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REACH
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HEALTH

TECHNICAL ASSISTANCE TO KEPI'S MANAGEMENT INFORMATION SYSTEM

Nairobi, Kenya

January 20-24, 1992

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January 20 - 24, 1992

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TRIP REPORT

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ACRONYMS

BCG	Bacillus Calmette Guerin
CEIS	Computerized EPI Information System
DANIDA	Danish Agency for International Development
DHMT	District Health Management Teams
DPT	Diphtheria, Pertussis, Tuberculosis
EPI	Expanded Program on Immunization
HIS	Health Information Systems
KEPI	Kenya Expanded Program on Immunization
MU	Management Unit
REACH	Resources for Child Health Project
TT	Tetanus Toxoid
USAID	United States Agency for International Development

I. EXECUTIVE SUMMARY

As part of its ongoing support to KEPI's management information system, a REACH Technical Officer made a one week visit to Kenya from January 20 - 24, 1992. The main objective of the visit was to fully brief the KEPI MU on the capabilities of CEIS, assist the MU in identifying their information needs and in identifying how CEIS reports and graphs could be used to meet these information needs. The technical officer also worked with KEPI Data Management Officer to develop plans for KEPI's upcoming disease surveillance workshops.

KEY FINDINGS

1. The KEPI MU will begin including the collection of disease surveillance data on its monthly immunization activity report. This represents a reasonable solution until KEPI can receive timely and complete disease surveillance data from HIS and is in accord with recommendations made by the KEPI pre-appraisal team in October, 1991.

2. Completeness of reporting service delivery data from the district level to KEPI has improved substantially in 1991 as compared to 1990. For 1991, approximately 70% of reports expected from the district level have been received. This improvement can be attributed to the increased level of feedback to the district level completed by the KEPI Data Management Officer during the year, including the routine sending of letters reminding districts to report completely.

3. The KEPI MU is highly motivated to use the full capabilities of the CEIS to provide them with the information they need to make management decisions. The MU will begin holding monthly meetings to review district performance with respect to key indicators of program performance and use the results to plan the location and content of supervisory visits.

4. The KEPI MU plan to conduct district level disease surveillance workshops in 1992 will, when completed, significantly improve the DHMT's ability to collect and analyze service delivery and disease surveillance data. The workshops will also produce a core group of national and provincial level staff capable of providing ongoing supervision and in-service training to DHMTs.

II. RECOMMENDATIONS

1. The KEPI MU may wish to limit its collection and analysis of disease surveillance data to incident cases only and not include mortality data. WHO currently recommends that EPI not routinely collect data on mortality due to EPI preventable diseases, but rather use special surveys to obtain these data. Furthermore, WHO also recommends that EPI prioritize their information needs and collect data on incident cases of diseases for which there are well established targets for disease reduction and strategies defined to meet these targets (See Appendix 1). In Kenya this would include measles, polio and neonatal tetanus. Consequently, KEPI may wish to include only these diseases on its suggested disease surveillance form and delete diphtheria and tuberculosis until the disease surveillance reporting system is fully functioning.

2. KEPI should continue discussions with HIS on obtaining monthly historical disease surveillance data by district for the years 1989 to 1991. These data should be entered into CEIS and used to generate reports and graphs that will assist KEPI in identifying seasonal and epidemic patterns of EPI target diseases in Kenya.

3. The KEPI MU should formally establish targets for the complete and timely reporting of routine service delivery data in 1992. KEPI may wish to use the targets of 80% complete reporting and 50% timely reporting from the district to the national level. KEPI should also

consider implementing a protocol for increasing the timeliness and completeness of reporting routine service delivery data in 1992. This could include routine monthly monitoring of indicators for timely and complete reporting and the sending of appropriate letters to each district every month summarizing the district's reporting performance. Regular monthly feedback should correct remaining problems in non reporting, particularly in those districts where completeness of reporting is less than 50% for 1991.

