Directory

Partners in Immunization in Child Survival Countries

March 1988
Introduction

The Resources for Child Health (REACH) Project, sponsored by the United States Agency for International Development (AID), is a five-year technical assistance contract awarded to John Snow, Inc. (JSI) in collaboration with other health-oriented organizations. A major purpose of REACH is the provision of assistance for IMMUNIZATION activities in AID-assisted countries.

If REACH's work in immunization is to be effective, careful consideration must be given to the immunization efforts of all concerned parties. REACH has endeavored to produce an IMMUNIZATION DIRECTORY which describes the immunization-related roles played by the host country governments, the major donors, and the (primarily US-based) private voluntary organizations (PVOs) on a country-by-country basis. To our knowledge, no prior directory with an immunization specific focus exists; therefore, REACH hopes that this document will be of use to others as they plan and implement immunization efforts.

The primary countries highlighted in this directory are those designated by AID as the twenty-two "Child Survival Emphasis" countries. In addition, some countries where REACH has provided technical assistance in EPI, are also included.

Any and all insights, corrections, additions to this document are gratefully welcomed. We realize that directories by nature are outdated as they are written, and REACH intends to update this one on an on-going basis throughout the life of the REACH Project. To facilitate this, we have enclosed templates of directory pages which we encourage you to complete and return. Please address all comments to:

REACH Project
John Snow, Inc.
Ninth Floor
1100 Wilson Blvd.
Arlington, Va 22209 USA

Tel. No. 703/528-7474
Telex No. 272896

We would also like to mention that REACH is in the process of designing an EPI Field Guide to familiarize program planners, health officers, and PVO managers, who are responsible for designing immunization programs, with information on technical issues and current controversies in immunization; and to serve as a reference document for consultants who are planning and evaluating EPI activities. The EPI Field Guide will be available in the summer of 1988.
Africa Region
Cameroon
Kenya
Madagascar
Malawi
Mali
Mauritania
Niger
Nigeria
Rwanda
Senegal
Sudan
Uganda
Zaire
Zimbabwe

Asia and Near East Region
Bangladesh
Egypt
India
Indonesia
Morocco
Nepal
Pakistan
Philippines
Yemen

Latin America and the Caribbean Region
Bolivia
Ecuador
Guatemala
Haiti
Honduras
Peru
Basic Country Data:

Total population:
Number of births annually:
Infant mortality rate:
Total population under 5 yrs:
Under 5 mortality rate:
Annual infant and child deaths (0-4):

Historical Perspective

National Policies

Current Scope
### OFFICIAL IMMUNIZATION SCHEDULE:

<table>
<thead>
<tr>
<th># DOSES</th>
<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
<th>COVERAGE RATES</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>BCG</td>
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<td>DPT</td>
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<td>Measles</td>
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<tr>
<td></td>
<td>Tetanus Toxoid</td>
<td></td>
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</tr>
</tbody>
</table>

**VACCINE SOURCE:**

**MOH NAMES/TITLES:**

**ADDRESS:**

**TELEPHONE:**

**TELEX:**
USAID

NAMES/TITLES:

ADDRESS:

TELEPHONE:
TELEX:

FUNDING LEVEL:
MAJOR ACTIVITIES/PROJECTS:

OTHER

NAMES/TITLES:

ADDRESS:

TELEPHONE:
TELEX:

FUNDING LEVEL:
MAJOR ACTIVITIES/PROJECTS:
**PRIVATE VOLUNTARY ORGANIZATION**

U.S. ADDRESS:  

IN COUNTRY ADDRESS:  

TELEPHONE:  
TELEX:  
CONTACT:  

TELEPHONE:  
TELEX:  
CONTACT:  

**MAJOR PURPOSES OF PROJECT:**

**PROJECT DURATION AND FUNDING LEVEL:**

**GEOGRAPHIC AREA SERVED BY PROJECT:**

**TARGET POPULATION FOR IMMUNIZATIONS**

<table>
<thead>
<tr>
<th>Antigen</th>
<th>Doses</th>
<th>Age</th>
</tr>
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<tbody>
<tr>
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<td></td>
</tr>
<tr>
<td>POLIO</td>
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<tr>
<td>DPT</td>
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<td>MEASLES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TETANUS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**VACCINE SOURCE:**

**PROJECT ACTIVITIES:**
PRIVATE VOLUNTARY ORGANIZATION

U.S. ADDRESS: 

IN COUNTRY ADDRESS: 

TELEPHONE: 
TELEX: 
CONTACT: 

TELEPHONE: 
TELEX: 
CONTACT: 

MAJOR PURPOSES OF PROJECT: 

PROJECT DURATION AND FUNDING LEVEL: 

GEOGRAPHIC AREA SERVED BY PROJECT: 

TARGET POPULATION FOR IMMUNIZATIONS 

<table>
<thead>
<tr>
<th>IMMUNIZATION SCHEDULE</th>
<th>antigen</th>
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<td>DPT</td>
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<tr>
<td>TETANUS</td>
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<td></td>
</tr>
</tbody>
</table>

VACCINE SOURCE: 

PROJECT ACTIVITIES:
Basic Country Data:

Total population:
Number of births annually:
Infant mortality rate:
Total population under 5 yrs:
Under 5 mortality rate:
Annual infant and child deaths (0-4):

Historical Perspective

National Policies

Current Scope
OFFICIAL IMMUNIZATION SCHEDULE:

<table>
<thead>
<tr>
<th># DOSES</th>
<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
<th>COVERAGE RATES</th>
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<td>DPT</td>
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<td></td>
<td>Polio</td>
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<td>Measles</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Tetanus Toxoid</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

VACCINE SOURCE:

MOH NAMES/TITLES:

ADDRESS:

TELEPHONE:
TELEX:
WHO

WHO NAMES/TITLES:

ADDRESS:

TELEPHONE:
TELEX:

FUNDING LEVEL:

MAJOR ACTIVITIES:

UNICEF

NAMES/TITLES:

ADDRESS:

TELEPHONE:
TELEX:

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:
PRIVATE VOLUNTARY ORGANIZATION

U.S. ADDRESS:  

IN COUNTRY ADDRESS:

TELEPHONE:  
TELEX:

CONTACT:

TELEPHONE:  
TELEX:

CONTACT:

MAJOR PURPOSES OF PROJECT:

PROJECT DURATION AND FUNDING LEVEL:

GEOGRAPHIC AREA SERVED BY PROJECT:

TARGET POPULATION  
FOR IMMUNIZATIONS

IMMUNIZATION SCHEDULE

antigen  doses  age

BCG  
POLIO  
DPT  
MEASLES  
TETANUS

VACCINE SOURCE:

PROJECT ACTIVITIES:
PRIVATE VOLUNTARY ORGANIZATION

U.S. ADDRESS: __________

IN COUNTRY ADDRESS: __________

TELEPHONE: __________
TELEX: __________
CONTACT: __________

TELEPHONE: __________
TELEX: __________
CONTACT: __________

MAJOR PURPOSES OF PROJECT:

PROJECT DURATION AND FUNDING LEVEL:

GEOGRAPHIC AREA SERVED BY PROJECT:

TARGET POPULATION FOR IMMUNIZATIONS

IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th>antigen</th>
<th>doses</th>
<th>age</th>
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<tbody>
<tr>
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<td></td>
</tr>
<tr>
<td>POLIO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DPT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEASLES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TETANUS</td>
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<td></td>
</tr>
</tbody>
</table>

VACCINE SOURCE:

PROJECT ACTIVITIES:
Basic Country Data

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<thead>
<tr>
<th>Description</th>
<th>Value</th>
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<tbody>
<tr>
<td>Total population:</td>
<td>9.9 million</td>
</tr>
<tr>
<td>Number of births annually:</td>
<td>424,000</td>
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<tr>
<td>Infant mortality rate:</td>
<td>99/1000 live births</td>
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<tr>
<td>Total population under 5 yrs:</td>
<td>1.7 million</td>
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<tr>
<td>Under 5 mortality rate:</td>
<td>162/1000 live births</td>
</tr>
<tr>
<td>Annual infant and child deaths (0-4):</td>
<td>68,000</td>
</tr>
</tbody>
</table>

Historical Perspective

The Expanded Program on Immunization (EPI) began in 1975 in Cameroon with a mobile team which was based in Yaounde. The EPI existed in an experimental phase between 1975 and 1978, but was given technical assistance from the USAID-funded SHDS project between 1978 and 1982. The program has been gradually extended to almost all 10 regions of the country, with 87.5% of the population reached in 1985. The goal of the EPI is to vaccinate all children under five years of age against measles, tuberculosis, diphtheria, pertussis, tetanus, and polio in order to reduce the mortality and morbidity of these diseases. The Ministry hopes to reach 85% vaccination coverage of the target population by 1990.

Delivery Strategies

The vaccination strategies used by the EPI include vaccination through fixed centers, mobile teams, and outreach vaccination services. Fixed centers administered approximately 70% of the doses of the EPI, with the remaining 30% attributable to the mobile teams.

There are 500 fixed centers which are able to offer vaccination services, though 30% of these centers are operated by the private sector, usually by religious organizations. Vaccination sessions are held one morning per month. Therefore, approximately 4 hours of vaccination services are offered to the population every month in most areas of the country. Vaccinations are given by health center staff, which include physicians and nurses.

The mobile teams are attached to regional-level fixed health centers and use the same staff for vaccination. The teams also provide basic medical consultations, primary health care, and tuberculosis and leprosy control in the communities they serve. The mobile teams work approximately 5-10 days per month in the field and are staffed with a medical doctor and paramedical personnel, resulting in 6-8 persons per team. The viability of the mobile teams depends on the condition of health center vehicles and the ability of the staff to leave the health center.

One additional strategy that was used between 1985 and 1986 to ameliorate the coverage rate was to hold outreach vaccination activities. The goal of the outreach activities was to reduce the backlog of older children who were not completely vaccinated through the routine services.

To improve the coverage of the population, Cameroon launched its National Vaccination Days in November and December 1986 and January 1987. The vaccination rounds were held one Sunday each month and relied heavily
on the volunteer support of the country. The campaign was supported by the Government of Cameroon (GOC), UNICEF, and other donors. A total of 4 million doses of vaccine was administered to children and pregnant women over a period of three days.

Technical Aspects

The organization and management of the EPI has suffered from the closing of the SHDS Project. There is only one person in charge of the EPI. This absence of technical assistance has weakened the coordinator's position. Currently, no viable supervision system exists between all levels of the EPI. The programming and implementation of the EPI come from the central level; regional centers have no decision-making power. Except for the mobile teams, the activities of the EPI are not integrated into the overall health delivery system in the country.

It has been noted that the program suffers considerably because of limited financial and material resources. Equipment necessary for a viable cold chain is not in place. Vaccination activities are restricted by the number of primary health centers and vaccination centers (there is only 1 primary health center for every 185,000 population, as compared with 1 hospital for 22,000 population) and by their geographic location. The number of vaccination sessions each month are insufficient to reach the targeted population.

There has been reported difficulty with health personnel involved with EPI services; staff remain unskilled, untrained, and not motivated to deliver vaccination services. The delivery of information is limited by the fact that there is no existing health information system. Routine activities of the EPI do not include regular health education for the population.

NATIONAL IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th># DOSES</th>
<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
<th>COVERAGE RATES (WHO, 1987, &lt;1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BCG</td>
<td>birth</td>
<td>77</td>
</tr>
<tr>
<td>3</td>
<td>DPT</td>
<td>6 wks, 1 mo, 1 yr</td>
<td>50</td>
</tr>
<tr>
<td>3</td>
<td>Polio</td>
<td>6 wks, 1 mo, 1 yr</td>
<td>43</td>
</tr>
<tr>
<td>2</td>
<td>Measles</td>
<td>6,9 mo</td>
<td>39</td>
</tr>
<tr>
<td>2</td>
<td>Tetanus Toxoid</td>
<td>7,9 mo gestation</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>booster to already immunized</td>
<td></td>
</tr>
</tbody>
</table>

VACCINE SOURCE: UNICEF.

MOH NAMES/TITLES:

Mr. Victor Anoma Ngu, Minister of Health
Mrs. Isabelle J. Bassong, Secretary of State for Public Health

ADDRESS:

Ministry of Health
Yaounde, Cameroon

TELEPHONE: (237) 22-35-25 or 22-16-95
TELEX: 978 MINSANTE 8565KN
WHO

NAMES/TITLES:

ADDRESS:
Monsieur le Representant de l'OMS
B.P. 155
Yaounde
Cameroon

TELEPHONE: 22 29 20
TELEX: 8573 KN

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:

UNICEF

NAMES/TITLES:
Mr. Juan Agurre, Country Representative

ADDRESS:
c/o UNDP Yaounde
P.O. Box 836
Yaounde, Cameroon

TELEPHONE: 237-223-182
TELEX: 8322 kn

FUNDING LEVEL: For the period 1986-1990, the total amount of general resources committed is US$481,000. In supplementary funds, SpottAid is providing to UNICEF US$165,000 and CUC/CPHA had committed US$ 205,000.

MAJOR ACTIVITIES/PROJECTS:

UNICEF has been a major donor in the EPI in Cameroon, particularly in providing assistance to the vaccination campaigns. UNICEF provided most of the capital equipment for the campaigns as well as large percentages of the salaries, supplies, and media costs. The national EPI is also largely supported by UNICEF in the form of social mobilization, vaccine supplies and materials, training, administrative assistance, and transportation.
USAID

NAMES/TITLES:

Gary E. Leinen, Health/Population Dvl. Officer

ADDRESS:

U.S. Postal Address:
USAID/Yaounde
Washington, D.C. 20520-2130

International Address:
Rue Nachtigal
B.P. 817
Yaounde, Cameroon

TELEPHONE: 234014, 230512
TELEX: 82223KN

MAJOR ACTIVITIES/PROJECTS:

USAID supports PVO child survival projects in areas of immunization through Save the Children. Activities include training of vaccination teams, reinforcement of immunization activities in Ntui and Yokadouma regions, and assisting in the development of the Information System. These activities will be supported from January 1986 to July 1989.

