMTs take decisions based on data/information to improve health service delivery and improve quality of life.

Specific Objectives

This manual is designed to assist DHMT staff to:

- Be aware of the general functions and roles of the district health management team.
- Inform staff of the different decisions that need to be taken at the district level.
- Appreciate the importance of data in decision-making.
- Know the data required to make various managerial and technical decisions and their sources.
- Develop competencies in using data for decision-making.

Target users

The manual is targeted at district health management staff involved in making decisions affecting the planning and management of health services at the district level. The manual may also be useful to staff at the sub-district level. In addition it can be used by programme managers at the regional level for performance monitoring.

Basic assumption

In preparing this manual, several manuals on health information management and information utilisation currently available in the health system were examined and assessed in terms of their objective and content. It was found that most of the manuals focus on the steps and processes of data management such as data capture, analysis, quality assurance and presentation with the posit that once data is collected and analysed it will be used for service planning and management.

It is however known that the use of information involves more than the mere capture, summarisation, analysis and dissemination of data. The use of information by the district health management team should involve the processes of utilising data collected to guide the performance of its activities, to determine its achievements and to detect problems. It

includes using data to demonstrate efficiency in service delivery by relating inputs to outputs and outcomes and also ensuring quality of care.

This manual is based on the main assumption that districts receive adequate data from service delivery points and have the basic skill and capacity to process the data into information but however lack the organisational culture of institutionalising the use of information in the processes of their day-to-day decision-making. It is expected that the use of information to arrive at evidence-based decisions will lead to efficiency in service planning and delivery and improved service coverage and health outcomes.

Organisation of the manual

The manual provides guidance on how to use information as a tool in the assessment of the levels and quality of the services provided and to guide the decisions of the district health team to improve service delivery and quality of care.

The manual is divided into four (4) Sections. **Section 1** explains the basic concepts such as health data, health information, management information system, health management information system and their inter-relationships. It also explains the concepts of decision-making and decision-making processes.

Section 2 deals with general management functions pertinent at the district level and their related decisions. **Section 3** covers the main technical services provided at the district level and their related decisions. **Section 4** deals with Community involvement and participation and inter-sectoral collaboration.

Sections 2 to 4 have a common format which includes:

- the rationale for making informed decisions on the components listed in the section,
- the key points to consider in the section,
- the relevant decision areas of the various sub-components,
- the information required to make such decisions and
- the sources of the information required to make such decisions

How to use the manual

This manual is primarily designed for use by staff of district health administration for assessing the performance of the district health services and for planning and managerial decision-making at the district level. It can also be used as a monitoring tool by the regional health administration and programme managers.

The manual can be used by each DHMT as a guide at its periodic meetings. The DHMT can select a relevant programme area in Section 2 to 4 of the manual and use the questions listed in the "decision area" under that programme heading to assess the performance of the service. The DHMT then follows through the various steps outlined in the ***"Steps in using information for decision-making"*** as detailed in the manual from pages 9 to 12. Through this process the DHMT is able to assess its service performance, identify any problems, develop strategies and plans to address the problems and evaluate the implemented plans to ascertain its effect in improving service provision. It is hoped that through regular use of the manual, DHMTs will develop competence in using information for decision-making for the improvement in the coverage, quality and management of the health service delivery

Basic Concepts

Section 1

This section is to assist the user to:

- Understand the basic concepts in health information management
- Identify factors affecting decision-making
- Understand the process of decision-making
- Identify the various methods of decision-making
- Understand the steps in using information for decision-making

Health Data

Health data are items of knowledge or statement of fact about an individual client or groups of clients or households/communities. Data is captured about clients during the process of health service delivery whether at a health facility or in the community. The data collected should include all relevant findings relating to the client's condition, diagnosis, treatment

and other related events. It is important to ensure that the data is collected at the point of contact with the health service.

Health Information

Health information is health data that have been organised in a meaningful format. It may refer to organised data collected about individual or aggregated information about clients who have benefited from a specific health service. Health information is useful if it is accurate, timely, relevant, structured and presented in a useable form. Health care providers need information not only at the point of service delivery but also at the point of decision making. The information should be in a format that makes decision-making easier.

Management Information System

Management Information System can be defined as a system to convert data from internal and external sources into information, communicate that information in an appropriate form, to managers at all levels and functions to enable them to make timely and effective decisions for planning, directing and controlling the activities for which they are responsible. Here the emphasis is placed on the USE of information rather than how they were produced.

Health Management Information System

This can be described as a Management Information System relating to the health sector. A Health Management Information System (HMIS) is therefore a system of documentation, analyses and use to improve the quality, continuity of care and coverage of health care services at all levels. Health Management Information is based on routine data collection. It is an on-going component of the overall information system that informs the different levels of the health care system of the progress towards objectives set.

Decision Making

Decision making is the process of identifying and choosing alternatives from informed choices to arrive at a desired goal.

Factors affecting decision-making

Decision making is influenced by factors such as the form and quality of the data available, the culture and value preferences of both the decision-maker and those affected by the decision.

Information is more likely to be used for decision-making if the data is timely, accurate, reliable and relevant to the decision intended to be made. The culture and value preferences of those who will be affected by the decision are important during decision-making. For example the strategy to promote the use of contraceptives may not be based only on local health indicators. Rather it may be influenced by information such as the value preferences of the opinion leaders, religious leaders and other social groups in the community to be affected by the decision.

Decision Streams

Decisions are usually made in the context of other decisions. Earlier decisions made can affect current decisions either positively or negatively. Also several other decisions will certainly follow from a current decision. For example the decision to approve a leave application for one employee will be followed by the decision to choose another employee to replace him which will also be followed by another decision to arrange to have the second employee's work shared by others or hire another person to replace him.

Alternatives (Options)

Decisions are choices selected from among alternatives. Alternatives are possibilities one has to choose from in addressing a situation. Alternatives can be identified from pre-existing ones or developed where they did not previously exist. It is inefficient to just select from among pre-selected or routinely applied alternatives. It is always best to explore all possible alternatives and choose the best from among them. It should be emphasized that decisions should be made to achieve set goals and objectives.

For example if a health centre decides to increase its antenatal coverage, this can be achieved in several ways. The district can decide among others to:

- Increase the number of clinic hours
- Increase the number of static outreach services
- Introduce a house to house service

- Increase the number of its serving staff
- Embark on a health education programme or
- A combination of the above strategies

These are some of the possible ways of addressing the low antenatal coverage.

Methods of decision-making

There are four methods of decision-making. These are:

- Authoritarian
- Subgroup
- Majority
- Consensus

Authoritarian

Here the team leader makes whatever decisions which have to be made and those decisions are assumed to be final. An example of this would be a judge handing down a decision in a legal case.

In some instances, this authority may be given to the team leader by the team members when certain conditions apply (e.g., there are a few options from which to choose or the team cannot agree and the timeline is short).

Subgroup

A small part of the team or sub-group gains sufficient influence to force the team leader or the group to adopt a decision. An example of this in politics is when a vocal minority insists on certain rights and the majority goes along with those decisions.

This method can be effective if the Sub-Group approaches the task to assist the full team, and if the team requested the Sub-Group to work as such.

Majority

This process is closely analogous to our parliamentary democratic process. In this method, a vote is taken and the majority (depending on what level of majority is previously agreed upon) decides the issue.

A specific weakness of the majority decision-making is that a significant percentage of the group, sometimes as much as nearly half, may disagree with the outcome. This means that almost half of the group may be unhappy with the decision.

Consensus

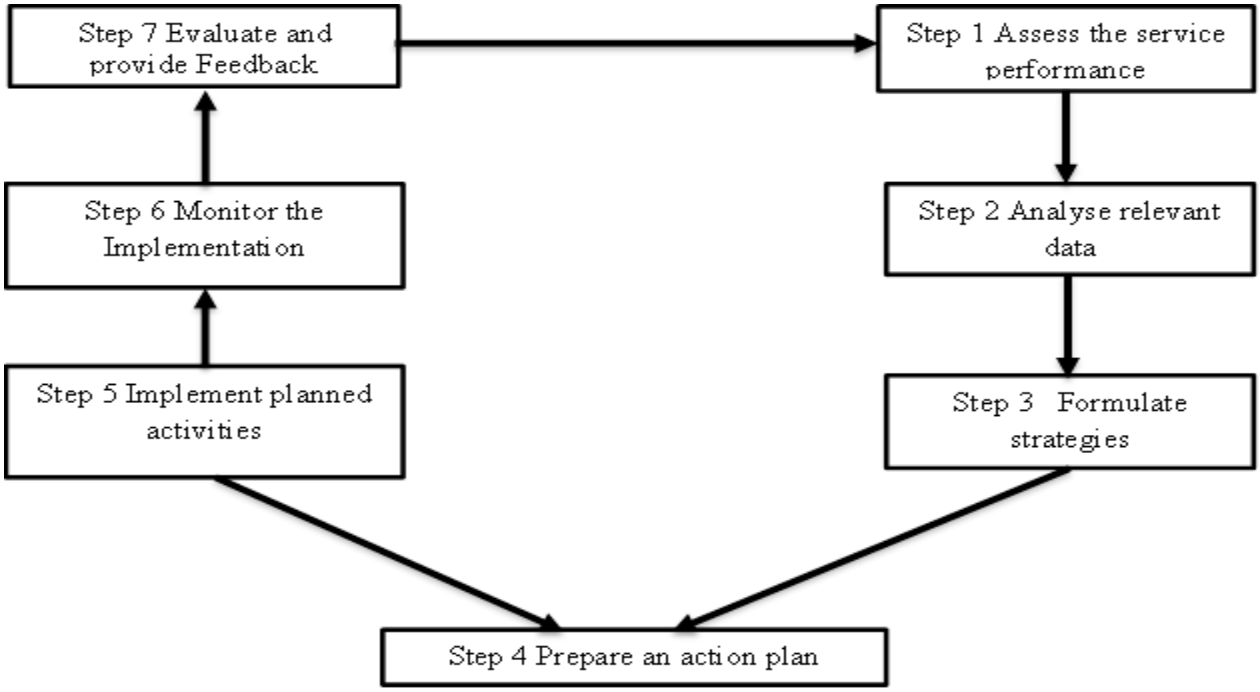
Consensus decision-making is the most effective but most difficult method of decision-making. This is because every member of the group must agree to the decision before it can be adopted.

In a consensus decision, the level of agreement is often related not so much to the fact that everyone absolutely agrees, but that they have decided through sufficient debate that they can live with the decision. If a team member cannot live with the decision, then you do not have a consensus decision.

Approaches to Decision Making

At the district health directorate, it is best to adopt the consensus building approach to arriving at decisions rather than the authoritarian (an individual) making the decision for the group to implement. It has been shown that people prefer to implement decisions they themselves were part of.

Steps in using information for health services management



The above cycle shows the steps in using information for health services management that will be applicable to sections 2 to 4 of the manual.

Step one: Assess the service performance

Use the questions in the "decision area" of sections 2 to 4 of the manual to conduct a self–assessment of your service performance. Start by selecting a specific service (e.g. antenatal service) and use the questions listed in the "decision area" of the manual to conduct the assessment. Do not restrict yourself to only the questions listed in the "decision area". Those questions are to act as guide and you may add on to them. Ask the relevant questions to assess your performance in terms of the ***coverage***, ***management*** and ***quality*** of the service delivery. The response will provide clues to the existence of any problem that requires attention.

Step two: Analyse the relevant data to identify the causes of the problem.

The responses obtained in step one above will provide broad indications of problem areas that may need attention. There will be the need to conduct a further analysis of the problems identified and their root causes. This is essential to determine the ***size*** of the problem, ***when*** it occurred, ***where*** it is located, ***who*** are affected, how it ***compares*** with other ***periods***, other ***districts***, ***targets set***, etc.

To obtain this information there is the need to perform further analysis of the relevant data.

- Calculate the relevant indicator such as the current antenatal coverage.
- Present the data using appropriate graphs such as line graph, bar chart or maps to show the location.
- Make comparisons of the performance with:
    - set target,
    - similar period in previous years
    - comparison with other services (as appropriate)
    - other districts
- Identify the root causes of the problems and how they contribute to the problem.
- Evaluate the size of the problem to determine how serious it is and whether it needs urgent action.

Step three: Formulate strategies

Brainstorm on all the possible alternatives for addressing the problem or issue as illustrated above. Consider options from the obvious to the non-obvious. The more alternatives you list the better the final decision will be. Assess the advantages and disadvantages of each alternative.

Before making any judgement on any alternative, prioritize the alternatives based on the following criteria:

- Feasibility (how realistic, reasonable or practical is the alternative)
- Acceptability (how suitable or tolerable is this alternative in terms of the cultural norms and values of the community)
- Cost (is it affordable or within budgetary allocation?)
- Effectiveness (the ability of the alternative to provide the required results)
- Conformity with service goals (policies and priorities)
- Interests of all other stakeholders e.g. political and social environment

Choose an option among the alternatives in the context of your priorities and available resources. Occasionally more information may be needed before a decision is made. In such situations the information may need to be identified and obtained. Once decisions are made there is the need to appoint an individual/team to be responsible for its full implementation.

Step four: Prepare an action plan and allocate resources to implement your strategy.

List all activities under your strategy and prioritize them. For each activity indicate the period for its implementation, the officer responsible, resources required for that action and any other relevant information. Use the sample form in Appendix 5 as a guide.

Step five: Implement planned activities

Implement the activities as listed in the plan of action. Activities should be assigned to specific officers and not to units or departments. Though these officers may not be directly responsible for performing those activities, they should be responsible for its implementation. It should be borne in mind that timeliness is essential.

Step Six: Monitor the implementation plan

During the implementation, there is the need to monitor the process to ensure that they proceed as planned. Ensure that each activity is performed as scheduled. Problems should

be noted and rectified on time so that it does not impede implementation. All activities should be fully documented and disseminated.

Step Seven: Evaluate and provide feedback

Finally evaluate your work to assess its effect on improving health service coverage and quality of care. Compare the outcomes achieved with targets and the previous levels to determine whether there have been any improvements. It is essential to provide feedback to the appropriate stakeholders at the community, sub-district, district and regional levels.

Section 2

Management Services

Rationale

The extent to which a district can achieve its objective depends to a large extent on how well the district health services are organised and the resources managed.

The district health management team must therefore ensure that health services are adequately planned, budgeted and implemented. Also it should ensure that district resources are managed efficiently and effectively. Efficient use of human, physical and financial resources will ensure that staff receives appropriate and adequate resources for their use. Attention should also be paid to staff education, training and deployment.

This section is to assist the staff to:

- **a.** Identify the various management functions of the DHMT.
- **b.** Discuss the 3 main management decision areas of the DHMT.
- **c.** Identify the information required to address the management decisions of the DHMT.
- **d.** Identify the sources of the information required to address the management decisions.
- **e.** Make relevant managerial decisions pertaining to the DHMT.

1. **Planning and Budgeting**

Decision Area	Information Required	Sources of Information

• What are our priority health problems?
• For each of the priority health problems consider the following:
  ○ What is the magnitude of the problem?
  ○ Where are the problems located?
  ○ Who are affected?
  ○ When does the problem occur?
  ○ What are the objectives and targets?
• What are the health priority interventions?
• What is the staff mix and their location?
• What is the staff strength?
• What resources are required?
• What resources are available?
• What are the relevant community characteristics?
• What are the community strengths, weakness, opportunities and threats
	Demographic data, number of staff and category, identified priority problems, current and past performance level (coverage figures), Community profile information; Previous plans and budgets,	Census data, Ghana Demographic and Health Survey data, Nominal Roll of Staff. Registers, Ledgers, Action plans, Programme of work, routine data (DHIMS), research reports and periodic reports (quarterly, semi-annual, annual)

2. **Monitoring, Supervision, Evaluation and Feedback**

Decision Area	Information Required	Sources of Information
• What are our targets? • What are our priorities? • What are our planned activities? • How much of the planned activities have been carried out?	Performance output, Targets, Indicators, Plans, Demographic and health Profiles, stakeholders' expectations	Annual Reports, Minutes of meetings, Registers, Plans of Action, Approved budgets, Ledgers, National and regional Indicators, routine data (DHIMS)

Decision Area	Information Required	Sources of Information
• What are our current outputs? • What are our service outcomes? • What are our comparative performances?(trends & geographical) • What are the sub-district performances? • What are the community strengths, weakness, opportunities and threats • What resource inputs do you have? • What are our health priority interventions? • What feedback do we give? • Who gets the feedback?		

