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**REACH**

RESOURCES  
FOR CHILD  
HEALTH

# **TECHNICAL ASSISTANCE TO KEPI'S INFORMATION SYSTEM**

**October, 1991**

**Nairobi, Kenya**

TRIP REPORT

Technical Assistance to KEPI's Information System

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## ACRONYMS

CEIS	Computerized EPI Information System
DANIDA	Danish Agency for International Development
DHMT	District Health Management Team
DMO	Data Management Officer
DPHN	District Public Health Nurse
EPI	Expanded Program on Immunization
HIS	Health Information System
JSI	John Snow, Inc.
KEPI	Kenya Expanded Program on Immunization
MOH	Ministry of Health
MU	Management Unit
PHN	Public Health Nurse
PLOP	Plan of Operations
REACH	Resources for Child Health Project
USAID	United States Agency for International Development

## I. EXECUTIVE SUMMARY

USAID/Nairobi and the MOH, Division of Family Health, Kenya Expanded Programme on Immunization (KEPI), requested technical assistance from the REACH Project to increase the frequency and utility of CEIS reports and graphs sent as feedback KEPI headquarters to the district level. Specific tasks included working with the KEPI Data Management Officer to identify reports and graphs containing key management information that should be provided to district staff to use in routine program monitoring, and generating a full set of the feedback materials for each district. The consultant and KEPI Data Management Officer also identified the content of training that will be required by district staff to interpret and effectively use the feedback materials and developed a draft set of materials to meet these training needs.

The manual system for reporting service delivery statistics was also reviewed and significant improvements in system management were noted. KEPI MU may wish to begin focusing on improving the timeliness and completeness of reporting service delivery data. Several obstacles to improved reporting were documented and recommendations were offered.

Lastly, the consultant and Data Management Officer specified the data entry requirements for disease surveillance module of CEIS and the reports and graphs summarizing morbidity and mortality data that will be produced by the CEIS.

## II. KEY RECOMMENDATIONS

1. The KEPI Data Management Officer has made significant improvements to KEPI's manual information system and has well utilized the Computerized EPI Information System installed in September, 1990. The KEPI MU should provide the Data Management Officer with the administrative support and necessary time required to make further improvements and to fully manage the health information system.
2. The KEPI Data Management Officer should fully brief the MU on the information maintained by CEIS and on the reports and graphs available. The KEPI MU should continue to identify the nature and frequency of specific management decisions it makes and the CEIS reports and graphs it can use to support these decisions.
3. The KEPI Data Management Officer should complete the first distribution of the CEIS feedback and training materials to the 42 districts. Feedback materials will consist of immunization coverage reports Number 5 (Monthly Cumulatives: Infant Doses and Coverage), Number 6 (Monthly Cumulatives: Pregnant Women: Doses and Coverage), Number 4 (Drop Out Rates) and immunization coverage graph Number 3 (Annual Cumulative Coverage). These materials will summarize important indicators of full immunization coverage for the year to date and should be generated and sent to districts on a quarterly basis.

4. The KEPI MU should establish targets for the complete and timely reporting of service delivery data by districts to KEPI. Appropriate CEIS reports should be reviewed monthly at the central level to monitor completeness and timeliness of reporting from the district level to KEPI. The KEPI MU may wish to finalize a letter that can be sent monthly to districts outlining the status of their reporting to KEPI. To encourage timely reporting, the letter should include specific mention of whether monthly reports are received on time (within one month).
5. The KEPI Data Management Officer and Data Entry Clerk should complete the review of the district's manual reporting files to determine compliance with suggested procedures for reporting and to identify any reports received but not entered into CEIS. Review findings should be included in the package of CEIS feedback materials to be sent to the districts. A similar review should be completed on a quarterly basis and the results included in the set of feedback reports and graphs to be sent quarterly to districts.
6. The KEPI MU should consider adopting the following standards for districts to follow in completing routine monthly reports and in submitting them to KEPI:
  - List all KEPI facilities within the district in the same order on each monthly report to facilitate the identification of health facilities that do not report. For facilities reporting, show either the total number of immunizations given or that no immunizations were given (zero reporting) and the reason why no immunizations were given. Leave blanks for those facilities not reporting.
  - Add facility level immunization totals and provide KEPI with a district-wide total.
  - Include mobile team activity within the total of the fixed center to which the team is attached.
  - When submitting updated monthly reports to include totals from health facilities that reported late, districts should clearly indicate the facilities and total number of immunizations first reported and the additional facilities and new totals being included in the update.
7. The KEPI Data Entry Clerk should on a monthly basis print a copy of Coverage Report Number 5 (Monthly Cumulatives: Infant Doses and Coverage), for each district and compare the number of doses of DPT, polio and measles to review the accuracy of the totals provided by districts on the monthly reports and the accuracy of data entry.
8. The KEPI MU should work with the MOH team and HIS staff to develop uniform case definitions for reportable diseases, to establish neonatal tetanus as a reportable disease separate from total tetanus and to ensure

that disease surveillance data is recorded at HIS by month and available to KEPI in discrete monthly totals.

9. The KEPI MU should establish a protocol to ensure that disease surveillance data are obtained from HIS on a monthly basis. The protocol should identify the person responsible for obtaining the data and the timing for this activity. KEPI should begin entering disease surveillance data monthly, one the updated version of the CEIS is available.
10. The KEPI Data Management Officer should visit at least four more districts to field test the CEIS reports, graphs and training materials that will be sent quarterly and to further identify district training needs. During the visits, the KEPI MU should identify additional district specific obstacles to meeting objectives for timely and complete reporting and identify possible solutions.
12. Training for DHMT's in using CEIS reports and graphs for local program monitoring and implementation should be a high priority activity for KEPI MU in early 1992. REACH should assist the KEPI Data Management Officer in completing the training materials required for the workshop.

### III. BACKGROUND

The REACH Project has supported the development and installation of a management information system for KEPI since 1989. In September 1990, a REACH Technical Officer and Information Systems Consultant installed the most recent version of CEIS (Computerized EPI Information System) software at KEPI headquarters in Nairobi and trained the newly appointed Data Management Officer. After approximately one year, the Data Management Officer has worked to improve the manual information system and has succeeded in bringing the CEIS up to date with respect to data entry. The Data Management Officer has twice sent a CEIS report to all districts that summarizes their performance with respect to immunization coverage.

The present consultancy was requested by USAID/Nairobi and the MOH to identify CEIS reports and graphs that contain important indicators of program performance available from routinely reported data. These reports and graphs would be sent as quarterly feedback to districts. The consultant and Data Management Officer were also to identify the extent of training that would be required by district staff to effectively use the feedback from CEIS to improve their program and to develop and field test training materials that could be used to support the use of feedback materials.

#### IV. TRIP ACTIVITIES

The following is a summary of the major activities completed during this consultancy. Unfortunately, other high priority activities occurring within KEPI MU during the same time period (Nakuru Child to Child Workshop and completion of the PLOP prior to the DANIDA assessment visit) prevented the consultant and KEPI Data Management Officer from collaborating as closely as would have been desirable on some of these activities.

##### A. IDENTIFICATION OF QUARTERLY FEEDBACK MATERIALS FROM CEIS

###### 1. CEIS Reports and Graphs

The consultant and KEPI Data Management Officer selected three CEIS reports (Coverage Reports 4, 5 and 6) and one graph (Coverage Graph 3) that will be sent quarterly to each of the 42 districts. Examples of these materials generated for Taita Taveta District appear in Annex 1. The feedback reports will allow district PHNs to identify their performance in two key program areas that determine full immunization coverage; program access and program continuity. The graph, the monthly monitoring chart, will show DPHNs their immunization coverage based on a year to date target and allow them to determine before the end of the year if they can expect to meet their target for immunization coverage based on their current level of program performance.

The consultant and KEPI Data Entry Clerk printed a complete set of feedback materials (three reports, one graph) for each of the forty two districts. These materials will be sent by the Data Management Officer with the draft CEIS training materials and feedback summary sheet (see below).

###### 2. Development of Training Materials

The consultant and Data Management Officer developed training materials to support the CEIS reports and graphs that will be sent quarterly to the districts. These materials include a discussion of the important determinants of full immunization coverage that can be identified from routine service delivery data, suggested steps to take at the district level to find out more about the cause of poor performance with respect to a determinant, and possible corrective actions. The materials also contain a complete description of the information presented in each CEIS report and graph selected for feedback and the location on the report or graph of the important indicator(s) of program performance to be reviewed.

The draft training materials that will be sent to districts appear in Annex 1 together with the sample CEIS reports and graphs.

## B. DISTRICT FIELD VISITS

The consultant and Data Management Officer visited four district headquarters (Nakuru, Elegyo Marakwet, Uasin Gishu and Baringo) and met with the District Public Health Nurse and Medical Records Officer. In two locations, the District Medical Officer was also present for the discussions. The four districts were selected because they provided a range of performance among districts with respect to completeness and timeliness of reporting and the level of immunization coverage achieved.

The visits were made to field test the CEIS feedback reports, graphs and training materials and to identify district level training needs with respect to interpreting the materials and using the information to improve program performance.

During each district meeting, the reports and graph selected for feedback were given to district staff along with the training materials. The two coverage reports, COV005 and COV006, were generally well understood in the four districts, but there were questions regarding the cumulative coverage line, the denominator used to calculate monthly and cumulative coverage, the survivors column and the information on reporting facilities. The training materials helped district staff answer these questions.

Staff in all four districts required a more detailed presentation of the drop out rate report (COV004) and the monthly cumulative coverage graph in order to understand the data being presented. In two districts, staff had difficulty demonstrating the correct method of calculating the drop out rate. Future district level training should emphasize the drop out report and cumulative coverage graph.

Comments from district staff were helpful in identifying how the feedback materials should be changed before they are distributed routinely. Suggestions included changing the column labeled "Survivors" to "Target Population" and adding the DPT1 - Measles Drop-Out rate to the Drop Out Rate report.

During these visits, district staff also had questions about procedures for completing the monthly immunization reports and sending them to KEPI. Materials covering these procedures will be developed and included in the final set of training materials that will accompany the CEIS feedback reports.

Discussions with staff also revealed important obstacles at the district level that will have to be overcome if KEPI's information system at the national level is to become more complete and more timely. These obstacles include:

- Transportation difficulties that prevent facilities from sending reports to the district.

-Problems in having reports posted from the district level if the medical records officers give them to some central posting office within the district.

-Inadequate follow-up by supervisors of medical records officers to ensure that monthly reports are actually sent to KEPI from the district once they are completed.

In all four districts, staff appeared to genuinely appreciate the feedback they were being given and interested in how they could use the information to improve their EPI. It is clear that DHMTs will need additional training if they are to use CEIS reports and graphs effectively. The training materials field tested will require some modification and should include some additional information on completing monthly reporting forms, but the basic content and level of presentation were found to be appropriate.

The materials should be used as a basis for a district level training on analyzing and using immunization data that will be a high priority activity for KEPI in early 1992. Prior to the training, it would be useful for the KEPI Data Management Officer to visit up to four more districts to obtain additional feedback on the CEIS reports and graphs and the training materials and to identify further training needs. REACH should assist KEPI as needed in preparing for and in conducting this training.

#### C. IDENTIFYING KEPI MU INFORMATION NEEDS

The Data Management Officer and consultant intended to give the MU a complete briefing on the information maintained by the CEIS and on the reports and graphs available to the MU from the CEIS. Following this briefing, the Management Officer and consultant were to have led the MU in a detailed review of the decisions they make and of the data they would like from the information system to support these decisions. Unfortunately the limited availability of KEPI MU staff, who were involved in preparing the PLOP, did not permit this presentation to take place during the consultancy. The Data Management Officer should discuss information needs with the MU as soon as possible.

