HEALTH INFORMATION SYSTEM GUIDELINES

**Ministry of Health
Department oF Planning and
Health Information Cambodia**

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FOREWORD

I am pleased to present Health Information System (HIS) Guidelines for the guidance and use of our health staff at all levels of the health system, particularly those at health facility levels. The Guidelines provide essential information on the nature and scope of the HIS, simple methods for improving data quality and assuring data integrity, the necessity for regular feedback and how it should be carried out, and an example of converting data into information for planning, implementing, and monitoring programs. It should be noted that, currently, HIS forms at health facility levels and above are being revised based on extensive stakeholder consultations. Once these forms are issued for use, these Guidelines will be expanded to include detailed instructions on the preparation of the forms.

Over the medium term period, the Ministry of Health also will implement a country wide computerized HIS at OD level and above, based on successful pilots conducted over the past few years in two provinces. This will move key levels of the health system away from a paper based HIS, thus facilitating improved data quality and integrity, and timely preparation and submittal of monthly, quarterly, and annual reports. It will also significantly reduce the burden on central HIS staff who are now required to spend inordinate time on data validation and entry, with less time available for analysis and interpretation. A computerized HIS also will enable routine feedback to be provided in a timely manner, contributing to the strengthening of the system.

A frequent comment on the HIS by stakeholders relates to the limited use of the data that are contained in it. To address this issue, within the next few months, the MOH will launch another round of training workshops on Data Use for Local Health Planning, primarily aimed at health facility levels. This training will provide our staff with knowledge and skills in simple field epidemiologic methods, and data use and interpretation, and contribute in turn to the strengthening of the HIS, since it is evident that use of data leads to improvement in quality.

HIS data constitute the foundation for planning, implementation, monitoring and evaluation in the health sector, and it is in the interests of all actors in the health system to ensure their quality and integrity. It is my sincere hope that these Guidelines will prove useful to our health staff in carrying out their duties.

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Director General for Health

Ministry of Health

ACKNOWLEDGMENTS

SECTION 1 INTRODUCTION

Purpose of the Guidelines   The purpose of these guidelines is to provide guidance to health staff at provincial, OD, and health facility levels on the essential features of the HIS, and to provide them with simple tools to help improve the quality of the data. An additional purpose is to provide simple examples of ways in which data can be converted into information for planning, monitoring and evaluating health programs. It should be noted that these guidelines are expected to be strengthened shortly with an additional section containing a detailed explanation of how to fill up the new HIS forms at various levels: health facility, OD, and province. These new forms are in the process of being finalized and once they are introduced, the additional section will be inserted into these guidelines.

Background   Information support is essential in the development and provision of health care services in Cambodia. As such, the national Health Information System (HIS) is regarded as one of the Ministry of Health's priority programs. The HIS was first launched in 1992 when the Ministry of Health began to develop a new information system to serve its needs, with technical and financial support from UNICEF. It was gradually phased in through implementation in a few provinces starting in May 1994. Complete nationwide coverage was achieved by February 1995. Since its inception, the HIS has undergone revisions in 1996, 1999, and late 2003. The 1996 revision was required to make adjustments to the HIS on the basis of the newly introduced health coverage plan, which defined the services to be delivered by each health facility on a geographic and population basis. The 2003 revision was carried out to identify additional indicators required for monitoring and evaluation by health facilities and the national programs. A hallmark of both the 1996 and 2003 revisions was the consultative and participatory approaches to revise the system, involving all key stakeholders.

The system covers information on routine health service activities and health problems witnessed at all levels of health facilities in the national health care system. Its main objective is to provide the Ministry of Health and its constituent parts, including referral hospitals and health centers, with reliable and timely information on health problems and service activities for rational decision-making to serve health management and planning needs. The HIS thus, is used as a tool for management and planning, especially for resource allocation, so that resources flow to meet priority needs.

The main strengths of the HIS lie in the following:

- Integration of nearly 20 recording and reporting systems into one system to prevent duplication and reduce staff workload
- Standardization of recording and reporting forms and definitions
- Simplicity and reliability, and
- Computerization

Perhaps the most noteworthy aspect of the HIS is that it is in place, and functioning well.

SECTION 2 CURRENT HIS COMPONENTS

The current HIS consists of four main components, including supporting tools for data collection.

Monthly routine reports cover major health problems and the activities of health services and consist of four standardized forms (Annex 1):

(i)   HC1: for health centers

(ii)   HO2: for referral hospitals

(ii)   DO3: an aggregation of all health centers and referral hospitals data within an operational district's jurisdiction, and

(iii)   PRO4: an aggregation of data from all operational districts within a province's jurisdiction. This last form, after compilation, is sent to the Department of Planning and Health Information on a monthly basis.

A schematic representation of the flow of information upwards, along with the approved schedule, is presented on the next page for ease of comprehension.

Flow of Health Information

Dept of Planning and Health Information	National Programs

Central Institutions
National Hospitals
Dept of CDC
Pasteur Institute

20th day

Provincial Health Departments
PRO4 Report
(Aggregated DO3 Reports)

10th day

5th day

OD Office
DO3 Report
(Aggregated HO2 and HC1)

Referral Hospital
HO2 Form

5th day

Health Center
HC1 Form

Health Center
HC1 Form

Report

Feedback

Alert system formally called the Early Warning System *(zero reporting)*, this is a weekly surveillance system for notifiable epidemic diseases in Cambodia. Information from this surveillance system enables managers at provincial and district levels to take appropriate and prompt actions in the event of disease outbreaks. It covers four main diseases: cholera, dengue hemorrhagic fever, measles, and acute flaccid paralysis. This system is currently managed by the Communicable Disease Control Department (CDC) which provides the DPHI with updated data on a weekly basis.

Quarterly reports for two national programs, covering tuberculosis and leprosy.

Register forms to support data collection on a daily basis at the health facilities. These contain the raw data relating to outpatient consultations, antenatal care, deliveries, birth spacing, immunization, hospitalization, etc.

In addition to the above, provincial and operational district levels maintain a **Health Activities Monitoring Table,** known as the *Tableau du Bord*, which is a management tool for monitoring targets set for individual health facilities. It consists of four forms for health centers, referral hospitals, OD offices, and Provincial Health Departments, covering information on health problems, health service activities and human resources. Most of these data are also contained in the monthly report forms (See Annex 3).

It is important to recognize that there are several other sources of health information in the country that are not directly linked to the health information system, but that nevertheless play a critical role in guiding health planning and management. These include the following:

- Malaria and dengue program – supervision checklists are maintained by national, PHD, and OD teams to monitor incidence, observance of protocols, laboratory standards, biomedical equipment quality, and pharmaceuticals supply and storage.
- HIV/AIDS/STD program – conducts HIV sero sentinel surveillance surveys (HSS) and behavioral surveillance surveys every one to one and a half years; also has supervisory checklists for IEC, AIDS care, and STD clinic activities.
- TB and leprosy programs – routine monitoring is carried out by the national TB program by collecting data from the facility registers and reporting them to the OD and PHD TB staff on a quarterly basis; supervision checklists are also used by both programs; and a national TB prevalence survey has been carried out, with the results to be released shortly
- National MCH Center – the various programs under the NMCHC such as the national immunization program, birth spacing, nutrition, and national reproductive health program all maintain supervisory checklists; in addition, the NIP also conducts active surveillance of acute flaccid paralysis, measles, and neonatal tetanus

SECTION 3 DATA COLLECTION AND REPORTING

Data collection starts at facility levels (health centers) through daily registers for curative outpatient consultation, antenatal care, immunization, birth spacing, deliveries, etc. Data from both on-site facility and outreach activities are recorded in the daily registers. Similarly, in hospitals, there is one register for each health service ward, for instance, general medicine, pediatric, obstetrics, gynecology, surgery, tuberculosis, pharmacy, laboratory, etc. In both health centers and hospitals, these hand-written registers record the date, patients name, sex, age, address, diagnosis (admitted and discharged for hospital), etc.

The reporting period covers the entire month from the first to the last day of the month. At the end of each month, data are entered into report forms at health facility levels via tally sheets. Monthly reports generated by health centers (form HC1) and referral hospitals (form HO2) are required to be sent to operational district health offices by the fifth day of the following month. These data are aggregated and by the tenth day are sent to the Technical Bureaus of the Provincial Health Departments through the standardized form DO3. Finally, each PHD aggregates the OD data through the PRO4 form and sends it to the Department of Planning and Health Information (DPHI) by the 20th day. At DPHI, these PRO4 forms are processed and analyzed through an MS Access computerized database and the data are used to produce the annual National Health Statistics report, which is disseminated to all stakeholders free of charge.

SECTION 4 MAIN CONSTRAINTS OF THE NATIONAL HIS

As noted earlier, overall, the national Health Information System has been functioning quite well. However, certain key constraints to effective functioning have been encountered. These relate to:

- Quality of data (accuracy) is still a concern in few health facilities
- Lack of capacity of health staff in carrying out data analysis and interpretation
- Limited use of the HIS data in planning and monitoring of health service delivery
- High turnover of designated staff responsible for the HIS at provincial and district level, mainly due to lack of motivation
- Lack of technical assistance, particularly at lower levels
- Problems with the functioning of the HIS database, and
- Lack of information from the private and NGO sectors.

Since these guidelines are primarily aimed at strengthening data quality, only the first three constraints are addressed in this document.

SECTION 5 STRENGTHENING THE QUALITY OF THE HEALTH INFORMATION SYSTEM

> " Accurate, timely and accessible health care data play a vital role in the planning, development and maintenance of health care services. Quality improvement and the timely dissemination of quality data are essential if health authorities wish to maintain health care at an optimal level." (WHO, 2003)

In recent years, the importance of data quality has assumed greater significance within the Cambodian health system. The reasons are not difficult to discern. First, with the introduction of the revised Planning Cycle and decentralized planning, each level of the health system is now required to draw up its Annual Operational Plan based on a situation analysis, and the setting of objectives and targets. Each level also is required to conduct monthly meetings and quarterly meetings where data pertaining to the current period are reviewed for the purposes of monitoring the implementation of the plan. Data quality plays a critical role in this process, since any compromise in their integrity will directly compromise plan implementation. Second, with the introduction of quality assurance initiatives, data quality plays a key role in the promotion of higher standards of care. Finally, data quality is critical since it has direct implications for the government budget and resource allocation. Despite the increased significance, the accuracy and reliability of data generated from the health facilities continues to be of concern. This section outlines steps that may be taken by monitoring teams to address these concerns.

An example of the quality of HIS data is provided by the estimate of the percent of fully immunized children of age 12-23 months found in the 2000 Cambodia Demographic and Health Survey (2000 CDHS). The survey found that the coverage was only 40 percent, whereas the routine HIS was reporting coverage levels of between 60 to 80 percent. One possible explanation for the discrepancy in the two sets of figures may be inflated data at the health facility level to show achievement of local targets. Whatever the reason, the fact remains that a true picture of immunization coverage was not being provided by the routine HIS, thus comprising the MOH's planning, management and monitoring functions.

Similarly, routine supervision carried out by monitoring teams at DPHI and provincial levels has also revealed data inflation occurring, mainly at health facilities with fewer financial resources and supervision visits. It should be pointed out that a thorough HIS Validation study conducted by DPHI in collaboration with WHO in 2002 found no *systematic* or *consistent pattern* of data inflation across the country. What examples did occur were mostly isolated and individual instances. This suggests that even taking small steps to prevent data inflation could have a significant impact on the quality of HIS data.

A major barrier to the use of HIS data for planning, management, and monitoring purposes remains the limited staff capacity in data analysis and interpretation. Use of HIS data in turn also contributes to data quality, as has been noted in several contexts around the world. As such, this section

addresses the issue of capacity building as well. This section therefore contains the following sub-sections:

- Data quality control
    - Random spot-checks
    - HIS format monitoring
- Capacity building for health staff in data use for health planning

A. DATA QUALITY CONTROL

A.1 RANDOM SPOT-CHECK

The quality of data can be improved through unannounced spot-checks conducted at health facility levels by monitoring teams, either from the Department of Planning and Health Information, or from provincial and operational districts. The purpose of an unannounced spot check is (i) not to find fault with individual staff or assign blame, but (ii) to bring about an improvement in data quality by impressing upon staff the need for data integrity.

Spot checks ordinarily take a great deal of time and effort, since the monitoring team has to travel to each village in which a patient or client resides, and track him or her down to conduct a face to face interview. As such, spot checks should not be conducted as a routine activity, but as an intermittent one. It is also not necessary to conduct spot checks at *all* health facilities within the jurisdiction of a supervisory authority. At intervals, a sample of health facilities may be chosen for conducting the spot checks. For health centers, monitoring teams are also advised to pay close attention to patients or clients residing in Zone B, instead of Zones A or C. Zone A consists of residents within the village surrounding the health facility i.e., those who live closest to the health center. Zone B includes those residing within the catchment area of the health center i.e., from 10 to 20 villages designated as forming the catchment area of the health center in terms of the health coverage plan. Finally, Zone C consists of those residents who live in other catchment areas. Since Zone A residents can easily be accessed, spurious data with respect to this zone are rarely encountered. For Zone C, since these villages fall outside the catchment area of the health center, they are rarely used for purposes of inflating data. Most such spurious entries fall within the Zone B demarcation, and it is for this reason that monitoring teams are advised to pay close attention to entries in patient or client registers that originate from villages in this zone.

Volume of Activities by Zone (Outpatient consultation)

	Zone A	Zone B	Zone C	Total	
				M	F
New Cases					
Total Consultation					

Zone A : Area of Village where health center is located .
Zone B : Outside zone A but within the catchment area of health center .
Zone C : Other catchment areas

One particular reason for conducting a spot check is when a higher level jurisdiction has reason to believe that data may be inflated at a particular health facility. In such an event, conducting a spot check is likely to reveal cases of inflation of data, and addressing the issue promptly will lead to improvements in data quality.

Two model spot-check questionnaires were developed by the Department of Planning and Health Information. These are for health centers and hospitals separately, as raw data recorded in patient or client registers are generated at these levels, and require to be checked from time to time.

A.1.1 Spot Check Questionnaire for Health Centers

Instructions

Table A

The monitoring teams must make a clear plan for their visits, and decide on which dates and at which health centers they propose to conduct unannounced spot checks. They should fill in the identification information in the first part of Table A, including names of health centers, operational district, and province, record the health center code, and enter the population covered by the health center. This latter figure they can obtain from a health center itself, or the health coverage plan guidelines.

Next, the information for the two boxes may be collected from the registers maintained at the health centers in respect of:

- Immunization (EPI: Expanded Program On Immunization)
- Antenatal care (ANC)
- Birth spacing   (BS)
- Deliveries
- Outpatient consultation (OPD)
- and Other Activities

At the health center, the monitoring team then counts all the number of cases in the registers during the week of the last month prior to their arrival. For instance, if a field visit is carried out in October, they should collect information from the last week of September from the registers. However, they have to decide for how many services they plan to conduct spot checks. For example, the team can choose only four services, such as EPI, ANC, Deliveries and OPD. Note that at some health centers, some of the offered services may have had only a few cases during the week under consideration. For instance, since the majority of pregnant women give birth at home, the number of health center deliveries may be very few. The 2000 CDHS found that only 10% of women had delivered at health facilities.

When the total number of cases from selected services have been decided, the next step is to conduct a random selection of cases from the relevant registers.

TABLE A (FOR HEALTH CENTERS)
PREVIOUS MONTH HC (OUTREACH) ACTIVITIES

តារាងសំណួរត្រួតពិនិត្យនៅមូលដ្ឋាន
HIS Spot-Check Questionnaire

Health Center Name:……………HC Code:………..……Province Name:................................

Operational District Name:……………..Population covered by HC………………inhabitants

Team Number: [   ][   ]   Interviewer's name:…………………………

Date and Time of Spot-check………../……….…../200

Start at…………………….End at:……………………

Total cases of last week (Monday-Friday) of the last month from the registers: ……cases[1]	Selected l0% of the total:……….. cases
-Total Nb of immunized children:……...cases -Total Nb of antenatal cares:…………..cases -Total Nb of birth spacing users:……….cases -Total Nb of delivery:………………..cases -Total Nb of outpatient consultation:…..cases	-Nb of immunized children selected: ……cases -Nb of ANC selected:.. …………………cases -Nb of BS selected: ……………………cases -Nb of delivery selected:…………………cases -Nb of OPD selected:…………………… cases
(Monitoring team can select other activities from other registers)	**Nb of selected cases found: ……………..cases**

1- It is much easier for patients or clients to recall services they have received recently.

Method of selection

For example:

1-For a spot-check in October, the total cases of selected services; immunization, antenatal care (ANC), birth spacing, and outpatient consultation from their registers of the last week (Monday to Friday) of September were 204 cases, as shown below:

- Total number of immunized children: 28 cases
- Total number of ANC: 35 cases
- Total number of birth spacing: 21 cases
- Total number of outpatient consultation: 120 cases

Total cases of previous week: 204 cases

2- Select 10% of the total for field visits:

204 x 10% = **20** selected cases for field visits

3- Calculate the selected number from each service of the 20 selected cases:

- Immunization: $\frac{28}{204}$ x **20** = 2.7 cases, take **3**.