3. Resource Management

a. Human Resource (personnel management)

Decision Area	Information Required	Sources of Information
• Do we have adequate number of staff at post? • Do we have appropriate staff mix? • What is the staff age profile? • What is the staff turn-over? • What is the health status of our staff? • Do staff undergo annual medical examination? • Have we appraised our staff? • Is there a functional occupational safety committee?	No. of staff by category & age, qualification, skill competency, transfers, deaths, resignations, staff turnover, health status of staff, Number of staff appraised, Health Insurance status, staffing norms; organogram, medical examination reports	Staffing norms, Attendance records, Personnel files, Duty roster, Nominal Roll of Staff, health records of staff; organogram

b. Human Resource (in-service training)

Decision Area	Information Required	Sources of Information
• Are staff receiving regular structured in-service training? • Is training appropriate? • Do you have information on the training needs? • Are there plans for training? • Are the plans being implemented? • Are the trainings equitably distributed geographically? • Are there adequate budgets for training? • Does in-service training covering all priority areas? • Does in-service training cover all categories of staff?	Training Needs, Information on trainings conducted, Available Training programmes, Resource persons available, training budgets; staff performance appraisal report;	Training needs assessment Reports, training records, training costs, Job descriptions, Training Brochures, Training Log books;

c. Financial management

Decision Area	Information Required	Sources of Information
• How timely are our financial allocations? • How much do we have? • What are the priorities? • Do we have enough to meet our priority needs? • Is our expenditure in line with our priorities? • Do we have a disbursement plan? • Are we utilising our finances efficiently? • Have all expenditures been accounted for? • Have all audit queries been responded to?	Plans, Budget , Budget allocation, Expenditure, Revenue received, Assets, Financial reports (Bank statement etc), Audit reports; Audit response;	Plans and Budgets, Budget allocation, Expenditure, Sources of revenue, Financial reports (Bank statement etc), Assets register, Book entries, Register of value books, Audit queries responses and reports, District Finance Office (Treasury), Procurement guidelines;

Decision Area	Information Required	Sources of Information
• Are we complying with the procurement guidelines? • Submission of Financial Returns		

d. Physical resources management

Decision Area	Information Required	Sources of Information
• Is there a district/facility store? • Are minimum and maximum stock levels defined? • Do we have stock above the minimum level? • Are requisitions from the sub-districts met? • What were the stock-outs in the last quarter (drugs and non-drug consumables)? • What items are we overstocking? • What is the wastage level (expired, breakages, theft)? • What is the physical condition of the store? • What are the conditions of the items (clean, well arranged)? • Do we have appropriate storage facilities? • What is the usage level of the items?	Stock Levels, Types of goods, Reorder level, Cost of items, Periodic Requirements, Order and Supply interval.	Ledgers, Tally Cards, Issue & Receive Vouchers, Requisition Books, Value Books, Audit Reports, Stock Taking Reports, Invoices, Stores Received Advice(SRA) , Waybills, Report, Requisition, Issue, Receipt Voucher (RRIRV)

e. Transport management

Decision Area	Information Required	Sources of Information
• What types of transport are available? • Do we have adequate numbers of serviceable transport? • Is there an up-to-date transport inventory? • Are the transport appropriately labelled? • Do we have appropriate mix of transport? • Do we have planned preventive maintenance schedule? • Are we complying with the PPM schedule? • Are vehicle log books being used? • Are vehicle being used for the right purpose? • What is the running cost? • What is the maintenance cost? • Do drivers/riders possess appropriate and valid license? • Are drivers/riders provided with appropriate safety gears? • Are our vehicles insured? • Have our drivers undergone the requisite and routine medical examinations? • Do vehicles have functional First Aid Kits, warning triangles, fire extinguisher etc.?	Number and types of vehicles, Maintenance costs, running costs, Age of vehicles; Status of vehicle (serviceable and non-serviceable), Fuel cost,	Vehicle Log Books, Maintenance Schedule & Records, Service Records, Asset Register, Fuel Usage Register/Ledger, Transport Policy, Driving Licence

f. Estate management

Decision Area	Information Required	Sources of Information
• Do we have adequate number of office accommodation? • Do we have adequate number of residential accommodation?	Number of office accommodation, Number of residential	Maintenance schedule & records, record of repairs, Estate register, Assets register List of occupants, Inventory of Buildings

Decision Area	Information Required	Sources of Information
• Are all Units/wards appropriately accommodated? • Do we have the necessary furnishing? • Do the buildings have adequate utility services? • Are utilities being used efficiently? • How much are we spending on utilities? • Do buildings have adequate security? • Are there appropriate directional signs? • Do we have an up-to-date property inventory? • Is there a planned, preventive maintenance schedule? • What are the maintenance costs? • Do buildings have appropriate landscaping?	accommodation, Number of maintenance done, current state of estate, Number and type of furnishing, Maintenance costs, Utility bills	and Furnishing, Estates Policy Manuals; Utility bills

g. Equipment management

Decision Area	Information Required	Sources of Information
• What types of equipment are available? • Do we have adequate numbers of serviceable equipment? • Is there an up-to-date equipment inventory? • Are the equipment appropriately labelled? • Do we have appropriate mix of equipment? • Do we have planned preventive maintenance schedule? • Is equipment being used for the right purpose? • Are we disposing off unserviceable equipment appropriately? • What is the running cost?	Number of functioning equipment, number not functioning, current state of equipment, Maintenance costs, running costs	Inventory of equipment, Assets register, maintenance schedule, Equipment policy, Maintenance contract, and standard equipment lists

• What is the maintenance cost? • Are users trained?		

h. Information management

Decision Area	Information Required	Sources of Information
• Do we have the required number of health information personnel according to staffing norms? • Is there an action plan for HIM? • Do we have requisite equipment? • Do we have the required data collection registers and reporting forms available at all service delivery points? • Are staff using the data collection registers and reporting forms? • Do we have arrangement in place to ensure complete, accurate and timely reports? • Are reports analysed and disseminated monthly, quarterly and yearly? • Is information being used for decision making? • What feedback system do we have in place? • Is the feedback system functioning? • Is there appropriate storage facility for Reports and Client Records?	Expected date of report, completeness of reports, feedback received, reports to be submitted/expected, date to send feedback, expected reports received, feedback responses, personnel data, equipment list, action plans, examples or evidence of information use for decision making Feedback Schedule (Expected date, completeness, reports to be submitted/expected)	Feedback Schedule (date to send feedback, expected reports received, responses) District Health Information Management Systems (DHIMS), RCH database System, reports analysed and disseminated, reports submission chart, action plans, decision log book, Stores ledger, SOP on Health Information

Section 3

Technical Services

Rationale

The key objective for district health services is to put in place programmes and services that will improve the health status and quality of life of the district population. This is achieved through the provision of curative, preventive, promotive and rehabilitation services. Within the limits of resource constraints, districts place emphasis on priority interventions and essential services.

It is therefore important for districts to ensure that core essential services are provided, vulnerable groups protected and populations at risk adequately covered.

This section is to assist the staff to:

- Identify the various technical functions of the DHMT.
- Discuss the technical services decision areas of the DHMT.
- Identify the information required to address the various technical decisions.
- Identify the sources of the information required to address the technical decisions.
- Apply the decision-making process in addressing issues relating to technical services.

1. Reproductive Health

a. Safe motherhood (Ante natal, safe delivery, post natal care, PMTCT)

Decision Area	Information Required	Sources of Information
General • Do we have the required number of midwives? • Do we have the standard type of equipment and supplies? • Do we have the required numbers of equipment and supplies? • Do we have the community structures to support maternal health service delivery? • Do we have standard service delivery protocols? • Have all the midwives been trained to use the protocols? • Are we achieving our service targets? Ante Natal (ANC) • Are pregnant women receiving IPT2? • Are pregnant women receiving TT2 plus? • Is anaemia a major health problem among pregnant women? • How many pregnant women make 4th visit? Safe Delivery (SD) • Are pregnant women needing comprehensive essential obstetric care referred appropriately? • Are women dying of pregnancy related	Number of midwives at post; Type and number of equipment in use; number of midwives trained on standard treatment; ANC data (Number of Women in Fertile Age, Expected pregnancies, Number of registrants, Number of visits, Services received, timing of initiation of Ante natal Care) IPT Coverage, TT2+ Coverage Safe Delivery data(Number of Women in Fertile Age, Number of Expected deliveries, Number of supervised deliveries, Number of personnel trained in safe delivery, Number of children born alive, Still births, Number of Maternal Deaths, Number of Maternal	Reproductive and Child Health reports, Maternal Audit reports, log of action taken on maternal deaths, DHIMS2, Client Folders, Monthly midwife returns. Laboratory report.

Decision Area	Information Required	Sources of Information
complications? • Are the maternal deaths being audited? • What action is taken on maternal audit reports? • Are we having still births? • Are the still births fresh or macerated? • Are we recording low birth weight? • Are staff skilled in Life Saving Skills (LSS)? • What is the number of deliveries monitored with partograph? Hospital • What is the caesarean section rate? • Are Blood transfusion services available? • How many clients needing blood and were transfused. Post –Natal (PNC) • Are we recording neonatal deaths? • What is the PNC coverage? PMTCT Services • What is the proportion of facilities offering PMTCT services? • How many clients are counselled for HIV? • How many clients are tested for HIV? • How many tested turn out as positive test Number of positive clients put on ARV prophylaxis.	Deaths Audited. Number of babies with Low birth weight) PNC data (Number of Women in Fertile Age, Expected Deliveries, Number of Deliveries, Number of registrants, Number of PNC visits, Number of referrals made. Number of health education given.), Number of blood units transfused. PMTCT data (Number of facilities with trained Service Personnel, Number of ANC Clients accessing Counselling and Testing, Number of HIV Positives, Number on ART)	

b. Family planning

Decision Area	Information Required	Sources of Information
• Proportion of clients accompanied by their male partners for family planning services? • What are the obstacles or barriers to family planning? • Are family planning misconceptions addressed? • Has there been stock-out of Family Planning Commodities? • What is our family planning coverage • Are staff adhering to standard operating procedures? • What are the types and quantities of family planning products issued? • What is the patronage of long term methods? • What is the usage/issue of FP commodities?	Number of Family Planning acceptors, Number of registrants, Number of Continuing Clients, Types of Family Planning methods, Types of Contraceptives available, Facilities providing family planning services, No. of men participating in family planning services.	Reproductive and Child Health reports, HSDS, FP stock register. Service Availability Mapping (SAM) data, Family Planning register

c. Prevention & management of unsafe abortion & post abortion care

Decision Area	Information Required	Sources of Information
• Are staff skilled in providing safe abortion and post abortion care services according to standard protocol? • Are safe abortion services available? Are services for post abortion care available? • What is the number of post abortion complications recorded?	Number of post-abortion complications managed, Number of MVAs done, Number of D&Cs done, , Number of Abortion related maternal deaths, causes of maternal deaths,	Monthly midwives returns Reproductive and Child Health reports, In patient morbidity and mortality reports, DHIMS, DHS, maternal death audit reports

Decision Area	Information Required	Sources of Information
• What are the common types of post abortion complications seen? • Are there abortion related maternal deaths?		

d. Prevention & Management of reproductive tract infections i.e. STI, HIV/AIDS

Decision Area	Information Required	Sources of Information
• What are the types of STIs recorded? • Are staff trained in syndromic management? • How many condoms were dispensed? • Are there BCC activities targeting STIs? • Are there counselling services in STIs, HIV/AIDS, human sexuality and responsible sexual behaviour. • Are there staff trained in counselling? • Do we have the facility to ensure confidentiality? • Do we have the appropriate tools for counselling? • Are our staff trained in HIV testing? • Do we have the facilities for testing HIV?	Number of STIs reported, Number of new HIV/AIDS cases reported, Number of HIV patients on ART, functionality of PLWHIV groups, Availability of reagents, Number of clients for voluntary HIV testing, Number of condoms distributed, Number and kinds of BCC activities held, Number of health facilities with counselling units, Number of clients counselled, number of staff trained in counselling skills.	Reproductive and Child Health reports, out-patient reports, in- patient reports, counselling registers. Reports from PLWHIV groups, Reports from NGOs

e. Gender based violence & reproductive health

Decision Area	Information Required	Sources of Information
• Are we recording domestic violence cases? • Are reported cases of rape/defilement increasing?	Number of domestic violence cases reported,	Outpatient register, Consulting room register, Out Patient Morbidity Report, In- patient register, DOVVSU Report

2. Child Health

a. Child welfare service

i. Promotion of exclusive breastfeeding

Decision Area	Information Required	Sources of Information
• What is the proportion of facilities in the district that are baby friendly? • Are there functional mother support groups? • Are staff trained in lactation management? • What is the nutritional status of our infants? • What is the exclusive breastfeeding coverage? • Are there barriers to exclusive breastfeeding? • What proportion of babies where breastfed within one hour after birth?	Number of mothers exclusively breastfeeding at discharge, Number of staff trained in lactation management Nutritional Status of infants, Number of mothers exclusively breastfeeding, Number of Facilities designated as baby-friendly, Number of mother support groups,	Monthly Midwives returns Child Health register, Child health record book, Census data, GDHS data and special studies. Reproductive and Child Health reports, District annual reports.

ii. Introduction of complementary feeding

Decision Area	Information Required	Sources of Information
• Are mothers introduced to appropriate complementary feeding practices? • Are mothers helped in managing complementary feeding? • Do staff have skills in managing complementary feeding? • What is the nutritional status of children? • Are there community growth promoters? • What proportions of caregivers have been	Nutritional Status of children, Age, Number of mothers introduced to complementary feeding, Number of staff trained in managing complementary feeding, Number of community growth promoters	• Child Health register, Child health record book, Census data, GDHS data, special studies. Ghana Multiple Indicator Cluster Survey (MICS), DHIMS Monthly Midwives returns. District Nutrition Reports

Decision Area	Information Required	Sources of Information
introduced to complementary feeding practices? • Are mothers encouraged to use locally available foods?		

iii. Vitamin A supplementation

Decision Area	Information Required	Sources of Information
• Are we providing Vitamin A supplementation routinely? • Are we providing post-partum Vitamin A supplementation? • Has there been any stock-out of Vitamin A capsules? • What is the coverage of Vitamin A supplementation? • Are we administering the correct doses of vitamin A to both mothers and children?	Number of children under five years receiving vitamin A, Number of mothers receiving Vitamin A, stock level of Vitamin A capsules, Number of expected deliveries,	Monthly Child health returns, Monthly midwives returns Child Health register, Immunisation register, Child health record book, Census data, GDHS data, special studies. Ghana Multiple Indicator Cluster Survey (MICS), Reproductive and Child Health reports, Monthly Immunisation returns, Monitoring and supervisory report.

iv. Immunisation

Decision Area	Information Required	Sources of Information
• Are we achieving our immunisation targets? • What are the vaccine dropout rates? • What are the vaccine wastage rates for the various antigens • Are there reports of adverse effects following	Target population, wastage rate, Immunisation coverage by antigen, Number of functioning cold chain equipment, Number of facilities providing daily immunisation services, Vaccine stock levels,	Child Health register, Immunisation register, Child health record book, Monthly immunisation returns, Reproductive and Child Health reports, Immunisation tally book, DHIMS, Cold chain inventory, Temperature