During the consultancy, two brief meetings were held with the KEPI Manager to review his monthly information needs. The manager felt that a monthly summary of district level immunization coverage would be useful at the central level in prioritizing districts for supervisory visits. Two new coverage reports (Coverage Reports 17 and 18), KEPI MU Monthly Immunization Summaries, were specified for use by the KEPI MU that will show coverage figures for key antigens that are indicators of program performance. In the reports, districts will be ranked on measles coverage and grouped into one of three categories of performance (measles coverage above 80%, measles coverage between 50% and 79% and measles coverage less than 50%). Coverage figures will be calculated based on the target population for the year to date.

An example of the KEPI MU Monthly Immunization Summary is shown in Annex 2. The updated version of CEIS will also produce two KEPI MU Monthly Immunization Summaries. These summaries will include two important drop-out rates and an example is shown in Annex 3.

The development of these reports was used as an opportunity to train the KEPI data entry clerk how to specify and generate new reports within CEIS. Even though KEPI has had this capability for the past year and has had access to a User's Manual that describes the steps required to create a new report, they have not taken advantage of the capability.

#### D. IDENTIFYING NEEDS FOR DISEASE SURVEILLANCE DATA AND SPECIFYING DISEASE SURVEILLANCE REPORTS AND GRAPHS

Needs for disease surveillance data were discussed with the KEPI Data Management Officer. KEPI would like to enter data on the incidence of measles, pertussis, polio, tuberculosis, total tetanus and neonatal tetanus on a monthly basis for the district level. The updated version of CEIS, to be sent following this consultancy, will offer KEPI this capability.

During this visit the Data Management Officer obtained copies of the annual summaries of the outpatient morbidity reports from HIS for the years 1988-1990. Annual totals of district specific data for measles, polio, pertussis, total tetanus and tuberculosis were entered. These data were used by the consultant and Data Management Officer to develop specifications for two surveillance reports that will be produced by the updated CEIS. The reports will show monthly and annual totals of disease incidence and incidence rates by district, province or for the national level (Annex 4) and will show a historical comparison of the trend in immunization coverage versus disease incidence (Annex 5).

Four important obstacles to meeting KEPI's disease surveillance needs were identified during discussions with the KEPI Data Management Officer:

-Diphtheria and neonatal tetanus are not reportable diseases in Kenya. Following a WHO sponsored disease surveillance workshop in August 1991, the MOH recognized the need to track the incidence of neonatal tetanus separately from total tetanus. WHO recommends that countries ensure that neonatal tetanus, measles and polio (and in mature programs, flaccid paralysis in children under 15 years of age) are included in the list of reportable diseases. A final decision to establish neonatal tetanus as a reportable disease is expected to result from a meeting of a 12 member team from the MOH that is scheduled to occur prior to the follow-up surveillance workshop planned for February, 1992.

In advance of an expected decision regarding neonatal tetanus, the revised CEIS will be installed to permit entry of cases of neonatal and total tetanus. The disease surveillance reports specified during this consultancy leave space for displaying the incidence of neonatal tetanus

and the blanks that will appear on the reports will serve as a reminder of the need to report neonatal tetanus separately.

-Uniform case definitions for reportable diseases have not been decided upon by the MOH. Following the August, 1991 surveillance workshop, the MOH recognized the need to establish uniform case definitions for reportable diseases. The 12 member team from the Ministry of Health, scheduled to meet before February, 1992 is also to agree on case definitions. Establishing and disseminating uniform case definitions is recommended by WHO and will be an important step towards improving the overall quality and consistency of disease surveillance data collected in Kenya.

KEPI should be a strong advocate for establishing neonatal tetanus as a separate reportable disease and for establishing uniform case definitions during the meeting of MOH staff.

-The information system used by HIS to manage disease surveillance data maintains only cumulative, running totals of cases and deaths for the year to date. Total cases and deaths are automatically updated after each data entry session. Discrete total numbers of cases for a calendar month are not available from the HIS information system.

WHO has stressed the importance of countries strengthening their routine systems for disease surveillance if they are to meet global targets to eradicate polio, eliminate neonatal tetanus and control measles. WHO recommends monthly reporting of total numbers of cases as a first step, with weekly reporting to start once a country's surveillance system is more mature.

The KEPI Data Management Officer intends to meet with HIS staff to identify how KEPI can obtain reports with the monthly total number of cases of immunizable preventable diseases for entry into CEIS. Once a mechanism is determined, KEPI should develop a protocol for ensuring that monthly disease incidence data is routinely obtained from HIS and entered into CEIS.

-Outpatient facilities in Kenya serve as the primary source for reporting morbidity data on cases of immunizable preventable diseases. Reports are sent to the district level which in turn report to HIS each month. Inpatient facilities also report morbidity data on cases of immunizable preventable diseases and serve as the primary source for reporting mortality data on immunizable preventable diseases. Inpatient facilities report quarterly to HIS.

The difference in the periodicity of reporting morbidity data from outpatient and inpatient facilities and of reporting mortality data from inpatient facilities will pose a problem to KEPI in using the CEIS to manage morbidity and mortality data. The CEIS assumes that the same reporting interval is used to report service delivery, morbidity and mortality data.

As a first priority, KEPI may wish to establish a protocol for ensuring the monthly receipt and entry of morbidity data from outpatient facilities. Once outpatient morbidity data is being routinely entered and monitored on a monthly basis, KEPI may wish to discuss with HIS the feasibility of also having inpatient facilities report disease morbidity data monthly. This would permit HIS and KEPI to monitor completely all target disease morbidity data on a monthly basis, as recommended by WHO.

#### E. REVIEW OF MANUAL REPORTING SYSTEM

The KEPI data entry clerk and consultant reviewed KEPI's manual system for reporting immunization service statistics in detail. Much improvement has been made since the CEIS consultancy in September, 1990 in terms of the overall flow of reports and their entry into CEIS. Monthly reports now are received, logged, placed into the district's file and sent to the data entry clerk to be entered into CEIS. Files for districts in five of eight provinces were reviewed during this visit and the KEPI Data Management Officer will finish reviewing the folders of districts in the remaining provinces.

The following problems were noted during the review process and discussed with the data entry clerk and data management officer.

- Folders for two districts contained monthly reports that had been received at KEPI but had not been entered into CEIS. For one district (Kwale), this involved reports for August-December, 1990. For all other districts reviewed, all reports that had been received, filed in the district's folder and marked as entered into CEIS had actually been entered.

- Delays in data entry at the central level occur when the district sends a monthly report but does not total the number of immunizations given by all facilities. The data entry clerk tends to hold these reports without entering them, or to send them back to the district to be added.

- Monthly reports totaled by the district and sent to KEPI are generally accurate, as assessed by random recalculation of totals and by comparing the monthly number of doses of DPT with the number of doses of polio administered. However, two districts were observed to have made multiple errors in addition on each of the monthly reports reviewed and several other districts made between one and several addition errors on their monthly reports for 1991. Monthly reports sent by districts making frequent errors should always be retotaled by the data entry clerk. The accuracy of reports sent by other districts should be routinely checked by comparing the total number of doses of DPT and polio and by randomly retotaling data for selected antigens on monthly reports.

- Facilities listed on a district's monthly report that did not immunize during the month, but that listed a reason for not

immunizing were not being counted as having reported for the month. Facilities that send a report indicating that no immunizations were given and listing the reason should be included in the total number of facilities reporting to the district level for the month. Only districts sending no information should be counted as not having reported.

Based on the findings from the review of districts in five provinces, the KEPI Data Management Officer decided that the KEPI MU should thoroughly review all district folders on a quarterly basis to ensure the accuracy and completeness of the reporting and data entry process. Findings from the quarterly review will be fed back to districts along with the CEIS reports and graphs.

Several guidelines to use in reviewing the manual reporting system were suggested that, if followed, could improve the accuracy of the manual information system. The KEPI MU should consider adopting these or similar guidelines as official policy and inform District Public Health Nurses and Medical Records Officers. Once adopted, the procedures could be included on checklist similar to the one used during this consultancy (Annex 6). A checklist would be helpful in standardizing the quarterly review process and the content of feedback to districts.

The following guidelines were suggested during this visit and included on the checklist:

-Districts should list all KEPI facilities in the same order on each monthly report. This will help district staff and KEPI MU staff monitor completeness of reporting from the facility to the district level and to identify facilities that have not reported. If a facility does not immunize during the month, but reports the reason why (i.e. no gas, no vaccine), the district should list the reason under the facility on its monthly report to KEPI. KEPI should include these districts in the total number of facilities reporting for the month.

-Districts should total the number of immunizations on the monthly report. KEPI should check the accuracy of district totals by randomly retotaling data for two or three antigens per report and by comparing total first, second and third doses of DPT with total first, second and third doses of OPV. For districts that have demonstrated difficulty in correctly totaling monthly reports, KEPI should thoroughly retotal data for all antigens.

-When updating a total for a monthly report already submitted, the district should clearly show the previous total reported and the facilities that contributed to that total plus the new facilities reporting and the new total for the month.

A proposed format for a standardized summary sheet to be sent with the quarterly feedback materials from CEIS was also developed and reviewed with the KEPI data management officer for comment (Annex 7). The sheet would summarize the important findings from the review of the manual

reporting system and the district's performance with respect to the indicators of the key determinants of full immunization coverage contained in the CEIS reports.

#### F. REVIEW OF TIMELINESS AND COMPLETENESS OF REPORTING

The consultant also completed a review of the completeness and timeliness of reporting service delivery data from the district level to KEPI for the period January - June, 1991. The findings were reviewed with the KEPI Data Management Officer and appear as Annex 8.

Significant was the observation that as of October 10, 1991, only 21 of the 42 districts had sent to KEPI reports for more than 80% (5 or 6 monthly reports) of the reporting periods for the first six months of 1991. This level of reporting was determined to be necessary to permit an accurate assessment of the district's performance for the January - June, 1991 reporting period.

Regarding timeliness, KEPI policy states that districts should send reports to KEPI by the 15th of the following month. Therefore, one month represents a reasonable standard to set for receipt of reports. Using a one month standard for timeliness, reports for August, 1991 were due at KEPI by October 1. As of October 11, 1991, 5 (12%) of districts had reported for August (on time using a one month standard for timeliness) and 17 (40%) had reported for July (on time using a two month standard for timeliness).

As a high priority, the KEPI MU should attempt to ensure timely and complete reporting of immunization statistics by districts to have an accurate set of data on which to base important decisions. The KEPI MU will monitor the timeliness and completeness of reporting from districts to KEPI on a monthly basis. The monthly KEPI MU Summary Report produced by the updated CEIS will show the timeliness and completeness of reporting at the bottom of the report to facilitate monitoring of this data. Prior to using the updated CEIS, the KEPI Data Management Officer should calculate the completeness and timeliness of reporting for each monthly reporting period by generating COV005 for all districts after the one month time period has elapsed.

The Data Management Officer had drafted a letter that the KEPI MU intends to send monthly to each district to encourage timely and complete reporting by districts. The letter will acknowledge receipt of all reports received during the month, and note whether the reports were submitted on time. The letter will also remind districts of all monthly reports that are due, but that have not been received by KEPI. The routine use of this letter is still pending approval by the KEPI MU.

#### G. IDENTIFYING DATA NEEDS FOR KEPI TRAINING ACTIVITIES

The consultant and Data Management Officer met with the KEPI training officer to outline the specifications for data entry and reports concerning KEPI training activities.

The main need expressed by the training officer was for a series of reports that will assist her in determining how many of the four different mid level and operational level EPI management and cold chain courses should be conducted during a year and the locations requiring these training.

A questionnaire was sent to each district in July, 1991, requesting information be sent on the number and type of staff working on KEPI in the district and the training needs for the upcoming year. This questionnaire will serve as KEPI's primary source of data in planning training activities for the next year. Proposed specifications for CEIS reports that will summarize district training data needs will be sent to the KEPI MU for comment following this consultancy.