- Antenatal care: $\frac{35}{204}$ x **20** = 3.4 cases, take **3** (If it is 3.5, could be rounded to 4)

- Birth spacing: $\frac{21}{204}$ x **20** = **2** cases

- Outpatients: $\frac{120}{204}$ x **20** = 11.8 cases, take **12**

Verification: 3 + 3 + 2 + 12 = 20 (selected cases of the total 10%)

4- Random selection (random interval):

- Immunization: take the total number of immunized children 28 cases and divide by 3:
  $\frac{28}{3}$ = 9.3
  This means that the team should choose every ninth case from the Immunizations register, for a total of 3 cases, as follows:

  1 2 3 4 5 6 7 8 **9** 10 11 12 13 14 15 16 17 **18** 19 20 21 22 23 24 25 26 **27**

  Thus, the 3 randomly selected cases for immunization services are clients numbered **9**, **18** and **27** in the register.
- Similarly choose the sample of cases for spot checks for ANC, birth spacing and OPD consultations.

Table A

Patient's name (1)	Age Sex (2)	Address (3)	HC/Outreach Services Received (4)		What service did *Name* receive from HC/Outreach in the last week? (EPI, ANC, BS, etc)delivery…) (5)	If Name (kid) received BCG vaccine, examine the scar on the left hand. (6)	Remarks (7)
1- Parents ' names:	-Age: -M -F		- EPI - ANC - BS - Delivery - OPD - Others (specify)	-BCG -OPV0 -DPT1 -OPV1 -DPT2 -OPV2 -DPT3 -OPV3 -HepB -Rouvax -Vit. A -Tetanol	☐ Yes, (specify services received) ………………… ………………… ☐ No, Finish the interview	☐ BCG Scar ☐ No Scar	
Result code: 1- This name was not existed, 2- Not at home after 2 visits, 3- Temporary/permanently moved out							
2- Parents ' names:	-Age: -M -F		- EPI - ANC - BS - Delivery - OPD - Others (specify)	-BCG -OPV0 -DPT1 -OPV1 -DPT2 -OPV2 -DPT3 -OPV3 -HepB -Rouvax -Vit. A -Tetanol	☐ Yes, (specify services received) ………………… ………………… ☐ No, Finish the interview	☐ BCG Scar ☐ No Scar	
Result code: 1- This name was not existed, 2- Not at home after 2 visits, 3- Temporary/permanently moved out							
3- Parents ' names:	-Age: -M -F		- EPI - ANC - BS - Delivery - OPD - Others (specify)	-BCG -OPV0 -DPT1 -OPV1 -DPT2 -OPV2 -DPT3 -OPV3 -HepB -Rouvax -Vit. A -Tetanol	☐ Yes, (specify services received) ………………… ………………… ☐ No, Finish the interview	☐ BCG Scar ☐ No Scar	
Result code: 1- This name was not existed, 2- Not at home after 2 visits, 3- Temporary/permanently moved out							
4- Parents ' names:	-Age: -M -F		- EPI - ANC - BS - Delivery - OPD - Others (specify)	-BCG -OPV0 -DPT1 -OPV1 -DPT2 -OPV2 -DPT3 -OPV3 -HepB -Rouvax -Vit. A -Tetanol	☐ Yes, (specify services received) ………………… ………………… ☐ No, Finish the interview	☐ BCG Scar ☐ No Scar	
Result code: 1- This name was not existed, 2- Not at home after 2 visits, 3- Temporary/permanently moved out							
5- Parents ' names:	-Age: -M -F		- EPI - ANC - BS - Delivery - OPD - Others (specify)	-BCG -OPV0 -DPT1 -OPV1 -DPT2 -OPV2 -DPT3 -OPV3 -HepB -Rouvax -Vit. A -Tetanol	☐ Yes, (specify services received) ………………… ………………… ☐ No, Finish the interview	☐ BCG Scar ☐ No Scar	
Result code: 1- This name was not existed, 2- Not at home after 2 visits, 3- Temporary/permanently moved out							

Table A

After collecting information as explained in Table A above, the monitoring teams should fill in the second part of Table A during their field visits. Information in the first four columns (1,2,3 and 4) of Table A are recorded from the health center registers (immunization, ANC, birth spacing, and deliveries), whereas information in the last three columns (5, 6 and 7), will be collected during the interview with patients or clients in their homes to find out whethe they did actually receive health services as recorded in the registers.

Column 1-2-3

In these columns, the teams have to record the patient's name, age and sex and their address from the registers. If a patient is a child, parents' names should be recorded, as this will aid in locating the children.

Column 4

This column is very important as it shows thee health services (at health center or outreach activities) that the patients or clients are reported to have received. For example, if the patient (a child) received vaccine shots for DPT1 and OPV1 as recorded in the registers, the teams have to circle the EPI and DPT1 and OPV1 headings. If other services are received, they should be specified as well e.g., dental care, counseling, etc.

Column 5-6-7

Column 5 is also very important as the teams have to verify what service/s the patients received and reported during the interview in their homes, against what it is recorded in the register in column 4. If parents of a child report that their child did receive DPT1 and OPV1 vaccinations, the monitoring teams should mark the "Yes" box and then write down DPT1 and OPV1 in this column. If no services were received, they should mark "No" and finish the interview. In column 6, if a child received BCG vaccine shot, they should check his/her left arm or shoulder if a scar is present. If the team discovers that villages or houses of selected patients/cases are not accessible by road or insecurity is a concern, the team can record this fact in the remarks column.

Results code

1- **This name does not exist**: This means that there is no such patient living in this village as confirmed by the chief of the village, and such patients or clients are called "ghost patients." The teams should circle code 1 (enter code 1). In principle, when the monitoring teams carry out spot-check in the village, the first thing they have to do is to contact local authorities for their collaboration, especially the chief of a village.
2- **Not at home after two visits**: The patients are still not at home after two visits and the teams are told by the neighbors that they are away visiting their relatives or on the farm and will be back in the next few days, so the team enters code 2.
3- **Temporary/permanently move out**: Circle code 3, if the house of the patient is closed and the neighbors say that they have moved out of the village to other areas.

A.1.2 Table B for Referral Hospitals

Last Month RH Activities (Discharges)

តារាងសំណួរត្រួតពិនិត្យនៅមូលដ្ឋាន
HIS Spot-Check Questionnaire

––––

Referral Hospital Name:……………RH Code:………..……Province Name:.............................

Operational District Name:………………..Population covered by RH………………inhabitants

Team Number: [ ][ ]   Interviewer's name:…………………………

Date and Time of spot-check………..../…….…....../200

Start at…………………….End at:……………….

Total Discharged of last week (Monday-Friday) of the last month from the registers: ……cases[1]	Selected 20% of the total discharged:……….. ……cases
-Total Nb of Medicine discharged :……. …...……cases	-Nb of Medicine discharged selected: …… ……...cases
-Total Nb of Pediatric discharged: …………...cases	-Nb of Pediatric discharged selected:.. …….…........cases
-Total Nb of Obstetric discharged: …..…………cases	-Nb of Obstetric selected: …………………………cases
-Total Nb of Gyneco discharged: …………...cases	-Nb of Gyneco selected: …………………………cases
-Total Nb of other discharged: ………………..cases	-Nb of other discharged selected: ………………… cases
(Monitoring team can select other activities from other registers)	Nb of selected cases found: ……………..cases

Instruction:

The procedure for cases selection is almost the same as described in Table A. The difference is that in Table B, the team will select inpatients who are dischrged from the hospital for the exit interview. In general if the number of inpatients discharged in the last week of the last month prior to the arrival of the teams is low, the selected cases should be 20% of the total discharged.

1-For example: the total number of the inpatients discharged from the hospital in the last week of September as recorded from the hospitalization register was 100 cases, so the method for random selection will be as follow.

- Total number of medicine discharged: 50 cases
- Total number of pediatric discharged: 25 cases
- Total number of obstetric discharged: 10 cases
- Total number of gyneco discharged: 15 cases
  Total cases of discharged last week: 100 cases

2- Selection of 20% of the total for field visits:

100 x 20% = **20** selected cases for field visits

3- Calculation the selected number from each service of the 20 selected cases:

- Medicine: $\frac{50}{100}$ x **20** = 10 cases

- Pediatric: $\frac{25}{100}$ x **20** = 5 cases

- Obstetric: $\frac{10}{100}$ x **20** = 2 cases

- Gyne: $\frac{15}{100}$ x **20** = 3 cases

Verification: 10 + 5 + 2 + 3 = 20 (selected cases of the total 20%)

4- Random selection (random interval):

- Pediatric: take the total number of pediatric discharged, 25 cases, and divide by 5:
  $\frac{25}{5}$ = 5
  This means that in the register of pediatric inpatients every 5th case should be chosen, for a total of 5 cases.

  1 2 3 4 **5** 6 7 8 9 **10** 11 12 13 14 **15** 16 17 18 19 **20** 21 22 23 24 **25**

  Thus, the 5 randomly selected cases of pediatric inpatients would be numbers **5, 10, 15, 20,** and **25** from the register.

  Inpatients for the general medicine, obstetric and gynecologic wards would be selected in the same manner.

Table B for Referral Hospitals

Patient's name (1)	Age Sex (2)	Address (3)	Discharged diagnosis (4)	Ward (service) admitted (5)	Length of stay (6)	Did Name hospitalized in that hospital in the last month (week)? (7)	Which service (ward) did Name hospitalized? (8)	How long did Name stay in that hospital (ward)? (9)	Remarks (10)
1- Parents ' names:	-Age: -M -F			☐Gen med ☐Pediatric ☐Obstetric ☐Gyneco ☐Surgery ☐ Others ……………	…day/s …month	-Yes, ➡ 8, 9 -No, Finish the interview	☐Gen med ☐Pediatric ☐Obstetric ☐Gyneco ☐Surgery ☐ Others ……………	…day/s …month	
Result code: 1- This name was not existed, 2- Not at home after 2 visits, 3- Temporary/permanently moved out									
2- Parents ' names:	-Age: -M -F			☐Gen med ☐Pediatric ☐Obstetric ☐Gyneco ☐Surgery ☐ Others ……………	…day/s …month	-Yes, ➡ 8, 9 -No, Finish the interview	☐Gen med ☐Pediatric ☐Obstetric ☐Gyneco ☐Surgery ☐ Others ……………	…day/s …month	
Result code: 1- This name was not existed, 2- Not at home after 2 visits, 3- Temporary/permanently moved out									
3- Parents ' names:	-Age: -M -F			☐Gen med ☐Pediatric ☐Obstetric ☐Gyneco ☐Surgery ☐ Others ……………	…day/s …month	-Yes, ➡ 8, 9 -No, Finish the interview	☐Gen med ☐Pediatric ☐Obstetric ☐Gyneco ☐Surgery ☐ Others ……………	…day/s …month	
Result code: 1- This name was not existed, 2- Not at home after 2 visits, 3- Temporary/permanently moved out									
4- Parents ' names:	-Age: -M -F			☐Gen med ☐Pediatric ☐Obstetric ☐Gyneco ☐Surgery ☐ Others ……………	…day/s …month	-Yes, ➡ 8, 9 -No, Finish the interview	☐Gen med ☐Pediatric ☐Obstetric ☐Gyneco ☐Surgery ☐ Others ……………	…day/s …month	
Result code: 1- This name was not existed, 2- Not at home after 2 visits, 3- Temporary/permanently moved out									
5- Parents ' names:	-Age: -M -F			☐Gen med ☐Pediatric ☐Obstetric ☐Gyneco ☐Surgery ☐ Others ……………	…day/s …month	-Yes, ➡ 8, 9 -No, Finish the interview	☐Gen med ☐Pediatric ☐Obstetric ☐Gyneco ☐Surgery ☐ Others ……………	…day/s …month	
Result code: 1- This name was not existed, 2- Not at home after 2 visits, 3- Temporary/permanently moved out									

Information in the first 6 columns are collected from the hospitalization register, whereas, columns 7,8,9 and 10 will be obtained during the home interview during the field visits.

Column 1, 2, 3

Patient's name, age and sex. Similar to Table A above.

Column 4, 5, 6

In column 4, record the diagnosis of discharge (e.g., typhoid fever) exactly as it is written in the register of hospitalization, and the name of the ward the patient was admitted to in column 5. Enter the length of stay in that ward in column 6.

Column 7

This is very important as it will validate what is written in the hospitalization registers. This will enable the team to find out whether those selected patients actually exist and were admitted in that hospital, as recorded. If this is so, the team circles Yes and continues to the next columns to confirm which ward the patient was admitted to, and for how long (column 8, and 9). If a selected patient cannot be found in that village (as confirmed by the chief of the village), the team should circle No, and finish the interview.

Result codes are the same as mentioned in Table A for health centers above.

A.2 Feedback Meeting to Review Spot Check Results

In the event the spot check reveals inflation of patient or client data, the monitoring team must invariably conduct a Feedback Meeting with the health facility management team. Again, the intent of such a meeting is not to assign individual blame, but to convey to staff the importance of maintaining the integrity of the data. Details of spurious entries in the registers should be provided to the management team, and their advice sought on the reasons for the same, and ways in which such spurious entries can be avoided in the future. A commitment to prevent spurious entries should be sought from all members of the management team, and secured. Next, the team should be assisted with drawing up a brief action plan to ensure internal checks to prevent such activities in the future. The management team should be counseled to raise the issue of data integrity with all staff at monthly meetings, and to underscore its importance. A basic message that needs to be conveyed to all staff by the management team is that inflation of data at any health facility reflects poorly on the performance of *all* staff at the facility, besides undermining national and provincial health goals. Ultimately, the intent of feedback meetings in such cases is to build peer pressure within the facility to prevent such activities in the future. A record of the feedback meeting should be drafted and copies maintained at the health facility, as well as sent to the relevant OD and PHD offices. This will enable the issue to be discussed at future integrated supervision visits, whether these are conducted by OD, PHD, or central supervisors. If a central team has conducted the spot checks and found spurious data, the team must endeavor to visit the concerned OD and PHD offices on its return from the health facility, to draw the attention of their health management teams to the results of the spot checks.

Even where a spot check does *not* reveal spurious entries in patient or client registers, the monitoring team should conduct a Feedback Meeting with the health management team at the health facility. Here the intent is to convey the results of the spot checks and compliment the team on the fact that no spurious entries were found. The opportunity to counsel the management team on the importance of data integrity should also be taken.

A.3 Regular Feedback

One way to improve data quality is by ensuring that regular feedback is provided to those who compile and collect data. In our health system, feedback should flow from the higher level to that immediately below it. For example, the OD should provide regular feedback to staff at health centers and referral hospitals. Similarly, PHDs should provide feedback to the ODs. Finally, the central level, principally the HIS unit at DPHI should regularly provide feedback to PHDs on the status of the data they aggregate and transmit to the central level. Based on anecdotal and other evidence, it seems clear that feedback mechanisms are not implemented on a regular and routine basis, and what feedback there is, is rarely offered in a systematic way.

Current HIS guidelines call for feedback to be offered every month when the routine HIS froms are received at the next level. This feedback need not be elaborate or complex. The health management team with assistance from the HIS staff should peruse the aggregate forms paying particular attention to the following:

- Missing data, or blank cells, rows or columns. In such cases, the lower level authority should be notified of the missing data and asked to clarify the reasons for the same
- Major increases or decreases in data relating to patients and clients treated and counseled. To determine if there are such anomalies in the data, the current month's or quarter's fogures should be compared to both the previous month or quarter, AND the same month or quarter in the previous year. When noticed, lower level jurisdictions may be informed and asked to explain the anomalies. In many cases, there may be entirely valid reasons for these anomalies such as disease outbreaks, natural disasters, etc. Alternatively, the explanation could lie in poor performance of the lower level jurisdiction, and thus not necessarily due to poor quality data. Whatever the reasons, explanations for the same should be asked for, and necessary actions initiated.
- Sample checks of totals and aggregates. In many cases, errors may exist due to mistakes in simple additions or subtractions. Carrying out a sample check of such totals will ensure that accurate data are transmitted upward. Where such mistakes are noticed, they should be brought to the attention of the concerned staff.
- Other problems may relate to the delays in receiving the data from the lower levels in a timely fashion. Wherever such delays are encountered, it is incumbent on the higher level jurisdiction to enquire about the reasons and take such supportive steps as are possible to resolve the problem.

It is not possible in these guidelines to enumerate all of the possible problems that may be encountered with regard to the quality of data. However, the key point is that once such problems are noticed, the higher level jurisdiction must discuss the issue with the lower level jurisdiction, and determine what, if any, assistance can be offered so that the problem is not encountered again. It is

essential that feedback when offered, is provided in a manner that encourages lower level staff to address the problem without losing motivation or affecting morale. The same principles that apply to effective and supportive supervision also apply to the provision of feedback. The key point is to be able to fix the problem so that quality of data are ensured, and not to lay blame or dishearten staff who often function undwer trying circumstances.

It is also important to remember that not all feedback need be negative. Indeed, if a lower level jurisdiction is found to be submitting its reports in a timely and complete manner, it should be complimented for its efficiency. A simple phone call, meeting or written note is sufficient for these purposes. Monthly or quarterly meetings can often be used advantageously for this purpose, since makign public compliments to one jurisdiction is often one way of motivating others to improve their performance.

B. Capacity Building In Data Use For Health Planning

An important element in improving data quality is to build the capacity of health staff to use data for planning, monitoring and evaluation. This follows from the fact that attention to data quality will only occur when health staff begin using the data that they collect in carrying out their day to day tasks. This will build understanding of the importance of data quality and consequently lead to improvements in data quality. It is important to realize that building capacity through training programs is only part of the answer to increasing data use. There are other systemic barriers as well that need to be addressed, and we shall address those later in this section. As a first step however, building capacity in data use is critical.