Decision Area	Information Required	Sources of Information
immunisation? (AEFI) • Are mothers attending Child welfare clinics? • Are fathers attending child welfare clinics? • What are the numbers of unimmunized children for the various antigens? • Are vaccines available at point of use? • Are we recording vaccine preventable diseases? • What is the proportion of facilities with functional cold chain equipment? • Do we have functional mothers support groups? • Do we have functional Safe Motherhood and Infant Life Education (SMILE) support groups? • How is immunisation waste managed? • Are all facilities providing daily immunisation services?	Number of functional mother support groups, data on adverse effects on immunisation , Number of safe immunisation waste disposal sites. Number of fathers attending child welfare Clinics	monitoring chart, Stock register, Tally cards, Work plans/schedules, Requisition books, Supervisory reports, Minute books.

v. Growth promotion and nutritional rehabilitation

Decision Area	Information Required	Sources of Information
• What is the proportion of children attending CWC who fell within +2 and -2 standard deviation by weight for age? • Do we have functional growth promoters in all communities? • Are households using iodated salt? • Are there BCC activities on growth promotion?	Nutritional Status of Child, Number of registrants, food supplies, number and type of BCC conducted, number and location of growth promoters, number of households using iodated salt, number of certified weighing scales	Child Health register, Child health record book, Reproductive and Child Health reports, survey reports, DHIMS, Evidence of weighing scale standardisation, Equipment inventory, BCC activity log book/chart

Decision Area	Information Required	Sources of Information
• Are there food supplies for rehabilitation? • Are there barriers to growth promotion? • Do we have standardised weighing scales? • Is anaemia a major health problem among pregnant women?		

vi. School health services

School Health services consist of the under listed services:

- Screening and examination of school children and food vendors
- TT immunisation
- Health education
- Maintenance of hygienic school environment
- Management of minor ailments and injuries.
- Mental Health
- Referrals

Decision Area	Information Required	Sources of Information
• Are we achieving our service targets? • Does the school have a fully equipped first aid box? • What are the numbers of children screened? • What proportions of schools have environmental certificates? • Are all the food vendors and caterers medically certified? • Are there logistics for school health activities	Number of Schools in catchment area, Number of schools visited, Number of Schools receiving more than three health talks in the year, Target class, Number enrolled per target class by sex, Number examined by target class, Types	School Health Register, Reproductive and Child Health Unit reports, activity log books, Supervisory reports, morbidity returns, and SHEP records. Child Health Returns

Decision Area	Information Required	Sources of Information
(weighing scales, tuning forks, Snellings chart, Stadiometer, tape measure)? • Are children being given health education in schools according to national standards? • What are the types and numbers of cases reported? • What are the types and number of cases referred? • Are we providing TT immunisation to all children who are due? • Are children being de-wormed under the "SHEP" programme? o Are we recording adverse drug reactions? o How are these adverse drug reactions managed?	and number of cases referred, Number of Environmental certificate issued, Number of cases of food borne diseases reported. Number provided TT immunisation, Number of children de-wormed, Number of children with adverse drug reactions,	

vii. Adolescent health services

Adolescent health services involve the identification of common health problems affecting adolescents; provision of adolescents focused services as well as referrals.

Decision Area	Information Required	Sources of Information
• Are staff trained to provide adolescent friendly services? • What proportion of our facilities provides adolescent friendly services? • Are there functional youth clubs? • What are the types and number of adolescent health	Number Facilities providing adolescent health services, Data on youth-serving agencies, Number of Health workers trained in adolescent health delivery, Number	Morbidity reports, Adolescent health reports, Reproductive and Child Health Unit reports, Activity log book, NGO activity reports, In-service training reports, and in-service training log

Decision Area	Information Required	Sources of Information
problems reported? • Are we recording teenage pregnancies? • Are adolescents with health problems identified and appropriately referred? • Are there health education activities targeting adolescent health? • Are we recording cases of drug use among the adolescents? • Are we recording psychiatry cases among the adolescents? • Are we recording rape cases of adolescents? • Are we collaborating with the appropriate agencies on adolescent counselling?	of peer educators in youth-friendliness, Health Profile on adolescents, Number and cases referred, Number of health education sessions targeting the adolescents, Number of rape cases reported, Number of Psychiatry cases reported. DOVVSU Reports	books. Monthly midwives returns, Child Health Returns. DOVVSU reports

3. Health Promotion

Decision Area	Information Required	Sources of Information
• Are we carrying out Health Education activities? • What topics of health education did we address? • How many sessions of health education were held for each topic? • Which medium are we using for our health education? • Are we targeting the appropriate audience? • Do we have the appropriate health education materials? • Are adequate health education materials available in our facilities?	Demographic & health profile, Records of health education activities/materials, Impact of health education, record of availability of change agents, Number of personnel trained in health education,	Priority intervention areas, KAP survey reports, Census data, health profile, Health education activities reports, Service reports, Training reports, training log books, Stores ledger, Waybill, Monitoring reports

Decision Area	Information Required	Sources of Information
• Do we have adequate trained personnel for health education? • What is the number of people reached with our Health Education activities?		

4. Disease Surveillance and Control (Communicable and Non-communicable Diseases)

a. Disease Surveillance

Decision Area	Information Required	Sources of Information
• Do we have case definitions at all levels (community, sub-district and district)? • Do we have thresholds for all the epidemic prone diseases? • Do we have surveillance personnel in place at all levels (community, sub-district and district)? • Does the District Hospital have a functional Public Health Unit? • Does the District Hospital Report on surveillance activities? • Do we have logistics (community registers, reporting forms, case based forms, reagents, transport medium, etc) for surveillance in place at levels? • Do we have the established communication channels? • Are surveillance personnel trained in IDSR? • Is the surveillance system performing according to set standards? • Is there active case search for diseases targeted for eradication (community/facility)? • Are your risk areas mapped out (Disease Map)? • What are the types and number of cases above threshold level	Number of CB Volunteers or CB Health Workers, Number of disease specific cases(diseases targeted for elimination and eradication), Number of Meetings (Volunteers and CHOs ; Volunteers and Sub-district health teams), Number of active case searches, Disease trends, demographic data, number trained in IDSR, risk prone areas, Number of timely, accurate, complete, returns,	Out patients register, consulting room register, in-patients registers, disease specific registers, Community registers, Census data, GDHS, disease map, returns submission chart, CD1 , CD2 forms, in-service training reports, activity log books, monitoring / supervisory reports, CBV lists

Decision Area	Information Required	Sources of Information
reported according to guidelines? • What is the proportion of timely reports? • What is the proportion of complete reports? • Are?		

b. Disease Outbreak

Decision Area	Information Required	Sources of Information
• Do we have epidemic management committee? • Do we have an epidemic preparedness plan? • Are there resources for epidemic management? • Are staff trained in outbreak management? • For the most recent disease outbreak did we respond appropriately? • For the most recent disease outbreak what was the case fatality rate? • Did we provide the feedback according to guidelines or protocols? • Do we confirm suspected cases according to protocol? • Are protocols for outbreak response displayed in all facilities?	Disease trends, Number of cases reported, Number of deaths reported, demographic data, Community profile, disease profile, stock levels of essential materials, Minutes of epidemic management meetings , Number of staff trained in epidemic management.	Epidemic preparedness plan, Census data, outbreak investigation reports, CD forms 1 & 2 , disease map, epidemic curve, disease outbreak reports, community registers, in-service training reports, Lab register, Line list report form, Case-based surveillance reports, Cause of death certificates

c. Disease Control

i. Communicable Diseases

Decision Area	Information Required	Sources of Information
• Do we have treatment protocols? • Are the treatment protocols displayed in all facilities? • Do we have the appropriate logistics? • Are staff trained in case management? • Are the set targets being met? • What are the case fatality rates? • Are we using the institutional policy on communicable diseases?	Number and type of cases reported, Number of deaths, Immunisation coverage, age profile of cases reported, morbidity and mortality profile (outpatient and inpatients), Number of logistics available at user points, Number of staff trained,	Outpatient morbidity, Inpatient morbidity and mortality, consulting room register, outbreak investigation reports, training reports, in-service training log book, stores register, Case-based surveillance reports, Cause of death certificates, Institutional Policy on Communicable Diseases

ii. Non-communicable Diseases

Decision Area	Information Required	Sources of Information
• Are we tracking the occurrence of non-communicable diseases? Are we carrying out Health Education on non-communicable diseases? What topics were discussed? • Do we have the equipment/logistics to carry out the activities? e.g. BP apparatus , weighing scale and glucometers • What is the proportion of clinical staff trained in the management of cases? • Are screening programmes carried out to identify	Number of cases reported, number of deaths, number of staff trained, number of equipment and logistics available at user points, activities performed, The number of health education talks	Outpatient morbidity, Inpatient morbidity and mortality, consulting room register, training reports, in-service training log book, supervisory and monitoring reports, activity log book, Cause of death certificates, Post Mortem reports. Health Education report.

Decision Area	Information Required	Sources of Information
cancers, hypertension etc.		

5. Health Promotion

Decision Area	Information Required	Sources of Information
• Are we carrying out Health Education activities? • Are we achieving our service targets? • What topics of health education are we addressing? • Which medium are we using for our health education? • Are we targeting the appropriate audience? • Do we have the appropriate health education materials? • Are adequate health education materials available in our facilities? • Do we have adequate trained personnel for health education? • Is our health education having an impact in the community?	Demographic & health profile, Records of health education activities/materials, Impact of health education, record of availability of change agents, Number of personnel trained in health education,	Priority intervention areas, KAP survey reports, Census data, health profile, Health education activities reports, Service reports, impact survey reports, Training reports, training log books, Stores ledger, Waybill, Monitoring reports

6. Community Health Services

a. Eye

Decision Area	Information Required	Sources of Information
• Do we have adequate number of ophthalmic nurses? • Are we detecting ophthalmic problems among school children? • Are service targets being met? • Is there any indication that there is increasing trend in eye related conditions? • How many eye outreach services have we provided in the last quarter? • What is the geographic coverage of our outreach services in the last quarter? • Do we have basic ophthalmic equipment?	• Number of Community Ophthalmic Nurses, • Number of eye cases reported, (age, sex and occupation of clients), • Target set, • Trends of service achievements over three years, • Number of outreach visits conducted, • Community profile, • Number of basic ophthalmic equipment.	Census data, GDHS data, Field reports, School health reports, Outpatient reports, inpatient reports, Stores ledger,

b. Dental

Decision Area	Information Required	Sources of Information
• Do we have adequate number of dental nurses? • Are we detecting dental problems among school children? • Are we detecting dental problems among pregnant women? • Are service targets being met? • Is there any indication that there is increasing trend in dental related conditions? • Are we providing outreach dental services? • How many dental outreach services have we provided	• Number of Community dental Nurses, • Number of dental cases reported, (age, sex and occupation of clients), • Targets set, • Trends of service achievements over three years, • Number of outreach visits conducted, • Community profile, • Number of dental basic dental equipment.	Census data, GDHS data, Field reports, Outpatient reports, inpatient reports, Stores ledger, school health reports

Decision Area	Information Required	Sources of Information
in the last quarter? • What is the geographic coverage of our outreach services in the last quarter? • Do we have basic dental equipment?		

c. Psychiatry

Decision Area	Information Required	Sources of Information
• Do we have adequate number of psychiatry nurses? • Are we detecting psychiatric problems among school children? • Are we detecting psychiatric problems (e.g., Puerperal psychosis) among post natal women? • Are service targets being met? • Is there any indication that there is increasing trend in psychiatric related conditions? • Are we providing outreach psychiatry services? • How many psychiatry outreach services have we provided in the last quarter? • What is the geographic coverage of our psychiatry outreach services in the last quarter?	• Number of Community psychiatry Nurses, • Number of psychiatric cases reported, (age, sex and occupation of clients), • Targets set, • Trends of service achievements over three years, • Number of outreach psychiatry visits conducted, • Community profile,	Census data, GDHS data, Field reports, Outpatient reports, inpatient reports, school health reports

7. Clinical Services

a. Out-patients services

Decision Area	Information Required	Sources of Information
• What is the demographic profile of the patients? • What is the trend in the Top Ten Causes of Outpatient attendance over the past 3 years? • What proportion of out-patients is insured? • What is the staff workload per sub-district/facility? • What is the OPD per capita?	• Number of attendances (age, sex occupation and location of clients), • Causes of outpatient morbidity, • NHIS Card Holding status, • Service coverage by Number of Staff (Doctors, MAs, Nurses, Midwives Pharmacists, Lab, etc)/ Patient ratio, Referrals, Population data	Census data, GDHS data, Field reports, Consulting room register, Statement of Outpatient reports, Outpatient Morbidity reports, staff nominal roll, Staffing norms

b. Referrals

Decision Area	Information Required	Sources of Information
• Do we have a referral protocol in every facility in the district? • Are staff trained in the use of the referral protocol? • Are referral forms available? • How many patients were referred in the last quarter using the referral form? • What cases were referred? • Are feedback forms available? • Do referring facilities receive feedback?	• Referral protocol • Staff in- service training report • Number of referral • Referred to, • Referred from, • Number of feedback received	Patient folder, referral book, consulting room register, feedback form, referral policy and protocol

Services available in the district

Health facility management

Decision Area	Information Required	Sources of Information
• Are the following committees in place and functional (**regular meetings, what activities are they performing**)? • Facility Advisory • Procurement • Disciplinary • Quality Assurance • Infection Prevention and Control • Drugs and Therapeutic • Are the requisite protocols, guidelines and standards available? • Are clinical conferences and audits taking place? • What are the common client complaints? • Are we responding to complaint adequately? • How many deaths other than maternal ones were audited? • What are the common disciplinary problems? • What control systems are in place to ensure efficient financial management? • Is information on expenditure returns shared with all unit/ward managers? **SAFETY AND SECURITY** • How many incidents of thefts and burglaries were experienced?		Committee meeting reports/minutes Directors of protocols, guidelines and standards

Decision Area	Information Required	Sources of Information
• Have the security men got security gadgets? • Is there supportive supervision of lower level health facilities?		

c. Out-patients and emergency services

Decision Area	Information Required	Sources of Information
• Which services are available 24hours? • What are the incidence and prevalence of diseases in the catchment area? • What proportion of patients is insured? • What is the demographic profile of the patients? • What is the staff workload?	Number of attendances, age, sex, location, NHIS status, causes of morbidity, Staff(Doctors, MAs, Nurses, Midwives, Pharmacists, Lab, etc)/ Patient ratio, Referrals, Population data	• Census data, GDHS data, Field reports, Consulting room register, Statement of Outpatient reports, Outpatient Morbidity reports, staff nominal roll, Staffing norms

In-patient services

Decision Area	Information Required	Sources of Information
• What are the incidence and prevalence of diseases in the catchment area? • What proportion of patients is insured? • What is the demographic profile of the patients? • What is the staff workload? • How long are people staying in the hospital? • What is the bed occupancy rate of the Hospital?	Number of attendances, age, sex, location, NHIS status, causes of morbidity, Staff(Doctors, MAs, Nurses, Midwives Pharmacists, Lab, etc)/ Patient ratio, Referrals, Population data , average length of stay, Total Patient days, Bed occupancy rate; Number of patients with bed sores; case fatality rate; number of	Census data, GDHS data, Field reports, Consulting room register, Statement of Outpatient reports, Outpatient Morbidity reports, staff nominal roll, Staffing norms; Theatre register; Ward register; Mortuary register;

Decision Area	Information Required	Sources of Information
Surgical services (including theatres and recovery wards) • What is the state of surgical services? • How long are people waiting for elective surgery? • What are the causes of surgical complications? **Medical services** • Are people getting bed sore? • Which medical conditions are we conducting clinical audits on? • How effectively are we managing common non-communicable diseases? **Obstetrics and gynaecology** • What is the state of services? **Ear Nose and Throat (ENT) services** • What is the state of services? **Paediatric** • What is the state of services? **Blood transfusion services** • How many units of blood were issued out? • How many blood related adverse reactions were reported? **Catering and die therapy** • Are we providing appropriate meals to all in-patients? • Are we medically screening our catering staff? **Nursing**	units of blood transfused; number of patients receiving blood transfusion; number of patients fed; number of meals cooked; number of patients on diet therapy; number of cataracts performed; number of tracer drugs available; number and type of laboratory investigations and X-rays performed;	Blood transfusion register; Laboratory register; X-ray register;

Decision Area	Information Required	Sources of Information
• Are we using the nursing care plan? • What is the state of nursing care? **Pharmacy** • What is the percentage tracer medicines availability? **Eye care** • What is the state of services? • How many cataract surgeries were done? • Are we monitoring visual outcome after cataract surgery? • Are we carrying out eye care outreaches? **Dental** • What is the state of services? • What dental care related complications are we reporting? • Are we carrying out dental outreaches? **Diagnostic services – e.g. x-ray, laboratory, ultrasound** • What is the state of services? • What is the level of radiation exposure at the x-ray unit? • How are staff and client protected from radiation? • Do we have internal quality control checks for selected laboratory investigations**?** **Physiotherapy** • What is the state of services? **Laundry** • What is the state of services?		