Support has also been provided through the REACH Project to collaborate with UNICEF on an EPI Rapid Assessment of the national campaign.

WORLD BANK

NAMES/TITLES:

ADDRESS:

TELEPHONE:
TELEX:

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:
ROTARY INTERNATIONAL

NAMES/TITLES:
Dr. Samuel Ngalle Edimo, Director in Yaounde
Dr. Aaron Tolen, Director in Mefou

ADDRESS:
Directeur des Etudes et Planification
Ministere de la Sante Publique
Yaounde, Cameroon

TELEPHONE: 22-01-72
TELEX: 8565KN, 8270KN, 1050

FUNDING LEVEL: US$620,000 (US$570,000 for vaccine, US$30,000 for social mobilization and US$20,000 for reduction of immunization dropouts) for the five-year period beginning in 1987. The funds are to be released to UNICEF for procurement of vaccines and the Rotary Club of Yaounde for social mobilization.

MAJOR ACTIVITIES/PROJECTS:
The POLIOPLUS PROJECT assists in national and regional accelerated immunization efforts, collaborates with local health authorities to reduce dropout rates, and enhances EPI communication strategies in the eight Rotary Club areas. The project aims to immunize at least 85% of all children 0-23 months of age by 1990, with an estimated 1,700,000 children in the first year.
MAJOR PURPOSES OF PROJECT: To train rural families in protective behaviors which will reduce the risk of death and morbidity to infants and children. Training will include the areas of EPI, ORT, nutrition and growth monitoring, water and sanitation, prenatal care, family planning, competent care for severe illness, and malaria prevention.

PROJECT DURATION AND FUNDING LEVELS: Three-year (1986-1989) USAID child survival funding for $320,000.

GEOGRAPHIC AREA SERVED BY PROJECT: Three rural, geographically separated regions: Doukoula (North Province), Ntui (Central Province), and Yokadouma (Central Province).

TARGET POPULATION FOR IMMUNIZATIONS

<table>
<thead>
<tr>
<th>Antigen</th>
<th>Doses</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>1</td>
<td>birth/first contact</td>
</tr>
<tr>
<td>POLIO</td>
<td>3</td>
<td>6, 10, 14 wks</td>
</tr>
<tr>
<td>DPT</td>
<td>3</td>
<td>6, 10, 14 wks</td>
</tr>
<tr>
<td>MEASLES</td>
<td>2</td>
<td>6, 9 mo</td>
</tr>
<tr>
<td>TETANUS</td>
<td>2</td>
<td>5-5 mo gestation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7-9 mo gestation</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: SCF will purchase vaccines through UNICEF, and will maintain the vaccine in cold-chain facilities of the MOH in Yaounde.

PROJECT ACTIVITIES:

- DELIVERS IMMUNIZATIONS to target population through SCF personnel, many of whom are formerly MOH personnel.
- PROVIDES TRAINING to health workers in program planning, management and supervision and in some technical aspects of immunization.
- STRENGTHENS THE COLD CHAIN through the provision of equipment, in addition to planning, distribution, supervision, and monitoring activities.
- TRACKS high-risk and dropout mothers and children and provides coverage data and vital statistics the project
Basic Country Data

<table>
<thead>
<tr>
<th>Description</th>
<th>Data</th>
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<tbody>
<tr>
<td>Total population:</td>
<td>20.6 million</td>
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<tr>
<td>Number of births annually:</td>
<td>1,138,000</td>
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<td>Infant mortality rate:</td>
<td>76/1000 live births</td>
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<tr>
<td>Total population under 5 yrs:</td>
<td>4.5 million</td>
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<tr>
<td>Under 5 mortality rate:</td>
<td>121/1000 live births</td>
</tr>
<tr>
<td>Annual infant and child deaths (0-4):</td>
<td>137,000</td>
</tr>
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Historical Perspective

Immunization delivery began in Kenya in 1975, and in 1980, with DANIDA support, the Ministry of Health (MOH) began a pilot expanded program on immunization. In 1982, the Kenya Expanded Programme on Immunization (KEPI) was officially launched. The KEPI began with a coastal district and then moved westward. The strategy has been to provide vaccinations at MCH posts by retraining staff on EPI principles, identifying and equipping health facilities with cold-chain equipment and vaccines, and providing transportation for vaccines. Currently, 950 posts throughout the country provide vaccinations daily.

National Policies

While KEPI is a separate unit within the Ministry of Health’s Division Family Health, the program is fully integrated with other maternal and child health services at the periphery. Based on the number of projected births and current coverage/dropout rates, selected districts have been accorded high priority for training, supervision, and the establishment of additional immunization sites.

Delivery Strategies

Immunization generally takes place daily at a fixed facility, supplemented to some extent by mobile outreach. District public health nurses are in charge of the program at the district level. They distribute the vaccines and gas bottles for refrigerators, provide supervision, and collect data from the field. Supervision also comes from Nairobi where each of the 4-5 people in the MOH have 3-4 priority districts that they visit each quarter.

Specific disease reduction targets for 1990 are to: 1) reduce the incidence of neonatal tetanus by 50%; 2) eliminate endemic poliomyelitis; and 3) control and virtually eliminate infant mortality from measles.

Technical Aspects

Cited areas of concern for the KEPI include northern nomadic populations which are difficult to reach 'vis-a-vis a fixed strategy; absence of a health surveillance system; and little social marketing. There is also some concern that the government is more interested in CDD programs and may not be willing to take gradual control of the KEPI from DANIDA, as originally planned.
Overall, the KEPI is doing impressively well with very widespread, high coverage levels. A mid-term evaluation of the project was conducted in 1984 by WHO which suggested that KEPI might serve as a model for immunization programs in other countries.

OFFICIAL IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
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<th>COVERAGE RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BCG</td>
<td>birth</td>
<td>80</td>
</tr>
<tr>
<td>3</td>
<td>DPT</td>
<td>3,4,5 mo</td>
<td>72</td>
</tr>
<tr>
<td>3</td>
<td>Polio</td>
<td>3,4,5 mo</td>
<td>72</td>
</tr>
<tr>
<td>1</td>
<td>Measles</td>
<td>8 mo</td>
<td>65</td>
</tr>
<tr>
<td>2</td>
<td>Tetanus Toxoid</td>
<td>pregnant women</td>
<td>40</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: DANIDA provides BCG, DPT, measles, and polio vaccines and tetanus toxoid. UNICEF also supplies polio vaccine.

MOH NAMES/TITLES:

Mr. Kenneth Matiba, Minister of Health  
Dr. Mjomba, Director of Medical Services, and Manager, KEPI  
Dr. Mutie, Assistant Director of Medical Services, and Manager, KEPI  
Mr. Siongek, Director, Communicable Disease  
Dr. Peter Bjerregaard, EPI, DANIDA

ADDRESS:

MOH  
KEPI  
P.O. Box 20781  
Nairobi, KENYA

TELEPHONE: 720030, 720609, Extensions 2474, 2475, 2476  
720724 (direct phone)  
TELEX: 22696 (for foreign affairs)
WHO

WHO NAMES/TITLES:
Dr. Marceilla Davis, Representative
Dr. N.A. Blaxhult, Associate EPI/CDD
Dr. Bo Burstrom, SRHDO Associate

ADDRESS:
P.O. Box 45335
Nairobi, KENYA

TELEPHONE: 720050
TELEX: 22917


MAJOR ACTIVITIES/PROJECTS:
WHO assists in the evaluation of the KEPI, provides materials and guidelines, and coordinates with other countries and their programs. WHO also provides an associate expert in CDD/EPI.

UNICEF

NAMES/TITLES:
Mr. B. Namazi, Country Representative
Dr. Gladys Martin, Regional Health Advisor

ADDRESS:
P.O. Box 44145
Nairobi, KENYA

TELEPHONE: 520671, 520734, 520526
TELEX: 963-22068; 22173/22068 UNITERRA

FUNDING LEVEL: For the period 1986-1990, the total amount of general resources committed is US$511,000. In supplementary funds, the government of Italy is providing to UNICEF US$4,592,000.

MAJOR ACTIVITIES/PROJECTS:
UNICEF is the second largest donor to the KEPI, and supports the program by providing polio vaccine, social mobilization, vehicles, materials, training, and administrative assistance.
USAID

NAMES/TITLES:
David Oot, Sup. Health/Population Dvl. Officer
Molly Gingerich

ADDRESS:
U.S. Postal Address: International Address:
P.O. Box 30261 USAID Mission to Kenya
Nairobi, Kenya Box 201
USAID Mission to Kenya
Box 201
APO New York, N.Y. 09675

TELEPHONE: 254-2-331160, Extension 230
TELEX: 22964

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:
Support has been provided to the Kitui Primary Health Care Project phases
I and II include immunizations given as part of a number of services
provided by mobile teams. In the future, USAID may assist the GOK in
health financing issues, provision of measles vaccine, and communications.
During 1988, USAID will also support EPI activities through the REACH
project, particularly in the areas of the EPI management information system
and cost-analysis, cost-effectiveness, and cost-efficiency studies.

During the years 1985-1988, USAID is providing funding to the Salvation
Army World Service Child Survival Project to assist with some immunization
activities as part of a larger child survival initiative. From 1986-1989,
AID will support the AMREF Child Survival Project which focuses
immunization efforts on highly susceptible children in urban Nairobi.
DANIDA

NAMES/TITLES:

Dr. Peter Bjerregaard

ADDRESS:

HFCK Building
Kenyatta Auel Koinange Street
P.O. Box 40412
Nairobi, KENYA

TELEPHONE: 331088-90
TELEX: 22216


MAJOR ACTIVITIES/PROJECTS:

DANIDA is the largest donor working in EPI in Kenya. DANIDA supports the national program with capital equipment, vaccines, and technical assistance. DANIDA plans to pull out of Kenya by 1990 or 1991, allowing the MOH to take over the program completely, with the exception of some vaccine support.
NAME/TITLE:  
Mr. Jyantilal Rajani, Chairman

ADDRESS:  
P.O. Box 90550  
Miritini, Mombasa  
Kenya

TELEX: 21197 KUSCO

FUNDING LEVEL:  US$1,934,000 (including US$1,844,000 for polio vaccines and US$90,000 for social mobilization) for the five year period beginning in 1987. The funds are to be released to UNICEF for procurement of vaccines and to the Rotary Club of Nairobi for social mobilization and surveillance.

MAJOR ACTIVITIES/PROJECTS:  
The POLIOPRUS PROJECT efforts focus on enlisting the private sector to assist the government to accelerate EPI and on creating public awareness and demand for immunization. Within the five years of support, the project aims to provide 36,880,000 doses of OPV to immunize at least 6.7 million children under five years of age.
AMREF MATERNAL AND CHILD HEALTH SUPPORT PROGRAMME

African Medical and Research
Foundation (AMREF)
420 Lexington Avenue
New York, NY 10170

phone: (212) 986-1835

AMREF
P.O. Box 30125
Nairobi, Kenya

phone: 501-301, 501-302, 501-303

telex: 23254 AMREF

CONTACT: Dr. Michael Gerber
Executive Director

CONTACT: Dr. Christopher H. Wood
Ms. Margaret Okello
Dr. Ben Oirere

MAJOR PURPOSES OF PROJECT: Improve the health of the mothers and children in the service areas through an integrated primary health care program includes ORT, prenatal care, family planning, growth monitoring, TB control, malaria management, and immunization.

PROJECT DURATION AND FUNDING LEVEL: The project is funded for three years, beginning October 1986, the amount of US$750,000 in USAID child survival monies.

GEOGRAPHIC AREA SERVED BY PROJECT: Masailand (Nomadic Health Unit), Ukambani (Kibwezi Rural Health Scheme), and three slum areas in urban Nairobi.

TARGET POPULATION FOR IMMUNIZATIONS

<table>
<thead>
<tr>
<th>Antigen</th>
<th>Doses</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>1</td>
<td>Birth</td>
</tr>
<tr>
<td>POLIO</td>
<td>4</td>
<td>Birth, 6,10,14wks</td>
</tr>
<tr>
<td>DPT</td>
<td>3</td>
<td>6,10,14 wks</td>
</tr>
<tr>
<td>MEASLES</td>
<td>1</td>
<td>9 mo</td>
</tr>
<tr>
<td>TETANUS</td>
<td>2</td>
<td>Pregnancy</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: Kenya EPI through UNICEF

PROJECT ACTIVITIES:

- DELIVERS IMMUNIZATIONS to target population through both AMREF and MOH personnel at fixed delivery sites and through nomadic health units.
- TRAINS traditional birth attendants to deliver tetanus toxoid vaccine with non-reusable disposable cap injectors. Trains trainers in technical skills.
- STRENGTHENS COLD CHAIN through equipment purchase, planning, distribution, supervision, and vaccine monitoring.
- PROMOTES immunization through health education sessions.
INTRODUCED AND PILOTED mother/child home-based health card to monitor pregnant women throughout pregnancy and children up to three years of age.
MAJOR PURPOSES OF PROJECT: 1) to train 27,000 village women in GOBI-FP through existing SAWSO women's groups; 2) to deliver the basic preventive services of growth monitoring, ORS, and EPI promotion to 39,000 children 0-5 years of age; 3) to conduct population registration to the extent that 75% of children 0-3 years of age are registered, with emphasis on children under one year of age and other high-risk children.

PROJECT DURATION AND FUNDING LEVELS: Three year USAID child survival project beginning in 1985 through 1988. USAID funding totals US$79,000 for the life of the project.