It is important to recognize that we cannot wait for perfect data *before* we begin using them for planning and monitoring purposes. Indeed, data quality begins to improve when data begin to be used for such purposes. Thus, use of data generates its own momentum for change, and brings pressures to bear for improved data quality. Another key to data quality is to ensure that data are validated and corrected at the level at which they are collected. Local analysis and use of information is thus crucial to the quality of the entire system. Use of information is the ultimate goal of the system and should be supported by feedback mechanisms.

Why are some data collected but never used? To be useful, data must not only be accurate and reliable but also organized in an appropriate way so as to facilitate analysis. This brings us to the crucial difference between data and information. Data are representation of facts or concepts or instructions in a formalized manner e.g., specific characteristics of indvidual patients such as age, sex, place of residence, disease condition, etc. Information however, is the organization of data so as to facilitate interpretation, analysis and use. An example of data organized to present information for antenatal coverage is presented later in this section.

B.1 Training Workshops on Data Use for Local Health Planning

In an effort to promote data quality and use of data for health planning, DPHI organized and conducted a series of provincial level training workshops on Data Use for Local Health Planning in 2002. Participants at the workshops were drawn from provincial, OD, and referral hospital health

management teams. Over 450 such staff were trained over an 11 week period by conducting workshops in each of Cambodia's 24 provinces. Additionally, 50 staff from local and international NGOs and organizations also participated as observers. DPHI plans to conduct similar workshops for health center staff in FY 2005.

A copy of the workshop agenda is presented in the Annex. As can be seen, the workshop curriculum covered the following topics:

Module 1: Basic Epidemiology, Definitions and Terms
Module 2: Epidemiologic Applications
Module 3: Analyzing Local Health Services
Module 4: Monitoring and Evaluation of Local Health Programs
Module 5: Data Integrity and Use at Local Levels

The workshops involved lecturettes, presentations, individual and group work, plenary discussions, and small group exercises. Throughout the workshops the emphasis was on interactive methods, seeking to draw on participants' own experiences. Examples of key presentations and exercises are contained in the Annex. All members of health management teams at provincial, OD and referral hospital leve are encouraged to go through these materials to refresh themselves. An example of organizing data as information that health staff can apply to their own data for planning, management, and monitoring functions is presented below for ease of reference.

B.2 Example: Presenting Data

It is sometimes helpful to make a picture with health data (a graph) to illustrate changes in coverage over time, discover where coverage is lowest, or compare coverage to the target. These pictures can also be used to explain the data to others, such as members of the management committee, other community leaders, and your supervisors. Making a graph using data organizes them so that they yield information which can then be interpreted and analyzed.

	Target	Actual
Quarter 1	75	50
Quarter 1	75	30
Quarter 1	75	70
Quarter 1	75	52
FY 2004	300	202

Let us suppose the above Table presents data on antenatal care coverage for 2+ visits at a health center for the financial year 2004. The total catchment area population of pregnant women is 500. We have set a target of 300 for the year, based on a percentage of 60% of all pregnant women. Each quarter you would expect about 75 visits (second column in Table above). Note that a target is different from the denominator in an indicator. The denominator represents 100% of all possible second+ antenatal visits, in this case, 500. A target is usually a certain portion of the total target population that you believe you can reach in a specific time period. It can be expressed as a percentage or a number. Thus, we want 60% of all pregnant women to attend at least two antenatal

visits this year. Based on the Table above, your target would be 60% of 500, or 300 (calculation: 500 x 0.6 = 300). Thus, over the year you would plan to reach at least 300 women. Each quarter you would therefore plan to reach 75 women, or one quarter of 300. The third column represents the actual coverage achieved in each quarter, for a total of 202 pregnant women in the year.

As an example, you can make a graph that shows changes in antenatal coverage over time, as in Figure 1 below. The key point here is that *cumulative coverage* is depicted. To do so, simply record a marker or dot across from the total number of two+ antenatal visits in the first quarter. For the next quarter, *add* the total number of visits to that of the first quarter, and so on for the rest of the year. You can then compare one quarter with the next to see if your total coverage is improving. Each point is connected with a line until the year is complete. In the graph on the following page, this is the bottom line (actual coverage). You can also place markers or dots on the graph relating to the coverage target set for your area. Next, connect the dots to make a line that shows the cumulative progress made *if* you reach the quarterly target throughout the year. In Figure 1 on the following page, this is the top line (coverage target).

Now, look at the two lines to compare your actual numbers to the target. In the example below, actual coverage is lower than the target for every quarter. In the first quarter, coverage almost reaches the target. As the year progresses, coverage falls further and further from the target. According to the graph, nearly a 100 more women would have to come to the health center for a second+ antenatal visit to reach the annual target. Thus, a graph presenting target and actual coverage in this manner becomes a simple way of converting data into information to aid planning, management, and monitoring functions of a health center management team. Of course, similar graphs can be employed at referral hospital, OD, and provincial levels as well, based on relevant data.

Fig. 1 Antenatal Care Coverage, FY 2004
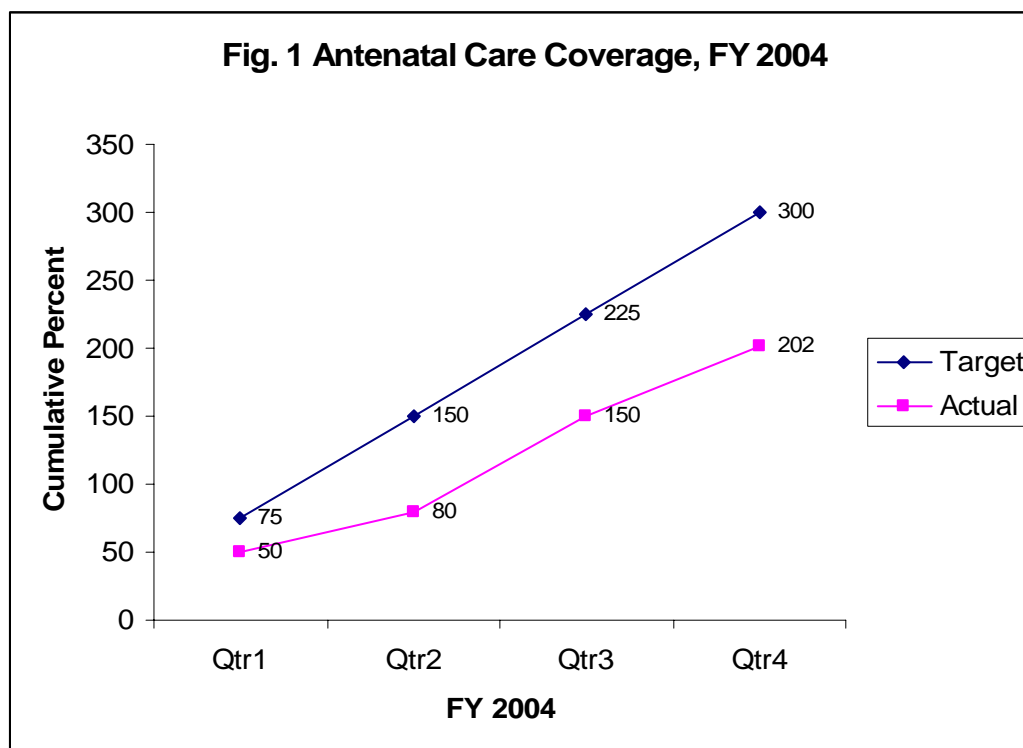
ANNEXES:

1- HIS Forms
2- Health Activity Monitoring Tables
3- Curriculum for Training Workshops on Data Use for Local Health Planning

REFERENCE:

- World Health Organization (2003). *Improving Data Quality: A Guide for developing Countries.* Regional Office for the Western Pacific, World Health Organization.

MONTHLY REPORT OF ACTIVITES   First to the last day of Month _____ Year 200___

Province: _____

Operational District: _____   Commune Covered _____

HEALTH CENTER : _____   Code # _____   Population covered _____

Nb of poor people exempted: ……………….(………….%)   Nb. of poor people supported by equity fund: …………(……..%)

I - CURATIVE CONSULTATION

1- Volume of Activities by Zone	Zone A	Zone B	Zone C	Male	Female	Total
Total New Cases						
Total Consultations						

Zone A : Area of Village where health center is located .
Zone B : Outside zone A with catchments area of health center .
Zone C : Other catchments areas

2 - Health Problems (New Cases)	0 - 4 Years	5 – 14 Years	15 - 49 Years	≥ 50 Years	Total	Referred to
Simple diarrhea						
Severe diarrhea						
Dysentery						
Upper ARI						
Lower ARI						
Cough > 21 days						
Malaria						
Dengue fever						
Measles						
Diphtheria						

Acute Flaccid Paralysis						
Neonatal tetanus						
Other tetanus						
High blood pressure						
Skin infection						
Urethral discharge						
Vaginal discharge						
Genital ulcer						
Genital warts						
Road Accidents						
Land Mine Accidents						
Eye diseases						
Goiter						
Substance abuse						
Other Mental Health						
Others						
TOTAL						
Malnutrition (Weight/Age)						

II – Hospitalization (former district hospital)

1. **EVALUATION OF ACTIVITIES** *(Only for health centers with beds available)*

	# of bed	Authorized discharge	Unauthorized discharge	Transfer	Death	HMR①	EHD	ALS ②	BOR ③
Services									
Tuberculosis									

① HMR (Hospital Mortality Rare) = # of Deaths x 100 / Total discharges (authorized discharge , unauthorized discharge , transfer , death)

② ALS   (Average Length of Stays) = # of EHD / Total discharge

③ BOR (Bed Occupancy Rate)   = # of EHD x 100 / # of bed x day # of Month

EHD (Effective Hospitalization Day): Calculate by Movement Report of Service

2. EVALUATION OF FORMER DISTRICT HOSPITAL MORBIDITY AND MORTALITY

Discharge Diagnosis	0 -4 Years		5 – 14 Years		15 - 49 Years		≥ 50 Years		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Simple Malaria										
Severe Malaria										
Diarrhea										
Cholera										
Dysentery										
ARIs										
Simple Dengue										
Severe Dengue										
Typhoid Fever										
Non Tubercular Meningitis										
Measles										
Acute Flaccid Paralysis										
Diphtheria										
Pertussis										
Neonatal Tetanus										
Other Tetanus										
Tuberculosis										
AIDS (Clinic)										
STD Male										
STD Female										
Gynecological Pathology										
Delivery										
Road Accidents										
Land Mine Accidents										
High blood pressure										
Heart Diseases										
Diabetes										
Eye Diseases										
Marasmus /kwashiorkor										
Substance abuse										
Other Mental Health										
Others										
Total										

III -Technical Laboratory Activities *(Only for health center with laboratory available)*

1. Volume of laboratory activities.

# Examination									# Positive Examination							
													Stool			
* BK	Blood Formula	VDRL	HIV	VCCT	Urine	Stool	Genital Discharge	Others Examination	** BK+	VDRL	HIV+	VCCT	Ascarie	Tania	Amiboes	Shistosoma

* BK   : Total slide examined included slide controlled
** BK+ : Slide diagnosis of new cases
VDRL : Venereal Disease Research Laboratory ; VCCT : Voluntary Counseling Confidential Testing

2. Malaria

2.1 Slides

Slide diagnosis	0 - 4 years	5 - 14 years	15 – 49 years		≥ 50years		TOTAL
			M	F	M	F	
Positive							(1)
Falciparum							
Vivax							
Mixed							
Negative							(2)

Total slide controlled	(3)
Total slide examined	(1+2+3)

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2.2 Dipstick

Dipstick diagnosis	0 - 4 Years	5 - 14 Years	15 – 49 Years		≥ 50 Years		TOTAL
			M	F	M	F	
Positive							(1)
Falciparum							
Vivax							
Negative							(2)

Total dipstick | | (1+2) |

2. 3 Deforming: Mebendazole

Mebendazole Provided	Children 12-23 Months	Children 24-59 Months	Children 6-15 Years		Pregnancies 4-9 Months	Lactating Mothers
			Male	Female		
At HC						
Outreach						
Primary school						
Total						

IV. Antenatal And Post-Partum Care, And Delivery

1. Antenatal and Detection of pregnancies at risk.

1st Visit (1)	2nd Visit (2)	3rd Visit (3)	4th Visit (4)	5th Visit (5)	Total Visit 1+2+3+4+5+…	Pregnancies at risk detected	Referred to	VCCT Volunteers Pregnancies	HIV+ Pregnancies

VCCT : Voluntary Counseling Confidential Testing

2. Post-partum care

1st Visit (1)	2nd Visit (2)	3rd Visit (3)	Total Visit (1)+(2)+(3)+ ….

3. Receiving Folic acid and iron supplementation

# of Pregnancies received iron (at HC)			Deliveries received iron at HC 42 tablets (at HC)	# of Pregnancies received iron outside of HC (Outreach)			Deliveries received iron outside of HC 42 tablets (Outside HC)
1st Visit (60 tablets)	2nd Visit (30 tablets)	3rd +… Visit (30 tablets)		1st Visit (60 tablets)	2nd Visit (30 tablets)	3rd +… Visit (30 tablets)	

4 . Deliveries

Places	Total Deliveries	Normal	Dystocia (Forceps/Ventouses)	Hemorrhage	Deliveries received PMTCT	Maternal Deaths	Referred to
At Health Center							
At Home : Health Staff							
At Home : TBAs							
TOTAL							

PMTCT : Protection Mother to Child Transmission

5. Spontaneous and Induced Abortion

	Total	Referred to
Spontaneous Abortion		
Induced Abortion		

6. Causes of maternal deaths

Hemorrhage	Obstructed Labor	Eclampsiae	Ruptured Uterus	Spontaneous Abortion	Induced Abortion	Other Causes

7. Child Births

Weight at Birth	Not weighed	< 2 Kg		2Kg and < 2,5 Kg		≥ 2,5 Kg		Total Live Births *		Neonatal death		Still Birth
		M	F	M	F	M	F	M	F	M	F	
# of Children												

*All births excluding Stillbirths.

V. Birthspacing

Acceptors / Methods	Pills	Injections (dose)	Condoms (unit)	IUD (unit)	Norplant (Unit)	Total
New Clients during the month						
Total Clients during the month						
Contraceptives / material consumption						
New Acceptors during the month						
Discontinue during the month						
Current Users						

VI. Expanded Program on Immunization

1. Children under 1 Year

	# Sessions planned	# Sessions Conducted	BCG # Children	HepB at Birth # Children			OPV1 # Children	OPV 2 # Children	OPV 3 # Children	DPT1-HepB1 # Children	DPT2-HepB2 # Children	DPT3-HepB3 # Children	Rouvax # Children	Full Immunized # Children
				< 24h	24h and < 3days	3 – 7 days								
At HC														
Outreach														

2. Pregnant women

	TT1 # Women	TT2 # Women	TT3 # Women	TT4 # Women	TT5 # Women
At HC					
Outreach					

3. Non-pregnant women aged 15-44

	TT1 # Women	TT2 # Women	TT3 # Women	TT4 # Women	TT5 # Women
At HC					
Outreach					

4. Children > 1 year

	OPV 1 # Children	OPV 2 # Children	OPV 3 # Children	DPT1-HepB1 # Children	DPT2-HepB2 # Children	DPT3-HepB3 # Children	Rouvax # Children
At HC							
Outreach							

VII. Vitamin A Program

Prevention			Treatment		
Children 6-11months # Children	Children 12– 59 months # Children	Post Delivery within 8 weeks * # Women	Exophthalmia-Night blindness # Children	Measles # Children	Malnutrition / Continued Diarrhea / Chronic Diarrhea # Children

*Just delivery and lactating mothers (within 2 months after delivery)

VIII – Leprosy Activities

	Treatment at The beginning of the Month	New cases detected During the Month			Completed treatment during the Month	Relapses/Defaulter Death & Migration	Under treatment at the end of the month
		Total NC	Dis.Gr2	<15 y			
PB1							
PB2-5							
MB							
Total							
Rate		/100,000	%	%			/10,000

Note :
- PB1 = Single Lesion Paucibacillary

- PB 2-5 = Paucibacillary

- MB = Multibacillary

- Dis.Gr2 = Disability Grade 2

IX - Dental Activities

# of Patients	Extractions		Restoration		Scaling	Others	Referred
	Primary Teeth	Permanent Teeth	Temporary	Permanent Teeth			
Child < 15 year							
Adult ≥15 year							
Total							

X. Other Activities & Comments:

Enumerate main problems or particular events which affect good functioning of health center, i.e. activities that you had developed and are not shown in headings/columns of this report.