Decision Area	Information Required	Sources of Information
Sterile Supply Services • What is the state of services? **Waste management** • What is the state of services? **Mortuary services** • What is the state of services?		

d. Referrals

Decision Area	Information Required	Sources of Information
• How many patients are referred? • What cases are referred? • Do referring facilities receive feedback? • Are referral forms available? • Are feedback forms available?	Age, sex and diagnosis of referred patients, where referred to, where referred from, Number of feedback received,	Patient folder, referral form, consulting room register, feedback form

Section 4

Community Involvement and Participation

Rationale:

Districts provide health services to members of the community. Also some of the community members are actively involved in health delivery. Traditional Birth Attendants (TBA), Community Health Volunteers (CHV), Health Committee Members, Mother Support Groups, Herbalists and other identified bodies play significant roles in health delivery.

Community participation and partnership with health providers determine the direction required in the implementation of specific strategies in the community.

A major challenge is to get people in the community to have ownership of the district health services and accept that it meets their needs and to support it. It is essential that the district health staff meet regularly with community management members and share information about community health issues and adopt further strategies to engage the communities in activities to improve their health and well-being.

Key points to explore

The DDHS should ensure that:

- **a.** Community members are involved and participate in district health service activities.
- **b.** Discussions are held with community members on the importance of inter-sectoral participation in district health services.
- **c.** Community members and other stakeholders are engaged on community health issues.
- **d.** Community members are involved in participatory monitoring and evaluation of district health system and in the generation of information.
- **e.** The officer builds competencies in the application of the decision making process in addressing community and inter-sectoral issues at the DHMT and in the communities.

1. **Community involvement and participation**

Decision Area	**Information Required**	**Sources of Information**
Do we have a detailed district profile? ○ Do we have a database/listing of all communities in our catchment area? ○ Do we have a list of all Community-based health service providers (TBAs, CBSVs, Chemical sellers, etc) ○ Are the opinion leaders playing a leading role in planning of community health services? ○ Are community members actively involved in the design and planning of their health services? ○ Are the health services acceptable to the community members? ○ Are our clients satisfied with our services / Do clients who patronize our services complain about the services we provide? • Do we actively engage the network of service providers in the district (clinics, hospitals, maternity homes, TBAs, CBSV, etc.)? ○ Are we having regular and scheduled meetings with the management committees of the network of providers in the district, (clinics, hospitals, maternity homes, TBAs, CBSV, etc.)? ○ Are we providing needed support to the private health providers (clinics, hospitals, maternity homes, TBAs, CBSVs etc)? ○ Are the private providers (clinics, hospitals, maternity homes, TBAs, CBSVs etc submitting their returns regularly? ○ Do we have a mechanism for monitoring and supervising their activities?	• Community profile: Population (Age, sex, religion, education, occupation, etc) by settlement area, • List of health service providers • Number of Community durbars, community volunteers, • Functioning health committees, • Number of mother support groups, • Number of meetings between health teams and community members, • Client satisfaction • Insurance Claims reimbursement Rate ○ Number of NHIS card holders ○ Proportion of card holders who patronize health services • Number of health related projects with community participation,	Community registers, Census data, Minutes books, Client satisfaction surveys, Monitoring reports, Reports monitoring charts, NHIS annual report

Decision Area	Information Required	Sources of Information
• Do we have a good working relationship with the District Mutual Health Insurance Scheme? • Are we undertaking any health related project with the community?		

2. Inter-sectoral Collaboration

Decision Area	Information Required	Sources of Information
• Do we participate actively in District Assembly meetings? • Do we regularly address / brief District Assembly on health issues? • What support is the district assembly providing to address district health issues? • What support are other MDAs, NGOs, private companies and individuals providing to address district health issues? • What mechanisms do we have in involving MDAs, NGOs etc in health service delivery?	• List of participants at District Assembly meetings. • Health issues discussed at District Assembly meetings.- • No. of inter-sectoral meetings, • No. of activities carried out with other sectors, • % of district expenditure provided by district assembly, • Support provided by MDAs, NGOs and individuals.	DHMT Minutes books, ledger books, Minutes of the District assemblies, Quarterly and Annual reports.

Example

Background information

This is the assessment of service performance conducted by CHIM district at the end of the second quarter of the year 2010. The findings revealed problem areas in the service delivery which led to the development of strategies and action plan to address the problems identified.

District baseline data

Baseline Data	Sub-district 1	Sub-district 2	Sub-district 3	Sub-district 4	Sub-district 5	Total
Total population	24,000	18,000	20,000	16,000	22,000	100,000
Expected pregnancies	960	720	800	640	880	4,000
Target ANC registrants per quarter	240	180	200	160	220	1,000
Children under 1 year	960	720	800	640	880	4,000
Target child immunisations per quarter	240	180	200	160	220	1,000
Number of public health nurses	2	0	0	0	0	2
Number of community health nurses	2	2	2	2	1	9

Step one Assess the service performance

The DHMT as a service delivery agency routinely assesses its antenatal services under the safe motherhood programme. The assessment was conducted using the decision questions below:

- Are we achieving our antenatal service targets?
- Are pregnant women attending antenatal services in their first trimester?
- Are pregnant women attending antenatal services at least four times during pregnancy?
- Are there variations in antenatal service performances between sub-districts?

Step two Analyse relevant data

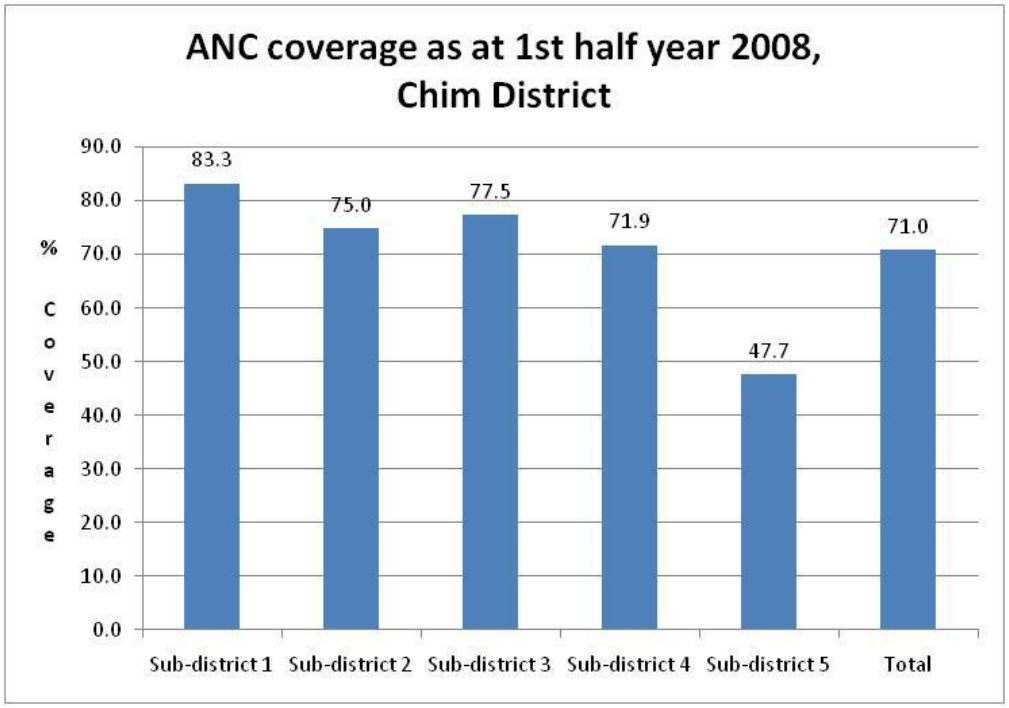
There were general indications that the year-to-date performance of ANC services was low. The following analysis was performed to reveal details of the performance. The analysis was based on the performance as at the end of the first half year.

- Antenatal coverage by sub-district.
- Percentage of pregnant women registering for ANC in the first trimester.
- Comparison of ANC coverage with half-year performance in previous year.

Antenatal services coverage for Chim district by sub-district as at 1st half year-2008

Baseline Data	ANC registrants for 1st quarter		ANC registrants for 2nd quarter		ANC registrants for 1st half year		ANC coverage as at 1st half year	
	Target	Actual	Target	Actual	Target	Actual	2008	2007
Sub-district 1	240	180	240	220	480	400	83.30%	90.00%
Sub-district 2	180	120	180	150	360	270	75.00%	85.10%
Sub-district 3	200	190	200	120	400	310	77.50%	78.40%
Sub-district 4	160	130	160	100	320	230	71.90%	78.80%
Sub-district 5	220	120	220	90	440	210	47.70%	70.20%
Total	1000	740	1000	680	2000	1420	71.00%	80.10%

Presentation of data should go with appropriate chart



Findings and discussion

The data analysis revealed that the general antenatal coverage as at the end of the first half year was below the expected target. The coverage ranged from a low of 47.7% for sub-district 5 to 83.3% for sub-district 1 with a district average of 71.0%. However the performances for the same period in 2007 were higher for all the sub-districts ranging from a low of 70.2% for sub-district 5 to 90.0% for sub-district 1 with a district average of 80.1%.

During discussions the DHMT found that the low ANC coverage in the district and especially in sub-district 5 could be due to the following:

- Outreach services had reduced from one per week to one per fortnight due to increase in fuel cost and delay in release of budgetary allocation.
- The community health nurse in sub-district is on maternity leave in April and there has not been any replacement.
- Data submitted from sub-district 2 and sub-district 4 was incomplete and also revealed some inaccuracies. It was further realised that the officers in these two sub-districts had not been given adequate orientation.

Step three: Formulate strategies

The findings of the data analysis and subsequent discussions revealed the problem areas that were contributing to the low ANC coverage. The DHMT brainstormed on several possible strategies and finally the following strategies were adopted for implementation to address the problems:

- Post a community health nurse to sub-district 5
- Intensify health education in all sub-districts
- Increase outreach services from one in a fortnight to one per week
- Provide orientation for health information officers in sub-districts 2 and 4

Step four: Prepare an action plan to implement your strategies

For each strategy list the activities that should be performed to implement it. Ensure that a specific officer is assigned to be responsible for each activity. Also all activities should have time period for implementation.

Action plan to increase coverage of ANC in Chim district

	Activity	Time frame	Person responsible	General Comments
Post a Community health nurse to sub-district 5				
1	Visit sub-district 5 and discuss issue with them	1st week of July	District director	Visit conducted on 3rd July by district director and two other DHMT staff
2	Identify an officer for posting and inform her.	1st week of July	District director	Officer identified willing to accept posting
3	Post officer to sub-district	End of July	District director	
Intensify health education in all sub-districts				
1	Acquire health education materials	1st week of July	Public Health Nurse	Posters and other logistics received from the RHMT
2	Inform all sub-districts about strategy	1st week of July	Public Health Nurse	Feedback indicate that sub-districts welcome the idea
3	Send health education materials to sub-district	2nd week of July	Public Health Nurse	
4	Provide health education on ANC	From 2nd week of July onwards	Community health nurses in sub-districts	
Increase outreach services from one in a fortnight to one per week				
1	Draw outreach programme	1st week of July	Public Health Nurse	
2	Inform the sub-district and communities	2nd week of July	Public Health Nurse	Community leaders willing to support
3	Arrange for logistics for outreach	2nd week of July	Public Health Nurse	
4	Arrange for vehicle for outreach	As required	Public Health Nurse	
5	Conduct outreach	From August onwards	Public Health Nurse	
Provide orientation for health information officers in sub-districts 2 and 4				
1	Conduct training needs assessment	1st week of July	District health information officer	
2	Prepare training materials and lesson notes	2nd and 3rd week of July	District health information officer	
3	Inform sub-district and officers to be trained	1st week of July	District health information officer	
4	Conduct training	August	District health information officer	

Step five Implement action planned activities

The activities listed in the plan of action should be implemented. It is the responsibility of the assigned officers to ensure the implementation of the activities. They may have to assign various officers to specific tasks to ensure its timely completion.

Step Six: Monitor the implementation plan

Each assigned officer ensures that the activities to which they are assigned are performed to achieve the desired objective. These are discussed at the weekly DHMT meetings and the officers responsible inform the meeting on the current state of affairs.

Step Seven: Evaluate and provide feedback

Finally when the activities are completed each assigned officer reports the final findings to the DHMT. This enables the DHMT to conduct an evaluation to assess whether the objective has been achieved. This should result in the improvement of the service performance and evidenced by a change in the indicator. This should be demonstrated by re-calculation and presentation of the current indicators.

It is necessary to provide the evidence of improved service performance as a result of the implementation of the strategies to the sub-districts and the communities. This will encourage them for further support and collaboration. However, if the strategy did not result in improved service performance, the reasons should be sought and the sub-districts and communities informed accordingly. This will enable the DHMT to seek their support and collaboration in search of alternate strategies to address the problems.

Immunization Example

District Immunization Performance

Background

Anku District is a district in the Eastern Region with a population of 80,000. Children under one year constitute 4% of the total population. The district has four sub-districts. Anku District assessed their immunization coverage for the first half of the year 2010 in order to take action to achieve their set target.

Table 1 District Baseline Data

	Kojokrom	Abonko	Beposo	Bawaleshie	Total
Total Population	16,500	20,000	18,500	25,000	80,000
Children under one year	660	800	740	1,000	3,200
Target for immunization for the year 80%	528	640	592	800	2,560
Target for immunization for half year	264	320	296	400	1,280
Number of community Health Nurse	2	3	2	3	10
Functional Cold chain facility	Functional cold chain facilities available	Does not have functional cold chain facilities	Functional cold chain facilities available	Functional cold chain facilities available	Functional cold chain facilities available
Total number of Motorbikes	3	4	3	2	12
Number of functional motorbikes	1	2	1	1	5

Step one Assess the service performance

The DHMT assessed its immunization performance. The following questions under the decision areas were used.

- Are we achieving our immunisation targets?
- What are the vaccine dropout rates?
- What are the numbers of unimmunized children for the various antigens?
- Are we recording vaccine preventable diseases?
- What is the proportion of facilities with functional cold chain equipment?
- Are mothers attending CWC(Access)

Step Two; Analyse relevant data

From the analysis there was a decrease in the immunization coverage compared to the target and the performance for the previous year. A more detailed analysis was done to find out the reasons for this low coverage. This was done by analyzing the following:

- Immunization coverage by sub-district?
- Immunization dropout rate by sub-district?