GEOGRAPHIC AREA SERVED BY PROJECT: Twenty villages in the Machakos District (Eastern region); just six outside of Nairobi.

TARGET POPULATION FOR IMMUNIZATIONS

<table>
<thead>
<tr>
<th>Antigen</th>
<th>Doses</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>1</td>
<td>birth/1st contact</td>
</tr>
<tr>
<td>POLIO</td>
<td>3</td>
<td>3,4,5 months</td>
</tr>
<tr>
<td>DPT</td>
<td>3</td>
<td>3,4,5 months</td>
</tr>
<tr>
<td>MEASLES</td>
<td>1</td>
<td>after 8 months</td>
</tr>
<tr>
<td>TETANUS</td>
<td>2</td>
<td>during pregnancy, one month apart</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: Kenyan Ministry of Health

PROJECT ACTIVITIES:

- PROMOTES DELIVERY OF IMMUNIZATIONS carried out by MOH personnel to the target population, through health education, home visits, and local health education material production.

- STRENGTHENS the cold chain through monitoring activities.

- TRAINS 40 local level Home League leaders and 200 Home League health educators in training skills for outreach to 10,000 mothers.
o CONDUCTS POPULATION REGISTRATION of the project area.
March 1988 Madagascar

Basic Country Data

Total population: 10.0 million
Number of births annually: 446,000
Infant mortality rate: 63/1000 live births
Total population under 5 yrs: 1.8 million
Under 5 mortality rate: 97/1000
Annual infant and child deaths (0-4): 42,000

Historical Perspective

Madagascar began its immunization program in 1977 with the creation of the Vaccination and Mobile Team Service (Service des Vaccinations et des Equipes Mobiles - SVEM). Previous national experience with immunization activities was gained during the smallpox eradication program. The first five-year plan (1977-1981) for the SVEM included only DPT (to children up to 1 year old) and locally produced BCG (to children up to 15 years old). Polio immunizations were to be given only in zones with high incidence rates. The strategy for this time period employed a mixed approach with both mobile teams and fixed sites for vaccine delivery. Notable problems of the EPI program at this time included: 50-65% dropout rate between DPT1 and DPT3 for the target group, lack of full or even partial participation by several health districts, poor rate of DPT vaccine utilization, and non-emphasis of recommended target groups. The second five-year plan (1982-1986) added two target antigens beginning in 1982 - tetanus toxoid for pregnant women and polio for all infants age up to 2 years old. Measles vaccine was excluded initially due to its high cost and cold-chain requirements.

Almost from its inception, the EPI in Madagascar has been adversely affected by the nation’s economic crisis. Like all social services, the EPI has suffered from the lack of foreign exchange, which may have affected the program most directly through the unavailability of sufficient cold-chain equipment and spare parts. Two devastating cyclones which struck in 1982 and 1984 also negatively impacted child health services. As of 1985, the official WHO vaccine schedule had not been employed.

National Policies

The EPI has been strongly influenced by the commitment the Malagasy government made in 1976 to decentralize the health care system, integrate primary health care, and promote local community-level involvement in the health program. The EPI is currently a major component of the joint Malagasy government (RDM) and UNICEF Child Survival and Development/Universal Childhood Immunization (CSD/UCI) Program. In 1985 an Intersectoral Management Committee was organized with the aim of providing a vehicle for a more integrated approach for the supervision and coordination of the CSD/UCI program. This committee brings together participants from four ministries: Health, Education, Information, and Population.

Decentralization plays a key role in the new CSD/UCI program, and the EPI sector is structured accordingly. There are five divisions within the MOH, including the Division of Community Health, which is the division
responsible for immunization, as well as health education and nutrition. Each of the country's six provinces has a provincial health directorate in which each of the five divisions of the MOH is represented. The country is divided into 36 medical districts, each under a medical inspector. Recently, the country has been further divided into 207 sectors, with a physician in each sector responsible for the supervision and training of all health workers in that sector.

Current Scope

The approach to strengthening the EPI under the CSD/UCI program is through modular implementation. Accelerated vaccination activities will be phased into regions according to the existence of a regional plan of action. As the number of Primary Health Care Centers (CSSPs) expands, the emphasis of the immunization delivery strategy continues to be the integration of EPI with primary health care through the fixed-site CSSPs. In 1985, approximately 70% of immunizations were provided through fixed sites, 10% through outreach activities of the centers, and the remaining 20% by mobile teams. Since it is planned that 500 CSSPs will be created before 1990, the EPI may be able to reach the great majority of the population without the use of mobile teams.

The CDS/UCI will also have a social mobilization and health education component that should strengthen the EPI. All concerned organizations — from the NGOs, private sector, and churches, to the political and administrative structures — will be encouraged to participate.

Technical Aspects

A new disease surveillance system was implemented in 1983. Along with data about immunization, information regarding diarrhea, malaria, and malnutrition is gathered from monthly reports submitted by the health centers. Although reporting is incomplete, 65% of the health centers were reporting in 1984. A WHO EPI review was conducted in October 1985.
## OFFICIAL IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th># Doses</th>
<th>Antigen</th>
<th>Recommended Age</th>
<th>Coverage Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1+booster</td>
<td>BCG</td>
<td>birth or 8 mos, booster at 6 yrs</td>
<td>13%</td>
</tr>
<tr>
<td>3+2 boosters</td>
<td>DPT</td>
<td>3-4 mos, 1 mo intervals, boosters at 13 mos &amp; 5 yrs</td>
<td>20% (third dose)</td>
</tr>
<tr>
<td>3</td>
<td>Polio</td>
<td>3-4 mos, 1 mo intervals, boosters at 13 mos &amp; 5 yrs</td>
<td>3% (third dose)</td>
</tr>
<tr>
<td>1</td>
<td>Measles</td>
<td>9 mos.</td>
<td>..</td>
</tr>
<tr>
<td>2</td>
<td>Tetanus Toxoid</td>
<td>pregnancy</td>
<td>..</td>
</tr>
</tbody>
</table>

### Vaccine Source:
For approximately 20 years, the BCG needs of Madagascar were met by vaccine locally produced by the Pasteur Institute of Madagascar. In recent years UNICEF has supplied the antigen while the BCG plant was being updated. UNICEF has supplied DPT vaccines, polio, and tetanus toxoid since 1982.

### MOH Names/Titles:
- Dr. Jean Jacques Seraphin, Minister of Health
- Dr. Samuel Andriamampiantona, Secretary General
- Dr. Paul Randimbivahiny, Director, Medical and Sanitary Services
- Dr. Edmond Ribaira, Director, Public Health
- Dr. Raphael Andriantseheno, Chief, Immunization and Mobile Teams Services
- Dr. Paul Andrianaivo, Chief, Communicable Disease Service
- Dr. Osee Ralijaona, Chief, Health Statistics and Demographics Services
- Dr. Andre Jose Ramangalahy, Chief, Maternal and Child Health
- Mr. Jean Pierre Gory, Director Adjoint, Pharmacy
- Mme. Francine Ratsimihah, Chief, Supply Service, Pharmacy

### Address:
Ministry of Health
Antananarivo
Madagascar

### Telephone:
2-23697

### Telex:
22339 AMDAMD (foreign affairs)
UNICEF

NAMES/TITLES:

Mr. I. Gomez, Area Representative

ADDRESS:

Giri, Nairobi
Rue Docteur Rasamianana
Behoririka
Antananarivo 101, Madagascar

TELEPHONE: 254-2-520671-5; 280-83; 303-51-2; 304-01, 296-42
TELEX: 983-22345

FUNDING LEVEL: For the period 1986-1990 the total amount of general resources committed is US$1,400,000. In supplementary funds, the AGFUND has committed to UNICEF US$400,000; the Japan Committee has provided US$100,000, CUC/CPHA will provide US$609,000; and the Netherlands Committee will provide US$990,000.

MAJOR ACTIVITIES/PROJECTS:

Prior to 1986, UNICEF's primary contribution to EPI was vaccine supply. EPI is a large share of the new CSD/UCI project. This program also includes a malaria control component, a diarrheal disease ORS component, and growth monitoring and essential drugs components.

This country-wide program seeks to provide the necessary means and knowledge to ensure delivery of childhood immunizations in the expanding primary health care system. Funding will support cold-chain equipment and commodities, transportation, technical and managerial training of health workers, and disease surveillance and other information systems enhancement.

The program will also sponsor the printing and distribution of "Health Passports", which are durable cards containing the infant's immunization record, growth chart, and guide for ORT use; initiate and expand the existing health communications project; and initiate operations research on child survival-related activities.
WHO

NAMES/TITLES:
Dr. C. Hakizimana, WHO Representative

ADDRESS:
Monsieur le Representant de l'OMS
B.P. 362
Antananarivo 101
Madagascar

TELEPHONE: 225-82
TELEX: 22481 UNISAN MG

MAJOR ACTIVITIES/PROJECTS:

USAID

NAMES/TITLES:
Mr. Samuel Rea, USAID Resident Representative

ADDRESS:
U.S. Postal Address:  
USAID/Antananarivo  
Washington, D.C. 20520

International Address:  
14 & 16 Rue Rainitovo  
Antsahavila  
BP 620  
Antananarivo, Madagascar

TELEPHONE: 212-57; 209-56
TELEX: 22202 USAEMB MG

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:
USAID conducted a study in December 1986 to explore ways to expand its role in the child survival activities of the Malagasy government. USAID will apply a portion of the PL480 Title I local funds toward the Child Survival Development/Universal Child Survival Project agreement between the Malagasy government and UNICEF, with emphasis on the immunization component of the project. The provision of short-term technical assistance will also be provided through the REACH project in 1988 for assistance in an assessment of the national cold-chain and supplies distribution system, surveillance of vaccination coverage rates (including neonatal tetanus), and development of operational EPI strategies in selected provinces.
UNITED NATIONS INDUSTRIAL DEVELOPMENT SERVICES OFFICE (UNIDO)

NAMES/TITLES:
Mr. Pierre Coulanges, President
Dr. P.J. Rakotonirina-Randriambelona, Directeur Adjoint

ADDRESS:
Institut Pasteur de Madagascar
B.P. 1274
Antananarivo
Madagascar

MAJOR ACTIVITIES/PROJECTS:
Technical and financial assistance for the renovation of the vaccine production unit of the Pasteur Institute.

ROTARY INTERNATIONAL

NAMES/TITLES:
Mr. Desire Andriamandimby, Chairman

ADDRESS:
B.P. 4405
Antananarivo 101
Madagascar

TELEPHONE: 421 85(H)/294 33(O)
TELEX: via UNICEF UNITAN/MG 22530

FUNDING LEVEL: US$640,000 (US$550,000 for vaccines and US$90,000 for social mobilization) for the five-year period beginning in 1987. The funds are to be released to UNICEF for procurement of vaccines and to the Rotary Club of Antananarivo for social mobilization.

MAJOR ACTIVITIES/PROJECTS:
The POLIOPLUS PROJECT is active through participation in rapid immunization interventions and through collaboration in other social mobilization efforts. The project objectives are to immunize 90% of children up to 2 years old and to provide 11,000,000 doses of oral polio vaccine for 2,700,000 children. Through increased mobilization efforts in private businesses and community organizations, the project hopes to improve EPI coverage.
Basic Country Data

Total population: 6.9 million
Number of births annually: 373,000
Infant mortality rate: 157/1000 live births
Total population under 5 yrs: 1.3 million
Under 5 mortality rate: 275/1000
Annual infant and child deaths (0-4): 102,000

Historical Perspective

The Malawi Expanded Program on Immunization (EPI) has evolved from immunization activities begun in 1973, with the implementation of the 15-year national health plan. Smallpox, BCG, DPT, and fairly small amounts of polio vaccine were provided at the start.

A nation-wide mass campaign against measles was conducted from 1978 through 1981; it was at the end of this campaign that immunization activities came to be known as the Expanded Program on Immunization. A nation-wide mass campaign against poliomyelitis (1980-1983), with maintenance vaccination in regions that had completed mass activities, served not only to immunize large numbers of children in Malawi but to add polio vaccine (OPV), in sufficient quantity, to EPI.

Prior to and during the mass campaigns, other immunization services were provided through maternal and child health clinics.

National Policies

When initially begun, EPI Malawi established five specific long-term objectives: 1) to increase immunization coverage of the target population to at least 80% before 1990; 2) to make immunizations available to all children by 1990; 3) to reduce infant/child mortality from the present (1978) 130/159 per 1,000 to 50 per 1,000 by the year 2000 through control of the six EPI diseases; 4) to increase the level of awareness in the communities of the need for immunization, within the context of primary health care; and 5) to integrate immunization services fully into the total health delivery system.

In 1984, five sub-goals for the years 1985-90 were incorporated into the overall objectives: 1) to reduce morbidity/mortality from measles by 50%, polio by 75%, and neonatal tetanus by 50%; 2) to establish morbidity/mortality baselines for pertussis through collection and analysis of statistical data; 3) to ensure immunization services are available in all fixed health centers and outreach facilities; 4) to ensure all district and regional child health staff receive EPI mid-level management courses, 65% of traditional birth attendants and community volunteers are trained to motivate mothers to seek immunization services, and all schools include immunizations in their curricula; and 5) to ensure the availability of spare parts for the cold chain and that each district has one staff member trained in cold-chain maintenance.
Delivery Strategies

In 1983, mass campaigns on measles and polio immunization, which had been conducted over the preceding three- to five-year periods as a sensitization for the Malawi EPI, were ended, and all EPI immunizations were integrated within fixed health facilities and their outreach clinics, which are accessible to over 80% of the population.

Immunization services are now integrated with the fixed health units and their outreach clinics. EPI is managed within the MCH section of the Ministry of Health, which is in turn a part of the primary health care system.

Administratively, Malawi is divided into three regional areas: 1) Central, with the administrative center in Lilongwe; 2) Northern, based in Mzuzu; and 3) Southern, with the main center in Blantyre. The Southern region has the largest population.