#### V. FOLLOW UP ACTIVITIES

- A. REACH will complete training materials for district health management teams that describe the use of quarterly feedback materials from CEIS in monitoring and improving KEPI at the district level.
- B. REACH will develop a series of exercises to accompany the CEIS training materials. These exercises will be useful in the training sessions planned for DHMTs in early 1992.
- C. REACH will complete the set up of the updated CEIS, including the installation of the service delivery and disease incidence reports specified by the consultant and Data Management Officer during this consultancy. The REACH Program Associate will install the updated CEIS and provide necessary training to the KEPI Data Management Officer during his administrative tentatively scheduled for November, 1991.
- D. REACH can assist the KEPI Data Management Officer, as requested, in planning and conducting training for district level staff in using immunization data (CEIS feedback materials) in program monitoring and planning, scheduled for early 1992.

**ANNEX 1**

**DRAFT**

**WORKING MANUAL FOR DISTRICT HEALTH MANAGEMENT TEAM  
USING QUARTERLY FEEDBACK FROM KEPI TO MANAGE YOUR  
IMMUNIZATION PROGRAMME**

This working manual was developed by the KEPI Management Unit and the REACH Project under the U.S. Agency for International Development (A.I.D.) Contract #DPE-5982-Z-00-9034-00; Project #936-5982.

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## ACRONYMS

<b>CEIS</b>	<b>Computerized EPI Information System</b>
<b>EPI</b>	<b>Expanded Programme on Immunization</b>
<b>KEPI</b>	<b>Kenya Expanded Programme on Immunization</b>

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## INTRODUCTION

This manual has been written to assist you, the District Public Health Nurses, and other members of the District Health Management Team, to use reports and graphs sent as feedback from KEPI Headquarters to improve the performance of your immunization programme. The reports and graphs have been produced by the Computerized EPI Information System (CEIS) installed at KEPI Headquarters, using the data sent to KEPI each month on the monthly immunization report forms. The KEPI Management Unit hopes that these reports and graphs will help you manage your immunization programme and meet the targets for programme performance set by KEPI. Please let the KEPI Management Unit know if you have questions or if you would like any other feedback reports or graphs sent to you regularly.

## QUARTERLY FEEDBACK SUMMARY

### INDICATORS FROM ROUTINELY REPORTED DATA THAT SHOULD BE MONITORED REGULARLY TO DETERMINE IF TARGETS FOR FULLY IMMUNIZED CHILDREN WILL BE MET

#### I. INTRODUCTION TO USING ROUTINE DATA TO MONITOR PROGRAMME INDICATORS

Children must have a first contact with the EPI and then return between two and four more times in order to receive all the required immunizations.

A first contact with the immunization programme is defined as having ACCESS. Completion of the immunization series is defined as CONTINUITY. Both of these attributes can determine whether or not KEPI can expect to fully immunize all children and pregnant women in your district. Data collected from routine reports of immunizations given can be used to decide if you are meeting your objectives for programme ACCESS and programme CONTINUITY or if there is a need for improvement.

If less than 100% of children in your district are being fully immunized, you will need to decide if this is because children in your district do not have ACCESS to the immunization programme or because your programme has poor CONTINUITY, meaning that children are receiving some immunizations but not all.

The following notes describe how you can use the data you collect to routinely monitor your immunization programme and to decide if you have a problem with programme access or programme continuity in your district.

Once you have decided which attribute of your programme requires improvement, you will need to decide what steps to take to learn more about the causes of poor performance and what actions you might take to improve programme performance and increase the number of children being fully immunized.

#### II. ACCESS TO IMMUNIZATIONS AND UTILIZATION OF IMMUNIZATION SERVICES

##### A. DPT1 Coverage as an Indicator of Access and Utilization

1. In order for you to reach the goal of fully immunizing 100% of the infants in your district, 100% of this population must have access to and use immunization services. The first dose of DPT should be given at the first contact with KEPI after six weeks of age. If children have only one contact with KEPI, they will most likely receive the first dose of DPT.

It is possible that children may receive BCG or Polio immunizations before receiving DPT1 after six weeks of age. If children receive BCG or Polio before six weeks of age, it is likely that the doses were given at the hospital at the time of delivery, not by the routine EPI in the district where the infant lives. For this reason, BCG may not be the best indicator of access to routine EPI services. DPT1 has been selected instead.

2. DPT1 coverage shows the highest percent of the target population that has access to and is using the EPI. DPT1 coverage also shows the highest percent of the target population that you

can fully immunize through routine KEPI services.

**B. Possible Causes for low DPT1 coverage**

1. If you are not reaching your goal of 100% coverage with DPT1, it either means that not everyone in your district has access to immunization services or that people who have access are not using the immunization services available to them.
2. You will need to decide if people in your district do not have access or are not using your immunization programme so you can make the right decision on how to increase your DPT1 coverage. Once you know the main cause of the problem, you can decide if you need to offer more immunization sessions, offer sessions in new locations, make more and regular supervisory visits or do more social mobilization and health education activities.

**C. Determining why you are not reaching your target for DPT1 coverage**

1. Follow the steps listed below to decide if you are not reaching your target for DPT1 coverage because of a lack of access or a lack of utilization.

**ACCESS**

- a. For your district, calculate the number of people who live within the catchment area of all health facilities that give immunizations or within the catchment area of an outreach site or location visited by a mobile team.
- b. Decide if 100% of the population lives within the catchment area of at least one of these health facilities, outreach sites and locations visited by mobile teams.
- c. Make sure that the distance you are using to calculate the catchment area is a reasonable distance that people can travel to get immunizations.
- d. Review health facility records to determine if all facilities that are expected to give immunizations on a regular basis are actually holding all the immunization sessions that you expect them to. Check to make sure that immunization supplies are adequate and available.

**ACCESS MAY BE A PROBLEM IF:**

**-NOT ALL (100%) OF THE POPULATION LIVE WITHIN THE CATCHMENT AREA OF AT LEAST ONE HEALTH FACILITY; OR  
-EACH HEALTH FACILITY IS NOT HOLDING THE NUMBER OF IMMUNIZATION SESSIONS YOU EXPECTED.**

**UTILIZATION**

- e. Observe immunization sessions to see if they are well organized and if staff are well trained and pleasant. Interview parents to learn if the sessions are acceptable and are being held at convenient and fixed times.

- f. Interview community members who do not attend immunization sessions to find out if:
- Immunization sessions are conducted according to a regular schedule or if sessions are frequently canceled;
  - Social or political barriers are preventing people from attending immunization sessions; or
  - There is a lack of information about the importance of immunization or about when immunizations are available.

UTILIZATION MAY BE A PROBLEM IF:

- IMMUNIZATION SESSIONS ARE DISORGANIZED OR NOT ACCEPTABLE;
- THERE IS A LACK OF INFORMATION ABOUT IMMUNIZATIONS/IMMUNIZATION SESSIONS; OR
- OTHER SOCIAL OR POLITICAL BARRIERS TO IMMUNIZATION EXIST.

D. Taking actions to increase your DPT1 coverage

1. Once you have completed the steps listed in part C, you should know more about the most likely cause of low DPT1 coverage in your district. Knowing the most likely cause can help you decide what actions will be most effective in increasing coverage.

2. Possible steps to improve access:

- a. Consider offering immunization sessions in more locations
- b. Set up new static facilities. Find new trained staff or transfer staff from facilities that do not give many immunizations.
- c. Where available, have outreach teams from static facilities visit new locations.
- d. Where available, have mobile teams visit new locations.
- e. Consider offering more immunization sessions at the static facilities, outreach sites and locations visited by mobile teams.
- f. Consider starting immunization sessions earlier in the day or extending the sessions until later, i.e., afternoons from 2:00 pm to 4:30 or 5:00 pm.
- g. Consider asking private physicians, private hospitals or private voluntary organizations that may not be offering immunizations to begin immunizing routinely. Considering providing them with vaccines and immunization supplies/equipment.
- h. Work with health staff and storekeepers to ensure that adequate cold chain, vaccines and supplies are continuously available at each health facility providing

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immunizations.

- i. Make sure that all scheduled immunization sessions actually do occur.

### 3. Possible steps to improve utilization:

- a. Increase supervision to help clinic staff to:
  - i) organize sessions;
  - ii) plan schedules that will be convenient to all; and,
  - iii) review performance and attitudes of health workers.
- b. Hold focus group discussions with community members to learn their attitudes about immunizations and the immunization services being offered in their specific community.
- c. Increase health education and social mobilization activities.

## III. PROGRAMME CONTINUITY

### A. Introduction to the indicators of programme continuity

#### 1. DPT1 - DPT3 Drop Out Rate and DPT1 - Measles Drop Out Rate

- a. To be fully immunized before one year, a child must attend at least three immunization sessions. If the KEPI immunization schedule is followed, a child must attend five immunization sessions. A big challenge to KEPI is to provide this continuity of services so that children who receive their first immunization also receive their last.
- b. Children who receive at least one immunization, but who do not receive their last one are called DROP OUTS. The drop out rate is the percent of children who receive one immunization but who do not receive the last one. If children drop out before receiving all immunizations then they cannot be fully immunized.
- c. KEPI managers at district level (DHMT) need to know the number of children who have at least one contact with KEPI but who do not go on to receive all of the immunizations. DPT1 is usually given at the first contact with routine KEPI services after six weeks of age and DPT3 or measles is usually given at the last.
- d. Monitoring the difference between the number of doses of DPT1 and DPT3 given and between the number of doses of DPT1 and measles given can help you determine the number of infants who are DROP OUTS -- i.e., not completing all of their immunizations. This in turn can help determine whether or not poor programme continuity is a major factor in preventing the full immunization of all children in the district.

## 2. Tetanus Toxoid (TT)1 - 2 Drop Out Rate

- a. Pregnant women should also be fully immunized before they give birth in order to prevent the occurrence of neonatal tetanus in their children. This means that women should come at least two times during their pregnancy if they have never been immunized with TT before.
- b. KEPI management staff at District levels (DHMT) need to know the number of women who have had at least one contact with the EPI during their pregnancy but who do not receive the second dose that is required to protect their infant against neonatal tetanus.
- c. Monitoring the difference between the number of doses of TT1 and TT2 given will help you determine the number of women who are DROP OUTS - i.e., not completing all of the immunizations needed to prevent neonatal tetanus. This in turn can help determine whether or not poor programme continuity is a major factor in not being able to protect infants fully against neonatal tetanus.

### B. Possible causes for a high drop out rate

1. There are many reasons why your EPI may have a high drop out rate. You should find out what the most important reasons for the drop out are in your programme so you can decide what is the best action to take to reduce this number. Possible causes may be:

- a. Parents do not know that they should bring infants back for more immunizations
- b. Health workers do not tell parents to bring infants back for more immunizations
- c. Health workers do not follow up on the infants in their catchment area to make sure that they return after the first visit
- d. Parents may have:
  - i) waited for a long time/had a bad experience with the health worker at an immunization session; or
  - ii) traveled a long distance/gone at a bad time to an immunization session.
- e. The infant may have had a bad reaction to the vaccine.
- f. All third doses of DPT given are not being recorded as given because:
  - i) parents do not keep the immunization cards, or do not bring the immunization cards to the sessions; or
  - ii) health workers do not give immunization records to parents; do not keep correct tallies/summaries of immunization doses given, or keep an up-to-date immunization register.

- g. Infants may have been given some but not all of the immunizations for which they are eligible.
- h. Second and booster doses of TT given are not being recorded correctly because:
  - i) pregnant women do not keep immunization records
  - ii) a second or booster dose given during a subsequent pregnancy is recorded as a first dose; or
  - iii) there is no up-to-date antenatal register kept.

C. Finding the cause of a high drop out rate.

1. Follow the steps listed below to find the reasons for a high drop out rate in your district:
  - a. Make supervisory visits to health facilities and outreach sites during regularly scheduled immunization sessions.
    - Observe how the clinic operates and how health workers behave towards clients and infants.
    - Observe whether health workers explain to parents when to return for more immunizations.
    - Observe whether health workers have a system for tracking infants and pregnant women who need additional immunizations.
    - Observe whether:
      - i) parents bring immunization records to sessions;
      - ii) health workers give parents immunization records as necessary; and
      - iii) health workers keep accurate tallies of the number of doses given.
    - Observe whether health workers are giving all immunizations for which children are eligible.
    - Observe whether clinics have adequate supplies of all immunization related equipment and vaccines during immunization sessions.
    - Find out the frequency of immunizations sessions and the times they are offered.
    - Find out whether scheduled sessions are sometimes canceled, or individual vaccines are not in stock.
    - Interview parents when they leave the immunization clinic to find out their attitudes

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about the immunization session, if they know when to come back and how far they had to travel.