- Number of unvaccinated children for measles per sub-district.?
- Number of children contacted by each community health nurse by sub-district.?
- Comparison with previous year's performance?

Table 2.Number of Children Immunized (Absolute numbers)

Antigen	Sub-Districts				
	Kojokrom	Abonko	Beposo	Bawaleshie	Total
BCG	260	200	282	420	1162
OPV1	255	185	275	415	1130
OPV2	250	180	270	410	1110
OPV3	230	170	265	405	1070
Penta 1	253	190	273	410	1126
Penta2	245	185	270	405	1105
Penta3	238	185	268	400	1091
Measles	285	175	260	395	1115
Yellow Fever	280	170	255	390	1095
Half year children unvaccinated for measles =Actual number of children in sub-district half year- Number vaccinated Half year	45	225	110	105	485

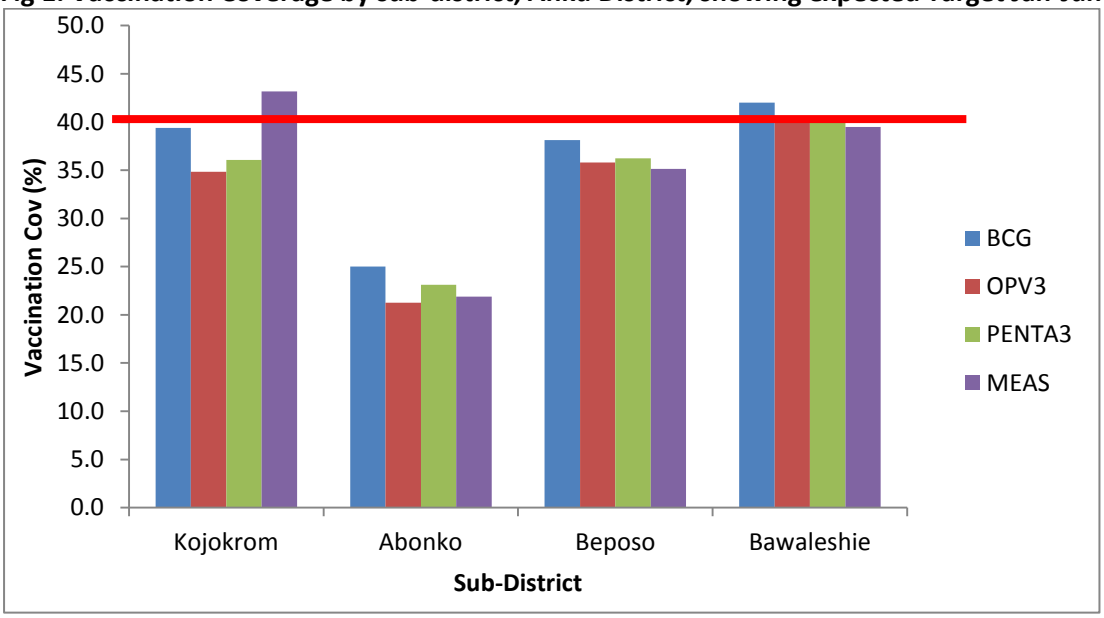
Table3 for coverage (Divide the absolute numbers of children immunized by children less than one year for each antigen and for each of the sub-district)

Table 3. Immunization coverage by sub-districts

Antigen	Sub-Districts				
	Kojokrom	Abonko	Beposo	Bawaleshie	Total Coverage
BCG	39.4	25.0	38.1	42.0	36.3
OPV1	38.6	23.1	37.2	41.5	35.3
OPV2	37.9	22.5	36.5	41.0	34.7
OPV3	34.8	21.3	35.8	40.5	33.4
Penta 1	38.3	23.8	36.9	41.0	35.2
Penta2	37.1	23.1	36.5	40.5	34.5
Penta3	36.1	23.1	36.2	40.0	34.1
Measles	43.2	21.9	35.1	39.5	34.8
Yellow Fever	42.4	21.3	34.5	39.0	34.2
Overall Immunization Dropout rate(BCG-Measles)	- 3.8	3.1	3.0	2.5	1.5
Access (Penta1 >45)	Poor access	Very Poor access	Poor Access	Average access	Poor access

Workload analysis(BCG/Community Health Nurses	260/2=130	200/3=66	282/2=141	420/3=140	1162/10=116

Fig 1. Vaccination Coverage by sub-district, Anku District, showing expected Target Jan-Jun 2010



Finding and discussions

The overall performance for the district fell below the target for the half year and comparing this to the performance last year there was a general drop in coverage for all the antigens. Comparing the sub-district performances, none of the sub-districts achieved the half year target for measles and yellow fever antigens. Abonko sub district had very low coverage for all the antigens. Bawaleshie was the only district that achieved the set target of 40% for all the antigens except measles and yellow fever.

Children that were unimmunized for measles for the half year in the District were 485, this constitute 30.3% of the children due for immunization for the half year. Of this number Abonko contributed 225 (46.4%).

Although the district had an acceptable BCG/ Measles dropout rate, Kojokrom had a negative BCG Measles dropout rate, this may be due to poor data management or the lack of skilled delivery services in Kojokrom Sub-district.

Looking at the community health nurses' workload analysis, every community health nurse in the district contacted on the average 116 children. A Community health nurse in Bawaleshie and Beposo however saw on the average 141 and 140 children respectively.

The vaccine fridge in Abonko had broken down for the past three months. The district had only five functional motorbikes out of a total of 12 motorbikes available in the district. (41.7%)

The DHIMT from this analysis and from supervisory monitoring reports identified Abonko sub-district as the major contributor to the districts poor performance. The probable reasons for this poor performance may include:

1. Lack of functional cold chain facility
2. Non-availability of transport for outreach services
3. Poor data management.
4. Inadequate staff.
5. Poor roads and inaccessible communities.
6. Poor staff attitude

Step Three Formulate Strategies

The DHMT upon further brainstorming and discussions agreed that main problems confronting the district that is not enabling it to meet its immunization targets were:

- Lack of functional cold chain facilities in Abonko sub-districts, they collect their vaccine from the adjacent sub-district for all their immunization sessions.
- Access was a problem overall for the district. This can be attributed to the lack of transport and fuel for outreach and the poor spatial distribution of facilities in the district.
- Poor data management which must have resulted in the negative dropout rate recorded by Kojokrom.
- Inadequate staff.
- Collection of token fees from clients by nurses and not keeping outreach appointments with communities

The strategies identified to address these problems were

1. Improve cold chain facilities in Abonko sub district
2. Improve access to EPI services.
3. Intensify health education on EPI in the sub-districts
4. Improve data management.
5. Post more community health nurses to Bawalashie and Beposo with high workload per community health nurse.
6. Improve staff attitude

Step Four: Prepare action plan to implement strategies

For each of the strategy the DHMT listed the activities that will be undertaken

Table 4. Action Plan to improve immunization coverage in Anku District

	Activity	Time Frame	Person Responsible	Resources required	General Outcomes
Improve cold chain facilities in Abonko sub-districts					
	Immediately repair old vaccine fridge in Abonko sub-district	1st week in July	DDHS	Funds	Abonko subdistrct
	Make requisition for new vaccine fridge from the Region	2nd Week in July	DDHS	Fuel Stationary	EPI Coordinator will send requisition to the Region by end of First week in July
Improve to access to EPI service					
	Create new outreach points in underserved areas- especially Abonko	By end of third Quarter	District Public Health Nurse /Disease Control Officer	Fuel Motorbikes Funds for social mobilization	Involve the community and ensure that token fees are not collected by community health nurses
	Repair all broken down motorbikes	By end of third Quarter	District Transport Officer	Stationary Fuel	
	Dialogue with communities and District assembly for creation of more functional CHPS zones	By the end of third quarter	DDHS	Stationary	
Intensify health education on EPI in the Sub-districts					
	Acquire health education materials	1st Week In July 2011	EPI Coordinator	Fuel Stationary	Health Education materials on EPI are available.
	Distribute health education materials to sub-districts	2nd Week in July	EPI Coordinator	Fuel	
	Provide Health Education on EPI	The rest of the year	EPI Coordinator	Fuel Funds	
Improve data management					
	Organize monthly data validation meetings of community health nurses and disease control staff performing vaccinations	Monthly	DDHS	Funds Stationary	

	Provide calculators for service providers	1st week in July	DDHS	Funds	
	Provide feedback on analysis of service data to service providers in the form of league table.	Monthly	DDHS	Stationary	This will create healthy competition that will ginger performance
Post Community Health Nurses to Beposo and Bawaleshie					
	Discuss with sub-districts to prepare accommodation for new community health nurses.	1st July	DDHS	Fuel	
	Request for CHOs from district	1st July	DDHS	Stationary	
	Post CHO to sub-districts	4th Quarter	DDHS		
Improve staff attitude					
	Undertake supervisory visits to sub-districts.	3rd and 4th Quarter	DDHS	Stationary	
	Award hard working staff	End of the year	DDHS	Funds	

SURGICAL SITE INFECTIONS

Background information

Afia District Hospital conducted an assessment of service delivery at the end of the fourth quarter of 2010. The findings revealed high rate of surgical site infection in the hospital. The infection prevention and control committee/team investigated and developed strategies and action plan to address the problems identified.

Step 1 Assess the service performance

The hospital IPC team assessed the performance using the decision questions below:

- What was the surgical site infection rate target?
- What could be the cause of high rate of infections in the fourth quarter?
- How effectively are we practising IPC?
- Do we have all the necessary items for managing surgical cases?

Step 2 Analyse relevant data and identify the possible causes

The threshold for surgical site infections for the hospital in 2010 was 10%. Though the target for the hospitals was not achieved in any of the quarters, the rate observed during the fourth quarter was extremely high 37.6% (See figure 1& 2). The possible causes identified by the IPC team were:

- Ineffective sterilisation of items due to break down of autoclave. It was also observed that the autoclave was old and often broke down.
- Shortage of water in the last quarter. The tap was closed for major repair works by the Water Company without notice to the hospital and also ineffective monitoring of stored water by the hospital. The hospital's water storage facilities were inadequate.
- Non-compliance to IPC guidelines by staff.
- Ineffective IPC monitoring and supervision.

Table 1 outlines the type of surgical cases performed and the infection rates per quarter.

Table 1 Type of surgical cases performed and the infection rates per quarter in 2010

Type of surgery	Q1			Q2			Q3			Q4		
	No. Of cases	No. infected	Infection rate	No. Of cases	No. infected	Infection rate	No. Of cases	No. infected	Infection rate	No. Of cases	No. infected	Infection rate
Caesarean section	50	8	16	55	6	10.9	35	5	14.3	50	15	30
Salpingectomy	10	1	10	5	0	0	12	2	16.7	7	4	57
Herniorraphy	30	4	13.3	37	5	13.5	40	3	7.5	40	20	50
Others	10	1	10	4	1	25	15	2	13.3	20	5	20
Total	100	14	14	101	12	11.8	102	13	12.7	117	44	37.6

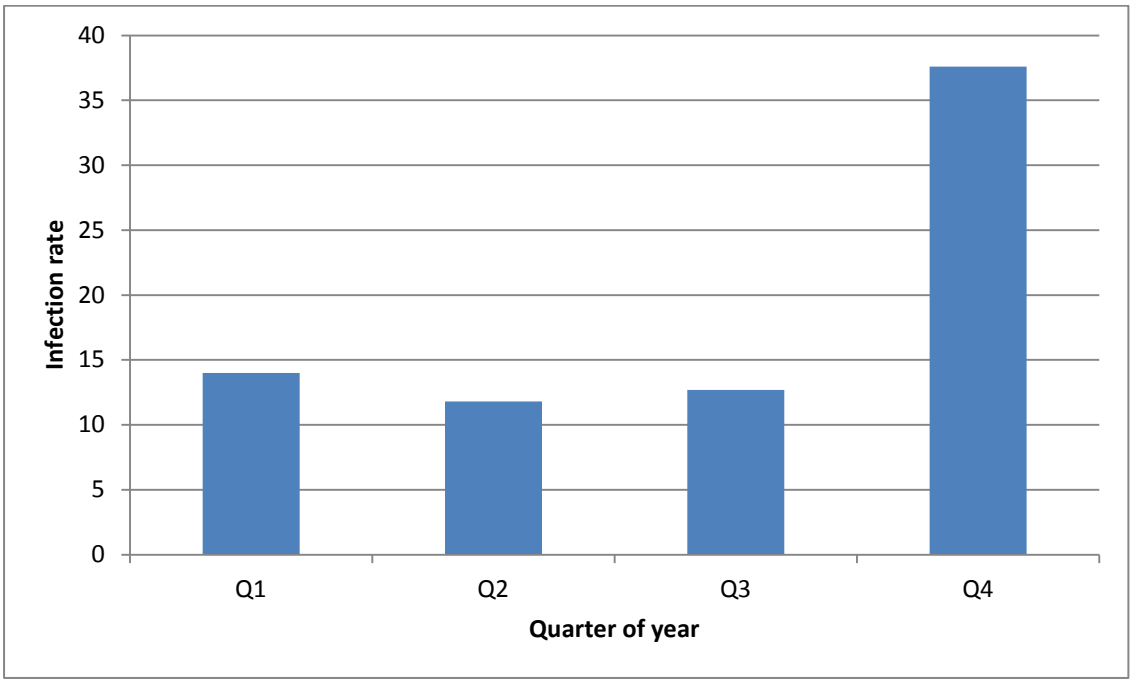


Figure 1 Rate of surgical site infections per quarter in Afia Hospital in 2010

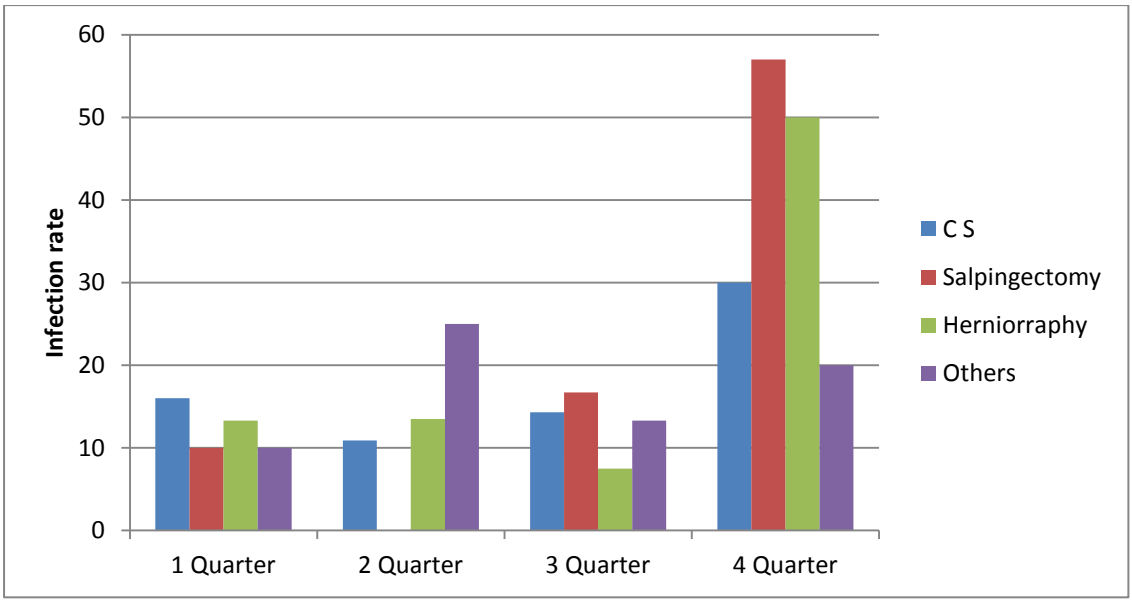


Figure 2 Type of surgery and infection rate

Step 3 Formulate strategies to address the problems

The IPC team discussed the issues and come up with the following strategies to address the problems:

1. To improve sterilisation services the following are recommended:

- Arrange to have items sterilised at the nearby health facility that has a functional autoclave
- Contact bio-medical unit at the regional health administration to repair the autoclave.
- In the medium term, the hospital could procure an additional autoclave.