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Sending Date of Report:_____

Signature of Health Center Director: _____   Signature of responsible:_____

Province :_____

Operational District **:**_____   First to the last day of Month _____Year 200____

HOSPITAL : _____
_____Code # _____   Population covered_____

Nb. of poor people exempted: …………….(………….%)   Nb. of poor people supported by equity fund: …………(…..%)

I . # of new cases referred from HC and # of new cases self-referred at Hospital

1 - Volume of Activities	Local District	Other District	Male	Female	Total
# of new cases referred from HC					
# of new cases self-referred at Hospital					
Total Consultations					

2 - Health Problems (New Cases)	0 - 4 Years	5 – 14 Years	15 - 49 Years	≥ 50 Years	Total
Simple diarrhea					
Severe diarrhea					
Dysentery					
Upper ARI					
Lower ARI					
Cough > 21 days					
Malaria					
Dengue fever					
Measles					
Diphtheria					
Pertussis					

Acute Flaccid Paralysis					
Neonatal tetanus					
Other tetanus					
High blood pressure					
Skin infection					
Urethral discharge					
Vaginal discharge					
Genital ulcer					
Genital warts					
Road Accidents					
Land Mine Accidents					
Eye Diseases					
Goiter					
Substance abuse					
Other Mental Health					
Others					
Total					
Malnutrition (Weight/Age)					

II. HOSPITAL MORBIDITY AND MORTALITY

Total Discharged by sex	Male		Female	
	Cases	Deaths	Cases	Deaths

Discharge Diagnosis	0 – 4 Years		5 – 14 Years		15 – 49 Years		≥ 50 Years		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Diarrhea										
Dysentery										
Cholera										
ARIs										
Simple malaria										
Severe malaria										
Dengue fever										
Dengue/Shock										
Typhoid fever										
Measles										
Diphtheria										
Pertussis										
AF Paralysis										
Neonatal tetanus										
Other tetanus										
High blood pressure										
Skin infection										
STD Male										

Discharge Diagnosis	0 – 4 Years		5 – 14 Years		15 – 49 Years		≥ 50 Years		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
STD Female										
Gynecology										
Delivery										
Spontaneous abortion										
Induced abortion										
AIDS (Clinic)										
Tuberculosis										
Non-Tuberculosis Meningitis										
Hep B										
Breast cancer										
Lung cancer										
Liver cancer										
Cervix cancer										
Uterus cancer										
Diabetics										
Cardiopathy										
Cataract										
Trachoma										
Corneal ulcer										
Glaucoma										
Marasmus /kwashiorkor										
Schistosomiasis										
Road Accidents										
Land Mine Accidents										
Goiter										
Substance abuse										
Other Mental Health										
Others*										
TOTAL										

* Others : Includes all cases, all surgical and medical problems, not listed in this Table.

III. HOSPITAL SERVICES

1. General Activities

1. General Activities	MEDICINE	SURGERY	PEDIATRIC	MATERNITY	GYNECOLOGY	OTHERS	TOTAL	TB
Number of beds								
Authorized discharge								
Unauthorized discharge								
Referred to								
Death								
HMR ①								
EHD								
ALS ②								
BOR ③								

① HMR = Nb of Deaths x 100 / Total discharge (authorized discharge , unauthorized discharge , transfer , death)
② ASL = Nb of EHD / Total discharge ③ BOR = Nb of EHD x 100 / Nb of bed x day Nb of Month
EHD (Effective Hospitalization Day) : Calculate by Movement Report of Service

2 - Surgical Activities

Interventions	Emergency	Scheduled	Total (1)	Death < 48 Hour(2)	Fatality Rate (2/1x100)
Eye					
Nose– Ear–Throat					
Abdomen					
Tubal Ligation					
Vasectomia					
Gyneco-Obstetrical					
Amputations					
Others					
Total					
Minor surgical activities					

3. Vitamin A Program

Prevention			Treatment		
Children 6-11months # Children	Children 12– 59 months # Children	Post Delivery within 8 weeks* # Women	Exophthalmia-Night blindness # Children	Measles # Children	Malnutrition / Continued Diarrhea / Chronic Diarrhea # Children

*Just delivery and lactating mothers (within 2 months after delivery)

4 – Leprosy Activities

	Treatment at The beginning of the Month	New cases detected During the Month			Completed treatment during the Month	Relapses/Defaulter Death & Migration	Under treatment at the end of the month
		Total NC	Dis.Gr2	<15 y			
PB1							
PB2-5							
MB							
Total							
Rate		/100,000	%	%			/10,000

Note :

- PB1   =   Single Lesion Paucibacillary

- PB 2-5   =   Paucibacillary

- MB   =   Multibacillary

- Dis.Gr2 =   Disability Grade 2

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5 - Dental Activities

# of Patients	Extractions		Restoration		Scaling	Minor Oral Surgery	Root Canal Therapy	Denture		Others
	Primary Teeth	Permanent Teeth	Temporary	Permanent				Fixed	Removable	
Child < 15 year										
Adult ≥ 15 year										
Total										

6 – Obstetrical Activities and Births

	Total #	Referred From	Referred to	Maternal Deaths
6.1 - Spontaneous Abortion				
- Induced Abortion				

6.2 - Deliveries

		Total #	Referred From	Referred to	Maternal Deaths
Normal Delivery					
Complicated Delivery	Cesarean section				
	Bleeding				
	Eclampsiae				
	Ruptured Uterus				
	Septicemia				
	Other cause				
Total					
Deliveries received PMTCT					

6 - 3 Weight at Birth

Weight at Birth	< 2 Kg		2Kg and < 2,5 Kg		≥ 2,5 Kg		Total Live Births *		Neonatal death		Still Births
	M	F	M	F	M	F	M	F	M	F	
# of Children											

*The total Live-births does not include Still births.

6 – 4. Folic acid and iron supplementation

Deliveries received Iron-Folic acid at RH : 42 tablets

IV . LABORATORY ACTIVITIES

1. Volume of laboratory activities.

# Examination									# Positive Examination							
													Stool			
* BK	Blood Formula	VDRL	HIV	VCCT	Urine	Stool	Genital Discharge	Others Examination	** BK+	VDRL	HIV+	VCCT	Ascarie	Tania	Amiboes	Shistosoma

* BK : Total slide examined included slide controlled
** BK+ : Slide diagnosis of new cases
VDRL : Venereal Disease Research Laboratory ; VCCT : Voluntary Counseling Confidential Testing

2 . Malaria
2.1- Slides

Slide diagnosis	0 - 4 year	5 - 14 year	15 – 49 year		≥ 50year		TOTAL
			M	F	M	F	
Positive							(1)
Falciparum							
Vivax							
Mixed							
Negative							(2)

Total slide controlled　(3)

Total slide examined　(1+2+3)

2.2 Dipstick

Dipstick diagnosis	0 - 4 Year	5 - 14 Year	15 – 49 Year		≥ 50 Year		TOTAL
			M	F	M	F	
Positive							(1)
Falciparum							
Vivax							
Negative							(2)

Total dipstick examined　(1+2)

44

6.2 - Deliveries

		Total #	Referred From	Referred to	Maternal Deaths
Normal Delivery					
Complicated Delivery	Cesarean section				
	Bleeding				
	Eclampsiae				
	Ruptured Uterus				
	Septicemia				
	Other cause				
Total					
Deliveries received PMTCT					

6 - 3 Weight at Birth

Weight at Birth	< 2 Kg		2Kg and < 2,5 Kg		≥ 2,5 Kg		Total Live Births *		Neonatal death		Still Births
	M	F	M	F	M	F	M	F	M	F	
# of Children											

*The total Live-births does not include Still births.

6 – 4. Folic acid and iron supplementation

Deliveries received Iron-Folic acid at RH : 42 tablets

VIII - OTHER ACTIVITIES AND COMMENTS

Enumerate main problems or particular events which affects good functioning of hospital, i.e. activities that you had developed and are not shown in headings/columns of this report.

_____

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Sending Date of report:_____

Signature of Hospital Director:_____ Signature of responsible:_____

MONTHLY REPORT OF ACTIVITES

PROVINCE : _____

First to the last day of Month _____ Year 200__

DISTRICT: _____

Code # _____   Population covered _____

Nb. of poor people exempted: ………………(………….%)   Nb. of poor people supported by equity fund: …………(……..%)

A - SYNTHESIS OF ACTIVITES OF HEALTH CENTER

TRANSMISSION OF REPORTS AND POPULATION CONCERNED

Number of health centers	
Number of reports received	
Population of all health centers that sent report	

I - CURATIVE CONSULTATION

1- Volume of Activities by Zone	Zone A	Zone B	Zone C	Male	Female	Total
Total New Cases						
Total Consultations						

Zone A : Area of Village where health center is located .
Zone B : Outside zone A with catchments area of health center .
Zone C : Other catchments areas

2 - Health Problems (New Cases)	0 - 4 Years	5 – 14 Years	15 - 49 Years	≥ 50 Years	Total	Referred to
Simple diarrhea						
Severe diarrhea						
Dysentery						
Upper ARI						
Lower ARI						
Cough > 21 days						
Malaria						
Dengue fever						
Measles						
Diphtheria						

Acute Flaccid Paralysis						
Neonatal tetanus						
Other tetanus						
High blood pressure						
Skin infection						
Urethral discharge						
Vaginal discharge						
Genital ulcer						
Genital warts						
Road Accidents						
Land Mine Accidents						
Eye diseases						
Goiter						
Substance abuse						
Other Mental Health						
Malnutrition (Weight/Age)						
Others						
TOTAL						

II – HOSPITALISATION (former district hospital **)**

1. **EVALUATION OF ACTIVITIES** *(Only for health centers with beds available)*

	# of bed	Authorized discharge	Unauthorized discharge	Transfer	Death	HMR①	EHD	ALS ②	BOR ③
Services									
Tuberculosis									

① HMR (Hospital Mortality Rare) = # of Deaths ' x 100 / Total discharge (authorized discharge , unauthorized discharge , transfer , death   )

② ALS   (Average Length of Stays)   =   # of EHD / Total discharge

③ BOR (Bed Occupancy Rate)   =   # of EHD x 100 / # of bed x day # of Month

EHD (Effective Hospitalization Day) : Calculate by Movement Report of Service

2. EVALUATION OF FORMER DISTRICT HOSPITAL MORBIDITY AND MORTALITY

Discharge Diagnosis	0 -4 Years		5 – 14 Years		15 - 49 Years		≥ 50 Years		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Simple Malaria										
Severe Malaria										
Diarrhea										
Cholera										
Dysentery										
ARIs										
Simple Dengue										
Severe Dengue										
Typhoid Fever										
Non Tubercular Meningitis										
Measles										
Acute Flaccid Paralysis										
Diphtheria										
Pertussis										
Neonatal Tetanus										
Other Tetanus										
Tuberculosis										
AIDS (Clinic)										
STD Male										
STD Female										
Gynecological Pathology										
Delivery										
Road Accidents										
Land Mine Accidents										
High blood pressure										
Heart Disease										
Diabetics										
Eye Diseases										
Marasmus /kwashiorkor										
Substance abuse										
Other Mental Health										
Others										
Total										

III -TECHNICAL LABORATORY ACTIVITIES *(Only for health center with laboratory available)*

1. <u>Volume of laboratory activities .</u>

			# Examination										# Positive Examination				
															Stool		
* BK	Blood Formula	VDRL	HIV	VCCT	Urine	Stool	Genital Discharge	Others Examination	** BK+	VDRL	HIV+	VCCT	Ascarie	Tania	Amiboes	Shistosoma

* BK : Total slide examined included slide controlled
** BK+ : Slide diagnosis of new cases
VDRL : Venereal Disease Research Laboratory ; VCCT : Voluntary Counseling Confidential Testing

2 . <u>Malaria</u>
2.1 <u>Slides</u>

Slide diagnosis	0 - 4 years	5 - 14 years	15 – 49 years		≥ 50years		TOTAL	
			M	F	M	F		
Positive								(1)
Falciparum								
Vivax								
Mixed								

Negative								(2)

Total slide controlled	(3)
Total slide examined	(1+2+3)

2.2 Dipstick

Dipstick diagnosis	0 - 4 Years	5 - 14 Years	15 – 49 Years		≥ 50 Years		TOTAL
			M	F	M	F	
Positive							(1)
Falciparum							
Vivax							
Negative							(2)

Total dipstick   (1+2)

2 . 3 Deworming : Mebendazole

Mebendazole Provided	Children 12-23 Months	Children 24-59 Months	Children 6-15 Years		Pregnancies 4-9 Months	Lactating Mothers
			Male	Female		
At HC						
Outreach						
Primary school						
Total						

IV. ANTENATAL AND POST-PARTUM CARE, AND DELIVERY

1. Antenatal and Detection of pregnancies at risk.

1st Visit (1)	2nd Visit (2)	3rd Visit (3)	4th Visit (4)	5th Visit (5)	Total Visit 1+2+3+4+5+…	Pregnancies at risk detected	Referred to	VCCT Volunteers Pregnancies	HIV+ Pregnancies

VCCT : Voluntary Counseling Confidential Testing

2 . Post-partum care

1st Visit (1)	2nd Visit (2)	3rd Visit (3)	Total Visit (1)+(2)+(3)+ ….

3 . Receiving Folic acid and iron supplementation

# of Pregnancies received iron (at HC)			Deliveries received iron at HC 42 tablets (at HC)	# of Pregnancies received iron outside of HC (Outreach)			Deliveries received iron outside of HC 42 tablets (Outside HC)
1st Visit (60 tablets)	2nd Visit (30 tablets)	3rd +… Visit (30 tablets)		1st Visit (60 tablets)	2nd Visit (30 tablets)	3rd +… Visit (30 tablets)	

4 . Deliveries

Places	Total Deliveries	Normal	Dystocia (Forceps/Ventouses)	Hemorrhage	Deliveries received PMTCT	Maternal Deaths	Referred to
At Health Center							
At Home : Health Staff							
At Home : TBAs							
TOTAL							

PMTCT : Protection Mother to Child Transmission

5. Spontaneous and Induced Abortion

	Total	Referred to
Spontaneous Abortion		
Induced Abortion		

6. Causes of maternal deaths

Hemorrhage	Obstructed Labor	Eclampsiae	Ruptured Uterus	Spontaneous Abortion	Induced Abortion	Other Causes

7 . Child Births

Weight at Birth	Not weighed	< 2 Kg		2Kg and < 2,5 Kg		≥ 2,5 Kg		Total Live Births *		Neonatal death		Still Birth
		M	F	M	F	M	F	M	F	M	F	
# of Children												

*All births excluding Stillbirths.

V. Birthspacing

Acceptors / Methods	Pills	Injections (dose)	Condoms (unit)	IUD (unit)	Norplant (Unit)	Total
New Clients during the month						
Total Clients during the month						
Contraceptives / material consumption						
New Acceptors during the month						
Discontinue during the month						
Current Users						

VI. Expanded Program on Immunization

1. Children under 1 Year

	# Sessions planned	# Sessions Conducted	BCG # Children	HepB at Birth # Children			OPV1 # Children	OPV 2 # Children	OPV 3 # Children	DPT1-HepB1 # Children	DPT2-HepB2 # Children	DPT3-HepB3 # Children	Rouvax # Children	Full Immunized # Children
				< 24h	24h and < 3days	3 – 7 days								
At HC														
Outreach														

2. Pregnant women

	TT1 # Women	TT2 # Women	TT3 # Women	TT4 # Women	TT5 # Women
At HC					
Outreach					

3. Non-pregnant women aged 15-44

	TT1 # Women	TT2 # Women	TT3 # Women	TT4 # Women	TT5 # Women
At HC					
Outreach					

4. Children > 1 year

	OPV 1 # Children	OPV 2 # Children	OPV 3 # Children	DPT1-HepB1 # Children	DPT2-HepB2 # Children	DPT3-HepB3 # Children	Rouvax # Children
At HC							
Outreach							

VII. Vitamine A Programme

Prevention			Treatment		
Children 6-11months # Children	Children 12– 59 months # Children	Post Delivery within 8 weeks * # Women	Exophthalmia-Night blindness # Children	Measles # Children	Malnutrition / Continued Diarrhea / Chronic Diarrhea # Children

* Just delivery and lactating mothers (within 2 months after delivery)

VIII – Leprosy Activities

	Treatment at The beginning of the Month	New cases detected During the Month			Completed treatment during the Month	Relapses/Defaulter Death & Migration	Under treatment at the end of the month
		Total NC	Dis.Gr2	<15 y			
PB1							
PB2-5							
MB							
Total							
Rate		/100,000	%	%			/10,000

Note :
- PB1   = Single Lesion Paucibacillary

- PB 2-5 = Paucibacillary

- MB   = Multibacillary

- Dis.Gr2 = Disability Grade 2

IX - Dental Activities

# of Patients	Extractions		Restoration		Scaling	Others	Referred
	Primary Teeth	Permanent Teeth	Temporary	Permanent Teeth			
Child < 15 year							
Adult ≥15 year							
Total							

B - SYNTHESIS OF ACTIVITES OF HOSPITAL

I . # of new cases referred from HC and # of new cases self-referred at Hospital

1 - Volume of Activities	Local District	Other District	Male	Female	Total by Sexes
# of new cases referred from HC					
# of new self-referred at Hospital					
Total Consultation					

2 - Health Problems (New Cases)	0 - 4 Years	5 – 14 Years	15 - 49 Years	≥ 50 Years	Total
Simple diarrhea					
Severe diarrhea					
Dysentery					
Upper ARI					
Lower ARI					
Cough > 21 days					
Malaria					
Dengue fever					
Measles					
Diphtheria					

Pertussis					
Acute Flaccid Paralysis					
Neonatal tetanus					
Other tetanus					
High blood pressure					
Skin infection					
Urethral discharge					
Vaginal discharge					
Genital ulcer					
Genital warts					
Road Accidents					
Land Mine Accidents					
Eye Diseases					
Goiter					
Substance abuse					
Other Mental Health					
Others					
Total					
Malnutrition (Weight/Age)					

II. HOSPITAL MORBIDITY AND MORTALITY

	Male		Female	
	Cases	Deaths	Cases	Deaths
Total Discharged by sex				

Discharge Diagnosis	0 – 4 Years		5 – 14 Years		15 – 49 Years		≥ 50 Years		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Diarrhea										
Dysentery										
Cholera										
ARIs										
Simple malaria										
Severe malaria										
Dengue fever										
Dengue/Shock										
Typhoid fever										
Measles										
Diphtheria										
Pertussis										
AF Paralysis										
Neonatal tetanus										
Other tetanus										
High blood pressure										
Skin infection										
STD Male										

60

Discharge Diagnosis	0 – 4 Years		5 – 14 Years		15 – 49 Years		≥ 50 Years		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
STD Female										
Gynecology										
Delivery										
Spontaneous abortion										
Induced abortion										
AIDS (Clinic)										
Tuberculosis										
Non-Tuberculosis Meningitis										
Hep B										
Breast cancer										
Lung cancer										
Liver cancer										
Cervix cancer										
Uterus cancer										
Diabetics										
Cardiopathy										
Cataract										
Trachoma										
Corneal ulcer										
Glaucoma										
Marasmus /kwashiorkor										
Schistosomiasis										
Road Accidents										
Land Mine Accidents										
Goiter										
Substance abuse										
Other Mental Health										
Others*										
TOTAL										

* Others : Includes all cases, all surgical and medical problems, not listed in this Table.