Annual funding for recurrent costs such as salaries and vehicle and refrigerator/freezer maintenance has come from the national MCH budget. In FY 1982-83, approximately 8% of the national health budget was allocated for the control of infectious diseases, including the EPI target diseases. The EPI does not have a separate budget.

Technical Aspects

UNICEF, in conjunction with the WHO and the MOH, conducted a major MCH program evaluation in 1984. This survey found that vaccination coverage levels in 1984 were virtually identical to those recorded in 1982. This was a positive finding in that the 1982 figures represented a major improvement over the the 1980 baseline levels for Malawi and, in addition, were higher than the levels found in many other southeastern African nations. However, this plateau is still well below the coverage levels (80% fully immunized) set for 1990 and indicates a need to reassess EPI strategy for future years. A follow-up UNICEF/WHO evaluation was scheduled for 1987.

A 1983 national EPI coverage survey of children 12 to 23 months of age revealed that 55% of children had been fully immunized, and that 68% had received three doses of TOPV and 64% had received measles vaccine. A repeat national coverage survey in 1985 showed a drop in the number of fully immunized children to 3%, with respective decreases in the percentage of children having received TOPV and measles vaccine. A further study was conducted by the CCCD project to find out the reasons for the decrease in coverage, and a series of remedial steps were taken by the Ministry of Health.

Donors have supplied major inputs of resources in terms of commodities (vaccines, cold chain, transport) and training. Approximately 15 NGOs had health-related interests in Malawi as of late 1986. A World Bank report noted: "At present, there is very little NGO group coordination within the government except for that which exists between the Ministry of Health and the Private Hospital Association of Malawi (PHAM). . . . There is no clear machinery to foster collaboration among the different NGOs at present. However, efforts have been made by the health-related NGOs to work together with a view to fostering liaison as a group with the National Council for Social Services. In order to attain better coordination the Ministry of Health will organize a workshop session(s) to synthesize available information, identify constraints to coordination and to then develop a plan of action to increase collaboration among the principal NGOs."
### OFFICIAL IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th># DOSES</th>
<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BCG</td>
<td>birth</td>
</tr>
<tr>
<td>3</td>
<td>DPT</td>
<td>2, 3, 4 mo</td>
</tr>
<tr>
<td>3</td>
<td>Polio(TOPV)</td>
<td>2, 3, 4 mo</td>
</tr>
<tr>
<td>1</td>
<td>Measles</td>
<td>9 mo</td>
</tr>
<tr>
<td>2</td>
<td>Tetanus Toxoid</td>
<td></td>
</tr>
</tbody>
</table>

Fully immunized: 35%  
RTH card: 73%

** (Source: CCCD 30 Cluster, 8/85)

### VACCINE SOURCE:
UNICEF provides measles, DPT, BCG vaccines, and Save the Children Federation will provide polio vaccine in 1984-1985. Rotary International will assist with polio after Save the Children Federation discontinues operation in Malawi. A total of US$1.78 million is budgeted for vaccine procurement between 1984-1987.

### MOH NAMES/TITLES:
- Mr. E.C.I. Bwanali, Minister of Health
- Dr. J.A. Kalilani, Dep. Chief Med. Officer, National CCCD Program Manager
- Mr. J. Chikakuda, Chief Clinical Officer, National EPI Director

### ADDRESS:
P.O. 30377  
Lilongwe, #3  
Malawi

### TELEPHONE:  
(265) 730-099  
TELEX: 4558
WHO

NAMES/TITLES:
Dr. S.H. Sivale, WHO Representative

ADDRESS:
P.O. Box 30390
Capital Hill
Capital City
Lilongwe 3
Malawi

TELEPHONE: 731390/731619 (direct line)
TELEX: 4624

FUNDING LEVEL: WHO is providing US$36,000 for training for 1986-87.

MAJOR ACTIVITIES/PROJECTS:

UNICEF

NAMES/TITLES:
Mr. K. Williams, Country Representative
Dr. A. Pointer
Dr. Ahmed, Cold Chain Advisor

ADDRESS:
New Commercial Bank Building
2nd Floor
Capital City Center
Lilongwe 3, Malawi

TELEPHONE: 260-1-216332, 216531
TELEX: 988-4617, 44310

FUNDING LEVELS: For the period 1986-1990, the total amount of general resources committed is US$515,000. In supplementary funds, the Government of Italy will provide US$4,477,000.

MAJOR ACTIVITIES/PROJECTS:
UNICEF support is directed towards the following areas: personnel training for MCH supervisors and all village-based workers, social mobilization, vaccine supplies, and cold-chain distribution and logistics.
USAID

NAMES/TITLES:

Mr. Charles R. Gurney, Health/Population Dev. Off.

ADDRESS:

U.S. Postal Address: USAID/Lilongwe
Washington, D.C. 20520-2280

International Address: P.O. Box 30016
Lilongwe, Malawi

TELEPHONE: 730-166
TELEX: 4627

FUNDING LEVEL: USAID is providing funding through the ACSI/CCCD project. The project agreement runs from June 1984 to the end of March 1988. US$1.4 million is allocated to the project over its life. Overall, AID has allocated US$ 3.0 million to child survival activities in Malawi for FYs 85-87.

MAJOR ACTIVITIES/PROJECTS:

USAID-supported activities in addition to ACSI/CCCD are in the areas of child spacing, nutrition, and water and sanitation projects. Development of private sector initiatives through local currency grants are being emphasized to address issues of sustainability and cost-recovery of MCH services. Donor coordination has been identified by AID as a "critical concern." EPI assistance is provided through several PVO child survival programs, such as ADRA for assistance in training health workers, the International Eye Foundation (IEF), and Save the Children.

In 1987, AID will assist HEALTHCOM in providing a long-term advisor to continue work with CCCD in providing ORT, immunizations, and malaria control.
THE WORLD BANK

NAMES/TITLES:
Mr. Peter Hall, Chief

ADDRESS:
Red Cross House

TELEPHONE: TELEX:

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:

ROTARY INTERNATIONAL

NAME/TITLE:
Mr. George Henry Dumble, Chairman

ADDRESS:
P.O. Box 498
Lilongwe
Malawi

TELEPHONE: 731936 (office)

FUNDING LEVEL: US$302,700, including US$4,000 for external promotion during the five-year period which began in 1985 has been committed. The funds are to be released to UNICEF for vaccines and to the World Health Organization to assist with evaluations.

MAJOR ACTIVITIES/PROJECTS:

The objectives of the Rotary Club in Malawi are to conduct a successor program to the three-year polio immunization program provided by Save the Children; to undergird results of 3-H Project 80-7, Treatment and the Rehabilitation of Polio Victims in Malawi, by prevention of polio; and to establish polio immunization as part of the EPI program. Rotary activities focus on supervision, public relations, and promotion.
ADRA/MALAWI CHILD SURVIVAL PROJECT

Adventist Development and Relief Agency (ADRA)  ADRA Malawi
6840 Eastern Avenue, N.W.  P.O. Box 951
Washington, D.C. 20012  Blantyre, Malawi
telephone: (202) 722-6770  telephone: 620-016
telelex: 440186 WASH D.C.  telex: 4216

CONTACT: Mr. Rudi Maier,  CONTACT: Dr. A. Rockwell, Director
  Assistant Director of Evaluation  Director of Community Development
  Mr. Ken Flemmer,  
  Director of Community Development

MAJOR PURPOSES OF PROJECT: To reduce infant and child mortality within the project area by increasing the proportion of children immunized to 80% and the mothers using ORT to 80%, and by increasing mothers' participation in MCH training and family planning awareness.


GEOPHASIC AREA SERVED BY PROJECT: Fifteen Adventist Health Services clinics throughout the country: North - Chambo, Sangilo, Nthenje, Nkorongwa, Luwazi, Lunjika, Entendani; South - Lakeview, Senzani, Msambe, Matandani, Chileka; three others near Malumillo Hospital. Sub-center HQs located at Mzuzu and Blantyre.

TARGET POPULATION FOR IMMUNIZATIONS

<table>
<thead>
<tr>
<th>antigen</th>
<th>doses</th>
<th>age</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>1</td>
<td>birth</td>
</tr>
<tr>
<td>POLIO</td>
<td>4</td>
<td>2,3,4 mos, 1 yr</td>
</tr>
<tr>
<td>DPT</td>
<td>4</td>
<td>2,3,4 mos, 1 yr</td>
</tr>
<tr>
<td>MEASLES</td>
<td>1</td>
<td>9 mo</td>
</tr>
<tr>
<td>TETANUS</td>
<td>2</td>
<td>pregnancy</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: Majority of supply from the Government of Malawi; occasional direct purchases from manufacturers outside of country as back-up.
PROJECT ACTIVITIES:

- DELIVERS IMMUNIZATIONS to target population at ADRA clinics through ADRA personnel with a fixed center strategy. Operates mobile "under-fives" clinic to increase immunization outreach of villages between 3-5 km from clinics.

- PROMOTES IMMUNIZATION in the community through health education sessions at the clinics and during home visits.

- TRAINS 90 local village health workers in community outreach. Also trains 2 regional supervisors and 12 medical assistants in technical skills.

- TRACKS HIGH-RISK CHILDREN AND PROGRAM DROPOUTS through surveys and disease surveillance activities conducted by paid community health workers and volunteer village health workers.
MAJOR PURPOSES OF PROJECT: To address problems of childhood mortality and morbidity, with a specific focus on preventable eye disease, through the distribution of Vitamin A and tetracycline ophthalmic ointment and through improved health education activities and assistance to the Ministry of Health ORT program and EPI.

PROJECT DURATION AND FUNDING LEVEL: A three-year AID Child Survival Project beginning October 1985 and funded in the amount of US$442,300.

GEOGRAPHIC AREA SERVED BY THE PROJECT: Two districts in the Lower Shire Valley, Chikwawa and Nsanje. Project headquarters in Blantyre.

TARGET POPULATION FOR IMMUNIZATIONS
(approximately 78,000 children BCG 1 birth
approximately 70,000 women MEASLES 1 9 mo
approximately 78,000 children ages 0-6 years POLIO 3 2,3,4 mos
approximately 70,000 women ages 15-40 years TETANUS 2 pregnancy

VACCINE SOURCE: Ministry of Health EPI.

PROJECT ACTIVITIES:

o TRAINS ophthalmic medical assistants (OMAs), health assistants, nurses, and health surveillance assistants (HSAs) in provision of EPI services.

o PROMOTES immunization through the training of traditional birth attendants (TBAs) in EPI/ORT messages to pass on to the women they care for. Trains village health committees to become aware of EPI participation.

o PROVIDES TRANSPORTATION for MOH MCH/EFI supervisory visits.

o DEVELOPS AND IMPLEMENTS MONITORING CAPACITY for EPI vaccine coverage and disease surveillance.
MAJOR PURPOSES OF PROJECT: The project will improve the health status of the target population through a comprehensive primary health care program which will include nine interventions: EPI, community-based health information system, ORT, clean water, malaria treatment, nutrition, breast feeding and weaning, acute respiratory infections, and antenatal care and family spacing.


GEOGRAPHIC AREA SERVED BY PROJECT: Mbalancanda Impact Area, located in the Northern Region of the western extreme of Mzimba District on the border of Zambia.

TARGET POPULATION FOR IMMUNIZATIONS

IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th>antigen</th>
<th>doses</th>
<th>age</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>1</td>
<td>birth</td>
</tr>
<tr>
<td>POLIO</td>
<td>3</td>
<td>2,3,4 months</td>
</tr>
<tr>
<td>DPT</td>
<td>3</td>
<td>2,3,4 months</td>
</tr>
<tr>
<td>MEASLES</td>
<td>1</td>
<td>9 months</td>
</tr>
<tr>
<td>TETANUS</td>
<td></td>
<td>pregnancy</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: SCF will purchase vaccines via UNICEF.

PROJECT ACTIVITIES:

- DELIVERS IMMUNIZATIONS to target population through existing MOH primary health care system and through SCF personnel.
- TRACKS target population through family registration system.
- PROMOTES IMMUNIZATION through home visits, publicity campaigns, and local production of health education materials.
- STRENGTHENS THE COLD CHAIN through equipment provision, program planning and vaccine distribution, supervision of health workers, and monitoring of vaccines.
TRAINNIS 20 mid-level supervisors and 120 local community health promoters in technical and management skills for immunization.
Basic Country Data

Total population: 8.1 million
Number of births annually: 410,000
Infant mortality rate: 175/1000 live births
Total population under 5 yrs: 1.6 million
Under 5 mortality rate: 302/1000
Annual infant and child deaths (0-4): 123,000

Historical Perspective

An EPI was launched by the Government of Mali (GOM) in 1982 but was not developed at that time because of drought and famine which disrupted the delivery of health and social services throughout the country. During the period 1984-86, immunizations were primarily provided by NGOs working in the country. The EPI is now being centralized and coordinated by Council National d'Immunisations.

Delivery Strategies

There are mobile teams at nine regional levels and 47 at cercle levels. Fixed centers also provide vaccination services. Efforts have been focused on towns where NGOs have not been working and the program plans to modify the strategy so that the fixed centers will be strengthened and mobile teams will be used primarily for supervision.