2. In terms of water supply, it is suggested:

- Effective monitoring of usage of stored water.
- That the hospital procures additional water storage facilities.

3. Training of staff on IPC

- The IPC team in collaboration with the training unit of the hospital should organise re-fresher training on IPC for all categories of staff

4. Monitoring and supervision

- Increase the frequency (e.g. monthly) of IPC monitoring and supervisory activities in the theatre and wards until infection rates improves.

Step 5 Implement action plan

Implement activities on action. Assigned officers may delegate some activities to others but the responsibility in ensuring that they are carried out lies with the assigned officers.

Step 6 Monitor the implementation

The head of facility has the responsibility for monitoring the implementation of the action plan. Assigned officer must give reports on extent of implementation at management meetings.

Step 7 Evaluate and give feedback

When activities are completed each assigned reports the outcome of implementation to the management. Management should conduct evaluation to assess whether there have been improvement or change in the indicator.

It is necessary to provide a feedback of improved services to the respective wards/units. Providing feedback will encourage them to support and collaborate with future actions. However, if the strategy did not result in improved service performance, the reasons should be sought and wards/units informed accordingly. This will enable management seek their support in identifying alternative strategies to address the problem.

Action plan

No.	Activity	Time (2011)	Person Resp.	Resources	Comments
Sterilisation services					
1	Arrange to have items sterilised at the nearby health facility that has a functional autoclave	Weekly	Head, Sterilisation services	Transport	Sterilised items available
2	Contact bio-medical unit at the regional health administration to repair the autoclave.	By 19th Feb	Head, Maintenance	-	Autoclave repaired
3	Procure autoclave	End of 2nd quarter	Procurement committee	IGF	Autoclave procured
Water supply					
	Monitor usage of stored water.	Ongoing	Officer responsible for utility services	-	Uninterrupted supply of water
	Procure additional water storage facilities	End of 1st quarter	Procurement committee	IGF	Water storage facilities procured
Training of staff					
	Organise re-fresher training on IPC for all categories of staff	April –June 2011	Training coordinator	IGF	Training report
Monitoring and supervision					
	Conduct monthly IPC monitoring and supervisory activities in the theatre and wards	Monthly	IPC focal person	-	Monitoring report

Skilled Delivery Example

Background information

During the last annual performance review it was found that the skilled delivery coverage of Adom district has been reducing over the last 3 years. The reports indicate that the coverage was as follows: 67% in 2008; 50% in 2009 and 35.8% in 2010. At the last weekly meeting of the DHMT, it was decided that efforts should be made as a matter of urgency to reverse this trend.

The DHMT decided to use the steps in using information for health service management to address the problem. The first step is to conduct further assessment to the problem.

Step one Assess the service performance

The DHMT conducted a detailed analysis of the problem using the decision questions below:

- What is our supervised delivery target?
- What is the Supervidsed Delivery coverage per sub-district?
- What is the ANC coverage per sub-district?
- Which sub-district is recording maternal deaths?
- How many deliveries are recorded by TBAs?
- How many expected deliveries are not accounted for?
- What is the distribution of midwives per sub-district and by facility?
- What is the distribution of community health nurses in the sub-districts?
- Is our health education targeting supervised delivery services?

District performance data for 2008-2010

Baseline Data	**2008**	**2009**	**2010**
Total population	35,693	36,585	37,500
WIFA	8,209	8,415	8,625
SD Target	910	940	953
ANC Coverage (%)	70	68	52
Total Deliveries	530	612	660
S D Coverage (%)	67.0	50.0	35.8

Step two Analyse relevant data

The following analysis was performed to reveal details of the performance by sub-district. The analysis was based on the performance as at the end of the year 2010.

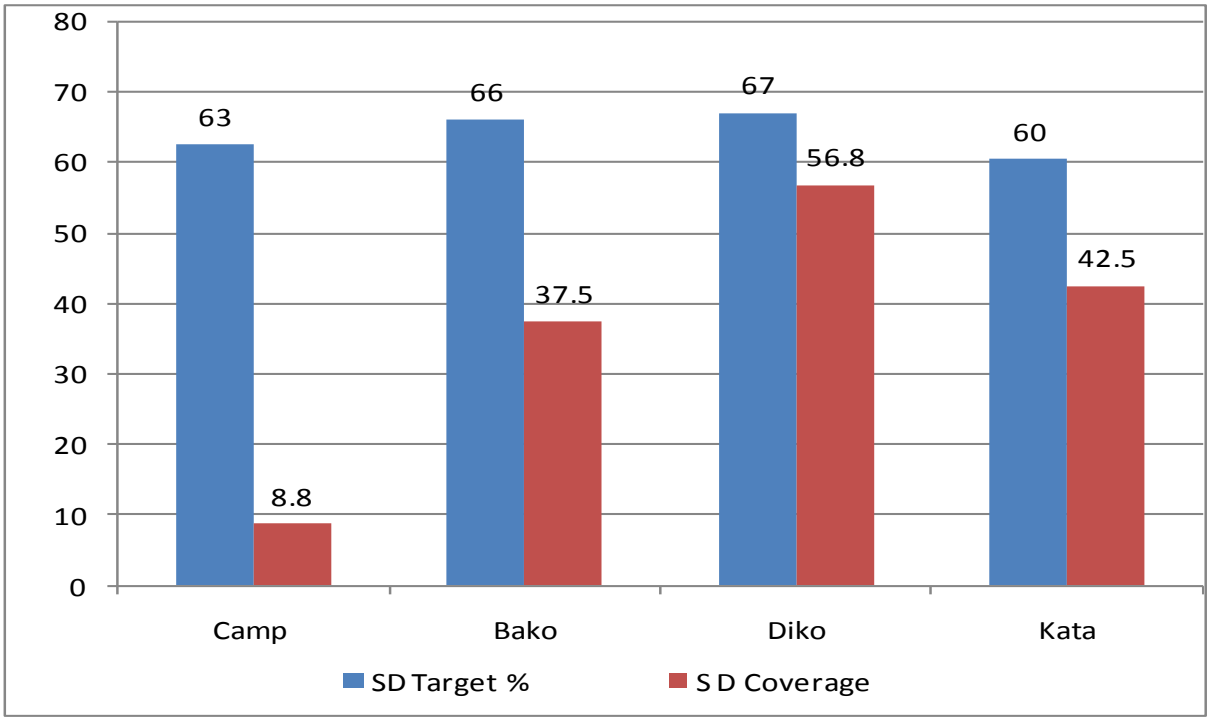
- What is our SUPERVISED DELIVERY target?
- What is the SUPERVISED DELIVERY coverage per sub-district?
- What is the distribution of midwives per sub-district and by facility?
- What is the attitude of staff towards clients?
- Are our facilities in the sub-districts user friendly?

Detailed analysis of Reproductive Health services coverage for

Adom District by sub-district for 2010

Performance	Camp	Bako	Diko	Kata	Total
Total population	10,000	7,000	8,500	12,000	37,500
WIFA	2,300	1,610	1,955	2,760	8,625
SD Target	250	185	228	290	953
ANC registrants	240	180	200	160	780
Expected pregnancies	400	280	340	480	1,500
Number of Midwifes	7	5	2	6	20
Number of TBAs	5	20	15	2	42
ANC Attendance	300	850	830	1,990	4,440
ANC Coverage	57.5	85.7	91.2	93.8	52
Ave ANC visit	1.3	3.5	4.2	4.4	3.6
Total Deliveries	60	150	230	220	660
Supervised Deliveries	35	105	193	204	537
S D Coverage	8.8	37.5	6.8	42.5	35.8
TBA Deliveries	25	45	37	16	123
Deliveries unaccounted for	340	130	110	260	840
Maternal Deaths	2	0	0	0	2
Number of community health nurses	15	10	9	12	46

Supervised delivery Targets and Performance by Sub-district 2010



Findings and discussion

The general performance of the district in supervised delivery is 35.8%. There was under performance in all sub-districts except Diko which had coverage of 56.8%. Camp had the lowest coverage of 8.8% despite the fact that they had the highest number (7) of midwives and also the highest number (15) of community health nurses.

During discussion the DHMT found that the following are contributing reasons to the low performance in that sub-district:

1. Poor attitude of staff towards clients
2. No in-service training had been conducted for the sub-district staff in the last 5 years
3. Average ANC was the lowest (1.3) among the sub-districts.
4. A large proportion of their expected pregnancies (85%) were not accounted for. They did not deliver at the health facilities neither did they deliver at the TBAs.
5. The 2 maternal deaths recorded in the district occurred in sub-district. The audit of the 2 deaths revealed delays in attending to the clients by the service providers.
6. The community members were not ready to access services of the service providers due the poor staff attitude and were rather accessing services at Diko the nearest sub-district.

Step three: Formulate strategies

Following the findings and discussions the DHMT met to formulate the following strategies to address the challenges identified:

1. Conduct in-service training on customer care for the staff of Camp sub-district
2. Orient Midwifes on safe motherhood.
3. Intensify health education on the importance of ANC and supervised delivery in sub-district.
4. Meeting with opinion leaders to discuss reproductive health issues
5. Organize community durbars in the Camp sub-district on the importance of patronizing health services.

Step four: Prepare an action plan to implement your strategies

For each strategy list the activities that should be performed to implement it. Ensure that a specific officer is assigned to be responsible for each activity. Also all activities should have time period for implementation.

Action plan to increase coverage of SD Coverage at Camp sub-district

	Activity	Time frame	Person responsible	Resources	General Comments
In-service training on customer care for service providers					
1	Request for resource person from the region	1st week of February	District director	Stationery, Fuel, Transport	Date will be discussed at region
2	Identify and invite staff for training	By end of 2nd week of February	District Public Health Nurse	Stationery, Fuel, Transport	Depending on outcome of A1
3	Organize training	2nd week of March	District director	Stationery, Fuel, Transport, per diem, feeding, accommodation, Training materials	
Orientation of midwifes on safe motherhood					
1	Request for resource person from the region	2nd week of February	District director	Stationery, Fuel, Transport	Date will be discussed at region
2	Identify and invite staff for training	By end of 3rd week of February	District Public Health Nurse	Stationery, Fuel, Transport	Depending on outcome of A1
3	Organize training	4th week of March	District director	Stationery, Fuel, Transport, per diem, feeding, accommodation, RH Protocols	
Conduct Health Education on ANC and Supervised Delivery					
1	Acquire health education materials	1st week of April	District director	Stationery, Fuel, Transport	
2	Draw an itinerary to cover camp sub-district	2nd week of April	Public Health Nurse	Stationery, Fuel, Transport	
3	Distribute materials to staff	2nd week of April	Public Health Nurse	Materials, Fuel, Transport	
4	Inform all communities about programme	2nd week of April	Public Health Nurse	Stationery, Fuel, Transport	
5	Conduct heath education	May onward	Public Health Nurse	Fuel, Transport, per diem	
Organize meetings with opinion leaders on reproductive health issues					
1	Write to opinion leaders inviting them to the meeting	1st week of April	District director	Stationery, Fuel, Transport	
2	Organise meeting	1st week of April	District director	Stationery, Fuel, Transport, per diem, feeding	
Organise community durbars on reproductive health issues and patronising health services					
1	Select communities for durbar	1st week of May	District director	Stationery, Fuel, Transport	
2	Inform selected communities of programme/date	1st week of May	District director	Stationery, Fuel, Transport	
3	Organize durbar in communities	3rd week of May	Public Health Nurse	Stationery, Fuel, Transport, per diem,	

	Activity	Time frame	Person responsible	Resources	General Comments
		onwards		feeding	

Step five Implement action planned activities

The activities listed in the plan of action should be implemented. It is the responsibility of the assigned officers to ensure the implementation of the activities. They may have to assign various officers to specific tasks to ensure its timely completion.

Step Six: Monitor the implementation plan

The district director assumes the overall responsibility for ensuring that the activities are performed by the assigned officers and reports submitted. He also monitors the activities as outlined in the action plan document and related issues discussed at the weekly DHMT meetings. The officers responsible inform the meeting on the current state of affairs.

Step Seven: Evaluate and provide feedback

Finally when the activities are completed each assigned officer reports the final findings to the DHMT. This enables the DHMT to conduct an evaluation to assess whether the objective has been achieved. This should result in the improvement of the service performance as evidenced by a change in the indicator. This should be demonstrated by re-calculation and presentation of the current indicators.

It is necessary to provide the evidence of improved service performance as a result of the implementation of the strategies to the sub-districts and the communities. This will encourage them for further support and collaboration. However, if the strategy did not result in improved service performance, the reasons should be sought and the sub-districts and communities informed accordingly. This will enable the DHMT to seek their support and collaboration in search of alternate strategies to address the problems.

Guidelines on drawing graphs

A **graph** is used as a pictorial representation of data and in most cases proves the best medium for presenting raw data. Graphs should be designed so that they convey the general patterns in a set of data at a single glance. Advantages of using graphs include:

- They are easily understood;
- They bring out hidden facts;

- They display trends and comparisons more vividly; and
- They are attention getters.

Generally, the variable assigned to the **x-axis** is considered the independent variable (method of classification), whereas the variable assigned to the **y-axis** is the dependent variable (frequency). That is, in drawing a graph, we plot a change in "y" with respect to "x".

Graphs should be simple and self-explanatory:

- The title indicate the "what, where, and when" and completely identify the data;
- The labels should be clear, concise and easy to understand
- When more than one variable is shown on a graph, each should be clearly differentiated by means of legends or keys;
- The specific units of measure for the data should be given.

Choosing the appropriate graph

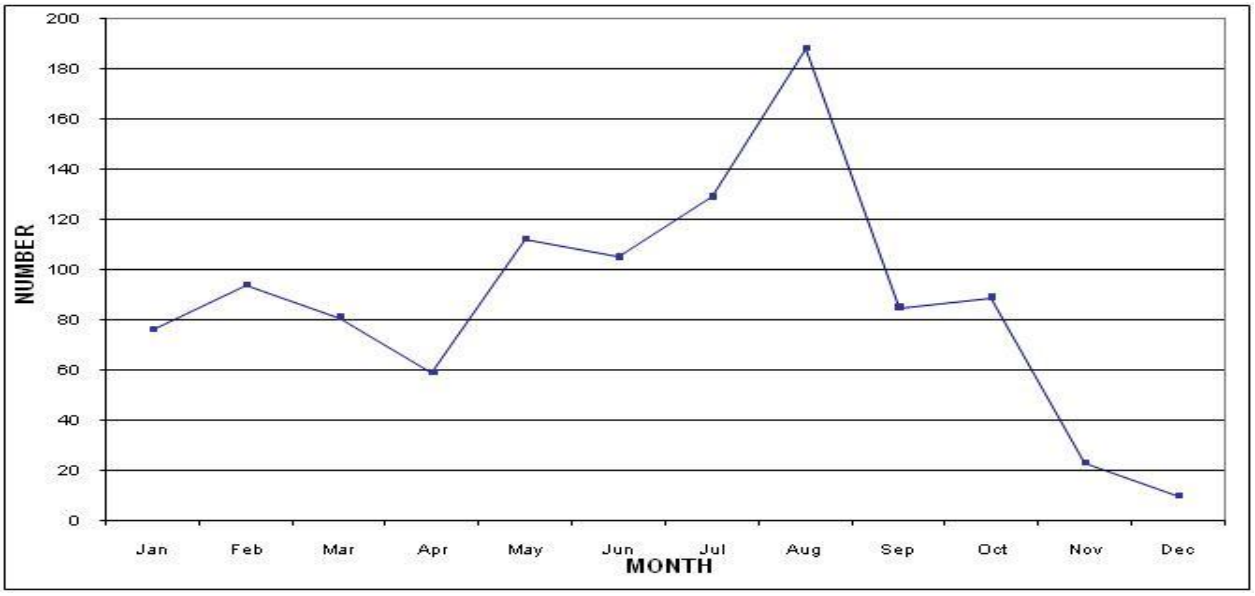
Presentation can be made more effective by the selection of the most appropriate graph. The type of graph selected depends on the type of data one is using. Generally there are two types of data, Continuous and discreet data.