III. HOSPITAL SERVICES

1 . General Activities

1 . General Activities	MEDICINE	SURGERY	PEDIATRIC	MATERNITY	GYNECOLOGY	OTHERS	TOTAL	TB
Number of beds								
Authorized discharge								
Unauthorized discharge								
Referred to								
Death								
HMR ①								
EHD								
ALS ②								
BOR ③								

① HMR = Nb of Deaths ' x 100 / Total discharge (authorized discharge , unauthorized discharge , transfer , death   )
② ASL   = Nb of EHD / Total discharge ③ BOR = Nb of EHD x 100 / Nb of bed x day Nb of Month
EHD (Effective Hospitalization Day) : Calculate by Movement Report of Service

2 - Surgical Activities

Interventions	Emergency	Scheduled	Total (1)	Death < 48 Hour(2)	Fatality Rate (2/1x100)
Eye					
Nose– Ear–Throat					
Abdomen					
Tubal Ligation					
Vasectomia					
Gyneco-Obstetrical					
Amputations					
Others					
Total					
Minor surgical activities					

3. Vitamin A Program

Prevention			Treatment		
Children 6-11months # Children	Children 12– 59 months # Children	Post Delivery within 8 weeks * # Women	Exophthalmia-Night blindness # Children	Measles # Children	Malnutrition / Continued Diarrhea / Chronic Diarrhea # Children

* Just delivery and lactating mothers (within 2 months after delivery)

4 – Leprosy Activities

	Treatment at The beginning of the Month	New cases detected During the Month			Completed treatment during the Month	Relapses/Defaulter Death & Migration	Under treatment at the end of the month
		Total NC	Dis.Gr2	<15 y			
PB1							
PB2-5							
MB							
Total							
Rate		/100,000	%	%			/10,000

Note :
- PB1   = Single Lesion Paucibacillary
- PB 2-5 = Paucibacillary
- MB   = Multibacillary
- Dis.Gr2 = Disability Grade 2

5 - Dental Activities

# of Patients	Extractions		Restoration		Scaling	Minor Oral Surgery	Root Canal Therapy	Denture		Others
	Primary Teeth	Permanent Teeth	Temporary	Permanent				Fixed	Removable	
Child < 15 year										
Adult ≥ 15 year										
Total										

6 – Obstetrical Activities and Births

	Total #	Referred From	Referred to	Maternal Deaths
6.1 - Spontaneous Abortion				
- Induced Abortion				

6.2 - Deliveries

		Total #	Referred From	Referred to	Maternal Deaths
Normal Delivery					
Complicated Delivery	Cesarean section				
	Bleeding				
	Eclampsiae				
	Ruptured Uterus				
	Septicemia				
	Other cause				
Total					
Deliveries received PMTCT					

6 - 3 Weight at Birth

Weight at Birth	< 2 Kg		2Kg and < 2,5 Kg		≥ 2,5 Kg		Total Live Births *			Neonatal death		Still Births
	M	F	M	F	M	F	M	F		M	F	
# of Children												

*The total Live-births does not include Still births.

6 - 4 Receiving Folic acid and iron supplementation

Deliveries received Iron-Folic acid at RH : 42 tablets

IV . LABORATORY ACTIVITIES

1 - Volume of laboratory activities .

# Examination									# Positive Examination							
													Stool			
* BK	Blood Formula	VDRL	HIV	VCCT	Urine	Stool	Genital Discharge	Others Examination	** BK+	VDRL	HIV+	VCCT	Ascarie	Tania	Amiboes	Shistosoma

* BK   : Total slide examined included slide controlled
** BK+ : Slide diagnosis of new cases
VDRL : Venereal Disease Research Laboratory ; VCCT : Voluntary Counseling Confidential Testing

2 . Malaria

2.1- Slides

Slide diagnosis	0 - 4 year	5 - 14 year	15 – 49 year		≥ 50year		TOTAL	
			M	F	M	F		
Positive								(1)
Falciparum								
Vivax								
Mixed								
Negative								(2)

Total slide controlled   (3)

Total slide examined   (1+2+3)

2.2 Dipstick

Dipstick diagnosis	0 - 4 Year	5 - 14 Year	15 – 49 Year		≥ 50 Year		TOTAL	
			M	F	M	F		
Positive								(1)
Falciparum								
Vivax								
Negative								(2)

Total dipstick examined   (1+2)

V - BLOOD BANK

1. Collection and Examination

Type	# of blood donors	Sex		Blood Group				Serology									
								HIV +		(B)HBs+		(C)HCV+		Syphilis+		Malaria+	
		M	F	A	B	O	AB	M	F	M	F	M	F	M	F	M	F
ISD																		
IRD																		
ED																		
Total																		

Note : - ISD = Internal Spontaneous Donor - IRD = Internal Replacement Donor
- ED   = External Donor   - HCV = Hepatic C Virus

2 - Consumption

SERVICES	MEDICINE	PEDIATRIC	SURGERY	MATERNITY	OTHERS	TOTAL
Units consumed						

VI - X-RAY , ECHOGRAPHY, SCANNER,MAMMOGRAPHY,FIBROSCOPY,ENDOSCOPY AND COBALTHERAPY

	X - Ray	Echography	Scanner	Mammography	Fibroscopy	Endoscopes	Copal therapy
# of exam							

VII - Kinetic Therapy

Kinetic Therapy		
Nb of Patient		
Nb of Time		

C - COMMENTS AND OTHER ACTIVITIES. (Enumerate main problems or particular events that impeded a good functioning of district. Cite activities that you had developped that are not listed in headings/column of this report.

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Sending date of the report:_____

Signature of district director :_____   **Signature of responsible for HIS:**_____

Ministry of Health - Planning and Health Information Department   **PRO4**

MONTHLY REPORT OF ACTIVITES

PROVINCE: _____ Code # ___

First to the last day of Month _____ Year 200___

Province Population [   ]

Total number of Health centers [   ]

Number of health centers that sent report [   ]

Pop .covered by health centers which sent their report [   ]

Nb. of poor people exempted: ……………………….(………….%)   Nb. of poor people supported by equity fund: ………………(……..%)

A - SYNTHESIS OF ACTIVITES OF HEALTH CENTER

I - Outpatient Consultation at Health Center

Operational District	Total New Cases						Total Consultation						Nb of contacts per episode (2 / 1)
	Zone A	Zone B	Zone C	Male	Female	Total (1)	Zone A	Zone B	Zone C	Male	Female	Total (2)	
TOTAL													

68

2 - Health Problems (New Cases)	0 - 4 Year	5 – 14 Year	15 - 49 Year	≥ 50 Year	Total	Referred to
Simple diarrhea						
Severe diarrhea						
Dysentery						
Upper ARI						
Lower ARI						
Cough > 21 days						
Malaria						
Dengue fever						
Measles						
Diphtheria						
Pertussis						
Acute Flaccid Paralysis						
Neonatal tetanus						
Other tetanus						
High blood pressure						
Skin infection						
Urethral discharge						
Vaginal discharge						
Genital ulcer						
Genital warts						
Road Accidents						
Land Mine Accidents						
Eyes diseases						
Goiter						
Substance abuse						
Other Mental Health						
Others						
TOTAL						
Malnutrition (Weight/Age)						

II – HOSPITALISATION (former district hospital)

1. **EVALUATION OF ACTIVITIES** *(Only for health centers with beds available)*

Non-tuberculosis Hospitalization

Operational District	Number of beds	Authorized discharge	Unauthorized discharge	Transfer	Deaths	HMR	EHD	ALS	BOR
Total									

Tuberculosis Hospitalization

Number of beds	Authorized discharge	Unauthorized discharge	Transfer	Deaths	HMR	EHD	ALS	BOR

2. EVALUATION OF FORMER DISTRICT HOSPITAL MORBIDITY AND MORTALITY

Discharge Diagnosis	0 -4 Years		5 – 14 Years		15 - 49 Years		≥ 50 Years		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Simple Malaria										
Severe Malaria										
Diarrhea										
Cholera										
Dysentery										
ARIs										
Simple Dengue										
Severe Dengue										
Typhoid Fever										
Non Tubercular Meningitis										
Measles										
Acute Flaccid Paralysis										
Diphtheria										
Pertussis										
Neonatal Tetanus										
Other Tetanus										
Tuberculosis										
AIDS (Clinic)										
STD Male										
STD Female										
Gynecological Pathology										
Delivery										
Road Accidents										
Land Mine Accidents										
High blood pressure										
Heart Disease										
Diabetics										
Eye Diseases										
Marasmus /kwashiorkor										
Substance abuse										
Other Mental Health										
Others										
Total										

III -TECHNICAL LABORATORY ACTIVITIES *(Only for health center with laboratory available)*

1. **Volume of laboratory activities .**

Operational District	# Examination									# Positive Examination				Stool			
	* BK	Blood Formula	VDRL	HIV	VCCT	Urine	Stool	Genital Discharge	Others Examination	** BK+	VDRL	HIV+	VCCT	Ascarie	Tania	Amiboes	Shistosoma
Total																	

* BK   : Total slide examined included slide controlled
** BK+ : Slide diagnosis of new cases
VDRL : Venereal Disease Research Laboratory ; VCCT : Voluntary Counseling Confidential Testing

2 MALARIA
2 - 1 Slides

Operational District	Slide diagnosis					Control Slides (3)	Total examined (1+2+3)	Positives Slide diagnosis					
	Positives				Negatives			0 – 4 yr	5 – 14 yr	15 –49 yr		≥ 50yr	
	Falciparum	Vivax	Mixed	Total (1)	Total (2)					M	F	M	F
Total													

2.2 Dipstick

Operational District	Dipstick diagnosis					Total dipstick examined (1)+ (2)	Positives Dipstick diagnosis					
	Positives				Negatives		0 – 4 yr	5 – 14 yr	15 –49 yr		≥ 50yr	
	Falciparum	Vivax	Mixed	Total (1)	Total (2)				M	F	M	F
Total												

2 . 3 Deworming : Mebendazole

Operational District	At HC						Outreach						Primary school						Total					
	Children 12-23 Month	Children 24-59 Month	Children 6-15 Year		Pregnancies 4-9 Month	Lactating Mothers	Children 12-23 Month	Children 24-59 Month	Children 6-15 Year		Pregnancies 4-9 Month	Lactating Mothers			Children 6-15 Year				Children 12-23 Month	Children 24-59 Month	Children 6-15 Year		Pregnancies 4-9 Month	Lactating Mothers
			M	F					M	F					M	F					M	F		
Total																								

IV. ANTENATAL AND POST-PARTUM CARES, AND DELIVERY

1. **Antenatal and Detection of pregnancies at risk.**

2 . Post-partum cares

Operational District	1st Visit (1)	2nd Visit (2)	3rd Visit (3)	4th Visit (4)	5th+... Visit (5)	Total Visit 1+2+3+4+5+...	Pregnancies at risk detected	Referred to	VCCT Volunteers Pregnancies	HIV+ Pregnancies	1st Visit (1)	2nd Visit (2)	3rd Visit (3)	Total Visit (1)+(2)+(3)+ ....
Total														

VCCT: Voluntary Counseling Confidential Testing

3 . Folic acid and iron supplementation

Operational District	# of Pregnancies received iron (at HC)			Deliveries received iron at HC 42 tablets (at HC)	# of Pregnancies received iron outside of HC (Outreach)			Deliveries received iron outside of HC 42 tablets (Outside HC)
	1st Visit (60 tablets)	2nd Visit (30 tablets)	3rd +… Visit (30 tablets)		1st Visit (60 tablets)	2nd Visit (30 tablets)	3rd +… Visit (30 tablets)	
Total								

4 . Deliveries

Operational District	At Health Center							At Home Health Staff					At Home TBAs					Total						
	Total Deliveries	Normal	Dystocia (Forceps/Ventouses)	Hemorrhage	Deliveries received MTCT	Maternal Deaths	Referred to	Total Deliveries	Normal	Hemorrhage	Maternal Deaths	Referred to	Total Deliveries	Normal	Hemorrhage	Maternal Deaths	Referred to	Total Deliveries	Normal	Dystocia (Forceps/Ventouses)	Hemorrhage	Deliveries received MTCT	Maternal Deaths	Referred to
Total																								

PMTCT: Protection Mother to Child Transmission

5. Spontaneous and Induced Abortion   **6. Causes of maternal deaths**

Operational District	Spontaneous Abortion		Spontaneous Abortion			Hemorrhage	Obstructed Labor	Eclampsiae	Ruptured Uterus	Spontaneous Abortion	Induced Abortion	Other Causes
	Total	Referred to	Total	Referred to								
Total												

7. CHIL BIRTHS

Operational District	Not weighted	M	F	M	F	M	F	M	F		M	F	Still Birth
Total													

V. Birth spacing

Operational District	Pills						Injections						Condoms						IUD						Norplant						Total					
	New Clients	Total Clients	Contraceptive Consumption	New Acceptor	Discontinue	Current Users	New Clients	Total Clients	Contraceptive Consumption	New Acceptor	Discontinue	Current Users	New Clients	Total Clients	Contraceptive Consumption	New Acceptor	Discontinue	Current Users	New Clients	Total Clients	Contraceptive Consumption	New Acceptor	Discontinue	Current Users	New Clients	Total Clients	Contraceptive Consumption	New Acceptor	Discontinue	Current Users	New Clients	Total Clients	Contraceptive Consumption	New Acceptor	Discontinue	Current Users
TOTAL																																				

VI. Expanded Program on Immunization

1   - Children under 1 Year

Operational District	At HC															Outreach														
	# Sessions planned	# Sessions Conducted	BCG # Children	HepB at Birth # Children			OPV1 # Children	OPV 2 # Children	OPV 3 # Children	DPT1- HepB1 # Children	DPT2- HepB2 # Children	DPT3- HepB3 # Children	Rouvax # Children	Full Immunized # Children	# Sessions planned	# Sessions Conducted	BCG # Children	HepB at Birth # Children			OPV1 # Children	OPV 2 # Children	OPV 3 # Children	DPT1- HepB1 # Children	DPT2- HepB2 # Children	DPT3- HepB3 # Children	Rouvax # Children	Full Immunized # Children
				< 24h	24h and < 3days	3 – 7 days												< 24h	24h and < 3days	3 – 7 days								
Total																													

2 - Pregnant women											3 - Non-pregnant women aged 15-44									

Operational District	At HC					Outreach					At HC					Outreach				
	TT1 # Women	TT2 # Women	TT3 # Women	TT4 # Women	TT5 # Women	TT1 # Women	TT2 # Women	TT3 # Women	TT4 # Women	TT5 # Women	TT1 # Women	TT2 # Women	TT3 # Women	TT4 # Women	TT5 # Women	TT1 # Women	TT2 # Women	TT3 # Women	TT4 # Women	TT5 # Women
Total																				

4 - Children > 1 year

Operational District	At HC							Outreach						
	OPV 1	OPV 2	OPV 3	DPT1-HepB1	DPT2-HepB2	DPT3-HepB3	Rouvax	OPV 1	OPV 2	OPV 3	DPT1-HepB1	DPT2-HepB2	DPT3-HepB3	Rouvax
Total														

VII. Vitamin A Program

Operational District	Prevention			Treatment		
	Children 6-11month # Children	Children 12– 59 month # Children	Post Delivery within 8 weeks* # Women	Exophthalmia-Night blindness # Children	Measles # Children	Malnutrition / Continued Diarrhea / Chronic Diarrhea # Children
Total						

* Just delivery and lactation mothers (within 2 months after delivery)

VIII - Leprosy Activities

District	Under treatment at The beginning of the Month					New cases detected During the Month															Completed treatment during the Month					Relapses/defaulter Death & migration					Under treatment at the end of the month				
						Total NC					Dis.Gr2					<15 y																			
	PB1	PB2-5	MB	Total	Rate	PB1	PB2-5	MB	Total	Rate	PB1	PB2-5	MB	Total	Rate	PB1	PB2-5	MB	Total	Rate	PB1	PB2-5	MB	Total	Rate	PB1	PB2-5	MB	Total	Rate	PB1	PB2-5	MB	Total	Rate
Total																																			
Rate										***					*					*															