- b. Hold focus group discussions with parents and community leaders. Ask them about their beliefs and attitudes about immunization sessions. Remember to ask them if the possible causes for a high drop out rate listed under Section B are important in the community.

**D. Taking actions to reduce high drop out rates.**

1. Once you have completed the steps listed under Part C, you should have more information about the most important cause for a high drop out rate in your district.

2. Steps to take if immunization clinic organization, timing or location is a problem or if health worker behaviors are causing a high drop out rate:

- a. Work with health workers to reorganize immunization sessions, or to fix a schedule for holding more convenient immunization sessions.
- b. Talk with health workers about improving their communication with parents and about the information they should be giving to parents/clients.
- c. Work with health workers to find a system they can use to track infants and pregnant women in the community who have not received all of their immunizations to make sure that they continue to return until they are fully immunized.
- d. Assist health workers in determining their needs for immunization equipment and vaccines to ensure that adequate supplies are continuously available.

3. Steps to take if the community's or the parent's attitudes and beliefs are important:

- a. Increase social mobilization and health education activities
- b. Talk with community leaders and parents to convince them of the importance of immunization. Have the leaders explain the importance of immunization to parents in their communities.

#### IV. USING KEPI FEED BACK REPORTS

##### A. COV 005 - MONTHLY CUMULATIVE REPORT FOR DOSES OF INFANT VACCINES (see chart V.A., page 18)

You and your supervisors will use Report COV 005 - COV 005 to determine whether or not programme performance in your district needs to be improved. This report will tell you how many doses of each vaccine have been given each month since the beginning of the year. For each dose, the total number given and the percent coverage achieved are shown. The report can help you by giving you monthly information on progress towards your annual targets for coverage. It will also give you information on the number of facilities reporting and the number of reports received, as compared to the number that are expected.

##### 1. PARTS OF THE REPORT

- a. **REPORT COLUMNS** - The vaccines you give to infants are written at the top of the columns that go across the top of the report.

###### - SURVIVORS

The first column is labeled "Survivors". This is equal to the number of infants who are born in your district each year and who will live to be one year old. This is your target population for immunizing infants for the year and is the number used to calculate coverage with each vaccine.

###### - VACCINES

The next several columns are labeled for each vaccine and dose that you give to infants and for the number of fully immunized infants (FIC). For each vaccine, the number of doses given is shown under the column labeled "Doses" and the percent immunization coverage is shown under the column labeled "Cov".

###### - REPORTING FACILITIES

The last three columns on the right-hand side show information about reporting in your district. The two columns under the label "Reporting Facilities" show you the number of facilities that reported to you for the month and the percent of reports expected for the month that were received. The column under the label "Total # of Facilities" tells you the number of facilities in your district that give immunizations and that should send you a report on immunization activities each month. This number equals the number of reports you should expect for the month.

- b. **MONTHLY INFORMATION** - The months of the year are shown vertically on the left-hand side of the report. Immunization data for each month is listed under the columns. For each month there are two lines:

## FIRST LINE

The name of the month is written on the top line. This row shows you the number of doses of each vaccine given during the month, and the number of facilities in your district that reported to you. The row will also show you the percent coverage for each vaccine for the month.

The denominator for calculating coverage is your target population for the year, which is shown under the "Survivors" column. The denominator for the percent of reporting facilities that reported is the total number of facilities in your district that give immunizations and that you expect to report for the month.

## SECOND LINE

The cumulative line, labeled (cums) on the report is on the second line, under the month. This line will show you the total doses you have given since the beginning of the year and your cumulative immunization coverage for the year up to that month. The cumulative totals for a month are equal to the total number of doses given during that month plus the number given during all the previous months of that year, beginning with January.

The denominator used to calculate the cumulative coverage you have reached up to that month is the target population for the year, which is shown under the "Survivors" column.

The denominator used to calculate the cumulative percent of facilities reporting is the total number of facility reports expected for the year. This number is equal to the number of facilities in your district that give immunizations and that you expect to report for a month times 12 (for the 12 months in the year).

## 2. UNDERSTANDING THE MONTHLY CUMULATIVE REPORT

- a. The TOTALS line at the bottom of the report shows you the total number of doses and the percent coverage you have achieved with each dose of vaccine by the end of the month that KEPI last entered a report for your district.

The TOTALS line also shows you how completely facilities are reporting to the you at district level and how completely you are reporting to KEPI.

- b. Find the last month that KEPI entered data. This will be the last month with numbers showing on the top line next to the name of the month.

-If KEPI has not entered a report for your district for a month, a series of dots (. . .) will show under the columns for the antigens and for the Reporting facilities column on the top line next to the name of the month.

-If KEPI has not entered a report for your district for a month, the cumulative total number of doses and the coverage for the year up to that month will still shown on the

cumulative (cums) line for that month. If no data has been entered for any month during the year, a series of dots (. . .) will also show on the cumulative (cums) line.

- c. Check the numbers listed on the report for each month to make sure that they are the same as the numbers you reported to KEPI. Also, make sure that all the monthly reports you sent were received by KEPI and entered. Notify KEPI of any problems.

### 3. PROGRAMME INDICATORS ON THE MONTHLY CUMULATIVE REPORT

- a. There are three indicators of immunization coverage that you should review on the report COV005. You should find the cumulative coverage for the year to date for the following:

DPT1 - Indicator of access to immunization services and use of these services.

MEASLES - Indicator of children completing the immunization series.

FACILITIES REPORTING - Indicator of the completeness of reporting from health facilities in your district.

- b. Review the values of these indicators and compare them with the targets set. Use the cover sheet sent by KEPI with the quarterly report to help you decide if you need to improve programme performance.

**B. COV006 - MONTHLY CUMULATIVE REPORT FOR PREGNANT WOMEN (see chart V.B., p. 19)**

**1. PARTS OF THE REPORT**

- a. **REPORT COLUMNS** - The doses of TT given to pregnant women are written at the top of the columns that go across the top of the report

**PREGNANT WOMEN**

The first column is labeled "Pregnant Women". The number in this column is equal to the total number of pregnant women in your district for the year. This is your target population for immunization with TT for the year. This total number for the year is written all the way down the column, next to the name of each month.

**VACCINES**

The next few columns are labeled for the doses of TT given to pregnant women, TT1, TT2 and TT Boost (Tetanus Booster doses). For each dose, the total number of doses given is shown under the column labeled "Doses" and the percent immunization coverage is shown under the column labeled "Cov".

**REPORTING FACILITIES**

The last two columns on the report show information about reporting in your district. The column labeled "Reporting Facilities" shows you the number and the percent of KEPI facilities in your district that reported to you for the month. This number should equal the number of facilities you listed on your monthly report to KEPI that either showed the number of doses given or that showed a reason why no immunization were given.

The column labeled "Total # of Facilities" tells you the number of KEPI facilities in your district that should be sending you a report on immunization activities each month.

- b. **MONTHLY INFORMATION** - The months of the year are listed in rows on the left side of the report. Immunization data for each month is listed under the columns. For each month there are two lines:

**FIRST LINE** - The name of the month is written on the top line. This row shows you the number of doses of TT1, TT2 and TT Booster doses given during the month and the number of facilities in your district that reported to you. The row will also show you the percent coverage achieved for each dose for the month. The denominator for calculating coverage for the month is your target population of pregnant women for the year, which is shown under the column labeled "Pregnant Women".

**SECOND LINE** - The cumulative line, labeled (cums) on the report, is on the bottom line, under the name of the month. This line will show you the total number of doses that have been given since the beginning of the year and your cumulative immunization coverage for the year up to that month. The cumulative totals for a month are equal to the total number of doses given during that month plus the number given during all the previous months of that year, beginning with January. The cumulative coverage you have reached up to that month is calculated by using the target population of pregnant women for the year.

## **2. UNDERSTANDING THE MONTHLY CUMULATIVE REPORT FOR PREGNANT WOMEN**

- a. **THE TOTALS LINE** - The TOTALS line at the bottom of the report shows you the total number of doses and the percent coverage you have reached with each dose of vaccine by the end of the month that KEPI last entered a report for your district.
- b. Find the last month that KEPI entered data. This will be the last month with the number of doses showing on the top line next to the name of the month.

-If KEPI has not entered a report for your district for a month, a series of dots (. . .) will show under the columns for the doses and for the Reporting Facilities column on the top line next to the name of the month.

-If KEPI has not entered a report for your district for a month, the cumulative total number of doses and the coverage for the year up to that month will still shown on the cumulative (cums) line for that month. The cumulative number and the cumulative percent will be the same as those for the previous month because no new activity was reported for the month being looked at.

- c. Check the numbers listed on the report for each month to make sure that they are same numbers as you reported to KEPI. Also, make sure that all the monthly reports you sent were received by KEPI and entered. Notify KEPI of any problems.

## **3. PROGRAMME INDICATORS ON THE MONTHLY CUMULATIVE REPORT**

- a. There are two indicators of immunization coverage that you should review on the report COV006. You should find the cumulative coverage for the year to date for the following:

**TT1** - Indicator of the access pregnant women have to immunization services and their use of these services.

**TT2** - Indicator of the number of pregnant women whose infants are protected at birth against neonatal tetanus. You should remember that this number will be the lowest percentage of pregnant women whose infants will be protected. Pregnant women who receive boosters will also have infants protected at birth and some pregnant women receiving no dose of TT during the pregnancy will also have infants protected at birth because they are still protected from TT doses given during an earlier pregnancy.

C. COV004 - ANNUAL SUMMARY, DROP OUT RATES (see chart V.C., p. 21)

1. PARTS OF THE REPORT

a. REPORT COLUMNS

i. DPT1 - DPT2

This is the percent difference between the number of doses of DPT1 given and the number of doses of DPT2 given during the year.

ii. DPT1 - DPT3

This is the percent difference between the number of doses of DPT1 given and the number of doses of DPT3 given during the year.

iii. OPV1 - OPV2

This is the percent difference between the number of doses of OPV1 given and the number of doses of OPV2 given during the year.

iv. OPV1 - OPV3

This is the percent difference between the number of doses of OPV1 given and the number of doses of OPV3 given during the year.

v. TT1 - TT2

This is the percent difference between the number of first doses of TT given to pregnant women and the number of second doses of TT given to pregnant women during the year.

b. DISTRICT LINE

There is one line of information on the drop out rate report. The name of your district is written on the left of the report. Next to the name of the district, under each of the columns, the drop out rates are listed.

The drop out rates show the percent difference between the number of doses of the first vaccine listed and the second vaccine listed in the column header at the top of the report. The drop out rates are based on the total number of doses of the antigens given for the year up to the last month you reported immunization data to KEPI. You will find the numbers used to calculate each of the drop out rates in the TOTALS line of report, COV005, Monthly Cumulatives, under the column showing the number of doses given for the vaccines used in the drop out rate.

## 2. UNDERSTANDING THE DROP OUT RATE REPORT

- a. You can calculate a drop out rate by taking the total number of doses of the first vaccine listed in the drop out rate and then subtracting the total number of doses of the second vaccine listed. You should divide the difference between these two numbers by the number of doses of the first vaccine.

For example, to calculate the DPT1 - DPT3 drop out rate, you would use the following formula:

$$\frac{(\text{Total Number of doses of DPT1}) - (\text{Total Number of doses of DPT3})}{(\text{Total Number of DPT1})} \times 100\%$$

- b. A drop out rate tells you the percent of children who receive a first dose of vaccine but do not receive a dose that should be given later. A positive drop out rate means that your programme is giving fewer doses of the second antigen listed in the drop out rate than of the first antigen. If you have a positive DPT1 - DPT3 drop out rate, it means you are giving more doses of DPT1 than of DPT3.
- c. A negative drop out rate means that your programme gave more doses of the second antigen than of the first antigen listed in the drop out rate. If you have a negative DPT1 - DPT3 drop out rate, it means that you gave more doses of DPT3 than of DPT1.