4. The KEPI MU plans to conduct district level training in monitoring coverage and disease surveillance should receive high priority. The first workshop could be conducted in May, 1992 and should be preceded by a one week training of trainers course. REACH should provide technical assistance, as necessary, to the continued development of workshop training materials and to the completion of the training of trainers course and workshop.

5. In advance of district level disease surveillance workshops, KEPI should consider meeting with appropriate staff from the MOH to adopt standard case definitions for polio, measles and neonatal tetanus. KEPI and the MOH should also consider establishing guidelines for the investigation of reported cases of polio and neonatal tetanus.

6. KEPI may wish to consider formally adopting the use of key indicators to monitor progress towards national coverage objectives for full immunization coverage and should set targets for these indicators. At a minimum these would include monitoring indicators for access/utilization, drop-outs, targeting of infants for immunization and for timely and complete reporting. KEPI may wish to set objectives for these indicators based on district performance for 1991. Districts could be divided into three groups, based on the level of full immunization coverage achieved in 1991, for the purpose of establishing 1992 objectives.

7. In preparation for district supervisory visits during 1992, KEPI MU staff should review the district's current level of performance with respect to key indicators of program performance and discuss problem solving strategies with districts that are specific to the priority problem identified. The KEPI data management officer should also brief the supervisory team member on the district's performance with respect to following reporting procedures. A simple checklist summarizing district performance, could be completed by the data management officer or the data entry clerk, and be provided to the supervisory staff prior to the visit to focus discussions during the supervisory visit.

8. In the near future, KEPI will be begin managing and analyzing disease surveillance data and training district level staff in these same skills. To be most effective in managing disease surveillance data, the KEPI Data Management Officer should receive basic training in epidemiology. The Centers for Disease Control or organizations in Europe offer short courses in epidemiology that would be appropriate and beneficial to the KEPI Data Management Officer. Options for providing epidemiology training to the Data Management Officer should be explored.

III. TRIP ACTIVITIES

A list of persons contacted appears in Appendix 2

A. Management Unit Briefings on Computerized EPI Information System

During the visit, the author had detailed discussions with the REACH Communications Advisor and the DANIDA Management Advisor to brief them on the ability of CEIS to provide them with information they might need to facilitate decision making and implement their specific activities. Based on a request from the DANIDA advisor, the consultant and KEPI Data Management Officer created a new CEIS report that will provide the KEPI MU with a summary total of the number of doses of BCG, DPT, Polio, Measles and TT given by district, by month for a given year. This report will assist KEPI in identifying district level vaccine requirements in the future.

The consultant and Data Management Officer also fully briefed the entire KEPI MU on CEIS and the types of information that could be provided to the unit to assist them in making management decisions. During the briefing the management unit was also advised of several key indicators of program performance that can be monitored using routinely reported service delivery data. These included indicators of access to and utilization of immunization services (DPT1 coverage), program continuity or completion of immunizations (DPT1 - Measles Drop Out Rate), the ability of KEPI to target under ones (as measured by the proportion of total doses of measles given that were administered to infants less than one) and the completeness and timeliness of reporting from the district to the national level (as measured by the percent of expected reports received and the percent of reports received that were received within one month).

In preparation for the briefing, the author and the Data Management Officer completed the specification of various coverage graphs that may be useful to the MU in monitoring these indicators. Samples of the graphs and additional CEIS reports were given to the MU during the briefing.

The MU decided to routinely review district specific performance with respect to these indicators and to use the results to prioritize districts requiring supervision. The results will also be used to focus the content of the supervisory visit towards finding solutions to the priority problems that are preventing the district from achieving coverage objectives. The MU also agreed to review district compliance with reporting procedures on a routine basis and to discuss the results of this review during supervisory visits. A checklist was proposed to facilitate the MU's review of district compliance with reporting procedures and is included in Appendix 3.