Technical Aspects

The EPI in Mali is in transition. One problem area that has been identified is the cold chain. UNICEF, Save the Children Federation, APMP, GTZ, CARE, and the Italian and German governments all provide assistance to the EPI.
## OFFICIAL IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th># DOSSES</th>
<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
<th>COVERAGE RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BCG</td>
<td>birth</td>
<td>19</td>
</tr>
<tr>
<td>3</td>
<td>DPT</td>
<td>6,10,14 wks</td>
<td>..</td>
</tr>
<tr>
<td>4</td>
<td>Polio</td>
<td>birth, 6,10,14 wks</td>
<td>..</td>
</tr>
<tr>
<td>1</td>
<td>Measles</td>
<td>9 mos</td>
<td>..</td>
</tr>
<tr>
<td>2</td>
<td>Tetanus Toxoid</td>
<td>mothers</td>
<td>1</td>
</tr>
</tbody>
</table>

**VACCINE SOURCE:** UNICEF.

**MOH NAMES/TITLES:**

Mrs. Sidibe A. Cisse, Minister of Public Health and Social Affairs
Dr. Toure, Director of Epidemiology and Prevention
Professor Souleymane Sangare, Director of the National Immunization Center of Mali

**ADDRESS:**

Ministre de La Sante Publique et Des Affaires Sociales
Bamako
Republic of Mali

**TELEPHONE:** 225301, 225302, 225361, 225244
**TELEX:** 972560 (foreign affairs)
WHO

NAMES/TITLES:

Dr. M. Sidatt, Representative
Benattia Zitoumi, Operations Technician, Chief of Project Mali - EPI
Dr. V. V. Petriagin, Medical Officer EPI/CDD

ADDRESS:

Monsieur le Represent de l’OMS
B.P. 99
Bamako
Mali

TELEPHONE: 2223-35
TELEX: 2446

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:

UNICEF

NAMES/TITLES:

Mr. L. De Vos, Country Representative
Mr. G. Cornale, Programme/Project Officer

ADDRESS:

Inmueble Cheickna Diawara
Badalabougou-Est, Bamako
Mali

TELEPHONE: 224-401
TELEX: 972-536

FUNDING LEVEL: The UNICEF program relies largely on donor support through supplementary funds. During the period 1986-1990, the following funds have been committed: US$4,949,000 from the Government of Italy; US$200,000 from Live Aid; US$105,000 from the Belgium Cm; US$66,000 from the French Committee, US$152,000 from the Government of Canada; US$272,000 from USAID; and US$ 144,000 from the German government.

MAJOR ACTIVITIES/PROJECTS:

In September 1987, UNICEF supported the establishment of a revolving drug fund in collaboration with WHO and the MOH which aims to refinance the replenishment of essential drugs and to support the development of district health services. The national program is also largely supported by UNICEF in the form of social mobilization, vaccine supplies and materials, training, administrative assistance, and transportation.
USAID

NAMES/TITLES:

ADDRESS:
U.S. Postal Address:  
USAID/Bamako  
Washington, D.C. 20520-2050

International Address:  
Rue Testard and Rue Mohamed V  
B.P. 34  
Bamako, Mali

TELEPHONE: 225834, 225663
TELEX: 448 AMEMB

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:
An AID bilateral health project will begin in FY 87 in two regions to address all aspects of Child Survival. Immunization activities are carried out in selected regions by AID-assisted and donor-financed PVOs such as NSF, Salvation Army, Save the Children, Foster Parents Plan, and CARE.

THE WORLD BANK

NAMES/TITLES:

ADDRESS:

TELEPHONE:
TELEX:

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:
ROTHARY INTERNATIONAL

NAME/TITLE:
Mr. Alassane Kante, Member

ADDRESS:
Bijoutier Joaillier
Rotary Club Bamako
B.P. 1209
Bamako
Mali

TELEPHONE: 224454
TELEX: 992 OR 996 PUBLIC

FUNDING LEVEL: US$810,000 have been committed which includes US$785,000 for vaccine and US$25,000 for social mobilization during the five-year period. Funds will be released to UNICEF for procurement of vaccine.

MAJOR ACTIVITIES/PROJECTS:
The POLIOPLUS PROJECT in Mali supports rapid immunization activities, collaborates with government and NGOs to strengthen immunization services, and disseminates public information to increase public awareness and demand for immunizations. The purpose of the project is to immunize 80% of all children below age one by 1990.
CHILD SURVIVAL — BANAMBA PROJECT

U.S. National Headquarters
155 Plan Way
Warwick, R.I. 02887

B.P. 1598
Bamako, Mali

telephone: (401) 738-5600
telex: 6716515

CONTACT: Mr. John Anderson
Director of Civic Affairs

telephone: 22-40-40
cable: FOSTACHILD

CONTACT: Mr. Edward Abbey
Director

MAJOR PURPOSES OF PROJECT: To provide the Banamba area of Mali with an expanded childhood immunization program, which is based on the National Extended Vaccination Program (PEV) and to create a multidisciplinary staff trained in child survival interventions in order to implement a well-child program in over 200 villages.


TARGET POPULATION IMMUNIZATION SCHEDULE FOR IMMUNIZATIONS

<table>
<thead>
<tr>
<th>antigen</th>
<th>doses</th>
<th>age</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>1</td>
<td>(ages not specified)</td>
</tr>
<tr>
<td>OPV</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>DPT</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MEASLES</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>TETANUS</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>TOXOID</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

VACCINE SOURCE: UNICEF — sent via UTA through Paris for immediate delivery.

PROJECT ACTIVITIES:

- DIRECT DELIVERY OF IMMUNIZATION through existing GOM health care system strategy: mobile teams for initial "sweeping up" phase fixed at vaccination centers for "maintenance" phase.

- IMMUNIZATION PROMOTION through "sensitization" sessions for area chiefs and division chiefs; health education sessions preceding immunization sessions.

- COLD CHAIN STRENGTHENING through equipment provision.

- TRAINING of nurses aides in mobile delivery strategies.
MAJOR PURPOSES OF PROJECT: To intensify the primary health care activities in 58 target villages through training of VHWs, development of community associations to establish locally financed basis for PHC services, and to improve immunization and diarrheal disease control.
Basic Country Data

Total population: 1.9 million
Number of births annually: 95,000
Infant mortality rate: 132/1000 live births
Total population under 5 yrs: 0.4 million
Under 5 mortality rate: 223/1000
Annual infant and child deaths (0-4): 21,000

Historical Perspective

The Islamic Republic of Mauritania launched its first vaccination program in 1977, choosing one area of the country, the Trarza region, as a "pilot" zone. By 1979, vaccination services had spread to all nine regions, supported by USAID, WHO, and UNICEF.

Delivery Strategies

Through the end of 1984, the EPI in Mauritania delivered immunizations through two channels: mobile teams and fixed centers. The program relied heavily on mobile units to deliver both immunizations and health care to nomadic camps and villages in outlying areas, and the immunization program also provided vaccinations in the more populated areas through the MCH centers (PMIs). In approximately 45 PMIs situated in the most important urban centers throughout the country, immunizations were given three days a week. At the end of 1984, a total of 31 PMIs were equipped with new refrigerators with a deep-freeze compartment.

A survey conducted in December 1984 highlighted some difficulties of the immunization program. The results showed low rates of full coverage for children vaccinated before the age of one. Subsequently, the EPI developed a modified approach, strengthening the role of the PMIs, improving the efficiency of the mobile teams, and adding mass campaigns to the overall strategy. In late 1985 and early 1986, with funds from UNICEF and other donors, the GOM launched three rounds of national vaccination days called Journees Nationales de Vaccination (JNVs). Each round was 3 days long for a total of 9 days of vaccination in 28 urban sites in the country, 13 of which were in Nouakchott. The JNV rounds have been discontinued because studies showed this practice to be less cost-effective than other program strategies.

Technical Aspects

A documentation unit has been created at the EPI headquarters, and in early 1985 a statistician was assigned to the EPI. On a monthly basis, 41 reports are received and rapidly analyzed. From this information, a routine feedback system was established.

Between 1985 and 1986, supervision was strengthened. Each region was visited at least twice by a member of the central-level team. The purpose of these visits was to solve technical and managerial problems as they arose.
Additionally, the quality of the cold chain was improved and linkages between fixed health facilities, mobile teams, and the central warehouse strengthened. At the central level, the administrative procedures to expedite customs clearance for vaccines were simplified. The cold rooms in the central warehouse were upgraded, and vaccine management procedures were significantly improved. The cold chain monitoring system operates from the central warehouse to the periphery by monitoring vaccine efficacy during outreach activities of the PHIs or during field tours in rural villages for the mobile teams.

WHO EPI reviews were conducted in June 1981.

OFFICIAL IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th># DOSES</th>
<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
<th>COVERAGE RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Survey, April 1986,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>children ages 12-35 mos</td>
</tr>
<tr>
<td>1</td>
<td>BCG birth</td>
<td></td>
<td>90.8</td>
</tr>
<tr>
<td>3</td>
<td>DPT 6,10,14 wks</td>
<td></td>
<td>61.5</td>
</tr>
<tr>
<td>3</td>
<td>Polio 6,10,14 wks</td>
<td></td>
<td>61.1</td>
</tr>
<tr>
<td>1</td>
<td>Measles 9 mo</td>
<td></td>
<td>68.8</td>
</tr>
<tr>
<td>2</td>
<td>Tetanus Toxoid pregnancy</td>
<td></td>
<td>52.7</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: UNICEF provides BCG, DPT, polio, and tetanus vaccines. Measles vaccine is imported.

MOH NAMES/TITLES:

Major N'Diaye Kane, Minister of Health and Social Affairs
Dr. Ba Mohomed Lemine, Director of Health Services
Dr. Kahn, Chief of Preventive Medicine
Dr. Sow, Director of the PRSSR
Mrs. Ba, Director of MCH

ADDRESS:

Ministry of Health and Social Affairs
Nouakchott
Islamic Republic of Mauritania

TELEPHONE: 251876, 251474, 251186
TELEX: 585 (foreign affairs)
WHO

NAMES/TITLES:

Dr. A. C. Mouhtare, Representative
Dr. Lekie-Botee, Medical Officer

ADDRESS:

Monsieur le Represant de l'OMS
B.P. 320
Nouakchott
Mauritanie

TELEPHONE: 524-02
TELEX: 811

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:

UNICEF

NAMES/TITLES:

Mr. M. Sene, Country Representative
Mr. Borghese, Programme/Project Officer, UCI

ADDRESS:

Alliance Building B.
2nd, 3rd, 4th & 5th Floors
Rue Lecoeur
Plateau, Abidjan
I Lot K, Parcelle f14

TELEPHONE: 225-215390, 225-227370
TELEX: 23340, 22890

FUNDING LEVEL: During the period 1986-1990, the total amount of general resources committed is US$70,000. As supplementary funding, the Government of Italy will provide US$1,989,000.

MAJOR ACTIVITIES/PROJECTS:

Prior to the new EPI plan, UNICEF was supporting the national effort for immunization mainly with provision of vaccine and some cold-chain equipment. Under the new EPI, UNICEF supports the strengthening and extension of MCH-based immunization activities and integration with CDC/ORT activities.
USAID

NAMES/TITLES:
Ms. Pamela A. Mandel, Health Development Officer

ADDRESS:
U.S. Postal Address: USAID/Nouakchott
Washington, D.C. 20520-2430

International Address: B.P. 222
Nouakchott, Mauritania

TELEPHONE: 52660/3
TELEX: AMEMB 560 MTN

FUNDING LEVEL: US$5 million, 1984-1988, for the Rural Health Services Project.

MAJOR ACTIVITIES/PROJECTS:
AID is funding the Rural Health Services Project, which is implemented by John Snow, Inc. The project purpose is to improve the immunization program by integrating the mobile team approach to vaccine delivery with primary health care in the country. Activities have included the refurbishing of the central vaccine store, construction of adequate cold store facilities, and improvement of the logistical management of the cold chain and of the immunization record-keeping system.

EPI long-term advisor: Jean Francois Etard, MD

MEDECINS SANS FRONTIERES

NAMES/TITLES:

ADDRESS:
BP 50
Nouakchott, Mauritania

TELEPHONE: 534-78
TELEX: 201720

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:
In 1985-1986, in consultation with the EPI, MSF conducted coverage surveys in three rural regions of Mauritania using the WHO cluster sampling technique. MSF has been involved in PHC delivery in three regions - the 2 Hodhs and the Brakna regions.
**Basic Country Data**

<table>
<thead>
<tr>
<th>Category</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population:</td>
<td>6.1 million</td>
</tr>
<tr>
<td>Number of births annually:</td>
<td>315,000</td>
</tr>
<tr>
<td>Infant mortality rate:</td>
<td>140/1000 live births</td>
</tr>
<tr>
<td>Total population under 5 yrs:</td>
<td>1.2 million</td>
</tr>
<tr>
<td>Under 5 mortality rate:</td>
<td>237/1000</td>
</tr>
<tr>
<td>Annual infant and child deaths (0-4):</td>
<td>74,000</td>
</tr>
</tbody>
</table>

**Historical Perspective**

Prior to 1983, immunization activities in Niger were conducted exclusively by mobile teams under the Division of Mobile Medicine (DHMM). In 1983, recognizing that the immunization activities conducted by the mobile vaccination teams were not achieving adequate coverage levels, the MOH decided to implement an Expanded Program on Immunization (EPI).

**Delivery Strategies**

The EPI combined three strategies for improved vaccine delivery: 1) immunization services to be offered by fixed health facilities, 2) outreach from fixed centers to all villages within a 5-15 km radius; and 3) mobile vaccination teams to cover villages further than 15 kms from a fixed health facility.

With the introduction of the fixed strategy, the DHS (Directorate of Health Services) became responsible for the center-based component of the EPI program. Although this is a major change in the program, no comparable change has been made administratively. Without a structural modification, the EPI could potentially operate under two independent branches.

**National Policies**

There is a five-year EPI plan (1986-1990) which incorporates a shift away from most immunizations being provided by mobile teams toward increased delivery at the fixed facilities. In 1986 the ratio of fixed delivery to mobile immunization delivery was 10%:90% while, conversely, the goal for 1990 is 85%:15%. Despite the existence of this five-year plan, as of April 1986 no detailed plan of action documented.

**Technical Aspects**

All immunizations are provided free of charge, but there is a fee of 100 CFA to purchase a child's health book.