### d. PROGRAMME INDICATORS ON THE DROP OUT RATE REPORT

You should find the following indicators of programme continuity on the drop out rate report:

DPT1 - DPT3 Drop Out Rate - Indicator of programme continuity for immunizing infants.

TT1 - TT2 Drop Out Rate - Indicator of programme continuity for immunizing pregnant women.

**D. COV003 - MONTHLY MONITORING GRAPH (see graph V.D., p. 22)**

**1. THE FIVE PARTS OF THE GRAPH**

**a. TARGET NUMBER SCALE: DOSES (X 1000)**

-The vertical scale on the left side of the chart is the target number scale. It has a label that reads "DOSES (X 1000)".

-The top number on the scale shows you the number of doses (in thousands) of each vaccine you must give during the year to vaccinate 100% of your target population. This total equals the total number of survivors in your district, which is your target for the year.

**b. IMMUNIZATION COVERAGE SCALE: % COVERAGE**

-The vertical scale on the right side of the chart is the immunization coverage scale. It has a label that reads "% COVERAGE".

-The numbers show you the percent immunization coverage you have achieved with each antigen as a percentage of the target population for the year. The numbers go from 0% to 100% so you can monitor your progress towards immunizing 100% of your target population during the year. The denominator for calculating coverage is the total number of survivors in your district for the year.

**c. MONTHS OF THE YEAR SCALE**

-The horizontal scale along the bottom of the chart shows you the months of the year that you will be monitoring your progress in immunizing the target population.

**d. PERCENT OF TARGET LINES**

-There are four solid lines drawn on the Monthly Monitoring Chart. These are the percent of target lines. All of the lines start at zero on the left of chart and rise towards the right side of the chart.

One line rises to 100% coverage by the end of the year

One line rises to 75% coverage by the end of the year

One line rises to 50% coverage by the end of the year

One line rises to 25% coverage by the end of the year

-The four target lines rise as they go across the chart to show the growing number of children who should be immunized in order to succeed in immunizing the percent of the target population shown at the end of the line by the end of the year.

-These target lines will help you decide before the end of the year whether or not your programme will reach its target, based on the current rate of performance.

-Each separate target line shows you the total cumulative number of doses you must give by the end of each month in order to reach the percent immunization coverage shown at the end of the line by the end of the year.

-The lines will show you the percent of the total target population that you should have immunized by the end of that month that you were able to immunize.

-You should look closely at the line that reaches 100% coverage, because this line will show you the total number of doses you must give by the end of each month to be successful in immunizing 100% of your target population by the end of that month and by the end of the year.

#### e. ANTIGEN LINES

-There are two lines with symbols drawn on the chart. The line with squares shows you the number of doses of BCG you have given. The line with circles shows you the number of doses of measles you have given.

-On the BCG line, the squares above each month show you the total cumulative number of doses of BCG given since January to the end of the last month reported. This is the cumulative total number of doses of BCG given during the last month reported plus all the past months for the year.

-On the measles line, the circles above each month show you the total cumulative number of doses of measles given since January to the end of that month. This is the cumulative total number of doses of measles given during the last month reported plus all the past months for the year.

## 2. UNDERSTANDING THE MONTHLY MONITORING CHART

a. Find the last month that KEPI received a report from your district and entered it into the CEIS.

-This will be the last month with a circle and square above showing the number of doses of BCG and measles given.

b. Find out what your immunization coverage is for the year at the end of the last month that KEPI entered a report.

-Look to see where the square and the circle are on the % COVERAGE scale. Estimate your immunization coverage with BCG and measles from this scale.

c. Find out if you have reached your goal of immunizing 100% of the target population with BCG for the time between January and the last month that KEPI entered data.

-Find the percent target line (100%, 75%, 50% 25%) that is closest to the BCG antigen line for the last month reported. This line shows you the percent of the target population up to the last month you reported that you have immunized.

-If the BCG antigen line is below the 100% line, this means that you have not been able to immunize 100% of eligible infants each month with BCG.

-The closest percent target line also shows you what your immunization coverage will be at the end of the year, if your immunization programme performance stays the same for the rest of the year.

d. Find out if you have reached your goal of immunizing 100% of the target population with measles for the time between January and the last month that KEPI entered data.

-Find the percent target line (100%, 75%, 50%, 25%) that is closest to the measles antigen line at the last month. This line shows you the percent of the target population up to the last month you reported that you have immunized.

-If the measles line is below the 100% line, this means that you have not met the target of immunizing 100% of infants against measles.

-The closest percent target lines also shows you what your immunization coverage with be at the end of the year, if your immunization programme performance stays the same for the rest of the year.

e. Find out if you are reaching your goal of completely immunizing all children who get the first immunization.

-If your programme is completely immunizing most children who start the immunization series, then there should not be a big difference between the number of doses of DPT1 given and the number of doses of measles. This is because DPT1 is often given first to children who are starting their immunizations and measles is often given last. For this graph, BCG is used instead of DPT1, but the number of children who get BCG should be close to the number getting DPT1.

-Look at the difference between the BCG line and the measles line. If the two lines are close together, this means that your programme is giving almost the same number of BCG doses as measles doses. Children who receive their first immunization are also receiving their last one. Your programme has a low drop out rate.

f. Find out if your programme is running every month at the same level, and whether or not all of the monthly reports you sent to KEPI have been received and entered.

-The Monthly Monitoring chart shows the cumulative total number of doses given by the end of each month. The total can only increase or stay the same from one month to the next. It can not decrease.

-If your district is immunizing constantly throughout the year and reporting to KEPI, then

your BCG line and your measles line will probably be straight, rising or showing increasing coverage by a similar amount every month.

A STRAIGHT line that rises (shows increasing coverage) for every month means that your programme is functioning every month and reporting to KEPI.

-If your district doesn't give any immunizations or very few immunizations during one month, the cumulative total will stay the same as in the previous month, or increase only a little.

-If there is no circle or square on the line above a month, this means that no immunization report was entered by KEPI for that month. The antigen line going from the previous month to the month in which there was no or little activity will be flat.

A FLAT line means there was a performance problem during a month.

g. Look at the position of the BCG and measles lines at the end of the month as compared to the position of the 100% target line at that month.

-The difference shows you how far you have to go to catch up. The difference between the position of the 100% line and the antigen line equals the number of extra doses you must make up over the next months, in addition to immunizing the target population for those months, if you want to reach 100% of your target by the end of the year.

-Because the number of doses that must be given equals the number of infants in the target population, the difference between the vaccine line and the 100% target line also shows you the number of infants you must immunize over the next months, in addition to the monthly target population, in order to reach your target of 100% by the end of the year.

**V. EXAMPLES OF CEIS FEEDBACK REPORTS**

Monthly, Cumulative: Infant Doses and Coverage

District: Taita Taveta

January 1991 December 1991

Month	Survivors	BCG		DPT1		DPT2		DPT3		DTP Birth		DTP1		DTP2		DTP3		Measles		FIC	I Cov	Reporting Facilities	Total # of Facilities	
		Doses	Cov	Doses	Cov	Doses	Cov	Doses	Cov	Doses	Cov	Doses	Cov	Doses	Cov	Doses	Cov	Doses	Cov					
Taita Taveta District																								
January (cums)	8468	579	7%	531	6%	503	7%	584	7%	500	6%	522	6%	538	6%	607	7%	558	7%	563	7%	19	75%	20
February (cums)	1110	397	5%	443	5%	399	5%	407	5%	106	5%	435	5%	407	5%	372	4%	370	4%	462	5%	19	75%	20
March (cums)	8468	535	6%	477	6%	533	6%	474	6%	151	5%	441	5%	558	7%	522	6%	402	6%	568	7%	22	110%	20
April (cums)	8468	512	6%	500	6%	460	5%	502	6%	161	5%	479	6%	510	6%	492	6%	431	5%	355	5%	13	96%	20
May (cums)	8468	526	7%	572	7%	547	6%	479	6%	515	6%	490	6%	566	7%	509	6%	532	6%	667	6%	20	100%	20
June (cums)	8468	524	6%	563	7%	531	6%	480	6%	506	6%	511	6%	540	6%	400	6%	493	6%	577	7%	21	115%	20
July (cums)	8468	550	6%	581	7%	577	7%	503	7%	522	6%	519	6%	589	7%	550	7%	536	6%	596	7%	22	110%	20
August (cums)	8468	573	7%	635	7%	610	7%	638	8%	185	6%	587	7%	629	7%	666	8%	540	6%	510	6%	22	110%	20
September (cums)	0468	4256	50%	4302	51%	4239	50%	4147	49%	3857	46%	4023	48%	4337	51%	4207	50%	3943	47%	4428	52%	165	69%	20
October (cums)	0468	4256	50%	4302	51%	4239	50%	4147	49%	3857	46%	4023	48%	4337	51%	4207	50%	3943	47%	4428	52%	165	69%	20
November (cums)	0468	4256	50%	4302	51%	4239	50%	4147	49%	3857	46%	4023	48%	4337	51%	4207	50%	3943	47%	4428	52%	165	69%	20
December (cums)	0468	4256	50%	4302	51%	4239	50%	4147	49%	3857	46%	4023	48%	4337	51%	4207	50%	3943	47%	4428	52%	165	69%	20
TOTALS	8468	4256	50%	4302	51%	4239	50%	4147	49%	3857	46%	4023	48%	4337	51%	4207	50%	3943	47%	4428	52%	165	69%	20

Monthly Cumulative: Pregnant women doses and coverage

District: Taita Taveta

January 1991 - December 1991

B. COV006

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Month	Pregnant Women	IT 1		IT 2		IT Boost		Reporting Facilities		Total # of Facilities
		Doses	Cov.	Doses	Cov.	Doses	Cov.			
<b>Taita Taveta District</b>										
January (cums)	9326	645	7%	295	3%	302	3%	19	76%	20
		645	7%	295	3%	302	3%	19	82%	
February (cums)	9326	510	5%	311	3%	218	2%	19	15%	20
		1155	12%	509	5%	524	6%	38	16%	
March (cums)	9326	176	2%	318	3%	371	4%	21	110%	20
		1631	17%	827	9%	798	9%	60	25%	20 IE (over Est. 100)
April (cums)	9326	503	5%	373	4%	369	4%	19	90%	20
		3213	34%	1100	12%	1067	11%	70	33%	
May (cums)	9326	723	8%	331	3%	367	4%	20	100%	20
		2936	31%	1331	14%	1334	14%	93	41%	
June (cums)	9326	565	6%	321	3%	317	3%	21	115%	20
		3561	38%	1555	17%	1601	17%	121	50%	
July (cums)	9326	184	2%	16	0%	131	1%	21	110%	20
		3685	39%	1635	17%	1722	18%	133	60%	
August (cums)	9326	521	6%	176	2%	363	4%	21	110%	20
		4216	45%	1790	19%	2284	24%	165	69%	
September (cums)	9326	...	...	...	...	...	...	...	...	20
		4216	45%	1790	19%	2284	24%	165	69%	
October (cums)	9326	...	...	...	...	...	...	...	...	20
		4216	45%	1790	19%	2284	24%	165	69%	
November (cums)	9326	...	...	...	...	...	...	...	...	20
		4216	45%	1790	19%	2284	24%	165	69%	
December (cums)	9326	...	...	...	...	...	...	...	...	20
		4216	45%	1790	19%	2284	24%	165	69%	
<b>TOTALS</b>	<b>9326</b>	<b>4216</b>	<b>45%</b>	<b>1790</b>	<b>19%</b>	<b>2284</b>	<b>24%</b>	<b>165</b>	<b>69%</b>	<b>219</b>