B. Planning for Disease Surveillance Workshop

The KEPI Data Management Officer plans to conduct a series of three district level workshops during 1992. The focus of these workshops will be to train DHMTs to collect, analyze and use service delivery and disease surveillance data to improve program performance and achieve disease reduction targets. During each workshop, districts from 2 to 3 provinces will be trained.

The first component of the workshop will provide training in improving the completeness and timeliness of reporting service delivery data. DHMTs will also be trained to use key indicators of program performance to monitor progress and identify priority problems that are preventing them from achieving program goals. Training will emphasize a problem solving approach that will encourage DHMTs to identify causes for poor program performance, using recommended tools, and to implement appropriate solutions.

The disease surveillance component will orient DHMTs to KEPI procedures for reporting cases of EPI preventable diseases and for taking appropriate follow-up actions. Basic training in analyzing disease surveillance data to identify disease trends and causes for observed trends will also be provided.

The author and Data Management Officer developed a draft workshop agenda with the possible content and training materials required for team sessions. The tentative workshop agenda is shown in Appendix 5. The Data Management Officer will present the agenda to the MU for their input and the final workshop agenda will be decided upon by the end of January. After the agenda is finalized, the responsibility for developing session plans and the required training materials will be determined. REACH will provide technical assistance as requested. The most likely timing for the first workshop is early May.

Prior to the workshop, the Data Management Officer will conduct a district level training and information needs assessment. The author worked with the Data Management Officer to develop the contents of the needs assessment questionnaire. The questionnaire is shown in Appendix 4. District visits to complete the needs assessment are scheduled to begin in mid-February, 1992.

The workshop will be preceded by a one week training of trainers course. During this week, staff from the Medical training colleges, Provincial Medical Offices, Rural Health Training Centers and HIS will be briefed on the workshop content. After training, participants will form provincial training teams that will be responsible for conducting the workshop for districts in their province. Each training team will be assisted by a staff member from HIS and KEPI during their provincial workshop.

C. Disease Surveillance Data

The author and Data Management Officer reviewed KEPI's need to obtain complete and timely disease surveillance data. The Data Management Officer has decided to request that DHMTs report monthly totals for cases and deaths of EPI preventable diseases on the back of the Monthly Immunization Summary form which is now directly sent to KEPI. This represents a very reasonable solution to the problems experienced in receiving timely disease surveillance data from HIS and will require minimal duplication of work. District Public Health Nurses and Medical Records Officers will only be required to abstract totals from Monthly Outpatient and Inpatient Morbidity reports and send these totals to KEPI. The KEPI Data Management Officer has received verbal agreement from the KEPI Manager and HIS Director to begin implementing this solution.

Before implementing this change, the KEPI MU may wish to review current WHO recommendations which suggest that EPIs only collect and analyze disease morbidity data on a routine basis. WHO suggests that disease mortality data be collected through special surveys only. Furthermore, KEPI MU may wish to review its decision to collect data on all EPI preventable disease and consider focusing its data collection and analysis activities on those diseases for which specific disease reduction targets and policy statements have been established. This would include neonatal tetanus, polio and measles.

To prepare for KEPI's increased role in collecting and analyzing disease surveillance data, the KEPI Data Management Officer would benefit from training in epidemiology. Courses such as those offered by CDC/Emory University or a European organization would be appropriate. The MU should explore options for providing the Data Management Officer with epidemiology training.

The author and Data Management Officer also discussed the need for KEPI to obtain monthly historical data on the incidence of target diseases in order to analyze seasonal and epidemic patterns of disease and, in the future, be able to interpret trends in reported cases and plan the timing of possible immunization campaigns. A meeting was held with HIS staff to identify a method by which monthly historical disease surveillance data could be provided to KEPI. During the meeting it was agreed that HIS would provide KEPI with monthly totals of disease incidence data from outpatient morbidity forms for 1990. After KEPI has transferred these data to CEIS, HIS agreed to supply KEPI with data for 1989 and 1991.

