Technical Assistance For A Teaching Manual on Immunization, Kenya
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Teaching Manual on Immunization,
Kenya

September 18 - 28, 1990

submitted to
USAID/Kenya

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Resources for Child Health Project

USAID Contract No.: DPE-5982-Z-00-9034-00
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<td>ARI</td>
<td>Acute Respiratory Infection</td>
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<td>COSAS</td>
<td>Coverage Survey Analysis System</td>
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<td>CEIS</td>
<td>Computerized EPI Information Systems</td>
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<tr>
<td>DANIDA</td>
<td>Danish International Development Agency</td>
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<td>DOP</td>
<td>Department of Pediatrics</td>
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<tr>
<td>DPT</td>
<td>Diphtheria, Pertussis, Tetanus</td>
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<tr>
<td>KAP</td>
<td>Knowledge, Attitudes, and Practices</td>
</tr>
<tr>
<td>KEPI</td>
<td>Kenya Expanded Program on Immunization</td>
</tr>
<tr>
<td>MOH</td>
<td>Ministry of Health</td>
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<tr>
<td>REACH</td>
<td>Resources for Child Health Project</td>
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<tr>
<td>UCI</td>
<td>Universal Child Immunization</td>
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<tr>
<td>UNICEF</td>
<td>United Nations Children's Fund</td>
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<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
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<tr>
<td>WHO</td>
<td>World Health Organization</td>
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EXECUTIVE SUMMARY

A ten day visit by Dr. Mary A. Carnell, Senior Technical Officer, REACH/Washington, was made at the termination of the REACH I contract to finalize activities done in cooperation with the Department of Pediatrics at the University of Nairobi and KEPI (Kenya Expanded Program on Immunization). In addition, REACH II plans were discussed and dates were established for several activities. Topics of mutual interest for operations research were explored with a variety of potential partners.

REACH involvement with the Department of Pediatrics dates from September, 1988. A Memorandum of Understanding was signed on September 29, 1989 by the Department of Pediatrics and the REACH Project concerning three components to be carried out during the 1989-90 academic year. The first component was the presentation of a series of lectures on EPI for third and fourth year medical students. The second component was the production of a teaching manual for medical students on immunization. The third component was the provision of a series of intensive experiences in immunization for Child Survival Scouts (selected group of fourth year medical students).

Both the lectures in immunization and the Child Survival Scout experience were part of the Department of Pediatrics curriculum since 1987, predating REACH involvement. However, Dr. F. Onyango, Department Chairman, stated that REACH has had a significant impact on improving the effectiveness of their program by increasing the attention and focus given to immunization in the past two years. An introductory lecture on EPI was given to third year medical students. Then, three series of seven lectures on EPI were given to fourth year medical students during their pediatric rotation in the 1989-90 academic year. The didactic lectures are complemented by hands-on practical experience in immunization; fourth year students administer immunizations, counsel mothers and do home visits in community preventive care at Kibera clinic (peri-urban area of Nairobi).

Child Survival Scouts are fourth year medical students who are selected due to high achievement in pediatrics for a special 2-3 month elective in child survival during the interval between fourth and fifth years. During this elective, the students design and carry out their own community based survey, including data collection, analysis, report writing, and giving feedback to the community. Surveys over the three years have included EPI coverage, missed opportunities, and a KAP (Knowledge, Attitude, and Practices) on nutrition and growth monitoring.

Although future REACH support and collaboration would be welcomed in both the lectures and Child Survival Scout program, the Department of Pediatrics has institutionalized these activities and fully intends to continue them.

At the time of this visit, all of the chapters for the medical students' manual had not yet been completed. A meeting of all authors and several meetings with the editors were held during this visit. Considerable work has been done and many of the chapters are ready for peer review and editing. REACH II has allocated funds for the printing of the manual. Discussions were held regarding the completion of the draft document.
Discussions with the KEPI Manager, Dr. Sang, established a timeline for upcoming REACH activities. A cost-benefit analysis is planned for late February, 1991 as an effort to mobilize district health care financing funds for EPI expenditures. A workshop to accelerate measles control is being planned for early February, 1991 for senior level provincial pediatricians and policy makers to include measles reduction among the Ministry of Health’s priorities.

Both the Department of Pediatrics and KEPI expressed a desire to have ongoing communication with REACH, preferably through regular visits. REACH’s technical assistance has been valued because REACH staff and consultants have been able to enrich the Kenyan immunization efforts with new ideas gathered from their varied experience in immunization in countries world-wide.