The GON uses inactivated polio vaccine (IPV) in combination with DPT vaccine (Tetraocoq) for control of poliomyelitis. This decision was based on the less stringent cold-chain requirements of IPV as compared with OPV.
OFFICIAL IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th># Doses</th>
<th>Antigen</th>
<th>Recommended Age</th>
<th>Coverage Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BCG</td>
<td>birth</td>
<td>28</td>
</tr>
<tr>
<td>3</td>
<td>DPT/IPV</td>
<td>3, 5, 7 mos</td>
<td>6</td>
</tr>
<tr>
<td>1</td>
<td>Measles</td>
<td>9 mos</td>
<td>19</td>
</tr>
<tr>
<td>3</td>
<td>Tetanus Toxoid</td>
<td>pregnancy, 6-8 mo gestation, women</td>
<td>3 (pregnant women)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and women ages 15-45 yrs</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Meningitis (A+C)</td>
<td>1-5 yrs</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Yellow Fever</td>
<td>1-15 yrs in risk zone</td>
<td></td>
</tr>
</tbody>
</table>

VACCINE SOURCE: According to the WHO, all EPI vaccines in Niger are imported and of good quality. They are purchased directly from the same manufacturer, Herieux. Vaccine needs are projected for the upcoming year by the DHMM and transmitted to the National Pharmaceutical Products Organization (ONPPC), which then orders directly from the manufacturer.

MOH NAMES/TITLES:

Mr. Abraham Barre, Minister of Health
Dr. Mamoudou Soumaila, Secretary General, Ministere de la Sante Publique et des Affaires Sociales
Dr. Alfa Cisse, Directeur, Direction de l'Hygiene et des Equipes Mobiles
Dr. Idi Moussa, Directeur, Rural Health Improvement Project (RHIP)
Dr. Issa Camara, Directeur Adjoint, Rural Health Improvement Project (RHIP)
Mme. Maiga, Cellule de Planification
Mr. Mamane Sofo Bawa, Administrative Directeur, RHIP
Mr. Ibrahim Magagi, Coordinator Cellule de Planification

ADDRESS:

Ministere de la Sante Publique et des Affaires Sociales
Niamey
Niger

TELEPHONE: 72-35-05
TELEX: 5463 MIPLAN 5463 NI (Ministere du Plan)
WHO

NAMES/TITLES:
Dr. Roger Molouba, Representative
Dr. A.E. Delas, Medical Officer
Mr. R.C. Steadman, Technical Officer

ADDRESS:
Monsieur le Representant de l'OMS
B.P. 10739
N'amey, Niger

TELEPHONE: 72 29 65
TELEX: OMS 5270 NI

FUNDING LEVEL: Projected support for EPI activities in 1986 is US$86,500.

MAJOR ACTIVITIES/PROJECTS:
Supports studies, training of personnel, vaccine supplies, and quality control.

UNICEF

NAMES/TITLES:
Mr. B. Bashizi, Country Representative
Mr. Pomiato, Programme/Project Officer, EPI

ADDRESS:
B.P. 12481 la Maison de L'Afrique
Naimey, Niger

TELEPHONE: 72-3724, 72-3003
TELEX: UNICEF 5554 NI

FUNDING LEVEL: For the period 1986-1990, the total amount committed from general resources is US$778,000. In supplementary funding, the Government of Italy will provide to UNICEF US$4,998,000; Live Aid has committed US$150,000; the UK National Committee will provide US$81,000; and CPHA will contribute US$131,000.

MAJOR ACTIVITIES/PROJECTS:
Pending funding agreement, the projected emphasis of UNICEF assistance will be on the development and implementation of National Immunization Days. The assistance disbursement plan for EPI activities includes: studies, training, social mobilization, cold chain and logistics, vaccines, and personnel (one long-term and one short-term TA).
USAID

NAMES/TITLES:

Ms. Margaret A. Neuse, Health Development Officer
Mr. Maurice Middleburg, Population Officer
Ms. Carina Stover, Health Development Officer
Mr. George Eaton, Director
Ms. Erna Kerst, Project Development Officer

ADDRESS:

U.S. Postal Address: USAID/Niamey
Washington, D.C. 20520-2420

International Address: B.P. 11201
Niamey, Niger

TELEPHONE: 73-43-63
TELEX: EMB NIA 5444NI

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:

The CCCD project has provided some technical assistance to the EPI activities of the Rural Health Improvement Project (RHIP) provides assistance including training village health teams and improving the information systems related to health care delivery, with assistance from Tulane University. The project ended December 31, 1987. As a follow-up to RHIP, USAID/Niger is implementing the Niger Health Sector Support Grant (NHSS). The purpose of this grant is to assist the MOH in addressing inefficiencies in health care delivery.

Tulane University Personnel:

Dr. Jean-Jacques Frere
Mr. Jim Setzer
Mr. Tim Manchester
THE WORLD BANK

NAMES/TITLES:
Ms. Herminia Martinez, Niger Loan Officer
Mr. Hjalte Sederlof, Health, Population and Nutrition
Mr. Guy Elena, Economic Development Institute
Dr. Nargoungou, Directeur Projet Sante

ADDRESS:
Banque Mondiale
B.P. 12402
Niamey, Niger

TELEPHONE: 734966, 735616, 735926
TELEX: BKMOND 5355 NI

FUNDING LEVEL AND MAJOR ACTIVITIES/PROJECTS:
In early 1986, the World Bank signed an IDA loan agreement with the GON for assistance with the introduction of structural reforms in the health sector. With respect to assistance in EPI activities, the project will be providing US$8-10 million for vaccines, cold chain and other technical equipment, storage facilities, vehicles, materials and staff training. Incremental operating costs and six months of technical assistance will be added for program monitoring and evaluation, and a morbidity and mortality study of EPI diseases to provide baseline data.

BELGIAN COOPERATION

NAMES/TITLES:
Dr. Therese Junker

ADDRESS:
Ambassade de Belgique
B.P. 10192
Niamey, Niger

TELEPHONE: 733314
TELEX: AMBABEL 5329 NI

FUNDING LEVEL: The total assistance is approximately US$1.4 million per year, primarily for operations research related to primary health care.

MAJOR ACTIVITIES/PROJECTS:
Direct assistance to EPI has not been targeted, but OR has been addressing issues related to service delivery and utilization.
DUTCH COOPERATION

NAMES/TITLES:
Mr. Schidt Dejener, Consul

ADDRESS:
Consulat des Pays-Bas
B.P. 685
Niamey, Niger

TELEPHONE: 722929

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:
Assistance to EPI in the development of a cold-chain maintenance capability in the country, including a long-term TA repair technician.

FRENCH TECHNICAL COOPERATION

NAMES/TITLES:
Mr. Iyves Pelletier, Directeur
Mr. Pascal Burdier, Directeur Adjoint

ADDRESS:
Association Francaise des Volontaires Du Progres
B.P. 11468
Niamey, Niger

TELEPHONE: 723069, 723478
TELEX: CRN GAP 5371 NI

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:
Basic Country Data

- Total population: 95.2 million
- Number of births annually: 4,848,000
- Infant mortality rate: 110/1000
- Total population under 5 yrs: 19.0 million
- Under 5 mortality rate: 182/1000
- Annual infant and child deaths (0-4): 873,000

Historical Perspective

Early efforts at mass immunization in Nigeria began in 1966 with a WHO/USAID-assisted Smallpox Eradication-Measles Control Program. Following this campaign, various independent efforts at vaccination continued in the states. In 1975, the Federal Ministry of Health consolidated resources and initiated a National EPI Pilot Programme with assistance from UNICEF and WHO, and by 1977 all states were implementing the program on a pilot basis. The EPI initially relied heavily on mobile units. An assessment of the program in 1983 suggested that national coverage was not more than 10% and that there was a negligible impact on the target diseases.

On October 26, 1984, a revised Expanded Program on Immunization (EPI) was launched in Nigeria by the Head of State. A phased expansion of sustained immunization effort was proposed through which other primary health care initiatives could be facilitated.

Delivery Strategies

The Federal Epidemiologic Unit, the Ondo State Ministry, UNICEF, and WHO collaborated and developed a revised EPI emphasizing: 1) a decreased reliance on electrically-powered cold-chain equipment and increased use of cold boxes and vaccine carriers; 2) a greater use of static health facilities instead of relying heavily on mobile operations; 3) securing commitment to EPI from political, health, and traditional authorities; 4) integrating the efforts of the various bodies responsible for health care policy and delivery; and 5) stimulating community participation through the use of house-to-house visits, personal contacts with traditional leaders, mass media, and printed leaflets. The new strategy was first employed in the Owo local government area (LGA) of Ondo state. Owa was selected because of an urban-rural mix, good distribution of static health facilities, low vaccination coverage, and because of the readiness of senior state officials to support the project. In one year, vaccination coverage in Owo rose from 9% to 83% of the target population.

National Policies

A new national EPI plan, based substantially on the strategy adopted in Owo, was formulated. EPI is being phased into the country, concentrating first on the capital LGA in each state (19 total) and moving gradually to adjacent LGAs until all are covered. The program concentrated on vaccinating children under two years of age in the initial year of implementation, program children under one, and on vaccinating pregnant women. The goal is to immunize 80% of the target population by 1990 and reduce incidence of the 6 target diseases by at least 50%. Resources for
the program come from the federal MOH, the state ministrie of health, the LGAs, UNICEF, and WHO. It is anticipated that the new EPI will be operating in all 304 LGAs by the end of 1987.

Technical Aspects

Storage of vaccines in freezers and refrigerators is restricted to the federal cold stores and state capital and zonal cold stores that secure vaccines for coldboxes of LGAs. Electrically dependent cold-chain equipment is restricted to the federal cold store, state central store, and zonal cold stores (one per state).

Since the program began, it is estimated that approximately 16,000 health personnel throughout Nigeria have received special EPI/ORT management training. Training and re-training are planned to continue on an on-going basis.

Monitoring and evaluation at the federal level is performed at the Federal Epidemiological Division in Lagos. Monthly reports are evaluated for coverage, service delivery, disease surveillance, and vaccine supply. Evaluation feedback is provided to the states and LGAs through an EPI newsletter. A WHO EPI review was conducted in 1984. There is a strong political commitment to the national EPI. State MOHs are devoting large proportions of their personnel and budgets to the new EPI, and some state MOHs plan to divert funds from curative services to support EPI.

OFFICIAL IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th># DOSES</th>
<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
<th>COVERAGE RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BCG</td>
<td>birth</td>
<td>12</td>
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<tr>
<td>2</td>
<td>DPT</td>
<td>2,3,4 mos</td>
<td>7</td>
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<tr>
<td>3</td>
<td>Polio</td>
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<td>1</td>
<td>Measles</td>
<td>9 mo</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>Tetanus Toxoid</td>
<td>pregnant women</td>
<td>..</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: After an initial period in which EPI vaccines were provided by UNICEF, the federal government has assumed responsibility of providing 100% of EPI vaccines to the states. These vaccines are imported. Rotary International is supplying polio vaccine for five years.

MOH NAMES/TITLES:

Dr. E. A. Smith, Director of Public Health Services
Dr. A. O. Sorungbe, National CCCD Program Manager
Dr. P. Y. Ogunsi, National EPI Coordinator

ADDRESS:
Federal Ministry of Health
Federal Secretariat Phase II
Ikoyi, Lagos

TELEPHONE: 684493
TELEX: 21236 EXTNAL (foreign affairs)
WHO

NAMES/TITLES:

Dr. S. H. Brew-Graves, WHO Representative  
Dr. P. M. Oostvogel, Associate  
Dr. Hcam van Vliet, Epidemiologist

ADDRESS:

Federal Secretariat, 9th floor  
Ikoyi, Lagos

Federal Epidemiology Division  
Onikan Health Centre  
Onikan, Lagos

TELEPHONE:  684020  
TELEX:  21731

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:

WHO has collaborated with the MOH (Federal Epidemiology Unit) in both the pilot EPI project in Ondo state and the subsequent expansion of the revised EPI to the rest of the Nigerian states.
UNICEF

NAMES/TITLES:

Mr. R. Tuluhungwa, Country Representative
Dr. Kimati, Programme/Project Officer

ADDRESS:

11A Osborne Rd.
Ikoyi, Lagos, Nigeria

5 Temle Road
Ikoyi, Lagos, Nigeria

TELEPHONE: 234-1-619302, 603540-4
TELEX: 96122477, 22177 UNICEF NG

FUNDING LEVEL: For 1986-1990, the total amount of general resources committed is US$10,075,000. As supplementary funding the U.S. government will provide to UNICEF US$3,500,000; the UK National Committee has committed US$142,000; the Government of Nigeria will provide US$144,000; SportAid will contribute US$ 130,000; and Rotary-Japan will provide US$ 223,000.

MAJOR ACTIVITIES/PROJECTS:

UNICEF has been a major actor in the EPI in Nigeria, providing technical assistance as well as cold-chain equipment and needles and syringes. Major inputs have been in the establishment of cold-chain and management infrastructures, integration with CDD/ORT and PHC, assistance to the federal government in procuring vaccines and equipment, and in community mobilization, particularly in educating mothers and training health professionals.
USAID

NAMES/TITLES:
Ms. Elizabeth K. MacManus, AID Affairs Director
Mr. Lawrence R. Eicher, Health Development Officer

ADDRESS:
U.S. Postal Office: USAID/Lagos
Washington, D.C. 20520-8300

International Office:
2 Eleke Crescent
P.O. Box 554
Lagos, Nigeria

TELEPHONE: 610097
TELEX: 23616 EMLA NG and 21670 USATO NG

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:

USAID supports EPI activities in Nigeria through the ACSI-CCCD program. Through a grant to UNICEF, AID assists the National Association of Nigerian Nurses and Midwives and Pediatrics Association of Nigeria to educate all Nigerian health professionals in ORT and immunization. USAID also supports the Africare Child Survival Project in areas of immunization. This project aims to support the Imo State Ministry of Health, and Women's Associations in two local government areas within the state.
AFRICARE - NIGERIA

Africare
440 R Street, N.W.
Washington, D.C. 20001

IMO Africare Child Survival Project
P.O. Box 3543, Oweri
Imo State, Nigeria

telephone: (202) 462-3614
telephone: (083) 232-314
telex: 64239

CONTACT: Mr. Alan Alemian
Regional Director

CONTACT: Mr. Charles W. Oliver
Africare Advisor
Mrs. Regina A. Obiagwu

MAJOR PURPOSES OF PROJECT: To decrease child morbidity and mortality, especially among the group aged 0-2 years, through improved nutrition (during pregnancy, breastfeeding, child nutrition). Other areas include: home-based ORT, or project-packaged ORS, immunization with special emphasis on full-series immunization, family planning, and presumptive treatment.