D. Measles Initiative Planning

To assist the KEPI MU and USAID/REACH in identifying possible districts for the measles initiative, the author and Data Management Officer specified a new CEIS report that contained data on the criteria for selection outlined by the REACH Acting Technical Director during his visit the previous week. The CEIS report presents data from the routine reporting system on the Annual Target population, DPT1 Coverage, the number and percent of infants not immunized against measles, the DPT1 - DPT3, DPT1 - Measles and DPT3 - Measles Drop Out rates, the proportion of all measles doses given that were given to infants under one and the completeness of reporting from the health facility to the district level.

The report was generated several times, each time ranking districts on a different criteria. Copies of the report were left behind at KEPI.

APPENDIX 1

WORLD HEALTH ORANIZATION RECOMMENDATIONS REGARDING DISEASE SURVEILLANCE

EXPANDED PROGRAMME ON IMMUNIZATION

GLOBAL ADVISORY GROUP

PROGRESS REPORT:

GUIDELINES FOR IMPROVEMENT OF ROUTINE SYSTEMS FOR DISEASE SURVEILLANCE, INCLUDING EPI TARGET DISEASES

14th Meeting
14-18 October 1991
Antalya, Turkey

Restricted distribution, English only

EPI/GAG/91/WP.13

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4.0 Fourth Step

Improve the existing surveillance system to effectively serve EPI purposes

Based on the results of the assessment of the existing system (Third Step), the system can now be improved to serve EPI purposes. It should be kept in mind that the most important improvements are to make sure that the right EPI target diseases are reportable and that the reporting is complete, timely and accurate.

4.1 Ensure that at least measles, NNT and polio (and in mature programmes acute flaccid paralysis) are included in the list of reportable diseases.

Whether other EPI target diseases should be reportable depends on local possibilities and priorities. Measles, NNT and polio are good indicators for the effectiveness of the immunization programme. If these three diseases are controlled, the probability that pertussis and diphtheria are also brought under control is high.

Tuberculosis is more difficult. The objective of BCG immunization at birth is to prevent severe courses of primary tuberculous infection in infants and children before school age. Therefore, surveillance of TB for EPI purposes should concentrate on cases of TB in children under 5 years of age and, ideally, focus on cases of disseminated tuberculous infection and tuberculous meningitis. It is obvious that these objectives can only be met on a routine basis by sophisticated surveillance systems or at a selected surveillance sites such as major hospitals and university clinics. The impact of BCG immunization at birth should rather be followed by disease surveys at certain (long) intervals, unless changes have been introduced in preventive activities.

4.2 Introduce a monitoring system for completeness and timeliness of reporting at district and national levels and a system to follow-up on reporting defaulters.

In countries which have adopted specific (targeted) disease control activities, the surveillance must be timely and complete. This should be monitored carefully and health units which do not comply must be followed up immediately and supported by intensified supervision.

Annex 1 shows an example of a registration form for timeliness and completeness of reporting in a district. The form can easily be adapted to provincial and national levels.

Focussing attention on timeliness and completeness of routine reporting, the combined indicator for reporting effectiveness should be :

> the number of monthly (or weekly) reports received on time compared to the number of expected reports as indicated at the bottom line marked "Reporting effectiveness" in Annex 1.

A simple system to follow this indicator should be introduced at all levels of the surveillance chain. The monthly routine reports from the districts to provincial level should include information on the number of health facilities expected to report and the number of reports received on time.

Further details on special polio surveillance activities can be requested from EPI/HQ (reference No. 4).

Immediate reporting may take place using telephone, telegraph, fax, etc. or a messenger.

Note: Cases reported individually should be included in the regular summary report.

Regular summary reports

In most countries, monthly reporting will be sufficient. In mature surveillance systems, weekly summary reports may be advantageous.