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C. COV004

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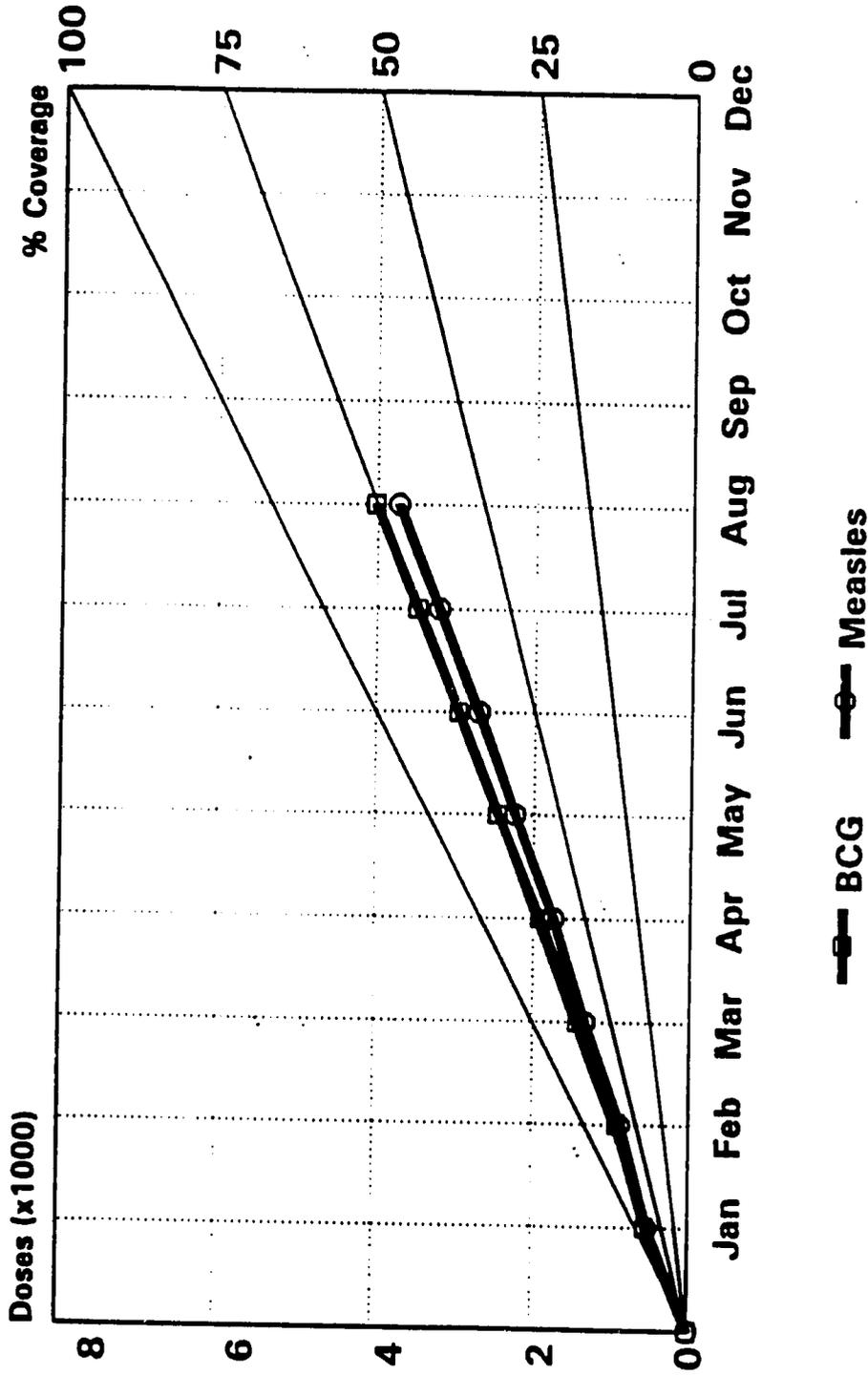
Annual Summary: Drop-out rates  
District: Taita Taveta  
1991

Area Code Name	OPT1-OPT2	OPT1-OPT3	OPV1-OPV2	OPV1-OPV3	ITI-IT2
35 Taita Taveta	12	12	32	52	52

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# Annual Cumulative Coverage

District: Taita Taveta 1991  
BCG, Measles



EPI / Kenya

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ANNEX 2

Prepared on: 22/10/91

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HEPI MU Monitor, Management Report

Country: Kenya

June 1991

Based on available coverage from LOS to TTE

Bank Location	Surveys	ISG Cov	MPI Cov	MTS Cov	OPV Birth Cov	OPV Cov	Resales Cov	FIC 1 Cov	TTE Cov
1) 02 Elgeyo Marakwet	4195	1002	1112	1022	632	1012	922	802	232
Kenya	537240	372	342	302	272	322	372	352	132

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IAPF MU Monthly Management Report

Country: Kenya

Jan. 1991

Based on health coverage from 50% to 70%

Rank Location	Survivors	MCG Cov	LPTI Co.	MFTI Cov	DI: Birth Cov	DPVJ Co.	Res.lev. Cov	FIC I Cov	TT. Cov
1) 04 Samburu	2630	93%	85%	69%	50%	73%	69%	76%	19%
2) 35 Taita Taveta	4234	74%	73%	69%	67%	70%	63%	70%	33%
3) 33 Lamu	1439	84%	72%	60%	71%	65%	65%	60%	32%
4) 11 Nairobi	33297	50%	65%	74%	96%	70%	63%	56%	54%
5) 05 Turkana	3542	0%	85%	53%	61%	50%	60%	33%	16%
Kenya	507210	37%	34%	30%	29%	32%	37%	25%	13%



KEPI 00 Monthly Management Report  
Country: Kenya  
June 1991

Ranked on Measles for coverage levels 0 - 99%

Rank	Location	Survivors	MC Cov	DT1 Cov	DT2 Cov	DIV Birth Cov	DIV3 Cov	Measles Cov	FIC - 1 Cov	TT2 Cov	RFT1	Meas Drop Out	TT1	TT2 Drop Out
1.	02 Elgeyo Marakwet	599	100%	99%	02%	63%	05%	76%	67%	27%		23%		47%
2.	75 Narak	1589	00%	72%	52%	44%	51%	74%	67%	20%		-3%		41%
3.	35 Taita Taveta	706	74%	00%	60%	71%	68%	70%	92%	29%		12%		60%
4.	05 Turkana	590	107%	95%	73%	05%	78%	65%	52%	10%		32%		47%
5.	04 Samburu	438	92%	92%	76%	81%	81%	63%	57%	25%		31%		49%
6.	33 Lamu	240	80%	73%	65%	66%	64%	61%	49%	22%		16%		38%
7.	92 Busia	1955	84%	74%	56%	71%	66%	52%	50%	52%		30%		2%
8.	25 Nyera	3169	40%	47%	47%	46%	49%	50%	55%	36%		-6%		42%
9.	73 Laikipia	1090	44%	49%	46%	39%	51%	49%	18%	22%		0%		59%
10.	41 Embu	1023	62%	47%	44%	52%	49%	48%	54%	29%		1%		50%
11.	93 Kakamega	6336	65%	65%	50%	41%	51%	47%	40%	23%		27%		49%
12.	24 Nyandarua	1503	34%	46%	45%	41%	41%	42%	39%	21%		9%		70%
13.	62 Kisumu	3010	70%	62%	50%	58%	52%	42%	39%	24%		31%		53%
14.	06 West Pokot	1264	65%	68%	41%	49%	44%	41%	35%	14%		39%		51%
15.	63 Siaya	3010	54%	58%	43%	48%	46%	40%	36%	20%		30%		45%
16.	46 Meru	5574	36%	36%	36%	23%	27%	36%	48%	39%		2%		-89%
17.	74 Makuru	4060	35%	36%	36%	31%	40%	33%	19%	12%		7%		65%
18.	61 Kisii	5652	41%	18%	30%	32%	31%	28%	16%	11%		-52%		49%
19.	64 South Nyanza	5181	61%	54%	37%	53%	45%	26%	21%	14%		52%		46%
20.	71 Kajiado	1142	45%	41%	32%	33%	27%	25%	26%	14%		40%		57%
21.	51 Garissa	761	46%	38%	22%	25%	23%	21%	20%	7%		44%		66%
22.	53 Wajir	747	23%	18%	12%	13%	13%	13%	8%	6%		29%		35%
23.	45 Marsabit	749	20%	18%	13%	12%	15%	10%	6%	6%		45%		38%
24.	11 Nairobi	3899	..	..	..	..	..	..	..	..		..		..
25.	21 Kiambu	4656	..	..	..	..	..	..	..	..		..		..
26.	22 Kirinyaga	1899	..	..	..	..	..	..	..	..		..		..
27.	23 Murang'a	4424	..	..	..	..	..	..	..	..		..		..
28.	31 Kilifi	2121	..	..	..	..	..	..	..	..		..		..
29.	32 Kwale	1422	..	..	..	..	..	..	..	..		..		..
30.	34 Nombasa	1667	..	..	..	..	..	..	..	..		..		..
31.	36 Tana River	519	..	..	..	..	..	..	..	..		..		..
32.	42 Isiolo	294	..	..	..	..	..	..	..	..		..		..
33.	43 Kitui	3064	..	..	..	..	..	..	..	..		..		..
34.	44 Machakos	7025	..	..	..	..	..	..	..	..		..		..
35.	52 Mandera	430	..	..	..	..	..	..	..	..		..		..
36.	65 Nyamira	0	..	..	..	..	..	..	..	..		..		..
37.	72 Kericho	4170	..	..	..	..	..	..	..	..		..		..
38.	76 Trans Nzota	2131	..	..	..	..	..	..	..	..		..		..
39.	77 Uasin Gishu	2199	..	..	..	..	..	..	..	..		..		..
40.	81 Baringo	1300	..	..	..	..	..	..	..	..		..		..
41.	83 Mandi	2076	..	..	..	..	..	..	..	..		..		..
42.	91 Bungoma	3289	..	..	..	..	..	..	..	..		..		..
Kenya Country			97873	28%	26%	22%	22%	23%	21%	19%	12%	19%		40%

Prepared on : 21/10/91

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Annual Summary: Reported Cases and Incidence Rate  
Country: Kenya  
1989

Disease Incidence per 100,000 Population  
Based on Measles for Incidence Rates 0 - 999

Dist Location	Diphtheria		Measles		Pertussis		Polio		MMF		Total Tet		Tuberculosis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
<b>Province: Nairobi</b>														
1. 11 Nairobi	...	...	303	22.1	15	1.1	29	2.1	...	...	10	0.7	262	19.1
<b>1 Nairobi Province</b>														
1. 24 Nyandarua	...	...	3244	981.0	24	7.3	1	0.3	...	...	1	0.3	20	6.0
2. 25 Nyeri	...	...	4893	702.8	431	61.9	23	3.3	...	...	18	2.6	121	14.8
3. 23 Murang'a	...	...	2596	269.2	43	4.5	43	4.5	...	...	6	0.6	66	6.8
4. 22 Kirinyaga	...	...	1057	253.4	288	69.1	9	2.2	...	...	16	3.8	96	23.0
5. 21 Kiambu	...	...	2207	217.3	81	8.0	24	2.4	...	...	100	9.8	633	62.3
<b>2 Central Province</b>														
1. 31 Kilifi	...	...	6182	976.5	1125	177.7	9	1.4	...	...	121	19.1	227	25.9
2. 33 Lamu	...	...	449	642.4	3	4.3	0	0.0	...	...	43	61.5	21	30.0
3. 36 Tana River	...	...	538	355.1	8	5.3	0	0.0	...	...	5	3.3	338	223.1
4. 35 Taita Taveta	...	...	624	294.8	132	62.4	5	2.4	...	...	16	7.6	129	61.0
5. 34 Mombasa	...	...	1256	252.1	55	11.0	15	3.0	...	...	4	0.8	325	65.2
6. 32 Kwale	...	...	536	126.3	167	39.4	16	3.8	...	...	8	1.9	77	18.1
<b>3 Coast Province</b>														
1. 42 Isiolo	...	...	492	765.9	319	496.6	146	227.3	...	...	0	0.0	118	183.7
2. 46 Meru	...	...	7382	605.9	417	34.2	100	8.2	...	...	46	3.8	...	...
3. 44 Machakos	...	...	7519	491.5	465	30.4	19	1.2	...	...	15	1.0	104	12.0
4. 41 Embu	...	...	1233	311.1	2	0.5	4	1.0	...	...	3	0.8	78	17.7
5. 43 Kilui	...	...	949	161.3	149	22.2	286	42.6	...	...	13	1.9	62	9.2
6. 45 Marsabit	...	...	10	6.3	0	0.0	24	15.0	...	...	0	0.0	51	31.9
<b>4 Eastern Province</b>														
1. 51 Garissa	...	...	496	220.5	0	3.6	4	1.8	...	...	1	0.4	56	24.9
2. 52 Mandera	...	...	239	176.6	0	5.9	6	4.4	...	...	0	0.0	176	130.1
3. 53 Wajir	...	...	32	14.3	29	12.9	0	0.0	...	...	2	0.9	31	13.8
<b>5 North-Eastern Provi</b>														
1. 52 Wajir	...	...	767	131.2	45	7.7	10	1.7	...	...	3	0.5	263	45.0