PROJECT DURATION AND FUNDING LEVEL: The project will operate from 1986 to 1988 with US$440,000 in child survival funding from USAID.

GEOGRAPHIC AREA SERVED BY PROJECT: Southeastern Nigeria in IMO State within two contiguous local government areas: Isiala Ngwa and Ohozara.

TARGET POPULATION IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th>TARGET POPULATION</th>
<th>IMMUNIZATION SCHEDULE</th>
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<tbody>
<tr>
<td>FOR IMMUNIZATIONS</td>
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<tr>
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</tr>
<tr>
<td>10,000 children ages 0-2 years</td>
<td>BCG</td>
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<tr>
<td></td>
<td>POLIO</td>
</tr>
<tr>
<td></td>
<td>DPT</td>
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<tr>
<td></td>
<td>MEASLES</td>
</tr>
<tr>
<td></td>
<td>TETANUS</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: Africare will supply 200,000 doses of measles vaccine to the Imo State MOH.

PROJECT ACTIVITIES:

- SUPPORTS IMMUNIZATION to target population through the Ministry of Health primary health care in project areas.

- PROVIDES TECHNICAL ASSISTANCE in communications and immunization promotion, program planning, evaluation, survey analysis, and health information systems.

- CARRIES OUT IMMUNIZATION PROMOTION AND OUTREACH ACTIVITIES in the form of media campaigns, health education sessions, local health education materials production, and home visits.

- TRAINS mid-level MOH trainers and 80 community-based health promoters in disease prevention.
Basic Country Data

Total population: 6.1 million
Number of births annually: 314,000
Infant mortality rate: 127/1000 live births
Total population under 5 yrs: 1.2 million
Under 5 mortality rate: 214/1000
Annual infant and child deaths (0-4): 68,000

Historical Perspective

Rwanda launched the Expanded Program on Immunization (EPI) in 1978, which had its roots in the smallpox eradication program many years prior. During its development, the Rwanda EPI has been flexible in altering its strategy to meet existing conditions. At the start of the program, a combined fixed and mobile strategy was planned. Existing health centers would serve as fixed vaccination sites, while rural populations which are located far from health centers would be vaccinated by mobile immunization technicians. Experience showed that the vaccinators could not be adequately supervised under this strategy, and they were subsequently reassigned to particular health facilities. Likewise, Rwanda EPI has adjusted the target age groups, from the initial group of all children under 6 years of age to children 0-2 years of age.

Current Scope

Immunization delivery now occurs through the health centers. Each health center is the source of primary care services for approximately 35,000 people within a radius of 8-10 km. There are about 172 health centers in 101 of the 143 communes. Of the 42 communes without a health center, 25 had dispensaries in late 1983. About 70 health centers and 65 dispensaries have a vaccinator on staff, and immunizations are given in three sessions each week in maternal and child health clinics. The EPI adopted a regional approach to administration of the program, where each of the 10 regions has some autonomy under the leadership of the EPI regional supervisor. Social mobilization is becomingly increasingly important to the immunization efforts of the country.

The Government of Rwanda (GOR) has described the national health policy in the Third Development Plan, which covers the years 1982-1988. Under this policy, top priority is accorded to immunization of children under 1 year of age. This plan also highlights improved access to health services, which includes the decentralization of services.

The EPI is located within the Ministry of Health and Social Affairs (MOHSA) under the Directorate of Epidemiology, which is in turn located under "Medecin Integre." The MOHSA has established a cooperative relationship with the various Christian religious missions who support church-affiliated health facilities throughout the country. The MOH supports these private health centers with MOH staff and the provision of some drugs and has legal authority over their operation. The Christian medical missions have developed their ow; coordinating agency known as BUFMAR (Bureau des Formations Medicales du Rwanda).
Technical Aspects

Despite increased measles vaccination coverage between 1985-1986, for children under 12 months of age, there was an epidemic of measles in 1986, although its severity was significantly lower than previous years. The number of reported measles cases resulting in death increased from 289 to 765 during that time period. This prompted exploration by the CCCD program of cold-chain maintenance and vaccination technique.

Two WHC EPI courses were conducted in Rwanda in March 1982 for the training of 75 mid-level EPI persons and in December 1982 for the training of 23 senior-level EPI workers. BUFMAR has included topics related to immunization in its quarterly weekend training sessions. In May and June 1983, a multi-donor team (UNICEF, WHO, USAID) carried out an evaluation of the national EPI/CCCD.

OFFICIAL IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th># DOSES</th>
<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
<th>COVERAGE RATES</th>
</tr>
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<tr>
<td>3</td>
<td>DPT</td>
<td>..</td>
<td>81</td>
</tr>
<tr>
<td>3</td>
<td>Polio</td>
<td>..</td>
<td>81</td>
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<tr>
<td>1</td>
<td>Measles</td>
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<td>78</td>
</tr>
<tr>
<td>2</td>
<td>Tetanus Toxoid</td>
<td>..</td>
<td>24 pregnant women</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: UNICEF.

MOH NAMES/TITLES:

Dr. Sncesimir Bizimungu, Minister of Health
Dr. J. B. Knyamipira, Secretary General of MOHS
Mr. E. Kazima, Acting Director General of Public Health
Mr. T. Nyandvi Director, Director General of Social Affairs
Dr. Augustine Ntilivamunda, Director of Epidemiology and Director of CCCD
Mr. Frederick Yimbalabiyie, Director of Integrated Medicine
Mrs. Mukayiranga Landrdada, Director of Popular Education and Family Promotion

ADDRESS:

B.P. 84
Kigali, Rwanda

TELEPHONE: 75276
TELEX: 521PUBKGLRW (public)
WHO

NAMES/TITLES:

Dr. J. Wright, Representative
Mr. Karamuka Stany, Primary Health Care Officer
Mr. Gabriel Muligande, Chief Health Officer

ADDRESS:

Monsieur le Representant de l'OMS
B.P. 1324
Kigali
Rwanda

TELEPHONE: 6682
TELEX: 574

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:

WHO has supplied the EPI with a physician epidemiologist as well as training and operating expenses.

UNICEF

NAMES/TITLES:

Mr. Bilge Ogun, Country Representative
Mr. Mercier, Project Officer, UCI
Mr. Jillian Aldebron, Project Officer, Communications

ADDRESS:

Avenue de l'Assemblee
Nationale, Kigali, Rwanda

TELEPHONE: 53-63
TELEX: 967-528, 528

FUNDING LEVEL: During the period 1986-1990, the total amount of general resources committed is US$178,000. As supplementary funding, SportAid has provided US$300,000; the Government of Italy will provide US$2,801,000; and CPHA will provide US$209,000.

MAJOR ACTIVITIES/PROJECTS:

UNICEF has recently begun implementing a large five-year project with a major EPI component which will include technical assistance from a resident EPI specialist as well as a resident social mobilization specialist. Major inputs include strengthening fixed health facilities (training, supervision, and equipment), social mobilization directed particularly towards mothers, and development of outreach posts in underserviced areas.
USAID

NAMES/TITLES:

Ms. Maryanne Neill, CCCD Technical Officer, CDC Atlanta
Mr. Louis Maryse Pierre, Health/Population Development Officer

ADDRESS:

U.S. Postal Address:  
USAID/Rwanda  
Washington, D.C. 20520-2210

International Address:  
Blvd. De la Revolution  
B.P. 28  
Kigali, Rwanda

TELEPHONE:  5601/2/3, 2126/7/8
TELEX:  

FUNDING LEVEL: USAID provided US$190,298 for the CCCD project (see below) in 1986. The GOR provided US$76,220 for the same year, which included a UNICEF contribution.

MAJOR ACTIVITIES/PROJECTS:

USAID has supplied the EPI with technical assistance, vehicles, cold-chain equipment, training, motorcycles, syringes/needles, kerosene, gasoline, and per diem and other operating expenses. USAID began this assistance in June 1981 with the USAID/EPI project.

The Combatting Childhood Disease (CCCD) project is a four-year bilateral project which focuses on diseases prevented by immunization (particularly the EPI), diarrheal diseases, and malaria. CCCD in Rwanda began with the project agreement in June 1984 and will go through 1988. Over the life of the project, USAID will provide US$1,072,000 in bilateral funds and the GOR will contribute US$896,174. The CCCD is the major health initiative of the group Cooperation for Development in Africa (CDA). The member countries of the group include Belgium, Canada, France, Germany, Italy, the United Kingdom, and the United States. USAID is the coordinating body for the project. The Centers for Disease Control (CDC) in Atlanta, Georgia, is the project contractor.
Rotary International

Name/Title:
Michel Andre

Address:
B.P. 577
Kigali
Rwanda

Telephone: 6307, 6331 (home)
Telex: 547 ROTOR RW

Funding Level: Funds of US$630,000 of which US$510,000 is for vaccine, US$100,000 have been committed for social mobilization and US$20,000 for evaluation during the five-year period beginning in 1987. Funds are released to UNICEF for procurement of vaccine and to the Rotary Club of Kigali for social mobilization.

Major Activities/Projects:
In an effort to achieve UCI and eradication of polio, the PolioPlus Project focuses efforts on private sector resources for demand-creation interventions, provides logistical support and organizational expertise for intensified immunization efforts, and participates in the national Coordinating Committee for EPI.
QADRA/RWANDA CHILD SURVIVAL PROJECT

Adventist Development Relief Agency (ADRA)
P.O. Box 60808
Washington, D.C. 20039

telephone: (202) 722-6770
telex: 440186 WASH. D.C.

ADRA
B.P. 2
Kigali, Rwanda

telephone: 2570, 2571
telex: 596 RWANDA

CONTACT: Mr. R. Watts
CONTACT: Mr. Lars Gustausson

MAJOR PURPOSES OF PROJECT: To immunize 80% of children in the target communities ages 0-5 years; and to train 80% of the mothers in the target communities in the use of ORT.

PROJECT DURATION AND FUNDING LEVEL: USAID Child Survival Project funded for three years at $270,000 from 1985.

GEOGRAPHIC AREA SERVED BY PROJECT: The project will operate in nine communities located throughout the northern, southwestern, and southern areas of the country, as follows: North - Mukiinga, Nkuli and Muteru, Kanama, Kayare; Southwest - Gishyita, Gisavu, Rwamatamu, Muka; South - Murama.

TARGET POPULATION FOR IMMUNIZATIONS

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<tr>
<th>antigen</th>
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</tr>
<tr>
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<td>1</td>
<td>birth</td>
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<td>POLIO</td>
<td>3</td>
<td>3,4,5 mos</td>
</tr>
<tr>
<td>DPT</td>
<td>3</td>
<td>3,4,5 mos</td>
</tr>
<tr>
<td>MEASLES</td>
<td>1</td>
<td>9 mo</td>
</tr>
<tr>
<td>TETANUS</td>
<td>2</td>
<td>7 mo gestation</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: Vaccine is provided by the Government of Malawi's national immunization program in Minisapasa.

PROJECT ACTIVITIES:

- DELIVERS IMMUNIZATIONS to target population through 18 project-trained and -salaried vaccinators in collaboration with two nurse supervisors.
- To train vaccinators in the administration of vaccines, cold-chain maintenance, and data collection.
- To train 36 community health workers in community outreach and health education techniques.
- To promote immunization among community leaders and other community members.
Basic Country Data

Total population: 6.4 million  
Number of births annually: 301,000  
Infant mortality rate: 137/1000 live births  
Total population under 5 yrs: 1.2 million  
Under 5 mortality rate: 231/1000  
Annual infant and child deaths (0-4): 69,000

Historical Perspective

In 1978, Senegal established a national immunization plan to coordinate organizations and their efforts to control infectious diseases, particularly those affecting children. Senegal adopted the conclusions and recommendations of a WHO Expanded Program on Immunization (EPI) consulting team as the basis of its national policy. Initially, a mobile team approach was to be used until services could be integrated into the general health services.

The Senegalese EPI (SEPI) formally began in 1979 but was not operational in all 10 regions of the country until after 1981 because of disparities in population density and availability of fixed health facilities.

The above strategy was developed to be adaptable to differences in geographic regions, climatic conditions, levels of socio-economic development and the availability of health facilities in each region.

National Policies

The Senegal EPI serves to control seven target diseases: diphtheria, neonatal tetanus, pertussis, polio, tuberculosis, measles, and yellow fever. The target population is all children under 1 year and all pregnant women. Full coverage by 1990 is a stated objective.

OBJECTIVES:

O Strengthening, at the national level, capabilities in the areas of planning, supervision, training, and evaluation.
O Strengthening, at the regional level, the operation, supervision, and evaluation of the EPI.
O Integration of EPI into the existing MCH program.
O Strengthening the ability of health personnel at the periphery to perform EPI procedures properly.
O Strengthen and enlarge the cold chain.
O Improve the logistics and supply systems.
O Educate, motivate and mobilize community participation.
O Improvement of the epidemiological surveillance system.
**EPI ORGANIZATION:**

At the national level the Senegalese EPI is under the overall direction of the Director of Hygiene and Sanitary Protection and is assisted by a national coordinator in the areas of technical services and management. The Director is responsible for coordination between: 1) the Task Force for Child Survival, 2) UNICEF, and 3) the Minister of Public Health.