* Rate : % , ** Rate : / 10.000 , *** Rate : / 100.000

IX - Dental Activities

Operational District	Extractions			Restoration				Scaling		Others		Referred	
	Primary Teeth	Permanent Teeth		Temporary		Permanent Teeth							
	Child < 15 year	< 15 year	≥ 15 year	< 15	≥ 15	< 15	≥ 15	< 15	≥ 15	< 15	≥ 15	< 15	≥ 15
Total													

B - SYNTHESIS OF ACTIVITES OF HOSPITAL

I . # of new cases referred from HC and # of new cases self-referred at Hospital

1 - Volume of Activities

Operational District	# of new cases referred from HC					# of new cases referred from HC					Total Consultation				
	Local District	Other District	M	F	Total by Sexes	Local District	Other District	M	F	Total by Sexes	Local District	Other District	M	F	Total by Sexes
Total															

2 - Health Problems (New Cases)	0 - 4 Years	5 – 14 Years	15 - 49 Years	≥ 50 Years	Total
Simple diarrhea					
Severe diarrhea					
Dysentery					
Upper ARI					
Lower ARI					
Cough > 21 days					
Malaria					
Dengue fever					
Measles					
Diphtheria					
Pertussis					
Acute Flaccid Paralysis					
Neonatal tetanus					
Other tetanus					
High blood pressure					
Skin infection					
Urethral discharge					
Vaginal discharge					
Genital ulcer					
Genital warts					
Road Accidents					
Land Mine Accidents					
Eye Diseases					
Goiter					
Substance abuse					
Other Mental Health					
Others					
Total					
Malnutrition (Weight/Age)					

II. HOSPITAL MORBIDITY AND MORTALITY

	Male		Female	
Total Discharged by sex	Cases	Deaths	Cases	Deaths

Discharge Diagnosis	0 – 4 Years		5 – 14 Years		15 – 49 Years		≥ 50 Years		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Diarrhea										
Dysentery										
Cholera										
ARIs										
Simple malaria										
Severe malaria										
Dengue fever										
Dengue/Shock										
Typhoid fever										
Measles										
Diphtheria										
Pertussis										
AF Paralysis										
Neonatal tetanus										
Other tetanus										
High blood pressure										
Skin infection										
STD Male										
STD Female										
Gynecology										
Delivery										
Spontaneous abortion										

Discharge Diagnosis	0 – 4 Years		5 – 14 Years		15 – 49 Years		≥ 50 Years		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Induced abortion										
AIDS (Clinic)										
Tuberculosis										
Non-Tuberculosis Meningitis										
Hepatitis B										
Breast cancer										
Lung cancer										
Liver cancer										
Cervix cancer										
Uterus cancer										
Diabetics										
Cardiopathy										
Cataract										
Trachoma										
Corneal ulcer										
Glaucoma										
Marasmus /kwashiorkor										
Schistosomiasis										
Road Accidents										
Land Mine Accidents										
Goiter										
Substance abuse										
Other Mental Health										
Others*										
TOTAL										

III - Evaluation of district hospital activities

1 . General Activities

. **Non-Tuberculosis program**

Operational District	Number of beds	Authorized discharge	Unauthorized discharge	Referred to	Death	HMR ①	EHD	ALS ②	BOR ③
Total									

. **Tuberculosis program**

Number of beds	Authorized discharge	Unauthorized discharge	Referred to	Death	HMR ①	EHD	ALS ②	BOR ③

① HMR = Nb of Deaths ' x 100 / Total discharge (authorized discharge , unauthorized discharge , transfer , death)
② ASL = Nb of EHD / Total discharge ③ BOR = Nb of EHD x 100 / Nb of bed x day Nb of Month

2 - Surgical Activities

Operational District	Emergency	Scheduled	Total (1)	Death < 48 Hour(2)	Fatality Rate (2/1x100)	Total of Minor surgical activities
Total						

3. Vitamin A Program

Operational District	Prevention			Treatment		
	Children 6-11months # Children	Children 12– 59 months # Children	Post Delivery within 8 weeks* # Women	Exophthalmia-Night blindness # Children	Measles # Children	Malnutrition / Continued Diarrhea / Chronic Diarrhea # Children
Total						

VIII - Leprosy Activities

District	Under treatment at the beginning of the month					New cases detected during the Month															Completed treatment during the month					Relapses/defaulter Death & migration					Under Treatment at the end of the month				
						Total NC					Dis.Gr2					<15 y																			
	PB1	PB2-5	MB	Total	Rate	PB1	PB2-5	MB	Total	Rate	PB1	PB2-5	MB	Total	Rate	PB1	PB2-5	MB	Total	Rate	PB1	PB2-5	MB	Total	Rate	PB1	PB2-5	MB	Total	Rate	PB1	PB2-5	MB	Total	Rate
Total																																			
Rate										***																									

*Rate %, ** Rate,:/10.000, ***Rate:/100.000*

5 - Dental Activities

Operational District	Extractions			Restoration				Scaling		Others		Referred	
	Primary Teeth	Permanent Teeth		Temporary		Permanent Teeth							
	Child < 15 year	< 15 year	≥ 15 year	< 15	≥ 15	< 15	≥ 15	< 15	≥ 15	< 15	≥ 15	< 15	≥ 15
Total													

6 – Obstetrical Activities and Births
6.1 - Spontaneous Abortion

Operational District	Spontaneous Abortion				Induced Abortion			
	Total #	Referred From	Referred to	Maternal Deaths	Total #	Referred From	Referred to	Maternal Deaths
Total								

6. 2 - Deliveries

Operational District	Total #								Referred From							Referred to						Maternal Deaths					
	Normal	Cesarean section	Bleeding	Eclampsiae	Ruptured Uterus	Deliveries received PMTCT	Septicemia	Other	Normal	Cesarean section	Bleeding	Eclampsiae	Ruptured Uterus	Septicemia	Other	Cesarean section	Bleeding	Eclampsiae	Ruptured Uterus	Septicemia	Other	Cesarean section	Bleeding	Eclampsiae	Ruptured Uterus	Septicemia	Other
Total																											

6 - 3 Weight at Birth

Operational District	< 2 Kg		2Kg and < 2,5 Kg		≥ 2,5 Kg		Total Live Births *			Neonatal death		Still Birth
	M	F	M	F	M	F	M	F		M	F	
Total												

6 - 4 Folic acid and iron supplementation

Operational District	Deliveries received Iron-Folic acid at RH : 42 tablets
Total	

IV -TECHNICAL LABORATORY ACTIVITIES

1 - Volume of laboratory activities .

Operational District	# Examination									# Positive Examination							
														Stool			
	* BK	Blood Formula	VDRL	HIV	VCCT	Urine	Stool	Genital Discharge	Others Examination	** BK+	VDRL	HIV+	VCCT	Ascarie	Tania	Amiboes	Shistosoma
Total																	

* BK   : Total slide examined included slide controlled
** BK+ : Slide diagnosis of new cases
VDRL : Venereal Disease Research Laboratory ; VCCT : Voluntary Counseling Confidential Testing

IV . LABORATORY ACTIVITIES

1 - Volume of laboratory activities .

Operational District	Slide diagnosis					Control Slides (3)	Total examined (1+2+3)	Positives Slide diagnosis					
	Positives				Negatives			0 – 4 yr	5 – 14 yr	15 –49 yr		≥ 50yr	
	Falciparum	Vivax	Mixed	Total(1)	Total (2)					M	F	M	F
Total													

2.2 Dipstick

Operational District	Dipstick diagnosis					Total dipstick examined (1)+ (2)	Positives Dipstick diagnosis						
	Positives				Negatives		0 – 4 yr	5 – 14 yr	15 –49 yr		≥ 50yr		
	Falciparum	Vivax	Mixed	Total(1)	Total (2)				M	F	M	F	
Total													

V – Blood Bank

1. Collection

Operational District	# of Blood Donors				SEX								Blood Group																		
					Male				Female				A				B				O				AB							
	ISD	IRD	ED	Total	ISD	IRD	ED	Total	ISD	IRD	ED	Total	ISD	IRD	ED	Total	ISD	IRD	ED	Total	ISD	IRD	ED	Total	ISD	IRD	ED	Total				
Total																																

Note : - ISD   = Internal Spontaneous Donor - IRD = Internal Replacement Donor

- ED   = External Donor - HCV   = Hepatic C Virus

2-Blood Examination

Operational District	Serology																																							
	HIV+								(B) HBs+								(C) HCV+								Syphilis+								Malaria+							
	Male				Female				Male				Female				Male				Female				Male				Female				Male				Female			
	ISD	IRD	ED	Total	ISD	IRD	ED	Total	ISD	IRD	ED	Total	ISD	IRD	ED	Total	ISD	IRD	ED	Total	ISD	IRD	ED	Total	ISD	IRD	ED	Total	ISD	IRD	ED	Total	ISD	IRD	ED	Total	ISD	IRD	ED	Total
Total																																								

Note : - ISD = Internal Spontaneous Donor - IRD = Internal Replacement Donor
    - ED = External Donor - HCV = Hepatic C Virus

2 - Consumption

Operational District	MEDICINE	PEDIATRIC	SURGERY	MATERNITY	OTHERS	TOTAL
Total						

VI - X-RAY , ECHOGRAPHY, SCANNER,MAMMOGRAPHY,FIBROSCOPY,ENDOSCOPY AND COBALTHERAPY

Operational District	X - Ray	Echography	Scanner	Mammography	Fibroscopy	Endoscopes	Copal therapy
Total							

VII - Kinetic Therapy

Operational District	Nb of Patient	Nb of Time
Total		

C – COMMENTS AND OTHER ACTIVITIES (Enumerate main problems or particular events which impeded good functioning of district).

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Signature of Provincial Health Director _____   **Signature of Responsible:** _____   **Sending date of report:** _____

HEALTH ACTIVITY MONITORING TABLE

For Health Center (including former district hospital)

HC Name : [　　　　]   OD Name : [　　　　]   Total beds including TB : [　　　　]   TB beds : [　　　　]

Population : [　　　　]   Expected births (2,8%) [　　　　]   No.of communes : [　　　　]   No of villages : [　　　　]
in the catchement area

Under one year (2,6%) [　　　　]   Target women for Birth Spacing (14%): [　　　　]

	Jan	Feb	Mar	Quarterly	Apr	May	Jun	Quarterly	Jul	Aug	Sep	Quarterly	Oct.	Nov.	Dec.	Quarterly	Annual
I .OUT PATIENT																	
Nb of New Cases																	
Total Consultations																	
Nb of Referred Cases																	
Return Rate																	
Nb of NC/ Inhabitan/Year																	
II. INPATIENT																	
Total discharges (non-TB)																	
Total nb.of deaths																	
Nb.of TB inpatients (discharges)																	
Nb .of deaths from TB																	

Bed Occupancy Rate (non-TB)																	
Bed occupancy rate (TB)																	
Hospitalization rate																	
III. PREVENTIVE CARE																	
Antenatal Care																	
Nb .of pregnant women who received ANC1																	
Nb .of pregnant women who received ANC2																	
Total number of ANC																	
Nb. of risk pregnancies detected																	
Percentage of risk pregnancies referred																	
Percentage of pregnant women received ANC1																	
Percentage of pregnant women received ANC2																	
Deliveries																	
Nb. .of deliveries at HC																	
Nb. .of deliveries at home (by HC staff)																	
Nb .of deliveries attended by TBA																	
Percentage of deliveries by trained health staff																	
Vaccination																	
Nb. .of children under one year who received BCG vaccination																	
Nb .of children under one year who received DPT3																	

Nb. of children under one year who received Measles vaccination																					
Percentage of children under one year who received Measles vaccination																					
Nb. .of children under one year who received Hepatitis B vaccination																					
Percentage of pregnant women who received at least 2 doses of tetanus toxoid (TT2+)																					
Birth Spacing																					
Nb .of New acceptors																					
Nb. .of Current users																					
Percentage of married women aged 15-49 who are currently using any modern method of contraception.																					
IV. MANAGEMENT																					
Annual operational plan and Quarterly work plan finalized (tick).																					
Nb.of HC staff meetings																					
Nb.of HC staff meetings																					
Nb.of supervision by OD teams																					
Nb.of supervision by PHD teams																					
COMMUNITY																					

No.of HMC meetings held																			
No.of VHV meetings held																			
No session of outreach activities																			
VI.LABORATORY																			
No,Malaria slides/dipsticks +																			
No BK slides +																			
VII.MAIN HEALTH PROBLEM OPD																			
Malaria																			
Diarrhea																			
High ARI																			
Low ARI																			
Dengue																			
Cough >21 days																			
Measles																			
STD																			
Others																			
All new cases																			
VIII.LEPROSY																			

IX.REVENUE																			
Received from MOH in cash																			
Received from MOH in kinds																			
Received from user fee in cash																			
Received from NGO/IOs in cash																			
Received from NGO/IO in kinds																			
Total cash income																			
Percentage of new cases (OPD) exempted																			
Percentage of user fee exempted																			

X. HUMAN RESOURCES

Categories	Total Number	Salaried Staff	Floating staff	Comments
Medical Doctor				
Surgeon				
Pharmacist				
Dentist				
Medical assistant				
Pharmacist assistant				
Dentist assistant				
Secondary nurse				
Secondary midwife				
Primary nurse				
Primary midwife				
Secondary lab.				
Primary lab.				
Anesthetic nurse				
Technician Rx				
Physiotherapist				
Pharmacist preparatory				
First aid				
Administrative staff				
Medical traditional				
Others				

This Health Service Monitoring Table (form A) is intended for use mainly by HC managers, but it is also useful for other users. It is used mainly:

- By HC chiefs for monitoring and evaluation of the HC performance and resources including service utilization, income and specific program activities. For instance, HC chief can monitor the trends of OPD health problems by looking at the number of new cases seen in each month. They could also at the end of the year, compare different indicators in the table with the target set in the HC action plan.

- During supervision visits to HCs by OD, PHD, central supervisors and other visitors.

- During OD monthly meeting with participation of HC chiefs and other OD and RH concerned staffs in order to monitor the progress of the activities with in the OD.

-From the table different charts can be drawn to see the trend of main indicators.

The contents in this table are minimum. Users can add more items if necessary, but the minimum contents have to be kept.

HEALTH ACTIVITY MONITORING TABLE

For Referral Hospital

Province : [   ]   Operational District [   ]   Year [   ]

Population in catchment area	Ratio inhabitants/ bed		Wards	Medicine	Pediatric	Surgery	Maternity	Others	TB	Total
			Nb of bed							

	Jan	Feb	Mar	Quarterly	Apr	May	Jun	Quarterly	Jul	Aug	Sep	Quarterly	Oct.	Nov.	Sep	Quarterly	Annual
I.REFERRAL CONSULTATION																	
Total New Cases																	
% of new case that were referred from HCs.																	
Total Consultation																	
II. INPATIENT																	
Total discharge excluding TB																	
Bed Occupancy Rate																	
Average length of stay																	
Nb. of deaths in hospital																	
Nb. of TB discharge																	
Nb, of TB deaths																	
TB bed occupancy rate																	
Hospital mortality rate*																	
Hospitalization rate *																	
Nb. of surgical operations**																	
Nb. of deaths < 48 H after operation																	

* Including TB
** Not including minor surgery

III. OBSTETRICS																				
Abortion																				
Total delivery																				
Nb. of complicated deliveries*																				
Nb. of caesarean sections																				
% of complicated deliveries*																				
Caesarean Section Rate																				
Nb. of death related to pregnancy occurring in hospital																				
* Including Caesarean section																				
IV. BLOOD BANK																				
Nb. of units collected																				
Nb. of units safe for use																				
Nb. of units used																				
V.SUPPORT SERVICES																				
Nb. of Rx examination																				
Nb. of endoscopie exam.																				
Nb. of Echo exam.																				
Nb. of Malaria slides /dipsticks +																				
Nb. of BK slides +																				
VI. MANAGEMENT																				
Annual operational plan and Quarterly work plan finalized (tick).																				
No.of hospital management committee staff meetings																				
No.of supervision by OD teams																				
No.of supervision by PHD teams																				

No. of user fee scheme meeting																			
VII.REVENUE																			
Received from MOH in cash																			
Received from MOH in kinds																			
Received from user fee in cash																			
Received from NGO/IOs in cash																			
Received from NGO/IO in kinds																			
Total cash income																			
Percentage of new cases (OPD) exempted																			
Percentage of IPD cases exempted																			
Percentage of user fee exempted																			

X. HUMAN RESOURCES

Categories	Total Number	Salaried Staff	Floating staff	Comments
Medical Doctor				
Surgeon				
Pharmacist				
Dentist				
Medical assistant				
Pharmacist assistant				
Dentist assistant				
Secondary nurse				
Secondary midwife				
Primary nurse				
Primary midwife				
Secondary lab.				
Primary lab.				
Anesthetic nurse				
Technician Rx				
Physiotherapist				
Pharmacist preparatory				
First aid				
Administrative staff				
Medical traditional				
Others				

This Health Service Monitoring Table (form B) is intended for use mainly by RH managers, but it is also useful for other users. It is used mainly:
-   by RH directors for monitoring and evaluation of the RH performance and resources including service utilization, income and specific program activities. They could also at the end of the year, compare different indicators in the table with the target set in the RH action plan.
- During supervision visits to RH by OD , PHD, central supervision teams and other visitors.
- During OD monthly meeting with participation of HC chiefs, OD and RH concerned staffs in order to monitor the progress of the activities with in the OD.
- During monthly meeting at the RH
- From the table different charts can be drawn to see the trend of main indicators.
The contents in this table are minimum. Users can add more items if necessary, but the minimum contents have to be kept.