A debriefing was attended by representatives of the Department of Pediatrics, KEPI, the Division of Family Health, REACH and USAID. A schedule for the follow-up actions required to make a camera-ready document of the medical students’ manual was established, including the delegation of responsibilities between the Department of Pediatrics, KEPI, and REACH.
I. INTRODUCTION

A ten day visit by Dr. Mary A. Carnell, Senior Technical Officer, REACH/Washington, was made at the termination of the REACH I contract to finalize activities done in cooperation with the Department of Pediatrics at the University of Nairobi and KEPI (Kenya Expanded Program on Immunization). In addition, REACH II plans were discussed and dates were established for several activities. Topics of mutual interest for operations research were explored with a variety of potential partners.

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II. REACH I MEMORANDUM OF UNDERSTANDING

A. Immunization lecture series for medical students

One introductory lecture on EPI was presented to third year medical students by Dr. Vincent Orinda. The following seven lectures were presented by lecturers in the Department of Pediatrics and KEPI to fourth year medical students during their pediatric rotation:

* Overview on Immunization - Dr. Sang (KEPI)
* Vaccines and Cold Chain - Dr. Orinda (DOP)
* Measles - Dr. Orinda (DOP)
* Practice of Immunization - Ms. Mwangi (KEPI)
* Pertussis - Dr. Nyacha (DOP)
* Childhood Tuberculosis - Dr. Onyango (DOP)
* Poliomyelitis & Tetanus - Dr. Orinda (DOP)

This series of lectures was repeated three times during the year to allow all fourth year students to receive exposure to immunization. The didactic lectures were complemented by hands-on practical experience in immunization; fourth year students administer immunizations, counsel mothers and do home visits in community preventive care during four days at Kibera clinic (peri-urban area of Nairobi).

During this consultancy, the writer of this report accompanied Dr. Orinda to visit the Kibera clinic. Because of the visit's timing (Friday afternoon) no students nor the supervisor were present. However, we were able to discuss clinic operations with the assistant nurse and review clinic records. Both Dr. Orinda and the writer were surprised to find that although tetanus toxoid was in the refrigerator, it is not administered to women at this clinic. If women are pregnant, they are referred to the antenatal clinic in
another location or to the hospital where they are to receive tetanus toxoid along with antenatal care. Of note, women of child-bearing age are not yet included in Kenya’s policy for tetanus toxoid immunization. Because of the significant missed opportunities to provide tetanus toxoid that such practices engender, it was discussed with the DOP chairman whether this was the preferred example for rotating medical students.

Evaluation of the students’ knowledge of vaccine-preventable diseases and the practice of immunization is primarily during the oral and essay portions of their final pediatric exams. No competency-based objectives for the lectures and practical immunization experience have yet been developed. REACH assistance in this area would be welcome.

B. Child Survival Scout Elective

Child Survival Scouts are fourth year medical students who are selected due to high achievement in pediatrics for a special 2-3 month elective in child survival during the interval between fourth and fifth years. During this elective, the students design and carry out their own community-based survey, including data collection, analysis, report writing, and giving feedback to the community. Surveys over the past three years have included EPI coverage, missed opportunities, and a KAP on nutrition and growth monitoring.

This elective has been very popular with the students according to the Department of Pediatrics. The UNICEF project on Institution Building for Universities supported this elective from the outset three years ago. REACH funds were earmarked to complement the DOP effort by providing monies for xeroxing and secretarial support.

REACH funds by nature of a purchase order are not available until after agreed work is completed. This arrangement is difficult for a university department in a developing country to effectively implement due to a lack of cash-flow which limits their capacity to advance monies that they do not yet possess.

C. Medical Students’ Manual on Immunization

At the time of this visit, all of the chapters for the medical students’ manual had not yet been completed. There are several reasons for the delays. An important oversight in the initial design of this endeavor was the logistical support that would be required. Although funds were earmarked for secretarial support for this component, they were not to be made available until after the manual was completed. However, such funds are needed during the drafting and editing of the manual. Drafts were done by hand, and copies were not always kept. In at least one case, valuable work and time were lost when an advanced draft could not be located and work was begun anew on an earlier draft. The DOP secretary input several chapters in word-processing. However, this was a slow process and lack of paper was cited for delays in printing out drafts.
The REACH consultant who assisted in the design of the Memorandum of Understanding and follow-up criticized the delays, but was not perceived by the Department of Pediatrics as helping to identify the obstacles and constraints, nor as offering constructive suggestions for resolving them. This served to demotivate involved authors and editors which engendered further delays.