Province: Nyansa	Diphth		Measles		Pertussis		Polio		MMT	Total Tet		Tuberculosis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate		Cases	Rate	Cases	Rate
1. 61 Kisii	...	...	7099	636.0	686	55.2	276	18.0	...	135	10.9	272	21.9
2. 64 South Nyansa	...	...	6907	604.1	798	69.8	23	2.0	...	13	1.1	264	23.1
3. 62 Kisumu	...	...	3308	496.7	257	30.6	10	2.7	...	8	1.2	97	14.6
4. 63 Siaya	...	...	2984	449.3	146	22.0	40	6.0	...	59	8.9	98	14.8
5. 65 Nyamira	...	...	...	...	...	...	...	...	...	...	...	...	...
6 Nyansa Province	...	...	21098	567.8	1887	50.8	315	8.5	...	215	5.8	731	19.7
Province: Rift Valley	...	...	...	...	...	...	...	...	...	...	...	...	...
1. 72 Kericho	...	...	7747	847.3	1629	178.2	146	16.0	...	84	9.2	678	74.2
2. 73 Laikipia	...	...	1440	623.7	17	7.4	45	19.5	...	0	0.0	0	0.0
3. 75 Marak	...	...	1468	431.0	40	11.7	2	0.6	...	29	8.5	20	5.9
4. 77 Uasin Gishu	...	...	1732	365.5	60	12.7	74	15.4	...	9	1.9	359	75.8
5. 82 Elgeyo Marakwet	...	...	573	353.3	635	391.5	14	8.6	...	17	10.5	167	103.0
6. 83 Mandi	...	...	1582	350.6	153	33.9	8	1.8	...	4	0.9	154	34.1
7. 76 Trans Nzara	...	...	595	132.1	30	6.7	51	11.3	...	30	6.7	474	105.2
8. 74 Makuru	...	...	1015	117.2	87	10.0	20	2.3	...	56	6.5	47	5.4
9. 84 Samburu	...	...	95	96.5	24	24.4	2	2.0	...	1	1.0	512	530.1
10. 71 Kajjado	...	...	132	62.3	0	0.0	0	0.0	...	0	0.0	6	2.5
11. 81 Baringo	...	...	169	59.0	22	7.7	1	0.3	...	2	0.7	88	30.7
12. 85 Turkana	...	...	52	37.2	148	105.8	7	5.0	...	9	6.4	156	111.5
13. 86 West Pokot	...	...	92	34.3	228	82.0	22	8.2	...	4	1.5	370	137.8
7 Rift Valley Province	...	...	16712	339.2	3065	62.2	392	8.0	...	245	5.0	3031	61.5
Province: Western	...	...	...	...	...	...	...	...	...	...	...	...	...
1. 91 Bungoma	...	...	2464	331.0	442	59.4	34	4.6	...	152	20.4	313	42.0
2. 93 Kakamega	...	...	3798	362.2	491	33.9	42	2.9	...	8	0.6	85	5.9
3. 92 Busia	...	...	418	111.1	64	14.5	13	2.9	...	0	0.0	16	3.6
9 Western Province	...	...	6680	253.5	997	37.8	89	3.4	...	160	6.1	414	15.7
Kenya Country	...	...	86727	382.3	9718	42.8	1559	6.9	...	1048	4.6	7639	33.7

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## ANNEX 5

Prepared on : 21/10/91

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Historical Summary of Coverage and Disease Incidence  
Country: Kenya  
1988 - 1990

Year	Survivors	Measles Cov	measles Rate	GPV3 Cov	Polio Rate	DPT3 Cov	Pertuss Rate	TT2 Cov	NNT Rate
<b>1 Nairobi Province</b>									
1988	40226	..	..	..	..	..	..	..	..
1989	42305	86%	22.1	98%	2.1	117%	1.1	104%	..
1990	44493	75%	39.5	80%	1.7	92%	3.8	70%	..
<b>2 Central Province</b>									
1988	167646	30%	436.8	32%	19.5	37%	37.0	32%	..
1989	174111	34%	408.8	30%	2.9	31%	15.3	50%	..
1990	180827	34%	329.0	24%	5.5	24%	12.6	13%	..
<b>3 Coast Province</b>									
1988	71181	45%	329.6	31%	7.6	38%	130.9	31%	..
1989	74037	56%	482.0	58%	2.3	67%	74.9	38%	..
1990	77009	46%	606.7	48%	23.1	48%	74.9	25%	..
<b>4 Eastern Province</b>									
1988	197443	30%	320.8	18%	3.0	13%	35.0	10%	..
1989	205417	38%	435.3	32%	14.3	39%	33.5	25%	..
1990	213714	35%	235.8	40%	4.1	39%	10.0	16%	..
<b>5 North-Eastern Province</b>									
1988	20292	15%	73.8	15%	2.3	18%	2.2	7%	..
1989	21234	16%	131.2	17%	1.7	18%	7.7	8%	..
1990	22223	22%	133.0	20%	0.2	20%	2.3	9%	..
<b>6 Nyanza Province</b>									
1988	182607	33%	337.3	23%	2.5	33%	55.1	15%	..
1989	188929	31%	567.0	30%	8.5	39%	50.8	17%	..
1990	195471	24%	377.7	32%	6.3	31%	24.4	15%	..
<b>7 Rift Valley Province</b>									
1988	240072	26%	485.2	24%	11.8	23%	78.4	15%	..
1989	250537	36%	339.2	24%	3.0	36%	62.2	14%	..
1990	261497	39%	356.7	31%	4.5	30%	63.1	13%	..
<b>8 Western Province</b>									
1988	124598	44%	245.0	42%	2.2	50%	25.4	30%	..
1989	129211	35%	253.5	38%	3.4	50%	37.8	21%	..
1990	133994	38%	236.2	51%	11.7	37%	40.1	19%	..
<b>Kenya Country</b>									
1988	1044065	28%	315.6	24%	7.6	30%	46.7	19%	..
1989	1085781	36%	382.3	34%	6.9	41%	42.8	25%	..
1990	1129228	32%	314.5	37%	7.1	35%	30.4	18%	..

ANNEX 6

SUGGESTED CHECKLIST FOR QUARTERLY REVIEW OF DISTRICT REPORT FOLDERS

MANUAL REPORTS

1. Are reports neat and clear?
2. Are all facilities giving immunizations listed on the report, with totals shown for those facilities reporting?
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?

INDICATORS OF PROGRAM PERFORMANCE

1. FIC and Measles Coverage - Is the district reaching its goal of fully immunizing 100% of the target population and immunizing 100% of the target population against measles?
2. DPT1 COVERAGE - Is the district reaching 100% of its target population for the year, as shown by the DPT1 coverage?
3. DPT1 - DPT3 Drop Out Rate - Does the program have good continuity for immunizing infants, as shown by the DPT1 - DPT3 drop out rate?
4. TT1 - TT2 Drop Out Rate - Does the program have good continuity for immunizing pregnant women with TT, as shown by the TT1 - TT2 drop out rate?

ANNEX 7

SUMMARY OF KIAMBU DISTRICT FEED BACK REPORT

DISTRICT REPORTING TO KEPI

	REPORTS EXPECTED	RECEIVED	ON TIME
FOR THE QUARTER:	3	0	
FOR YEAR TO DATE:	6	0	

QUARTERLY TARGET FOR RECEIVING REPORTS      MET      NOT MET

QUARTERLY TARGET FOR TIMELY REPORTING      MET      NOT MET

FULLY IMMUNIZED CHILDREN AND CHILDREN IMMUNIZED WITH MEASLES

	FULLY IMMUNIZED CHILDREN	MEASLES COVERAGE
FOR THE QUARTER:		
FOR THE YEAR TO DATE		

TARGET FOR MEASLES COVERAGE:      MET      NOT MET

TARGET FOR FULLY IMMUNIZED CHILDREN:      MET      NOT MET

PROGRAM ACCESS

DPT1 COVERAGE FOR THE QUARTER:

DPT1 COVERAGE FOR THE YEAR TO DATE:

TARGET FOR PROGRAM ACCESS:      MET      NOT MET

PROGRAM CONTINUITY

DPT1 - DPT3 DROP OUT RATE FOR THE QUARTER:

DPT1 - DPT3 DROP OUT RATE FOR THE YEAR TO DATE:

TARGET FOR PROGRAM CONTINUITY:      MET      NOT MET

**PROGRAM AREAS PERFORMING WELL DURING THE QUARTER:**

Unknown, no reports received for 1991.

**PROGRAM AREAS TO BE IMPROVED ON:**

Improve completeness of reporting from District to KEPI.

Please send reports for the following months:

January, 1991  
February, 1991  
March, 1991  
April, 1991  
May, 1991  
June, 1991  
July, 1991  
August, 1991

ANNEX 8

NOTE TO KEPI DATA MANAGER SUMMARIZING COMPLETENESS AND TIMELINESS OF REPORTING

The following is a summary of the completeness and timeliness of reporting by Districts to KEPI of their monthly immunization reports for the period January to June, 1991. It may be very useful to send the districts a letter each month, thanking them for reporting and noting when the report is received on time. The letter should also point out to the districts any months for which reports have not been received.

DISTRICT COMPLETENESS OF REPORTING

DISTRICT SUMMARY  
COMPLETENESS OF REPORTING  
FOR PERIOD JANUARY - JUNE, 1991

DISTRICTS REPORTING FOR 5 - 6 MONTHS 21 (50%)

DISTRICTS REPORTING FOR 3 - 4 MONTHS 7 (17%)

DISTRICTS REPORTING FOR 0 - 2 MONTHS 14 (33%)

-----  
TOTAL COMPLETENESS OF REPORTING FOR JANUARY - JUNE, 1991

REPORTS EXPECTED =  $42 \times 6 = 252$ , REPORTS RECEIVED = 154

COMPLETENESS OF REPORTING = 62%

**DISTRICT TIMELINESS OF REPORTING**

In reviewing the timeliness of reporting, the policy that states that districts are supposed to report to KEPI their immunization statistics within one month is used.

The following is the summary of the reports received by KEPI as of October 2, 1991 for the months of July and August, 1991. This will show the number of districts that have reported within two months and one month time.