Form C

HEALTH ACTIVITY MONITORING TABLE

For Operational District

Province : [   ]   OD [   ]   No. of communes covered by OD [   ]

No. of villages covered by OD [   ]

Quarter [   ]   Year [   ]

No. of HCs covered by OD [   ]

A- HEALTH CENTER DEVELOPMENT

HEALTH CENTER NAME												Total
Population												
I .OPD												
Nb of New Cases												
Total Consultations												
Nb of Referred Cases												
Return Rate												
Nb of NC/ Inh /Year												
II. IPD												
Total discharges (non-TB)												

Total nb. of deaths												
Nb.of TB inpatients (discharges)												
Nb.of deaths from TB												
Bed occupancy rate (non-TB)												
Bed occupancy rate (TB)												
Hospitalization rate												
III. PREVENTIVE												
Antenatal Care												
Nb. of pregnant women who received ANC1												
Nb .of pregnant women who received ANC2												
Total number of ANC												
Nb. pregnancies at risk detected												
Percentage of risk pregnancies referred												
Percentage of pregnant women who received ANC1												
Percentage of pregnant women who received ANC2												
Deliveries												
Nb. of deliveries at HC												
Nb.of deliveries at home (by HC staff)												
Nb .of deliveries attended by TBA												
Percentage of deliveries by trained health staff												
Vaccination												
No. of children under one year who received BCG vaccination												

Nb.of children under one year who received DPT3 vaccination												
Drop-out-rate												
Nb.of children under one year who received Measles vaccine												
Percentage of children under one year who received Measles vaccination												
Nb.of children under one year who received Hepatitis B vaccination												
Percentage of pregnant women who received at least 2 doses of tetanus toxoid (TT2+)												
Birth Spacing												
Nb.of New acceptors												
Nb.of Current users												
Percentage of married women aged 15-49 who are currently using any modern method of contraception.												
IV. MANAGEMENT												
Annual operational plan and Quarterly work plan finalized (tick).												
Nb.of HC staff meetings												
Nb.of supervision by OD teams												
Nb.of supervision by PHD teams												
V.COMUNNITY PARTICIPATION												
Nb.of HMC meetings held												
Nb.of VHV meetings held												
Nb session of outreach activities												

VI. LABORATORY												
Nb.of Malaria Slides / Dipstick+												
Nb. of BK slides+												
VII. LEPROSY												
No. of new cases of leprosy detected												
VIII. REVENUE												
Received from MOH in cash												
Received from MOH in kinds												
Received from user fee in cash												
Received from NGO/IOs in cash												
Received from NGO/IO in kinds												
Total cash income												
Percentage of new cases (OPD) exempted												
Percentage of user fee exempted												

B – REFERRAL HOSPITAL

No .of Beds

Medicine	Pediatrics	Surgery	Maternity	Obstetric	Others	Total	TB beds		Ratio inhabitants / bed*

*Including TB bed

Total New Cases	No. of referrals from HCs	% of referrals from HCs	Total Consultation	Total discharge (non-TB)	Total deaths (non-TB)

Discharge		Bed Occupancy Rate		Average length of stay (Excluding TB)	Hospital Mortality Rate (Including TB)	Number of major surgery operation	Number of deaths occurring < 48h after operation
Discharge	Deaths	non -TB	TB				

OBSTETRICS

Abortion	Total delivery in RH	Complicated deliveries	Caesarean Section	% of complicated deliveries	Caesarean section rate	Maternal mortality in RH

BLOOD BANK   SUPPORT SERVICES

Number of units collected	Number of units safe for use	Number of units used		No. of X-ray examination	Endoscopy examination	Echo. examination	No.of Malaria slides / dipstick +	No. of BK slides +

REVENUE

Received from MOH		Received from Partners		Received from user fee	Total Cash received	% of OPD exempted	% of IPD exempted	% income exempted
In Cash	In Kind	In Cash	In Kind					

. HUMAN RESOURCES

Categories	Operational District Office	Referral hospital	Health Center MPA	Commune clinic	Total
Medical Doctor					
Surgeon					
Pharmacist					
Dentist					
Medical assistant					
Pharmacist assistant					
Dentist assistant					
Secondary nurse					
Secondary midwife					
Primary nurse					
Primary midwife					
Secondary lab.					
Primary lab.					
Anesthetic nurse					
Technician Rx					
Physiotherapist					
Pharmacist preparatory					
First aid					
Administrative staff					
Medical traditional					
Others					

This Health Service Monitoring Table (form C) is intended for use mainly by OD managers, but it is also useful for other users. It is used mainly :

- by OD director for monitoring and evaluation of the HCs and RH performance and resources including service utilization, income and specific program activities. They could also at the end of the year, compare different indicators in the table with the target set in the OD action plan.
- during supervision visits to RH or HCs by OD teams, PHD, central supervision teams and other visitors.
- during OD monthly meeting with participation of HCs and RH in order to monitor the progress of the activities with in the OD.
- from the table different charts can be drawn to see the trend of main indicators within the OD.

The contents in this table are minimum. Users can add more items if necessary, but the minimum contents have to be kept.

Form D

HEALTH ACTIVITY MONITORING TABLE

For Provincial Health Department

PROVINCE :

QUARTER :..   YEAR :............................

I. OPERATIONAL DISTRICT PROFILE

Operational District Name										Total
Population										
Nb. of administrative districts										
Nb. of communes										
Nb. of villages										
Nb. of HC planned in HCP										
Nb. of HC MPA Functioning										
Nb. of HC Former District Hospital										
Nb. of commune clinics										
Nb. of Health Posts										

II. HEALTH CENTER
1. OPD

Nb of New Cases										
Total Consultations										
Nb of Referred Cases										
Return Rate										

Nb of NC/ Inh /Year												
2. IPD												
Total number of beds including TB												
TB beds												
Total discharges (non-TB)												
Total number of deaths												
Nb.of TB inpatients (discharges)												
Nb.of deaths from TB												
Bed occupancy rate (non-TB)												
Bed occupancy rate (TB)												
Hospitalization rate *												

*Including TB

3. ANTENATAL CARE

Nb.of pregnant women who received ANC1												
Nb.of pregnant women who received ANC2												
Total number of ANC												
No. At risk pregnancies detected												
Percentage of risk pregnancies referred												
Percentage of pregnant women who received ANC1												
Percentage of pregnant women who received ANC2												

4. DELIVERIES

Nb.of deliveries at HC												
Nb.of deliveries at home (by HC staff)												
Nb.of deliveries attended by TBA												
Percentage of deliveries by trained health												

staff											

5. IMMUNIZATION

Nb.of children under one year who received BCG vaccination											
Nb.of children under one year who received DPT3 vaccination											
Drop-out-rate (BCG-Measles)											
Percentage of children under one year who received Measles vaccination											
Nb.of children under one year who received Hepatitis B vaccination											
Percentage of pregnant women who received at least 2 doses of tetanus toxoid (TT2+)											

6. BIRTH SPACING

Nb.of New acceptors											
Nb.of Current users											
Percentage of married women aged 15-49 who are currently using any modern method of contraceptive.											

III. REFERRAL HOSPITAL
1. REFERRAL CONSULTATION

Total New Cases											
% of new cases that were referred from HCs											
Total consultations											

2. INPATIENTS

Total number of beds including TB											
TB beds											
Total discharge excluding TB											
Bed Occupancy Rate (non-TB)											
Average length of stay (non- TB)											
Nb. of deaths in hospital (non-TB)											

Nb. of TB discharge										
Nb of TB deaths										
TB bed occupancy rate										
Hospital mortality rate*										
Hospitalization rate *										
Nb. of surgical operations**										
Nb. of deaths < 48 H after operation										

* Including TB
** Not including minor surgery

3. OBSTETRICS

Abortion										
Total delivery										
Nb of complicated deliveries*										
Nb of caesarean sections										
% of complicated deliveries*										
Caesarean Section Rate										
Nb. of mother deaths related to pregnancy occurring in hospital										

* Including Caesarean Section

4. BLOOD BANK

Nb. of units collected										
Nb. of units safe for use										
Nb. of units used										

5. SUPPORT SERVICES

Nb. of Rx examination										
Nb. of endoscopie exa.										
Nb. of Echo exa.										
Nb. of Malaria slides /dipsticks +										
Nb. of BK slides +										

IV. REVENUE *

Received from MOH in cash										

Received from MOH in kinds										
Received from user fee in cash										
Received from NGO/IOs in cash										
Received from NGO/IO in kinds										
Total cash income										
Percentage of new cases (OPD) exempted										
Percentage of IPD cases exempted										
Percentage of user fee exempted										

***Total income in the operational district

This Health Service Monitoring Table (form D) is intended for use mainly by directors of PHD, but it is also useful for other users. It is used mainly :
 - by PHD directors for monitoring and evaluation of the OD performance (HCs and RHs) and resources including service utilization, income and specific program activities. They could also at the end of the year, compare different indicators in the table with the target set in the Annual Operation Plan.
 - during supervision visits to PHD by central supervisors and other visitors.
 - during PHD monthly meeting with participation of all concerned staff at PHD as well as during other meetings at PHD offices.
 - from the table different charts can be drawn to see the trend of main indicators .
 The contents in this table are minimum. Users can add more items if necessary, but the minimum contents have to be kept.

Ministry of Health, Cambodia

An Introduction to Basic Epidemiology

Department of Planning and Health information

Dr. Sao Sovanratnak

Dr. Vijay Rao

1

Overview

- Definition of Epidemiology
- Epidemiological Approach
- Sources of Epidemiological Data
- Occurrence of Disease
- Frequency of Disease
- Mortality

2

What is epidemiology?

- Epidemiology is the study of how often diseases occur in different groups of people and why

3

Epidemiology and science

- Epidemiology is interdisciplinary, connected to health/biomedical sciences
  - Biology
  - Chemistry
  - Statistics/ Biostatistics
  - Physiology
  - Pathology
  - Anatomy

4

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Epidemiological approach

- An epidemiological approach to reproductive health looks at the:

  Persons affected by a disease

  Places where the disease occurs and

  Time of disease occurrence

6

Persons

- Who?
  Basic demographic and lifestyle characteristics
    - Age
    - Sex
    - Race/Ethnicity
    - Socioeconomic characteristics

7

Places

- Where?
    - Place of residence
    - Place of occurrence
    - District/Province
    - Urban/Rural

8

Time

- When?
    - Seasonal
    - Weekly
    - Monthly
    - Yearly

9

Sources of epidemiological data

- Population censuses
- Health surveys
- Vital statistics
- Disease registries
- Health care utilization records
- Other studies

10

Population census

- A count of the total population, along with socio-demographic characteristics such as age, gender, place of residence
- Census counts often provide the denominator (population at risk) to compute epidemiological rates and proportions

11

Health surveys

- Can be generalized to a larger population if the sampling units are representative to the population

12

Vital statistics

- National registry for births and deaths
- Birth certificates can provide socio-demographic information associated with health status of mothers/babies
- Death certificates can provide information on underlying causes of death

13

Disease registries

- Population-based disease registries established to record cases of certain diseases e.g. TB and HIV/AIDS
- Can be useful to show population-at-risk by geographic boundaries

14

Health care utilization records

- Hospital discharge records
- Bed occupancy studies
- ADD…..

15

Other studies

- Project records or service statistics
- Community based KAP/KPC
- Observation (with standardized checklists)
- Mini-surveys
- Sero-surveys

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Overview

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Measuring Occurrence of Disease

- Rate
- Ratio

18

Rate

- Measure of frequency of event in a defined population

$$\frac{\text{Number of events}}{\text{Avg. pop. at risk for event}} \quad x \quad (10^{n})$$

19

Ex.: Contraceptive Prevalence Rate

$$\frac{\text{Number of women (ages 15-49) using contraception}}{\text{Number of women surveyed (ages 15-49)}} \quad X \ 100 =$$

_____%

20

Ratio

- The relation of one population subgroup to the total population or to another subgroup
  - i.e., one subgroup divided by another
- A rate is also a ratio but a ratio is not always a rate

21

Ex.: Maternal Mortality Ratio

$$\frac{\text{Number of maternal deaths}}{\text{Total Live Births}} \quad X \ 100,000 =$$

__ deaths per 100,00 live births

22

Overview

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23

Measuring Frequency of Disease

- Prevalence
- Incidence

24

Prevalence

- Number of affected persons in the population at a specific period of time divided by the number of persons in the population at that time

$$\frac{\text{N existing cases of health problem at given period of time}}{\text{Total population}} \times (10^n)$$

25

Point vs. Period Prevalence

- Period Prevalence: a proportion

$$\frac{\text{N of existing disease cases over a specified time period}}{\text{Total population}} \times (10^n)$$

- Point Prevalence: same as period, but for a specific point in time.

26

Point or Period Prevalence?

- Did you receive a Vitamin A doses during the last 6 months?
- Did you ever breastfeed?
- Do you currently smoke cigarettes?

27

Incidence

- Number of **new** cases of a health problem that occurs within a population at risk during a specified period of time

$$\frac{\text{N of new cases of disease over a specified time period}}{\text{Population at risk}} \times (10^n)$$

28

Relationship between Prevalence and Incidence

Prevalence

29

Relationship between Prevalence and Incidence
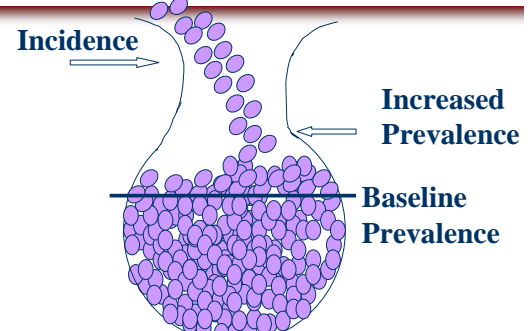
Incidence

Increased Prevalence

Baseline Prevalence

30

Relationship between Prevalence and Incidence

Baseline Prevalence

Decreased Prevalence

Deaths

Cures

31

Relationship between Prevalence and Incidence

Incidence

Prevalence

Deaths

Cures
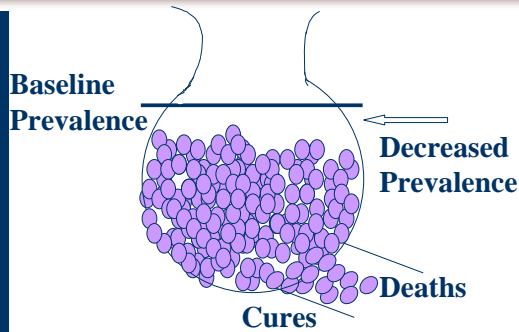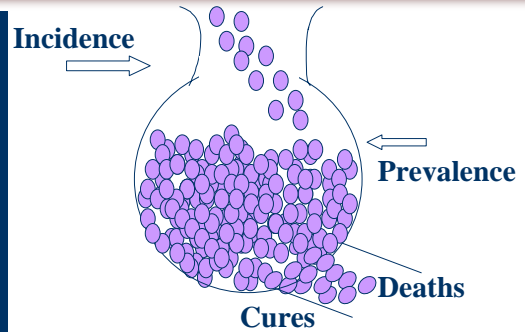
32

Overview

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Mortality

- Mortality is the incidence of death from a disease

34

Death Rate

- (Crude) Death rate is the number of deaths per 1,000 population in a given year

Number of deaths
Total population

x 1,000 =

__ deaths per 1,000 population

35

Specific Death Rates

- Age-specific Death Rate
- Cause-specific Death Rate
- Gender-specific Death Rate…

36

Age-Specific Death Rate

Deaths of people
Ages 40-44
——————————— X 1,000 =
Total population
Ages 40-44

__ deaths
per 1,000
of that age

Cause-Specific Death Rate

Deaths from
cancer
——————————— X 100,000 =
Total population

__ deaths
per 100,000
of that disease/cause

Epidemiological Application for Local Health Planning

Department of Planning and Health Information
Ministry of Health

1

Epidemiological Questions

- Problem identification
- Magnitude
- Distribution
- Causes of health problems

2

Problem identification

- What are the main health problems in your community, district, or province?
- eg. disease: malaria, dengue hemorrhagic fever, severe diarrhea, acute respiratory infections, disabilities, low birth weight…
- Severity of the problem
- Frequency of the problem
- Sensitivity to public health measures

3

Magnitude and Distribution

- How many cases or events?
- When it generally occurs?
- Where it occurs?
- Who is affected?
- Why they are affected?

4

How many cases/events?

- To determine "how big" a health problem is in the province you must consider:
- How you count the case or health event? what unit will you use?
- What source of information do we have for answer this question?

5

When it generally occurs?

- Many health problems vary according to:
  - the time of the year (seasonal variation)
  - the time of the week
  - the time of the day
- Others show no marked variation

6

Where do the cases or health events occur?

- Look at the spatial distribution of cases or events
  - Are there particular places/ communities where certain health events (eg. diseases, malnutrition…) occur?
- Can be useful to plan health interventions?

7

Who is affected?

- Population characteristic
  - Age, sex, occupation, ethic group, etc.
- Determine risk factors (smoking, diet, physical inactivity, etc) and risk groups

8

Analysis of problem

- Why does the problem occur?
  - What are the causes and effects that explain the rates of occurrence of a particular disese or health problem?
  - What are the relationship between these causes ?