The monthly (or weekly) reports will give aggregated data on number of cases. In most countries this will give sufficient information for management purposes, especially when combined with information from outbreak investigations, surveys, special studies, etc., on age groups and immunization status of cases. In more mature routine surveillance systems, the aggregated number of cases can be separated in a few age groups (less than one year, 1-4 years, 5 and more years).

If no cases have been diagnosed of certain diseases, this should be clearly indicated by a zero.

Important: Even if no case of any of the reportable diseases has been diagnosed, the regular (monthly) reporting form must be forwarded (the so-called zero reporting). Otherwise, it is impossible for the next link (district, provincial and national level) to be aware of the degree of completeness of the surveillance system and to follow-up on reporting defaulters.

Note: Cases that have been subject to individual immediate reporting must be included in the monthly report.

Number of deaths caused by EPI target diseases should not be reported since it complicates the reporting without giving any useful information. Case fatality ratios cannot be calculated from routine surveillance data. Information on mortality from EPI target diseases is certainly important and should be derived from outbreak investigations, community based surveys and hospital records.

4.5 Decide what should be recorded in the health units

The patients register forms the basis for follow-up of patients under observation or in treatment and hence for a high quality of patient care. For surveillance purposes, the patients register forms the basis for investigations of reporting accuracy (Third Step, point 3) as well as for retrospective outbreak investigations. It is therefore important to define which information should be recorded in the patients register in the health centres about each case of disease. Annex 3 gives an example.

For cases of specific diseases of low frequency, special registration forms may be warranted. All cases of NNT should be thoroughly investigated by the health centre to create the optimal conditions for prevention of future cases. A NNT case investigation form is shown in Annex 4. In countries which have embarked upon polio eradication procedures, a line listing form for suspected cases of polio should be used at the district and national levels. An example is shown in Annex 5.

APPENDIX 2

PERSONS CONTACTED

PERSONS CONTACTED

Connie Johnson/USAID/Nairobi

Mr. Kimau/KEPI Logistics Officer

Mr. Kimanau/KEPI

Per Milde/DANIDA

Mrs Murangi/KEPI Training Officer

Dr. Muu/KEPI Manager

Jane Wanza/KEPI Data Management Officer

Mr. Akatch/HIS Staff

Mr. Baree/HIS Staff

APPENDIX 3

SUGGESTED CHECKLIST FOR REVIEWING DISTRICT REPORTING

SUGGESTED CHECKLIST FOR QUARTERLY REVIEW OF DISTRICT REPORT FOLDERS

1. Are reports neat and clear?
2. Are all facilities giving immunizations listed on the report with facilities that did not immunize or that did not report for a month clearly shown?
3. Are facilities listed in the same order on each monthly report?
4. Are all items on the monthly report completed?
5. Does the district total all immunizations given by facilities in the district?
6. If the district reports are totaled, are the totals correct?
7. Do more than 80% of KEPI facilities in the district report to the district level for each month?
8. Does the district send to KEPI more than 80% of the monthly reports expected for the year to date?
9. Does the district send to KEPI more than 80% of the monthly reports expected for the year to date on time (within one month)?
10. For what months does the district still need to send reports for?

APPENDIX 4

NEEDS ASSESSMENT QUESTIONNAIRE

NEEDS ASSESSMENT SURVEY ON
IMMUNIZATION AND DISEASE SURVEILLANCE REPORTING (KEPI)