Dr. Alan Cross, on sabbatical from the University of North Carolina and working with the University of Nairobi Department of Pediatrics, July 1989-July 1990, encouraged the group to pursue this effort. He viewed this collaboration with REACH on the medical students' manual as an opportunity for the DOP to gain needed financial assistance in the production of a valuable resource on immunization, not only for medical students, but also for instructors, nurses and clinical officers.

A meeting of all authors and several meetings with the editors were held during this visit. Considerable work has been done and many of the chapters are ready for peer review and editing. REACH II has allocated funds for the printing of the manual. Discussions were held regarding the completion of the draft document.

Ms. Josephine Kariuki, REACH/Kenya Administrative Assistant, was instrumental during this visit to advance the work on the manual. She typed several chapters, input edits on most chapters, and made print-outs for authors and editors in remarkable turn-around time. The REACH office assistant, Mr. George Kibe, greatly facilitated the team effort by making numerous photocopies of the various drafts for authors and editors.

A rough estimate of the number of manuals that should be produced in a first printing to serve for the next five years is as follows:

* Univ. of Nairobi medical students 200/year X 5 = 1000
* Nurses 1000/year X 5 = 5000
* Clinical officers 600/year X 5 = 3000
* Lecturers, NGOs, new Moi Univ. Medical School students, misc. = 1000

TOTAL 10,000

An estimated cost of 55 Shillings per copy based on the KEPI manual bids would give a projected cost of 550,000 Shillings (approx. $US 24,000). This estimate far exceeds the $US 4,000 in the REACH budget for printing. The Department of Pediatrics is willing to submit a proposal to UNICEF and/or other donors and is confident that this needed manual can find necessary support.

A schedule for the follow-up actions required to make a camera-ready document for the medical students' manual was established, including the delegation of responsibilities between the Department of Pediatrics, KEPI, and REACH. The following timeline was agreed upon at the final editors' meeting attended by Drs. Onyango, Orinda, and Ngacha of the Department of Pediatric, Drs. Sang and Mutie of KEPI, and Dr. Carnell and Ms. Kariuki of REACH.
### NECESSARY FOLLOW-UP ACTIONS

In order to prepare the current draft of the medical students' manual on immunizations for printing the following tasks and timeline were discussed and agreed upon by the Department of Pediatrics, KEPI, and REACH at the end of this visit:

<table>
<thead>
<tr>
<th>TASK</th>
<th>COMPLETION DATE</th>
<th>RESPONSIBLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Edit chapters to prepare for peer review</td>
<td>Oct. 5/90</td>
<td>Drs. Orinda/Sang/Ngacha</td>
</tr>
<tr>
<td>2. Input edits, print out chapters, make copies for authors, send diskette to REACH/Washington.</td>
<td>Oct. 15/90</td>
<td>Ms. Kariuki</td>
</tr>
<tr>
<td>3. Distribute chapters for peer review</td>
<td>Nov. 1/90</td>
<td>Dr. Carnell/REACH</td>
</tr>
<tr>
<td>4. Send peer review comments to Dr. Onyango to distribute to Drs. Sang &amp; Ngacha</td>
<td>Dec. 10/90</td>
<td>Dr. Carnell/REACH</td>
</tr>
<tr>
<td>5. Review comments and give to authors</td>
<td>Dec. 15/90</td>
<td>Drs. Sang/Ngacha</td>
</tr>
<tr>
<td>6. Authors incorporate desired edits</td>
<td>Jan. 15/91</td>
<td>All authors</td>
</tr>
<tr>
<td>7. Input edits, print out complete document for all editors and copy chapters to respective authors</td>
<td>Feb. 1/91</td>
<td>Ms. Kariuki</td>
</tr>
<tr>
<td>8. Convene 3 day workshop for editors to complete edits on document and submit to Ms. Kariuki to input</td>
<td>Feb. 15/91</td>
<td>Dr. Onyango to convene: Drs. Sang/Ngacha/Orinda to attend</td>
</tr>
<tr>
<td>9. Input final edits</td>
<td>March 1/91</td>
<td>Ms. Kariuki</td>
</tr>
<tr>
<td>10. Review final document</td>
<td>March 15/91</td>
<td>Dr. Onyango</td>
</tr>
<tr>
<td>11. Prepare camera-ready document</td>
<td>May 15/91</td>
<td>not yet determined</td>
</tr>
<tr>
<td>12. Print document</td>
<td>July 15/91</td>
<td>not yet determined</td>
</tr>
<tr>
<td>13. Distribute document</td>
<td>Sept. 1/91</td>
<td>not yet determined</td>
</tr>
</tbody>
</table>
Dr. Orinda will be on leave from the Department of Pediatrics for a two
year posting to Namibia for UNICEF. Dr. Dorothy Mbori-Ngacha will be
responsible for the DOP to assist Dr. Sang in the editing of the manual and in
coordinating the other authors' contributions in his absence. However, Dr.
Orinda is very interested to remain involved in the editing process. The
final editing workshop was planned to coincide with his scheduled trip to
Kenya for the workshop on the accelerated control of measles to be held in
February. The DOP will be responsible for organizing and financing the
editing workshop. Dr. Grabowsky, a REACH Technical Officer, who will help
facilitate the measles workshop, would be welcomed to participate in this
final editing meeting if he were able to extend his stay in Kenya.