  ☞ Causation tree

9

Causation tree: Eg. Malnutrition

Causes

Poverty | No land for farming?

Lack of food? | Disaster?

?

Diseases, worms… → **Malnutrition**

?

?

Growth retardation (mental, physical…)

Susceptible to disease/ death.

Effects

?

?
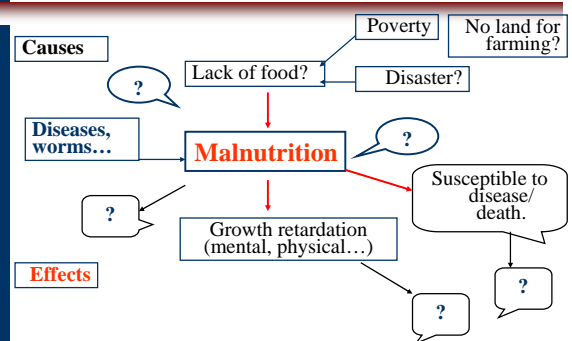
10

Group exercise

Identify any health problem/event that you are familiar with in you community and determine:

- Severity of the problem
- Magnitude (how big the problem is) and distribution
- Frequency
- Sensitivity to public health measure (what intervention can be taken?)

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Slide 1

Ministry of Health

Analyzing Health Services for Local Health Planning

Data

Dr. Sao Sovanratnak
Dr. Vijay Rao

Department of Planning and Health Information

1   10/14/2005

Slide 2

Contents

- Applying the key epidemiological questions to health service problems
- Main health service problems
- Operating efficiency indicators
- Identify health service problems (group exercise)
- Equality and equity
- What do we know about the poor
- Key health indicators by wealth group
- Benefit incidence

2

Slide 3

Key Epidemiological Questions

Health problems	Health service problem
A-Identification	
1- What are the main health problems?	2- What are the main health service problems?
B-Magnitude and Distributions	
2- How many (cases)?	2- How many problems?
3- When do cases occur?	3- When do problems increase?
4- Where do cases occur?	4- Where do problems increase?
5- Who is (are) affected?	5- Who is (are) affected?

3

Slide 4

Health problems	Health service problem
C-Analysis	
6- Why do cases occur?	6- Why do problems arise?
D-Measures taken	
	7- Measure taken to cope with the problems
	8- Results and barriers?
	9- what else can be done?

4

Slide 5

What are the main service delivery problems?

- Group exercise
- Problems identification on cards
- preparation of priority setting matrix

5

Slide 6

Prioritization of Health Service Problems

Problem	Negative impact	Results gap	Community perception	Scope for improvement	Total
Lack of midwife	High maternal mortality?	Birth delivery at public health facilities is low?	Does community percept lack of midwife at facility level as big problem?	What measure or intervention can be taken to deal with this problem? immediately? costly?	

List any problem and fill in the columns with points ranging from 1-10 indicating the severity of the problem.

6

How many service delivery problems exist?

- Using indicators to assess health services:
  - Analyze present situation
  - make comparison
  - Measure changes over time
- (See introduction to Monitoring and Evaluation module)

Ex. Maternal Mortality Ratio vs. Process Indicators

Service use indicators	Numerator	Denominator	Reference level
Proportion of births attended by skilled health staff (SHS)	Number of births attended by SHS	All births in target population	100%
C-sections as a proportion of all births	Nb of C-section	All births in target population	5%
	EOC: Essential obstetrical care		
Proportion of all women with complications treated in EOC facilities	Nb. of women with complications treated in EOC facilities	15% of all live births in target population	Minimum 100%

Operating Efficiency Indicators

- Average Length of Stay (ALS)
- Bed Occupancy Rate (BOR)
- Turnover Rate

Group Exercise

Identification of Health Service Problems

- When do health service problem/s arise? Dry or wet season?
  - Availability of health staff: village health workers (shortage)
  - Utilization of health services (low/high): Vaccination coverage, antenatal care, birth delivery, child growth monitoring…
- Where do these problems arise? Urban, rural, slum areas, along the river, mountain areas…?
- Who is/are affected?
- How do we ensure equity (Eg. in term of provision of health services?)

Each group identify some health service problems in their own areas of work and draw a sketch map plotting the places where these problems occur.

Equality and Equity

- What is the difference between the two?
- How do we define equity?
- What are the Royal Government of Cambodia's key value as expressed in the Health Strategic Plan 2003-2007?
- Is there a conflict between equity and efficiency?
- How do we measure equity? Which groups are involved?

Equality and Equity

The Rich — Poor
50 50

Equality (The fact)

The Rich — Poor
25 75

Equity (The judgment)
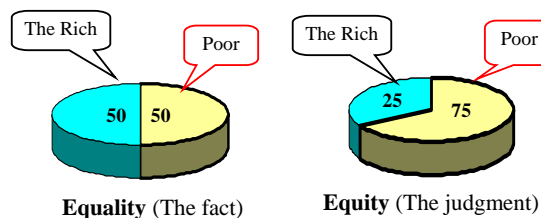
Ex. divide a pie cake to the rich and the poor

What do we know about the poor?

- The poor are burdened by communicable diseases
- Households place a high value on health and recognize its relationship to poverty
- Households underutilize existing services, especially preventive services.
- People often opt for private sector services

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What do we know about the poor?

- Most government services are far from the poorer communities
- Nearby government services do not function at a high level of quality of care (QOC)
- Government health services are not responsive to health needs and demands of the poor.
- In public policy on health, the rhetoric does not match the reality

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Key Health Status Indicators by Wealth Groups (Quintile)

Indicators	Poorest	Richest	Total
Infant Mortality Rate (IMR)*	110	50	93 *
Under 5 Mortality Rate (U5MR)	155	54	122
Total Fertility Rate (TFR)	4.5	2.2	3.8
Stunting	53%	28%	44%

Source: World Bank unpublished analysis based on Cambodia Demography and Health Survey 2000

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Key Health Utilization Indicators by Wealth Groups

Indicators	Poorest	Richest	Total
Full immunization	29%	68%	40%
ORT Use	11%	43%	20%
Acute Respiratory Infection (ARI)	32%	52%	37%
ANC Visits	15%	63%	26%
Birth delivery by skilled staff	15%	81%	32%
Family planning use	10%	23%	16%

16

Benefit Incidence

- Crude but powerful tool to measure who gains from public spending
- Combines two empirical facts:
  - Who is using services?
  - Cost to government of supplying services
- Total Benefit for each group = Utilization * Net Unit Cost

Source: Abdo Yasbeck, Who benefits? The World Bank, Slide Presentation, 2000

Vietnam findings: Total benefits, mill VND		
	Poorest 20%	Richest 20%
Central hospital		
Prov hospital		
District hospital		
Policlinic		
Commune Health center		
Total Benefit		
What are possible program implications?		

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Group Exercise
The gap between the rich and the poor in access to health service delivery
Why do these problems occur?
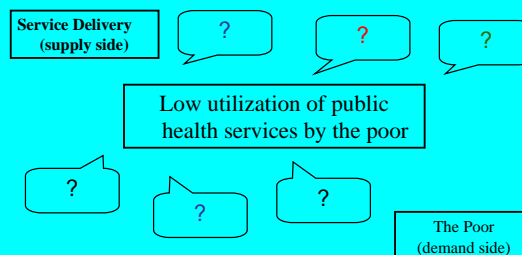
Service Delivery (supply side)

?   ?   ?

Low utilization of public health services by the poor

?   ?   ?

The Poor (demand side)

18

Introduction to Monitoring and Evaluation

Ministry of Health

M-E

Department of Planning and Health Information

Dr. Sao Sovanratnak
Dr. Vijay Rao

1

Overview

- What is Monitoring and Evaluation?
- Why do you do it?
- How do you do it?
- What is an M&E framework?
- How do you develop an M & E framework?

2

What is Monitoring and Evaluation (M-E)?

Process to gain information about the activities and achievements of projects or programs, in order to make decisions to improve them.

3

Monitoring and Evaluation

- M and E provide data and perspective necessary to:
  - Guide strategic planning
  - Design and implement projects or programs
  - Allocate and re-allocate resources

4

Monitoring vs. Evaluation

- **Monitoring**: day-to-day and on-going process of tracking program results or project activities

- **Evaluation**: assessment or analysis of impact and/or effect of programs or projects (usually mid-term and at the end of the project)

5

Monitoring and Evaluation Tools

Monitoring	Evaluation
- Health Information system	- Survey
- Registers	- Discussion
- Supervision	- Suggestion box
- Regular meeting, etc.	

6

Ex: Monitoring questions

- Are project outputs being met?
- Are we headed in the right direction?
- Are we in good time?
- Are the indicators appropriate?
- What can be improved?

7

Ex: Evaluation questions

- Have we arrived at the defined objectives?
- Were the needs met?
- Have the needs changed?
- How effective were the strategies we employed?

8

Monitoring and Evaluation are:

Similar in:
- Purpose

Different in:
- Method
- Timeframe
- Type of data collected
- Frequency
- Use

9

Types of Evaluation (M-E)?

- Formative: generates information while program activities are forming or happening (focus on process)
- Midterm: measures progress at project mid-point
- Effect: measures change in knowledge, attitude, behavior, or coverage among your population of interest.
- Impact: assesses changes in individuals' well-being that can be attributed to a particular program or policy.

10

Why do it?

To answer:
- Did we do what we said we were going to do?
- Did we achieve that we said we would achieve?

Also:
- Was the project design sound? How can we improve it?
- Did our project caused the observed change?

11

Planning for M & E requires

- Allocation of project resources
  - Time
  - Money
  - Personnel
- Commitment to use the data

12

How do you do it?

☞ Using **objectives** and **indicators**

Objectives

- Specific and quantifiable statement of program achievement
- Measurable outcome used to determine program progress towards the program goal
- What you can and need to measure

Objectives should be…

SMART:
- **S**pecific
- **M**easurable/quantified
- **A**ttainable
- **R**elevant
- **T**ime-bound

Types of objectives

- **Output**: measure activities and progress of your program/project
- **Effect**: measure changes in knowledge, attitudes, coverage, or behaviors of target population
- **Impact**: measure progress in achieving overall project or program goal.

Formulation of an output objective

Establish/deliver a specific and quantified product or service
by [health workers or system] to [specific population]
by [time frame]

Example of output objective

To increase the number of clinics in Phnom Penh providing STI testing and treatment from 32 to 50 within the first 6 months of 2003.

Formulation of an effect objective

[Change]

the [knowledge, Attitude, skills, coverage , coverage or
behaviors] among [specific population or segment]
from-to[from baseline to desired level]
OR
to x%
by [time frame]

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Example of effect objective

Increase full immunization coverage from 40% to 90%
among children ages 12-23 months within five years
from 2003-2007.

20

Formulation of an impact objective

Change: increase or reduce (rate or ratio) among

(population of interest) from baseline level to desired
level by time frame.

21

Example of impact objective

Example: Reduce maternal mortality among women in
reproductive age (WRA) in Cambodia from 437 maternal
deaths per 100,000 live births to 305/100,000 within five
years from 2003-2007.

22

Are these objectives SMART?

Objectives	S	M	A	R	T
To increase the use of STI testing and treatment services by women aged 15-49 by 40% in 2 years					
To increase the use of family planning services					
To increase the proportion of women who accept long-term contraceptive methods (include IUD, norpalnt, and sterilization) from 20% of users to 25% of users					

23

How do you measure an objective?

◆ Use indicators

24

What is an indicator?

◈ Variable that measures one aspect of a program or project

◈ Measurement

◈ Focuses on a single aspect of program or project

25

What is a good indicator?

◈ Useful
– Contributes information to decision making process
– Has a specific purpose
◈ Ethical
– Respects and protects rights of individuals are
◈ Valid:
– Measures what it intends to measure conceptually

26

What is a good indicator? (cont'd)

◈ Reliable:
– Minimizes measurement error
◈ Precise:
– Clearly defines each part of the indicator
◈ Accessible:
– Must be able to actually obtain the measure
– Chooses appropriate data collection method

27

Types of indicators

◈ **Output** – measure products and services and quality of products and services
◈ **Effect** – measure level of knowledge, skills attitudes, intentions, coverage, and behaviors of the population of interest
◈ **Impact** – measure health status of population of interest

28

Formulation of an effect indicator

◈ Effect Indicator:
– [% or #] of
– [group members] who [know/believe/can/do] [specific knowledge/attitude/skill/behavior]

29

Examples of effect indicators

◈ Percent of women ages 15-19 who use condoms each time they have sexual intercourse
– Measured by: Knowledge, attitudes, practices survey (KAP) or behavioral surveillance survey (BSS)

◈ Number of district-level healthcare workers who know that condoms can prevent the spread of HIV/AIDS
– Measured by: Health worker interview

30

Advantages and disadvantages of effect indicators

◆ Advantages:
- Shows changes in people

◆ Disadvantages:
- Does not tell you if status had changed
- Does not tell you what caused change
- Data can be difficult and expensive to obtain

31

Formulation of an output indicator

◆ Output indicator:
- [# of] or [% of planned] [specific activities/products/services] that [have been carried out/achieved] [to acceptable/expected standard of quality]

32

Examples of output indicators

◆ Number of outreach staff trained
- Measured by: Project/training records

◆ Percent of trained outreach staff who received rating of "good" or "excellent" on final training exercise
- Measured by: Supervisors' checklist

33

Advantages and disadvantages of output indicators

◆ Advantages:
- Directly related to activities
- Easy, quick, and frequent
- Includes measures of quality of care

◆ Disadvantages:
- Does not tell you if people change, only what the project does
- Can lose sight of desired impact

34

Impact indicators

◆ Usually rates or ratios

◆ Examples:
- Pregnancy rate
- Maternal Mortality Ratio (MMR)
- Sexually Transmitted Infection (STI) Rate
- Total Fertility Rate (TFR)
  - Measured by: population-based survey

35

Advantages and disadvantages of impact indicators

◆ Advantages:
- This is the point of the program!

◆ Disadvantages:
- Often difficult/impossible methodologically (How do you measure empowerment?)
- Changes occur slowly (e.g. changes in fertility rates, changes in maternal mortality)
- Usually done at national level, therefore can be costly

36

Standard indicators

- MEASURE Evaluation, World Bank, UN compile standard indicators
  - More relevant for impact and effect indicators
  - Less relevant for output indicators

37

Are these good indicators?

- Number of women who know modern family planning methods
- Percent of staff trained
- Number of WRA in Phnom Penh who know that condoms prevent the spread of HIV/AIDS

38

What is an M and E framework?

Charts/diagrams that illustrate relationships between program inputs, activities, outputs, effects, and impacts. **Inputs** or resources affect **Activities** which produce immediate **Outputs**, which, in turn, lead to **Effects**, ultimately leading to longer term or broader results, or **Impacts.**

Inputs → Activities → Outputs → Effects → Impacts

39

What is the purpose of an M and E framework?

Provides a clear, visual interpretation of planned use of resources and desired ends.

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Component of M&E Framework

- Impacts: change in the health, social, economic status of population of interest
- Effects: change in knowledge, attitude, skills, coverage, or behavior of population of interest
- Outputs: products and services that must be in place for effects and impact to occur
- Activities: technical and support tasks required to produce outputs
- Inputs: resources needed to support activities

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What is an M and E Matrix?

- A way to organize an M and E plan and framework.

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Example of M-E Matrix

Framework step	Indicators	Source of Data	Person responsible	Frequency of data collection	Comments
Desired impact					
Effects					
Outputs					
Activities					
Inputs					

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Building ownership (involvement) of M and E Framework by

- Providing feedback
- Supportive supervision
- Providing feedback
- Preventing overload – minimal list of indicators, flexible reporting requirements

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To sum up

M&E is a process to gain information about the activities and achievements of programs by using objectives and indicators to measure outcomes and guide strategic planning.

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Data Integrity and Use

Routine Health Information System in Cambodia

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Objectives of HIS

♦ Provide reliable information on health problems and health service activities

♦ Promote evidence-based planning and management of health services

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Main Characteristics

♦ Integration
♦ Standardization
♦ Simplicity
♦ Reliability
♦ Computerization

Components of HIS

♦ Monthly routine reports
♦ Alert system (zero reporting)
♦ Quarterly reports (Tuberculosis, leprosy)
♦ Register forms
♦ Health activity monitoring table

Flow of Information

♦ Daily registers for data collection
♦ Monthly reports from HCs and RHs to ODs
♦ ODs report to PHDs
♦ PHDs report to MOH/DPHI
♦ Feedback to national programs, other MOH departments, and provincial levels

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Uses of Health Information

♦ Epidemic control
♦ Planning and management
♦ Budgeting, and resource allocation
♦ Drugs and supplies allocations
♦ Work plan formulation
♦ M&E of facilities and health system

Constraints

- Lack of a data culture
- Limited use of data at provincial and district levels
- Lack of timeliness of reporting
- Limited staff capacity to analyze and interpret data
- Quality of data
- Insufficient feedback
- No information from private commercial and NGO sector

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Improving Data Use

- How do we motivate health workers?
- What incentives can we provide?
- How can data be made more reliable?
- Are there any actions that can be taken at the local levels to promote data integrity?
- Is it necessary to make data relevant?
- Addressing data culture constraints
  - create an **information culture** based on
  - **using data** for **decision making** through
  - **participation** and **consensus-building**

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