DISTRICT_____

NAME OF DHMT MEMBER INTERVIEWED_____

I. DISTRICT INFORMATION:

A. Total number of health facilities required to report disease surveillance data_____

B. Total number of immunizing health facilities_____

C. Distance from district headquarters to nearest health facility (kms)_____

D. Distance from district headquarters to farthest health facility (kms)_____

II. AVAILABILITY OF IMMUNIZATION REPORTING FORMS:

A. The immunization tally sheets (MOH 702) are:

1. Always available
2. Rarely available
3. Never available

B. The immunization summary sheets (MOH 710) are:

1. Always available
2. Rarely available
3. Never available

III. COMPLETION OF IMMUNIZATION REPORTING FORMS:

A. The immunization tally sheets (MOH 702) are completed:

1. At the end of each session
2. At the end of each week
3. At the end of each month

B. The immunization summary sheets (MOH 710) are completed:

1. At the end of each session
2. At the end of each week
3. At the end of each month

IV. REPORTING IMMUNIZATION DATA:

A. According to district policy, when should health facility immunization reports be received at the district HQs?

1. By the fifth day of the following month
2. By the end of the following month
3. By the end of the following quarter
4. As soon as possible

B. What percent of facilities in your district report immunization data:

1. On time (in less than one week)
2. Late (from one week to one month)
3. After one month

C. What percent of immunization reports expected from health facilities were received for the last reporting period?

1. More than 80% ____
2. Between 50% and 80% ____
3. Less than 50% ____

D. Late reporting from health facilities to the district is most often due to:

1. Not knowing the importance of reporting on time
2. Lack of transportation or poor communication between the health facility and the district
3. Lack of postage stamps
4. Forgetting to send report.

E. According to district policy, when should the district's monthly immunization summary form be received at KEPI HQs?

1. By the fifteenth of the following month
2. By the end of the following month
3. By the end of the following quarter
4. As soon as possible
5. Annually

F. If all health facilities have not reported to the district after one month, what should you do with the district's monthly immunization summary?

1. Keep it on file at the district HQs and submit it when all health facilities have reported
2. Keep it until the end of the following month and submit it with the following month's report
3. Forward it to KEPI, listing all health facilities that should report, and clearly show those facilities that did not report

G. If a health facility's report is incomplete, what action do you take?

1. Ignore incomplete report and include reported data in district total
2. Send the report back to the health facility with a note requesting that the information be completed
3. Discard the report

V. ANALYZING IMMUNIZATION DATA

A. Do you monitor immunization coverage in your district on a monthly basis?

1. Yes
2. No

If yes, which antigen or antigens to you monitor most closely?

1. DPT1/OPV1
2. DPT3/OPV3
3. Measles
4. Fully Immunized Children

B. Do you monitor immunization drop out rates in your district on a monthly basis?

1. Yes
2. No

If yes, which drop out rate do you monitor most closely?

1. DPT1 - DPT3
2. DPT1 - Measles
3. TT1 - TT2
4. BCG - Measles

C. What tools do you use to monitor coverage?

1. Monthly monitor chart
2. Totals from immunization tally sheets sent by health facilities
3. Other, please explain

_____

D. What is the most important cause in your district for not fully immunizing all infants before one year of age?

1. Lack of access to immunization services
2. Poor utilization of immunization services
3. High drop out rates
4. Missed opportunities to immunize
5. Failing to target under ones for immunization
6. Other _____

E. What specific actions did you take last year to correct the most important cause for not fully immunizing all infants before one year of age?

1. _____
2. _____
3. _____
4. _____
5. _____

16.

VI. FEEDBACK FROM KEPI ON IMMUNIZATION PERFORMANCE

A. How often did you receive feedback reports from KEPI last year?

1. Every month
2. Every quarter
3. Twice a year
4. Once a year

B. When you received feedback reports from KEPI, how did you use the information that was contained in them?

C. What information or data columns on the Monthly Cumulative Report (COV005) sent from KEPI do you have trouble understanding?

1.
2.
3.

D. What changes should KEPI make to the feedback reports and graphs it sends you to make them more useful to you?

1.
2.
3.

VII. DISEASE SURVEILLANCE DATA

1. What is the case definition in your district for:

   a. Measles?

   b. Polio?

   c. Neonatal Tetanus?