In addition to this timeframe for preparing a final document, Ms. Kariuki
of REACH/Kenya will be responsible for the overall logistics in bringing this
manual from a draft document to a printed manual ready for distribution. Ms.
Kariuki will also be responsible for collecting bids from printers for the
production of the manual.

It is estimated that additional funds will be required for printing the
document in excess of those available through REACH II funding ($4,000). The
Department of Pediatrics and KEPI will be responsible for preparing a proposal
to solicit UNICEF and/or other donor support for these additional monies after
bids are collected.

Planned distribution of the manual was discussed at the authors' meeting
and is to include medical students at both University of Nairobi and the new
Moi University Medical School, nursing students, clinical officers, lecturers,
and non-governmental organizations involved in EPI. The first printing was
estimated at 10,000 copies to cover the next five year period.

As Chairman of the Department of Pediatrics, Dr. Onyango, in consultation
with the editors, will determine when the individual authors have completed
their chapters, and will be responsible for the disbursement of funds to them.
Likewise, disbursement of funds to the respective editors upon completion of
the manual will be his responsibility.

III. REACH II PROGRAMMING

Two meetings were held with Dr. Sang, KEPI manager, to discuss the REACH
II workplan. A detailed annual workplan for REACH social mobilization and all
REACH II short-term technical assistance will be submitted to USAID by Ms.
Grace Kagondu and Mr. Robert Steinglass by the end of October 1990. Ms.
Connie Johnson, USAID/Kenya Health Program Officer, will review this plan with
KEPI and other donors for approval.

A. CEIS

A recent CEIS (Computerized EPI Information System) visit by REACH team
Ms. Mimi Church and Mr. David Boyd was highly appreciated. They worked full
time with the new KEPI data management officer. The KEPI manager feels KEPI
has greatly advanced due to having both CEIS and COSAS (Coverage Survey Analysis System) installation and training performed by REACH. He suggests that the most appropriate timing for a planned follow-up visit would be in 6-8 months. This would allow time for the data management officer to visit the districts, give feedback from CEIS generated printouts, and establish what modifications are desired by the districts to better address their program management needs.

B. Workshop on Acceleration of Measles Control and other Immunizable Diseases

After discussions with Dr. Sang/KEPI, Ms. Connie Johnson/USAID, and Dr. Orinda/DOP, it was decided during the debriefing that the most appropriate timing for this workshop would be early February 1991. This should allow sufficient planning time so that WHO/Geneva and WHO/AFRO could send resource persons to assist the REACH facilitator, Dr. Mark Grabowsky, and Dr. Orinda who will be in Namibia with UNICEF on a two year leave from the DOP.

This workshop is being planned as the first of three phases for strengthening the policy and practice regarding measles reduction. The three phases are as follows:


2. Provincial level: KEPI management unit would do follow-up workshops with provincial level personnel.

3. District level: district level planning to detail implementation of an accelerated measles control strategy would follow.

The KEPI manager said that it would be desirable to include a special emphasis on polio and neonatal tetanus during this workshop.

C. Cost-benefit Study

Due to three DANIDA studies currently running simultaneously until December 1990, it is deemed necessary to postpone a cost-benefit study until late February-March 1991, to last 4-6 weeks. The KEPI manager would appreciate on-going communication with REACH/Washington on establishing the protocol for this study. His thoughts at this time envision a team of at least three full-time Kenyan participants including KEPI central team, Ministry of Health Headquarters Finance Dept., and district or provincial representatives.