1. A continuous data is used for the following types of graphs:
    a) Histogram
    b) Frequency polygon
    c) Line graph
    d) Scatter diagram
2. Discrete data is used for the following types of graphs:
    a) Bar diagram
    b) Pie chart
    c) Spot map.

Representing continuous data in a line graph

The **line graph** is used to show the change of a variable in relation to another time-related variable, such as month or year. The **time-related variable** (i.e. month) is plotted **along the horizontal axis** and the **values of the "dependent" variable** (i.e. number of cases) **on the vertical axis**.

Monthly distribution of malaria admissions in CHIM hospital (2008).

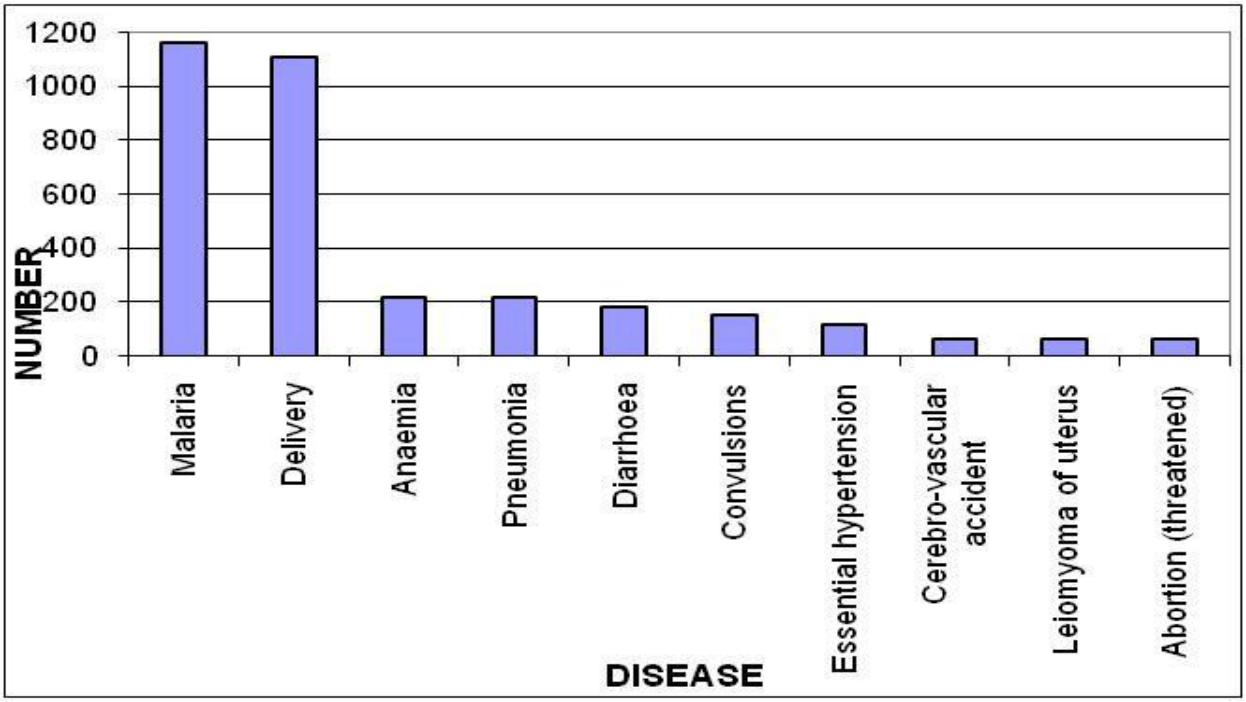


The above line graph highlights the seasonal variations in malaria admissions, showing a peak in August during the raining season.

Representing discrete data in a bar chart

Bar charts are used to represent a discrete data set. The **classes** (e.g. disease) are put **on the horizontal axis**, and the **frequencies on the vertical axis**. The frequency of each group is represented by the length of the corresponding bar, and all bars are characterized by an identical column width. Bar charts resemble the histograms in appearance, but they differ because the **bars** are **separated by a space**. The bars may be arranged horizontally as well as vertically, and are usually arranged in either ascending or descending order.

Ten leading causes of admission in CHIM hospital (2008)



The above Bar chart shows that malaria and maternity cases account for the highest number of the hospital admissions in Chim hospital, followed by anaemia, pneumonia and diarrhoea.

Appendix 1

Daily Activity Log Book for DHMT staff

Date	Name of Staff	Grade	Activities performed

This form is to be used by district staff to record their daily activities.

Appendix 2

District Baseline Data for the Year……

	Baseline data	Sub-district 1	Sub-district 2	Sub-district 3	Sub-district 4	Sub-district 5	Sub-district 6
1	Total population						
2	Total population Under 1 year						
3	Total population WIFA						
4	Total number of staff						
5	Total number of professional nurses						
6	Total number of auxiliary nurses						
7	Total number of other staff						
	……..						
	……						

This table is to be used to record district baseline data to be used for planning purposes

Appendix 3

Monthly Performance of Selected Indicators

	Indicator	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1	Antenatal													
2	Postnatal													
3	Family planning													
4	Total delivery													
5	Supervised delivery													
6	BCG													
7	OPV 3													
8	Penta 3													
9	Measles													
10	TT2													
	…….													

This table is to be used to record the performance of some of the essential health services on monthly basis. This is to be completed by the district health information officer and a copy pasted on the notice board.

Appendix 4

Summary of Human Resource by Sub-district ……

	Grade	Sub-district 1	Sub-district 2	Sub-district 3	Sub-district 4	Sub-district 5	Sub-district 6
1	Medical Assistant						
2	Clinical nurses (professional)						
3	Clinical nurses (auxiliary)						
4	Public health nurses (professional)						
5	Public health nurses (auxiliary)						
6	Midwives						
7	Nutrition staff						
8	Disease control staff						
9	Laboratory staff						
10	Health information staff						
11	Administrative staff						
12	Other staff						

This table provides data on the human resource strength of the district. It is to be completed by the officer in-charge of human resource management.

Appendix 5

Action plan for: .....

	Activity	Time frame	Person responsible	General Comments
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

This is a sample form for recording action plans of activities performed by the DHMT. This form should be coordinated by the district director. It can be varied to suit the district.

Appendix 6

District Performance of Sector-wide Indicators

	Indicators	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Annual
1	Number of Infant deaths – Institution					
2	Number of Infant admissions – Institutional					
3	Number of under five deaths – Institutional					
4	Number of under-five admissions – Institutional					
5	Maternal Mortality ratio – Institutional (per 100,000 LBs)					
6	Number of Under five years who are underweight presenting under facility and outreach					
7	% Under five years who are underweight - Institutional					
8	Number of outpatient visits					
9	Outpatient visits per capita					
10	Number of admissions					
11	Hospital Admission rate					
12	Number of doctors					
13	Population to doctor ratio					
14	Number of nurses					
15	Population to nurse ratio					
	Specialist Outreach					
16	Number of specialist visits received from the national level					
17	Number of patients seen by national team					
18	Number of operations performed by national team					
	Disease Surveillance					
19	TB cure rate					
20	TB Treatment Success Rate					
21	HIV prevalence (among pregnant women)					
22	No. of Guinea worm cases seen					
23	No. of AFP cases seen					
24	Total number of malaria cases					
	Diseases targeted for Elimination					
25	Lymphatic Filariasis treatment coverage					
	Reproductive & Child Health					
	Safe Motherhood					
26	Number of Family planning Acceptors					
27	% of WIFA accepting FP					
28	Number of ANC registrants					
29	% of ANC coverage					
30	% ANC registrants given IPT2					

	Indicators	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Annual
31	Number of PNC registrants					
32	% PNC coverage					
33	Number of Deliveries (includes deliveries by trained TBAs)					
34	% of supervised Deliveries (by skilled Personnel)					
35	Number of deliveries by skilled attendants					
	CHPS					
36	No. of functional CHPS zones					
	Child Survival					
37	EPI coverage Penta 1 (%)					
38	EPI coverage Penta 3 (%)					
39	EPI coverage OPV 3 (%)					
40	EPI coverage Measles (%)					
41	Total number of Under-five malaria cases – Admissions					
42	Number of maternal deaths					
43	Total number of maternal deaths Audited					
44	% maternal death audits					
45	Total number of Under five deaths due to malaria					
46	Under five malaria case fatality rate					
47	%Tracer Drugs available out of the tracer drug list at the Regional Medical store					
48	Total Number of TB Cases Cured					
49	AFP Non-Polio AFP rate (/100,000) population under 15 years					
	Revenue Mobilization					
50	IGF (GH¢)					
51	GOG subsidy (GH¢)					
52	Health Fund (GH¢)					
53	MOH Programmes (Earmark Funds) (GH¢)					
54	Other Sources e.g. Financial Credits, HIPC (GH¢)					
	Expenditure by item					
55	Item 1: Personal Emoluments (GH¢)					
56	Item 2 : Administration Expenses (GH¢)					
58	Item 3: Service Expenses (GH¢)					
57	Item 4: Investment Expenses (GH¢)					
58	…..					

Indicators should not be limited to the above alone,

This table is to be used to compile the indicators required for the quarterly performance review. Completion of this form is to be coordinated by the district director.

Glossary of Indicators

MATERNAL HEALTH INDICATORS

PERCENTAGE OF ANTENATAL COVERAGE

Definition of the indicator: Proportion of pregnant women receiving antenatal care during pregnancy.

Definition of key terms: Numerator: Number of antenatal registrants in the year. Denominator: Number of expected pregnancies (estimated as 4% of the population)

Data sources: Reproductive and Child Health Reports.

Use: This indicator is used to assess the coverage of antenatal services and to decide when and where to begin interventions to improve low coverage.

PERCENTAGE OF SUPERVISED DELIVERIES (BY SKILLED ATTENDANTS)

Definition of the indicator: Proportion of deliveries supervised by (skilled attendants)

Definition of key terms: Numerator: Number of supervised deliveries in the year Denominator: Number of expected pregnancies (estimated as 4% of the population)

Data sources: Reproductive and Child Health reports.

Use: This indicator is used to assess the coverage of delivery by skilled health personnel and to decide when and where to begin interventions to improve low coverage.

PERCENTAGE OF POSTNATAL CARE COVERAGE

Definition of the indicator: Proportion of women receiving postnatal care after delivery

Definition of key terms: Numerator: Number of postnatal registrants in the year. Denominator: Number of expected pregnancies (estimated as 4% of the population)

Data sources: Reproductive and Child Health reports.

Use: This indicator is used to assess the use of post natal and by extension well-baby services. Low coverage can prompt health workers to adopt new strategies to increase coverage.

PERCENTAGE OF FAMILY PLANNING ACCEPTORS

Definition of the indicator: Proportion of women in the fertile age group who receive family planning services during the year.

Definition of key terms: Numerator: Number of women in the fertility age-group (15-49 years) accepting family planning services during the year. Denominator: The number of women in the fertility age group (WIFA). WIFA is estimated as 24% of the population.

Data sources: Reproductive and Child Health reports.

Use: This indicator is used to assess the use of family planning services. Low coverage can prompt health workers to adopt new strategies to increase coverage.

COUPLE YEAR OF PROTECTION CYP

TETANUS TOXOID COVERAGE RATE

Definition of the indicator: Proportion of women in the fertile age group who receive tetanus toxoid vaccination during the year.

Definition of key terms: Numerator: Number of women in the fertility age group (15-49 years) receiving two doses of tetanus toxoid during the year. Denominator: The number of women in the fertility age group (15-49 years). WIFA is estimated as 24% of the population.

Data sources: Reproductive and Child Health reports.

Use: This indicator is used to assess the general performance of the immunization and antenatal services. Low coverage can prompt health workers to adopt new strategies to increase coverage.

MATERNAL MORTALITY RATIO

Definition of the indicator: Number of maternal deaths for every 100,000 live births during the year. Maternal death represents the death of a woman while pregnant or within 42 days of termination of pregnancy irrespective of the duration and the site of the pregnancy, from any cause related to the pregnancy or its management.

Definition of key terms: Numerator: Maternal deaths in a year x 100,000. Denominator: Total live births in the year

Data sources: Data is usually obtained from routine death notification or surveys based information. Such surveys have been few and limited in Ghana making it difficult to indicate the maternal mortality ratio by region and nationally. The figure quoted for the country is between 214 and 240. Institutional maternal mortality ratios are not representative unless all births and deaths take place at the hospital and are properly classified.

Use: This indicator is a measure of the level of accessibility and quality of care of the safe motherhood programme. Also, it indicates the general health of the population and specifically the health status of women. High values can act as a stimulus for priority setting and strategies for intervention.

PERCENTAGE MATERNAL AUDITS TO MATERNAL DEATHS

Definition of the indicator: Number of all maternal deaths which occurred in a health facility and were subjected to investigations by a team assigned for the purpose and a report presented.

Definition of key terms: Numerator: Number of maternal deaths audited during the period. Denominator: Total number of maternal deaths recorded during the period

Data sources: Ward register and files dedicated to reports on maternal death audits

Use: This indicator is a measure of the extent to which maternal deaths are investigated to determine the causes of death and to put in place interventions to reduce maternal deaths. It is an indicator of quality of care of maternal health services.

CHILD HEALTH INDICATORS

OPV1 COVERAGE

Definition of the indicator: Proportion of children under 1 year receiving Oral polio (OPV1) vaccine during the year.

Definition of key terms: Numerator: Number of children under 1 year receiving the OPV1 vaccine in the year. Denominator: Number of children under 1 year (estimated as 4% of the population).

Data sources: Reproductive and Child Health reports.

Use: This indicator is used to assess the performance of the immunisation and infant health programmes.

OPV 3 COVERAGE

Definition of the indicator: Proportion of children under 1 year receiving Oral polio (OPV 3) vaccine during the year.

Definition of key terms: Numerator: Number of children under 1 year receiving the OPV 3 vaccine in the year. Denominator: Number of children under 1 year (estimated as 4% of the population).

Data sources: Reproductive and Child Health reports.

Use: This indicator is used to assess the performance of the immunisation and infant health programmes.

PENTA 1 (PENTA1) COVERAGE

Definition of the indicator: Proportion of children under 1 year receiving Penta1 vaccine during the year.

Definition of key terms: Numerator: Number of children under 1 year receiving the Penta 1 vaccine in the year. Denominator: Number of children under 1 year (estimated as 4% of the population).

Data sources: Reproductive and Child Health reports.

Use: This indicator is used to assess the performance of the immunization services, and to determine the drop-out rate between PENTA 1 and PENTA 3. Low coverage can prompt health workers to adopt strategies to increase coverage.

PENTA 3 (PENTA3) COVERAGE

Definition of the indicator: Proportion of children under 1 year receiving Penta3 vaccine during the year

Definition of key terms: Numerator: Number of children under 1 year receiving the Penta 3 vaccine in the year. Denominator: Number of children under 1 year (estimated as 4% of the population).

Data sources: Reproductive and Child Health reports.

Use: This indicator is used to assess the performance of the immunization services, and to determine the drop-out rate between PENTA 1 and PENTA 3. Low coverage can prompt health workers to adopt strategies to increase coverage.

IMMUNIZATION DROP OUT RATE

Definition of the indicator: Proportion of children under 1 year who do not complete their immunization schedule. This indicator is a measure of continuity of service and quality of care. It is most useful to make a year-to-date cumulative calculation of the indicator throughout the year.