**REPORTS**

<u>MONTH</u>	<u>RECEIVED</u>
JULY	17/41 (40%)
AUGUST	5/41 (12%)

3

**DISTRICTS REPORTING TO KEPI MU  
COMPLETENESS OF REPORTING  
FOR PERIOD JANUARY - JUNE, 1991**

**DISTRICTS REPORTING TO KEPI FOR 5 - 6 MONTHS (Number = 21, 50%)**

11 Nairobi	51 Garissa	73 Laikipia
25 Nyeri	53 Wajir	75 Narok
33 Lamu	62 Kisumu	82 Elgeyo Marakwet
35 Taita	63 Siaya	84 Samburu
41 Erabu	64 S. Nyanza	85 Turkana
42 Isiolo	65 Nyamira	88 West Pokot
46 Meru	71 Kajiado	91 Bungoma

**DISTRICTS REPORTING TO KEPI FOR 3 - 4 MONTHS (Number = 7, 17%)**

23 Murang'a	52 Mandera
24 Nyandarua	81 Baringo
31 Kilifi	92 Busia
45 Marsabit	

**DISTRICTS REPORTING TO KEPI FOR 0 - 2 MONTHS (Number = 14, 33%)**

21 Kiambu (0)	43 Kitui (0)	74 Nakuru
22 Kirinyaga	44 Machakos (0)	76 Trans Nzoia (0)
32 Kwale (0)	61 Kisii	77 Uasin Gishu
34 Mombassa (0)	72 Kericho (0)	83 Nandi (0)
36 Tana River		93 Kakamega

**Note:** Kitui and Nandi Districts did not report to KEPI for all of 1990.

**SUMMARY OF REPORTS RECEIVED BY MONTH**

<b>MONTH</b>	<b>REPORTS RECEIVED</b>
January, 1991	28 (67%)
February, 1991	27 (64%)
March, 1991	29 (69%)
April, 1991	25 (60%)
May, 1991	24 (57%)
June, 1991	21 (50%)

Mutual, Cumulative: Infant Doses and Coverage

District: Taita Taveta

January 1991 December 1991

Month	Survivors	BCG		DPT1		DPT2		DPT3		OPW Birth		OPV1		OPV2		OPV3		Measles		FIC : 1 Cov	Reporting Facilities	Total # of Facilities		
		Doses	Cov																					
<b>Taita Taveta District</b>																								
January (cums)	8468	579	72	531	62	503	72	584	72	500	62	522	62	538	62	607	72	558	72	563	72	19	952	20
February (cums)	3460	397	52	443	52	399	52	407	52	466	52	435	52	407	52	372	62	370	62	462	52	19	952	20
March (cums)	8468	976	122	974	122	978	122	991	122	914	112	957	112	945	112	979	122	928	112	1025	122	38	162	20
April (cums)	8468	535	62	477	62	533	62	474	62	451	62	441	62	558	72	522	62	403	62	548	72	22	1102	20
May (cums)	8468	1511	182	1451	172	1511	182	1465	172	1360	162	1398	172	1503	162	1501	182	1411	172	1593	192	60	252	20
June (cums)	8468	512	62	500	62	460	62	502	62	461	62	479	62	510	62	493	62	431	62	455	62	13	962	20
July (cums)	8468	2023	242	1951	232	1971	232	1967	232	1829	222	1877	222	2013	242	1994	242	1842	222	2048	242	78	332	20
August (cums)	8468	502	72	572	72	547	62	479	62	515	62	499	62	566	72	509	62	532	62	467	62	20	1002	20
September (cums)	8468	2609	312	2523	302	2518	302	2446	292	2344	282	2376	282	2579	302	2503	302	2374	282	2715	322	98	412	20
October (cums)	8468	524	62	563	72	534	62	480	62	506	62	511	62	540	62	480	62	493	62	577	72	23	1152	20
November (cums)	8468	3133	372	3086	362	3052	362	2926	352	2844	342	2917	342	3119	372	2983	352	2867	342	3292	392	121	502	20
December (cums)	8468	550	62	501	72	577	72	583	72	520	62	519	62	589	72	550	72	536	62	596	72	22	1102	20
January (cums)	8168	3683	432	3667	432	3629	432	3509	412	3372	402	3436	412	3708	442	3541	422	3483	402	3888	462	143	602	20
February (cums)	8168	573	72	625	72	610	72	630	82	495	62	587	72	629	72	666	82	540	62	510	62	22	1102	20
March (cums)	8168	4256	502	4302	512	4239	502	4147	492	3857	462	4023	482	4337	512	4207	502	3943	472	4428	522	165	692	20
April (cums)	8168	4256	502	4302	512	4239	502	4147	492	3857	462	4023	482	4337	512	4207	502	3943	472	4428	522	165	692	20
May (cums)	8168	4256	502	4302	512	4239	502	4147	492	3857	462	4023	482	4337	512	4207	502	3943	472	4428	522	165	692	20
June (cums)	8168	4256	502	4302	512	4239	502	4147	492	3857	462	4023	482	4337	512	4207	502	3943	472	4428	522	165	692	20
July (cums)	8168	4256	502	4302	512	4239	502	4147	492	3857	462	4023	482	4337	512	4207	502	3943	472	4428	522	165	692	20
August (cums)	8168	4256	502	4302	512	4239	502	4147	492	3857	462	4023	482	4337	512	4207	502	3943	472	4428	522	165	692	20
September (cums)	8168	4256	502	4302	512	4239	502	4147	492	3857	462	4023	482	4337	512	4207	502	3943	472	4428	522	165	692	20
October (cums)	8168	4256	502	4302	512	4239	502	4147	492	3857	462	4023	482	4337	512	4207	502	3943	472	4428	522	165	692	20
November (cums)	8168	4256	502	4302	512	4239	502	4147	492	3857	462	4023	482	4337	512	4207	502	3943	472	4428	522	165	692	20
December (cums)	8168	4256	502	4302	512	4239	502	4147	492	3857	462	4023	482	4337	512	4207	502	3943	472	4428	522	165	692	20
<b>TOTALS</b>	<b>8468</b>	<b>4256</b>	<b>502</b>	<b>4302</b>	<b>512</b>	<b>4239</b>	<b>502</b>	<b>4147</b>	<b>492</b>	<b>3857</b>	<b>462</b>	<b>4023</b>	<b>482</b>	<b>4337</b>	<b>512</b>	<b>4207</b>	<b>502</b>	<b>3943</b>	<b>472</b>	<b>4428</b>	<b>522</b>	<b>165</b>	<b>692</b>	<b>20</b>

AS

Monthly Cumulative: Pregnant women doses and coverage

District: Taifa Taveta

January 1991 - December 1991

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Month	Pregnant Women	TT 1		TT 2		TT Boost		Reporting Facilities		Total # of Facilities
		Doses	Cov.	Doses	Cov.	Doses	Cov.			
<b>Taifa Taveta District</b>										
January (cums)	9326	645	7%	295	3%	302	3%	19	95%	20
		645	7%	295	3%	302	3%	19	8%	
February (cums)	9326	510	5%	211	2%	222	2%	19	95%	20
		1155	12%	509	5%	524	6%	38	16%	
March (cums)	9326	176	2%	218	2%	271	3%	21	110%	20 IE AGGREGATING.
		1631	17%	827	9%	798	9%	60	25%	
April (cums)	9326	582	6%	273	3%	269	3%	18	90%	20
		2213	24%	1100	12%	1067	11%	78	33%	
May (cums)	9326	723	8%	331	3%	267	3%	20	100%	20
		2936	31%	1331	14%	1334	14%	98	41%	
June (cums)	9326	565	6%	324	3%	267	3%	23	115%	20
		3561	38%	1555	17%	1661	17%	121	50%	
July (cums)	9326	184	2%	66	1%	131	1%	22	110%	20
		3685	39%	1615	17%	1722	18%	143	6%	
August (cums)	9326	521	6%	179	2%	562	6%	22	110%	20
		4216	45%	1790	19%	2284	24%	165	69%	
September (cums)	9326	...	...	...	...	...	...	...	...	20
		4216	45%	1790	19%	2284	24%	165	69%	
October (cums)	9326	...	...	...	...	...	...	...	...	20
		4216	45%	1790	19%	2284	24%	165	69%	
November (cums)	9326	...	...	...	...	...	...	...	...	20
		4216	45%	1790	19%	2284	24%	165	69%	
December (cums)	9326	...	...	...	...	...	...	...	...	20
		4216	45%	1790	19%	2284	24%	165	69%	
<b>TOTALS</b>	<b>9326</b>	<b>4216</b>	<b>45%</b>	<b>1790</b>	<b>19%</b>	<b>2284</b>	<b>24%</b>	<b>165</b>	<b>69%</b>	<b>20</b>

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C. COV004

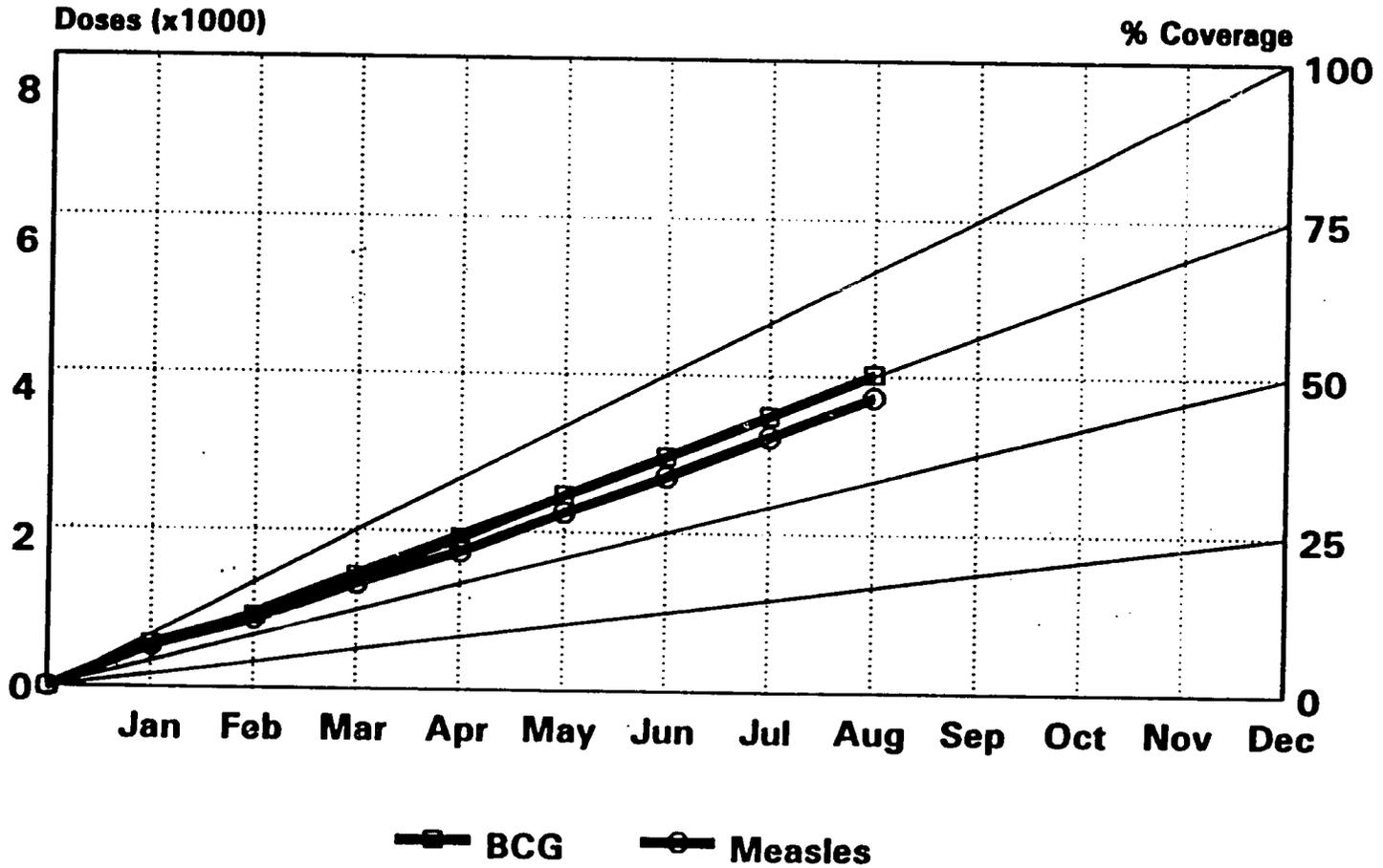
Prepared on: 23/10/91

Page: 1

Annual Summary: Drop-out rates  
District: Taita Taveta  
1991

Area Code Name	DPT1-DPT2	DPT1-DPT3	OPV1-OPV2	OPV1-OPV3	TT1-TT2
35 Taita Taveta	12	42	22	52	502

# Annual Cumulative Coverage District: Taita Taveta 1991 BCG, Measles



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