The purpose of this study, as currently being considered, is to provide data to assist the district planning committees in the allocation of district funds generated through health care financing mechanisms. KEPI hopes to be able to demonstrate that EPI is deserving of an equitable share of these funds.
The KEPI manager is considering carrying out such a study in two districts, yet to be selected. One should be a high-performance and the other a low-performance district, in order to estimate the varying unit costs. Hopefully, results could be generalized so that other districts could consider the cost-benefit of EPI in their allocation of funds.

D. Operations Research

REACH II has a mandate to offer assistance in operations research in the areas of EPI and ARI (acute respiratory infections). Topics of mutual interest for operations research were explored with a variety of potential partners. Possible topics include the determination of the most appropriate indicators of tetanus toxoid coverage for women of child bearing age and the administration of the new E-Z vaccine at the time of DPT3 immunization.

It is desirable to locate potential Kenyan candidates who would be interested to act as principal investigators on such studies. Dr. Aggrey Wasunna, a neonatalogist with the DOP, University of Nairobi expressed interest in studies regarding the newborn.

Both Mr. David Alnwick of UNICEF and Prof. Meme of the DOP/Nairobi suggested that REACH contact Prof. Mengech who is the Dean for the new medical school of Moi University in Eldoret. Although the first class of medical students has not yet begun, this school is apparently attracting strong faculty. Its location away from the capital in a district may provide a favorable climate and population for carrying out operations research.

In addition, unlike many countries where specialists are concentrated in the capital city, apparently a number of outstanding pediatricians are well established in the provinces as government medical officers and would be candidates for principal investigators and/or capable of identifying interested persons.

Dr. Mark Grabowsky, REACH/Washington Advisor for Operations Research, will follow-up with letters to various contacts. A visit to Kenya to discuss potential studies could be proposed pending approval by USAID.

E. Coverage surveys

The KEPI Manager is interested to carry out standard WHO 30 cluster EPI coverage surveys in a sample of the 42 districts. He proposes the end of 1991 or early 1992 as desirable dates for such surveys.

F. REACH/Kenya Office

Ms. Kariuki is making the transition from having been employed by REACH for both Health Care Financing and EPI to working for EPI only. She is budgeted for REACH II as half-time beginning October 1, 1990. During this visit, I discussed her job description with her and the projected activities for REACH II where she might become active. During the debriefing, Dr. Orinda cited her efforts on production of the draft manual over the past week as central to the advances that were accomplished. Her continued role in
logistics to follow the manual until final production and printing is welcomed and agreed to by USAID/Kenya, Department of Pediatrics/Univ. of Nairobi, and KEPI.

She will explore the training courses offered in desk-top publishing. If she were able to acquire this additional skill, it would not only benefit the appearance of this manual, but increase the capacity of KEPI in future materials production.

A new job description which incorporates a widening of her current role as administrative assistant and liaison with REACH/Washington needs to be drafted to include additional tasks. Coordinating logistics for the workshop on the acceleration of measles control is another possible task to which she is well suited. She is agreeable and interested in working on both the manual and workshop and is open to discussing future assignments as they arise.

IV. COLLABORATION WITH DONORS

A. DANIDA

A meeting with Mr. Johannsen, Senior Advisor for DANIDA, was held to discuss their future plans in EPI. As a principal donor to KEPI since its beginning ten years ago, they have made a substantial contribution. Their second five-year agreement expires December 1990. They are in the process of determining their contribution to KEPI's 1991-1995 five-year plan. A total budget for this plan is approximately 500 million Shillings ($US 23 million). It has not yet been decided how the burden will be shared between government and donors.

DANIDA will decide their future collaboration in KEPI based on two outcomes:

1) if they can agree among donors and with Kenya for increased government contribution (currently about 10%), to enable their gradual withdrawal from the program to be planned;

2) the outcome of three studies that are currently underway:

   a) management study at KEPI central level
   b) transport/logistics study nationwide - it is estimated that approximately 80% of vehicles supplied are not functioning
   c) vaccine potency study to assess the quality of the cold chain