Definition of key terms: Numerator: Number of children 0-11 months who have received PENTA 1 minus the number of children 0-11 months who have received PENTA 3
Denominator: Number of children 0-11 months who have received PENTA 1

Data sources: Reproductive and Child Health reports.

Use: This indicator is used to assess the extent to which children fail to complete their immunization schedule. It is also used to assess the continuity of service and quality of care provided.

MEASLES COVERAGE

Definition of the indicator: Proportion of children under 1 year receiving Measles Vaccine during the year

Definition of key terms: Numerator: Number of children under 1 year receiving the Measles vaccine in the year. Denominator: Number of children under 1 year (estimated as 4% of the population).

Data sources: Reproductive and Child Health reports.

Use: This indicator is used to assess the performance of the immunisation and infant health programmes.

PERCENTAGE OF CHILDREN RECEIVING VITAMIN A SUPPLEMENTATION

Definition of the indicator: Proportion of children aged 6–59 months who received a high-dose vitamin A supplement within the last 6 months.

Definition of key terms: Numerator: Number of children between 6-59 months who receive Vitamin A supplementation in the last 6 months. Denominator: number of children between 6-59 months.

Data sources: Reproductive and Child Health and immunization reports. DHS and MICS.

Use: This indicator is used for monitoring and assessing the performance of the child health programmes.

INFANT MORTALITY RATE

Definition of the indicator: The number of deaths of infants under one year within a specified period for every 1000 live births during the same period.

Definition of key terms: Numerator: Number of deaths of infants under one year during a specified period x 1000. Denominator: Number of live births in the same period

Data sources: Data is usually obtained from registration of vital events, population census demographic and health survey. The commonly used source in Ghana is the DHS with 2003 representing the most current.

Use: This indicator is a measure of the general health status of the population and the performance of the infant health programmes.

UNDER FIVE MORTALITY RATE

Definition of the indicator: The probability of children dying between birth and their fifth birthday for every 1000 children born alive.

Definition of key terms: Numerator: Number of deaths of children under five years during a specified period x 1000. Denominator: Number of children under five years in the same period

Data sources: Data is usually obtained from registration of vital events, population census demographic and health survey. The commonly used source in Ghana is the DHS with 1998 representing the most current.

Use: This indicator is a measure of the general health status of the population and the performance of the child health programmes.

UNDER FIVE MALARIA CASE FATALITY RATE

Definition of the indicator: Under five malaria case fatality rate is defined as the proportion of children under five years of age who die of malaria out of the total number of children under five years who have malaria. In other words it expresses the proportion of children under five years with malaria who die from it (**ratio of deaths to cases**).

Definition of key terms: Numerator: Number of children under five years dying of malaria. Denominator: Number of children under five years with malaria.

Data sources: The data is obtained from the hospital In-patient Morbidity and Mortality Returns

Use: This indicator is used to assess the performance of the malarial control programme and quality of care of the health services.

PERCENTAGE UNDER FIVE YEARS WHO ARE MALNOURISHED (UNDERWEIGHT)

Definition of the indicator: Proportion of children under five years whose weight-for-age measures are below minus two standard deviations (-2SD) from the median weight-for-age of the WHO/NCHS reference population.

Definition of key terms: Numerator: Number of children under five years surveyed who are below minus two standard deviations from the median. Denominators: Number of children under five surveyed.

Data sources: A number of survey which collect anthropometric data can provide such data. In Ghana the most extensively quoted data is the DHS. Data from children seen at health facilities do not provide data reliable assessment of the nutritional status. A representative sample of the population should be used instead and surveys need to be carried out at reasonable intervals (e.g. five years) since malnutrition status do not change rapidly.

Use: This indicator is a measure of the general health status of the population and the performance of the child health programmes.

AFP NON-POLIO RATE

Definition of the indicator: Acute flaccid paralysis (AFP) non-polio rate measure the number of AFP cases that are not due to polio per 100,000 population under 15 years. The rationale behind this indicator is that the surveillance system should be sensitive enough to detect at least one case of AFP for every 100,000 population under 15 years. Without such surveillance system it would be impossible to verify when the wild polio virus has been eradicated.

Definition of key terms: Numerator: Number of AFP cases recorded. Denominator: Population of less than 15 years

Data sources: AFP non-polio rate is calculated from data collected from the surveillance report.

Use: This is an indicator used to assess the sensitivity of the surveillance system to detect polio cases even when the disease no longer occurs. This is important since even if polio would be eradicated, there will still be cases of AFP related to other causes.

SPECIALISED SERVICES INDICATORS

HIV SEROPREVALENCE (AMONG REPRODUCTIVE AGE, 15-19, 20-24)

Definition of the indicator: HIV prevalence is the percentage of persons testing HIV positive in the 15-19 and 20-24 year age group.

Definition of key terms: Numerator: Number of HIV positives in 15-19 age-group and 20-24 age group. Denominator: Total number of persons in the specified age group tested for HIV.

Data sources: HIV prevalence is calculated from the routine data collected in the national sentinel surveillance system for HIV.

Use: HIV prevalence among the young population (15-19 and 20-24 years) reflects infections which are of more recent onset and therefore is a good proxy of HIV incidence. This indicator is therefore used to monitor the HIV epidemic dynamics in the population.

TUBERCULOSIS CURE RATE

Definition of the indicator: TB cure rate is the percentage of TB clients who have been cured after anti-TB treatment, meaning that they are smear negative at (or one month prior to) the completion of treatment and on at least one previous occasion.

Definition of key terms:

Numerator: Number of clients cured after TB treatment

Denominator: Total number of clients under treatment.

Data sources: TB cure rate is calculated from data from the Report on TB Treatment Results

Use: Since the highest priority in the TB control programme is the identification of new cases and the cure of the detected cases, this indicator is the key determinant in evaluating the effectiveness of the TB control programme.

NUMBER OF GUINEA WORM CASES

Definition of the indicator: This is the number of Guinea Worm cases reported in the year.

Data sources: The number of Guinea Worm cases is obtained from the Monthly Guinea Worm Returns.

Use: Since Guinea Worm is targeted for eradication this indicator is used to assess the performance of the Guinea Worm Eradication programme and to determine strategies to implement towards its eradication.

ACCESS TO HEALTH SERVICES INDICATORS

NUMBER OF COMMUNITY RESIDENT NURSE PER DISTRICT

Definition of the indicator: This basically shows the trend in the deployment of community health officer (CHO) under the CHPS programme. Over the years the indicator has been presented too show communities which have completed all the stages of the programme which include the completion of residential units or CHPS compounds and the provision of other essential equipment and amenities. A functional CHPS compound represents communities where the compound is completed and the community health officer is at post. The definition is currently being considered for modification to indicate the provision of service rather than the completion of structures. For now it will be taken as communities where the community health nurses have started working with the communities in the area of community mobilization, provision of essential primary health services.

Definition of key terms: Total number of communities with resident trained nurse

Data sources: CHPS monitoring data at the district level

Use: The indicator assess the extent of the deployment of the CHPS programme to communities and by extension a measure of access to health care services to communities.

NUMBER OF OUTREACH SERVICES CARRIED OUT BY SPECIALIST FROM TERTIARY, SECONDARY AND DISTRICT HOSPITAL

Definition of the indicator: Number of clinics held by specialists from outside the Region or District during the year.

Definition of key terms: Specialist outreach services are organized by the national level and they involve the use of specialists from the teaching (tertiary) facilities. However region may also organize specialists from the regional hospital to the districts and may request the use of specialists from other areas

including the private sector. Specialist services provided by a specialist(s) in a facility which is also his or her normal place of work is not counted as an outreach service. Specialist outreach services may include any of the recognized specialties such as Obstetrics and Gynaecology; Surgery; Ophthalmology; Ear Nose and Throat; Dermatology; etc. Clinics may include out-patient services and other operations carried out by the specialist.

Data sources: Routine registers kept by the specialist outreach services coordinator at the national level. Registers kept by the regional and district health administrations and individual facilities where services were provided. Information on specialist outreach services may be presented as Total number of clinics, Total number of clinics by specialty, Number of clients seen at out-patient, Number of operations undertaken.

Use: The indicator a measure of access to specialized health care services at the local level.

POPULATION TO DOCTOR AND NURSE RATIO BY REGION

Definition of the indicator: Number of people to one doctor/nurse in a defined geographical area.

Definition of key terms: Numerator: Total number of doctors/nurses in the region. Denominator: Total population of the region

Data sources: Number of doctors/nurses may be obtained from the personnel unit of the regional health administration. At the district level the district health administration will compile list of all medical practitioners including those in the private sector. Population figures for regions and districts may be obtained from the Ghana Statistical Services. This as been compiled and will be found in the annex. It is based on the 2000 population census and the district projections are based on the regional growth rates.

Use: The indicator measures the availability of health staff at various levels and also the equity in staff distribution patterns.

OUTPATIENT VISIT PER CAPITA BY REGION

Definition of the indicator: Number of outpatient (OPD) visits per person per year.

Definition of key terms: Numerator: Total number of outpatient visits in the year Denominator: Total population of the region

Data sources: The data is obtained from the outpatient attendance recorded per facility and summed for all the facilities in the region per year.

Use: The indicator measures the use of outpatient services. In a population with a low OPD per capita but with a high morbidity of acute and preventable diseases, the indicator is a prompt to health staff to adopt strategies to make health services more accessible and available to the population.

HOSPITAL ADMISSION RATE

Definition of the indicator: The hospital admission rate is the average number of hospital admissions per 1000 population per year.

Definition of key terms: Numerator: Total number of hospital admissions in the year Denominator: Total population of the district.

Data sources: The data is obtained from the in-patient admissions recorded in the in-patient register for each hospital and summed for all the hospitals in the district (if there are more than one hospital in the district) per year.

Use: This is an indicator of the use of in-patient services reflecting the level of accessibility of hospital services to the population. It indicates the level of utilization of hospital services despite the traditional barriers such as distance, user charges and quality of care.

INDICATORS ON MEASURES OF EFFICIENCY AND SERVICE QUALITY

BED OCCUPANCY RATE

Definition of the indicator: Bed Occupancy Rate (BOR) measures the percentage of beds occupied by clients in a given period.

Definition of key terms: Numerator: Number of client-days. Denominator: Number of beds multiplied by number of days in the period.

Data sources: The number of client-days is obtained from the Monthly Bed State Returns compiled at each hospital.

Use: This is an indicator of the efficiency of hospital resource use. In general, health facilities are designed to operate most efficiently at a level of about 80-90 percent occupancy; lower bed occupancy rates indicate inefficient use of hospital resources. Conversely, high occupancy rate may reflect an efficient use of hospital resources and poor quality of care when it is related to inappropriate pattern of admissions and length of stay that is too long.

AVERAGE LENGTH OF STAY

Definition of the indicator: The average length of stay (ALOS) is measure of the average duration of in-patient hospital admissions (mean number of days from admission to discharge).

Definition of key terms: Numerator: Number of client-days. Denominator: Number of in-patients.

Data sources: The number of client-days is obtained from the Monthly Bed State Returns compiled at each hospital. The number of in-patients is obtained from the in-patient register.

Use: This is another indicator of the efficiency of hospital resource utilization. Short average length of stay generally indicate good efficiency, enabling turnover rates to increase, and allowing the extension of hospital services to a greater number of clients. An excessively long average length of stay for a given condition may reflect inefficient hospital resource use, inflating demand for hospital beds and increasing hospital costs.

BED TURNOVER RATE

Definition of the indicator: Bed Turnover Rate (BTR) is the average number of in-patients admitted per each hospital bed.

Definition of key terms: Numerator: Number of clients admitted. Denominator: Number of hospital beds.

Data sources: The number of in-patients is obtained from the in-patient register. The number of beds is obtained from the ward state returns.

Use: Bed Turnover rate (BTR) is an indicator of the efficiency of hospital resource use. High bed turnover rate implies that a greater number of clients may be admitted, improving hospital productivity and decreasing average cost per admission. Alternatively, excessively low bed turnover rate reflects inefficiency in the use of hospital resources leading to high average costs per admission.

PERCENTAGE TRACER DRUG AVAILABILITY

Definition of the indicator: A snap shot assessment of the availability of essential drugs. A list of tracer drugs is provided and at a given time the proportion of those that are available on the shelves is taken.

Definition of key terms: Numerator: Proportion of tracer drugs available at the time of survey. Denominator: Total number of tracer drugs on the list.

Data sources: Pharmacy stores records.

Use: This indicator is used to assess the quality of care of the services provided. If the tracer drug availability is 100 percent it indicates that all essential drugs required to provide treatment for clients are made available at all times. A low value indicates that the facility is not stocking all essential drugs required to provide treatment to clients and this may impact on the quality of care provided and client outcomes.

INDICATORS ON FINANCE

PERCENTAGE RECURRENT BUDGET FROM GOG AND HEALTH FUND

USED BY PRIVATE SECTOR, NGOS, CSOS AND OTHER MDAS

Definition of the indicator: Total amount of funds allocated from the district budgets to support other health providers other than the GHS facilities.

Definition of key terms: Numerator: Proportion of budget allocated to Private providers, NGOs etc. Denominator: Total budget released to the district for the year.

Data sources: Financial management reports on disbursements at the regional/district level.

Use: This indicator is used to measure the extent of inter-sectoral collaboration and partnership between the DHMT and the other sectors.

PERCENTAGE OF GOG BUDGET SPENT ON HEALTH

Definition of the indicator: Proportion of total government budget allocated to the health sector. The health sector in this case is the Ministry of Health including all implementing agencies.

Definition of key terms: Numerator: Total allocation to the health sector as a percentage. Denominator: Total government budget.

Data sources: Ministry of Finance budget estimates reports.

Use: This indicator is used to measure the extent of central government commitment to the provision of health care in particular and social services in general.

PERCENTAGE GOG RECURRENT BUDGET FOR HEALTH

Definition of the indicator: Proportion of total government recurrent budget allocated to the health sector. The health sector in this case is the Ministry of Health including all implementing agencies.

Definition of key terms: Numerator: Total recurrent allocation to the health sector as a percentage. Denominator: Total government recurrent budget.

Data sources: Ministry of Finance budget estimates reports

Use: This indicator is used to measure the extent of central government commitment to the provision of health care in particular and social services in general. This does not take into account capital expenditure which may be high due to the high cost in new buildings and other physical investments. It gives an indication of investments in actual provision of health care services.

PERCENTAGE OF IGFs COMING FROM PRE-PAYMENT AND COMMUNITY-

INSURANCE SCHEME

Definition of the indicator: Proportion of all revenue for service delivery obtained through premiums or bills settled by schemes.

Definition of key terms: Numerator: Total revenue from schemes multiplied by 100. Denominator: Total revenue realized by the BMC.

Data sources: Revenue returns.

Use: This indicator provides information on the general performance of the health insurance and prepayment schemes.

TOTAL AMOUNT SPENT ON EXEMPTIONS BY EXEMPTION CATEGORY

Definition of the indicator: Total cost of rendering services to exempted clients based on agreed framework for costing those services. Another way of defining this is the total revenue that would have accrued to the BMC if the clients were to pay full fees for all services provided.

Definition of key terms: Total cost of services to exempted client by category of client.

Data sources: Exemptions register.

Use: This indicator is used to assess the extent to which health services is being made available and accessible to the poor and vulnerable.

INDICATORS ON PARTNERSHIP AND COLLABORATION

PERCENTAGE OF MEETINGS HELD BY THE COMMUNITY MANAGEMENT COMMITTEE

Definition of the indicator: Proportion of planned meetings held with community management committee.

Definition of key terms: Numerator: Number of meetings held by the community management committee. Denominator: Number of meetings planned by the community management committee.

Data sources: DHMT minutes.

Use: This indicator is used to measure the extent of collaboration and partnership with the community and the DHMT.

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