2. When a case of measles, polio or neonatal tetanus is reported, what actions do you take to confirm it as a case?

   1. Polio

   2. Measles

   3. Neonatal tetanus

3. How soon should a case of polio be reported to the district level from a health facility or a hospital?

   a. Within 48 hours
   b. Within one week
   c. Within one month

   On the average, how long does it take for a case of polio to be reported to the district level

4. Do you take any action based on a report of one case of polio? If yes, what actions do you take?

   If no action is taken based on a report of one case, how many cases of polio being reported will result in action? What actions do you take?

5. How soon do you take this follow-up action in response to a reported case or cases of polio?

6. How many cases of polio were reported in your district last year (1991)?

   a. Less than 10
   b. Between 10 and 50
   c. More than 50

7. How many cases of neonatal tetanus are reported each month in your district?

   a. Less than 10
   b. Between 10 and 50
   c. More than 50

8. When was the last case of neonatal tetanus reported to you?

   a. Within the last month
   b. Between one and three months ago
   c. Between three months and one year ago
   d. Over one year ago

9. Do you require that health facilities report zero cases when no cases have been seen at the health facility in the month?

   a. Yes
   b. No

10. What percent of facilities in your district report disease surveillance data:

   a. On time (in less than one week)
   b. Late (from one week to one month)
   c. After one month

11. What percent of disease surveillance reports expected from health facilities were received for the last reporting period?

    a. More than 80% ____
    b. Between 50% and 80% ____
    c. Less than 50% ____

12. Do you monitor the incidence of EPI target diseases in your district on a monthly basis?

    If yes, what analyses do you complete each month?

    What tools do you use to help you analyze disease surveillance data?

13. What mechanism would you recommend be used to report cases of polio, measles and neonatal tetanus as quickly as possible to the district level (for example telephone, telegram, public transport)?

APPENDIX 5

KEPI DISEASE SURVEILLANCE WORKSHOP

Session 1 -Introduction to Workshop

-Reporting requirements

-Indicators for timely and complete reporting

Session 2 - Identifying clinic catchment areas

-Determining need for increasing services and increasing utilization

Session 3 - Reviewing current performance for immunization coverage

-Current levels of coverage

-District presentations on current methods used to monitor coverage

Session 4 - Managing EPI

-Indicators for monitoring completeness and timeliness of reporting

-Indicators of Program Performance and Setting Objectives

-Introduction to program attributes and their indicators

-Calculating indicators

-Interpreting Immunization Data

-Methods for monitoring indicators

Monthly monitor chart
KEPI feedback reports

-Supervising Health Facilities

Session 5 - Problem solving to increase immunization coverage

-Identifying possible causes for poor program performance

-District presentation on barriers to achieving objectives

- Tools for identifying causes

-75 household surveys, focus groups, missed opportunities survey, supervisory visits

-Identifying solutions based on identified cause

-Tools for problem solving

-Decision Trees

Session 6 - Introduction to Disease Surveillance

-Briefing on disease incidence by district for 1990-1991 and timeliness and completeness of reporting

-Reporting requirements: Forms, frequency

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-Indicators for monitoring reports of disease surveillance data

-Analyzing disease surveillance data

Identifying trends

Interpreting trends, identifying possible causes for trends

Identifying actions based on trends and their cause

Tools to analyze disease surveillance data

Maps, graphs

Session 7 - Polio Eradication

-Case definition

-Identifying sites likely to see polio and identifying reporting officers at each site

-Identifying district surveillance officer and description of responsibilities

-Procedures for reporting cases of polio to district, classifying cases.

-Procedures for responding to reports of polio, including case investigation and containment measures

-Indicators for monitoring polio surveillance

Session 8 - Neonatal Tetanus Elimination

-Case definition

-Procedures for responding to reported case

-Completing case investigation form

-Analyzing case investigation forms

-Taking actions based on analysis

-Identifying high risk areas for NNT and developing control strategies

Session 9 - Measles

-Case Definition

-Procedures for investigating outbreaks

Session 10 - Plans of action

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