They anticipate the outcome of these studies in December 1990. They will schedule an appraisal visit after this (possibly February 1991) to consult with the government and other donors to decide DANIDA's future involvement. A bridging agreement will be required in the interim. A new senior advisor to be full-time at KEPI will begin October 1, 1990 for a two year contract. He is a logistics officer and will function in a management role as counterpart to the KEPI manager.
Mr. Johannsen will recommend to the new advisor that a donor meeting be held in October 1990, after the July-September KEPI Progress Report is completed. He expressed considerable frustration related to the KEPI Annual Workplan that was completed in March 1990. Just after its completion and the agreement of all personnel to an ambitious plan, four key staff left the country for various periods of time. USAID/Kenya supported the KEPI Logistics Officer to go to the USA for training; REACH/USAID supported the KEPI manager to participate in the REACH internal assessment in the Philippines; USAID/REACH supported the REACH Social Mobilization officer to go to the USA and Haiti for meetings and exchange; UNICEF sponsored the KEPI Training officer to go to Namibia to assist as a facilitator for a training workshop.

Although each of these trips provided valuable experience that should serve to enrich KEPI, their timing was not considered in light of the annual workplan and considerable delays have been encountered in key areas of the program. Better interagency coordination could help minimize similar problems in the future.

B. UNICEF

A meeting was held to discuss UNICEF's involvement in KEPI and the Child Survival Scout component of their Institution Building Capacity project. Mr. David Alnwick, Senior Project Officer, discussed the recent provincial level coverage surveys. It was hoped that they would provide a credible national coverage figure for the Summit on Children September 28, 1990 regarding the status of Kenya in reaching UCI (Universal Child Immunization). Considerable problems with the data have resulted in delays in establishing coverage figures.

Plans to carry out district level surveys in the future are not affected by the fact that these provincial surveys following census bureau clusters were done.

Mr. Alnwick was not fully aware of the need for a medical students' manual. He questioned if most of the necessary information on immunization was not already available in materials produced by WHO and other organizations.

V. FOLLOW-UP ACTION REQUIRED

1) Recommend that the Department of Pediatrics, KEPI and REACH follow closely the agreed time-line and respective responsibilities for finishing the Medical Students' Manual on Immunization to permit distribution for the 1991 academic year.

2) Suggest that the Department of Pediatrics develop competency-based objectives for the lecture series on immunizations to assist the students in clarifying what knowledge and skills are necessary to function as future team leaders in immunization.

3) Suggest that international travel visits for key KEPI personnel need to be scheduled into the Annual Workplan, along with REACH and other consultant
visits to Kenya, in an effort to coordinate activities and minimize the disruption to ongoing planned activities.

4) REACH/Washington and REACH/Kenya should prepare detailed annual workplans for the areas of social mobilization and all short-term assistance for submission to USAID by October 1990. Scopes of work need to be developed for REACH/Kenya office staff.

5) REACH/Washington will establish a plan to maintain continuity with KEPI through regular visits and correspondence.

6) Any proposed visits to Kenya by REACH staff or consultants will be preceded by communication with USAID/Kenya regarding proposed scope of work, and the level of effort required.
ANNEX 1

PERSONS CONTACTED

USAID/Kenya
Mr. David Oot
Ms. Connie Johnson
   Director, Health Office
   Health/Pop. Development Officer

REACH
Ms. Grace Kagondu
Ms. Josephine Kariuki
Mr. George Kibe
   Communications Specialist/KEPI
   Administrative Assistant
   Office Assistant

Department of Pediatrics, University of Nairobi
Dr. Francis Onyango
Prof. Julius S. Meme
Dr. Vincent Orinda
Dr. Aggrey Wasunna
Dr. Dorothy Mbori-Ngacha
Dr. Martin Luta
Dr. John Alwar
Ms. Josephine
   Chairman
   Prof. Emeritus
   Lecturer
   Lecturer
   Lecturer
   Lecturer
   Secretary

KEPI Management Unit
Dr. R.K.M. Sang
Ms. Mary Mwangi
Ms. Jane Wanza
Mr. Harold M. Kodo
Mr. S.M. Kamau
Mr. Kiarie
Ms. Alice Kiragi
Ms. Anastasia Atieno
   National Manager
   Training Officer
   Data Management Officer
   Health Education Officer
   Logistics Officer
   Operations Officer
   Secretary
   Office Assistant

MOH/Division of Family Health
Dr. D.M. Mutie

MOH/Health Information Systems
Mr. Geoffrey Kimani
   Statistician

DANIDA
Mr. J. Winther Johannsen
   Senior Advisor

UNICEF
Mr. David Alnwick
   Senior Project Officer