The Director informs the Ministry of Public Health through monthly and annual reports on the activities of the Director and Coordinator.

The Coordinator is also the Director of the Service des Grandes Endemies, and is in charge of the delivery of immunizations, related policies and procedures such as evaluation in the regions and departments, provision of vaccines and supplies, and personnel assignment and staffing.

Accordingly, he is also in permanent charge of the supervision of the regional coordinators and of the evaluation of regional programs. These evaluations concern technical operations and epidemiological reporting and are reported in monthly meetings with the chief physician of the SEG and in periodic coverage surveys.

The EPI at the regional level is under the authority of the Regional Chief Medical Officer and assisted by the Chief Medical Officer of the regional SEG, who is also the Regional Coordinator.

The Regional Chief Medical Officer coordinates the efforts of the EPI with other public health efforts. With the Regional Coordinator, he defines the operational plans for the regions and the operation of the fixed centers in the region.

**Delivery Strategies**

Through 1984, the SEPI relied primarily on mobile teams operated by the Service des Grandes Endemies (SEG) to carry out immunization activities. This strategy resulted in limited coverage due to the costs of the mobile teams and minimal integration of EPI services into other primary health care activities. This led to a re-evaluation of the mobile team approach.

In order to obtain the above objectives, the SEPI began adoption of a mixed strategy which used fixed centers as well as mobile teams. In order to improve coverage levels and to reduce the levels of the target diseases in view of sharply increasing costs, immunization activities and personnel have been progressively and rapidly integrated into the structure of the fixed units. In all sites in Senegal, the MCH and health centers (public and private) now function as fixed centers for vaccination. In rural areas, the health centers have a double role: 1) to serve as a fixed center for those in the immediate area, and 2) to provide a functioning outreach program, delivering services on an intermittent basis to the population living within a 15 km radius of the health center.

Currently (1985), Senegal has 82 MCH health centers, 562 health posts, and approximately 650 other health facilities serving as immunization centers. With these facilities, approximately 50% of the population can be served on a regular basis and at a reasonable cost.
Technical Aspects

In 1985, the results after 4 years of operations are mediocre - only 20% of the population are within reach of immunization services, and levels of morbidity and mortality for the EPI target diseases remain high. One of the key elements in the revitalization of the SEPI resides in the area of social mobilization. The evaluation of the SEPI in 1984 and the recent mass campaign demonstrated the need for information and promotion to involve the full participation of the public. Accordingly, health education must be performed by all departments to assure the success of the program.

The Senegalese EPI believes that continued use of mobile teams is indispensable for national coverage. The mobile teams operate in essentially rural areas beyond the radius of the areas served by the health posts. Approximately 20-30% of the population must be served in this manner. The mobile strategy allows those not having access to health centers, who are hindered by distance/time or who are in an area where the health post is not functioning due to a lack of equipment or personnel, to have access to EPI services. Large disparities between regions exist in this regard. The importance accorded to one strategy or another should be a function of the constraints observed in the particular region. Whatever the cause, termination of the mobile teams would also hinder the functions of immunization, supervision, administration, and evaluation in the fixed centers.

OFFICIAL IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th># DOSES</th>
<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
<th>COVERAGE RATES</th>
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VACCINE SOURCE: information not available.

MOH NAMES/TITLES:

Mrs. Marie Sarr Mbodj, Minister of Health

ADDRESS:

Building Administratif
Avenue Ruome
Dakar, Senegal

TELEPHONE: 21-24-20, 23-10-88
TELEX: 21650 (foreign affairs)
WHO

NAMES/TITLES:

Dr. V.A.X. Agbessi, Representative

ADDRESS:

Monsieur le Representant de l'OMS
Case postale 4039
Dakar
Senegal

TELEPHONE: 22 27 69
TELEX: 3361

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:

UNICEF

NAMES/TITLES:

Dr. D. Calliaux, Country Representative

ADDRESS:

43, Avenue Albert Sarraut
Dakar, Senegal

TELEPHONE: 221-214780
TELEX: 962 250 EFC

FUNDING LEVELS: In supplementary funds the Government of Italy will provide US$5,668,000; the FRG Committee has contributed US$330,000; the UK Committee will provide US$8,000; and Rotary will provide US$1,000.

MAJOR ACTIVITIES/PROJECTS:

UNICEF broadly supports all areas of the EPI, including cold chain maintenance, procurement of needles and syringes, training, social mobilization, administration, and transportation.
USAID

NAMES/TITLES:


ADDRESS:

U.S. Postal Address:  
USAID/Dakar  
Washington, D.C. 20520-2130  

International Address:  
B.P. 49, Avenue Jean XXII  
Dakar, Senegal

TELEPHONE: 21-42-96  
TELEX: 517 AMEMB SG

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:

ROTARY INTERNATIONAL

NAMES/TITLES:

Mr. Rito Alcantara, Member

ADDRESS:

45, av. de la Republique  
Dakar, Senegal

FUNDING LEVEL: US$219,000

MAJOR ACTIVITIES/PROJECTS:

As part of Senegal's ongoing EPI program established in 1981, the Rotary Polio Project works in cooperation with the Ministry of Health to immunize 250,000 children per year against polio. The five-year project began in 1984 with the following objectives: 1) to supply 750,000 doses of oral polio vaccine per year; 2) to supply 200 cold boxes, 100 ice packs, and 200 refrigerator thermometers; and 3) to purchase gasoline for transport of immunization teams.
MAJOR PURPOSES OF PROJECT: To improve the health status of infants and children by 1) increasing the rate of immunization coverage among the 0-2 year-old population from 20% to 70%; 2) increasing awareness of ORT to 90% and increasing usage of ORT to 60%. These interventions will be built on to the existing services of the CRS nutrition centers.

PROJECT DURATION AND FUNDING LEVEL: The USAID child survival funding totals US$440,000 from 1986 through 1988. CRS will contribute US$306,000, for a total project budget of US$746,000.

GEOGRAPHIC AREA SERVED BY PROJECT: Region of Diorbel, the smallest administrative region after Dakar. Three departments are included: Diorbel, Mbakke, and Mambey.

TARGET POPULATION IMMUNIZATION SCHEDULE FOR IMMUNIZATIONS

<table>
<thead>
<tr>
<th>antigen</th>
<th>doses</th>
<th>age</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>1-2</td>
<td>3 mo</td>
</tr>
<tr>
<td>POLIO</td>
<td>2</td>
<td>3-5 mos, 6-8 mos</td>
</tr>
<tr>
<td>DPT</td>
<td>2</td>
<td>3-5 mos, 6-8 mos</td>
</tr>
<tr>
<td>MEASLES</td>
<td>1</td>
<td>9-11 mos</td>
</tr>
<tr>
<td>YELLOW FEVER</td>
<td>1</td>
<td>9-11 mos</td>
</tr>
<tr>
<td>TETANUS</td>
<td>2</td>
<td>pregnancy</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: UNICEF and MOH.

PROJECT ACTIVITIES:

- DELIVERS IMMUNIZATIONS to target population through existing MOH system. Works with UNICEF and the MOH to convert 3 MCH centers and 39 posts into fixed vaccination centers. Supports mobile teams to reach borders of project area.

- SUPPORTS AND SUPERVISES the logistics system to ensure a steady supply of vaccines and ORS to regional health posts in project area.
DEVELOPS AND IMPLEMENTS educational materials and a comprehensive training program for MOH nurses and village health workers in the project area.

CARRIES OUT BASELINE SURVEY to attain information on knowledge, attitude, and practice.
MAJOR PURPOSES OF PROJECT: To decrease child and maternal mortality and morbidity by expanding and supporting the MOH services in the accelerated EPI, the childhood diarrheal disease program, nutrition, birth spacing, and training of village health workers.

PROJECT DURATION AND FUNDING LEVEL: From 1986 through 1988 the project will receive US$250,000 in USAID child survival funding.

GEOGRAPHIC AREA SERVED BY PROJECT: 150 km northwest of Dakar in Lougu subdistrict of Lougu Department, Mbedience arrondissement. This is one of the poorest areas of the country with a very high rate of infant death.

TARGET POPULATION IMMUNIZATION SCHEDULE FOR IMMUNIZATIONS

<table>
<thead>
<tr>
<th>Antigen</th>
<th>Doses</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>1-2</td>
<td>3 mo</td>
</tr>
<tr>
<td>POLIO</td>
<td>2</td>
<td>3-5, 6-8mos</td>
</tr>
<tr>
<td>DPT</td>
<td>2</td>
<td>3-5, 6-8mos</td>
</tr>
<tr>
<td>MEASLES</td>
<td>1</td>
<td>9-11 mos</td>
</tr>
<tr>
<td>TETANUS</td>
<td>2</td>
<td>pregnancy</td>
</tr>
</tbody>
</table>


PROJECT ACTIVITIES:

- DELIVERS IMMUNIZATIONS to target population through existing government primary health care system.
- PROMOTES IMMUNIZATION with publicity campaigns and health education sessions.
- STRENGTHENS THE COLD CHAIN by providing equipment, planning, distribution, supervision, and vaccine monitoring.
- TRAINS 12 mid-level MOH nurses, 43 community health workers, 34 traditional birth attendants, and 10 village health area coordinators in technical and managerial skills.

- SUPPORTS ORGANIZATION of three village-based organizations for health promotion activities: village health committee, a women's organization, and a youth organization.
Basic Country Data

Total population: 21.6 million
Number of births annually: 975,000
Infant mortality rate: 112/1000 live births
Total population under 5 yrs: 3.9 million
Under 5 mortality rate: 187/1000
Annual infant and child deaths (0-4): 180,000

Historical Perspective

The EPI began in the Sudan in 1976 following the smallpox eradication campaign. The country has not, however, achieved very high immunization coverage. Through 1985, 45 major population zones achieved an average coverage rate of 16% and 5% coverage nationwide. These low coverage rates, especially for measles, contributed significantly to the high mortality rates of areas which were hard hit by the drought.

Delivery Strategies

A national EPI working group has been established and the administration has been restructured. For rural and remote areas, the strategy is to develop outreach and mobile capabilities. For urban areas, immunization delivery is based in fixed and outreach centers staffed by vaccinators inherited from the smallpox program. Rural areas in the northern region follow a two-dose system for DPT and polio, while urban areas adhere to the regular dose schedule. IPV is used in one region. Currently, no immunization programs are in place in the southern third of the country because it is a war zone.

National Policies

In 1985, the Council of Ministers issued an official declaration supporting immunization. At this time, an accelerated campaign was undertaken in Khartoum to be gradually spread to other towns and rural areas. This urban accelerated immunization campaign in Khartoum has been very successful, achieving 65% coverage of children under the age of 1.

Technical Aspects

The accelerated EPI will place emphasis on improving and expanding project staff and on strengthening the cold chain and transport facilities. Staff will be expanded at all levels and ensured training linked with supervision and on-the-job training. A training school was to be established in Khartoum in mid-1986 to support management of the cold chain, which depends partly upon a photovoltaic system. Training of maintenance teams was also to be emphasized, together with the establishment of central spare parts stock to serve regional teams and mobile maintenance units.
### OFFICIAL IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th># DOSES</th>
<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
<th>COVERAGE RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>(1985, Khartoum)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(WHO, 1987, &lt;1yr old)</td>
</tr>
<tr>
<td>1</td>
<td>BCG</td>
<td>..</td>
<td>65, 12</td>
</tr>
<tr>
<td>(2)</td>
<td>DPT</td>
<td>..</td>
<td>65, 8</td>
</tr>
<tr>
<td>(2)</td>
<td>Polio</td>
<td>..</td>
<td>65, 8</td>
</tr>
<tr>
<td>1</td>
<td>Measles</td>
<td>..</td>
<td>66, 6</td>
</tr>
<tr>
<td>2</td>
<td>Tetanus Toxoid</td>
<td>..</td>
<td>52% fully imm.</td>
</tr>
</tbody>
</table>

R=Rural, U=Urban

**VACCINE SOURCE:** UNICEF.

**MOH NAMES/TITLES:**

Mr. Hussein Abusalih, Minister of Health

**ADDRESS:**

Ministry of Health  
P.O. Box 303  
Khartoum, Sudan

**TELEPHONE:** 73000, 74372, 78597, 71110, 81728
WHO

NAMES/TITLES:

Dr. J. Kahn, WHO Representative
Mr. J. Pott, Technical Officer/STC
Mr. Adam Babiker, Operations Officer
Mr. Md. Hassan, Operations Officer
Dr. M. Juncker, Associate

ADDRESS:

WHO Representative
P.O. Box 2234
Khartoum, Sudan

TELEPHONE: 76471
TELEX: 22491

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:

WHO worked with UNICEF and the MOH in supporting the acceleration of the EPI.
UNICEF

NAMES/TITLES:

Mr. C. Dodge, Regional Representative
Mr. Francis Mburu, Chief, Health Unit

ADDRESS:

Plot No. 10, Block 7/8A
East Duyon
(Off Mak Nemir)
Khartoum 2, Sudan

TELEPHONE: 46381, 46496, 46453, 46364
TELEX: 24105 SCO SD, 22214 UNDP

FUNDING LEVEL: In 1987 US$3.8 million in supplementary funds were provided, of which US$2,750,000 were provided by the Italian Government; US$1,147,000 by the Canadian government; and US$97,000 by the Japanese Committee. Approximately US$9,948,000 in supplementary funds will be sought for the period 1988-1991.

MAJOR ACTIVITIES/PROJECTS:

UNICEF along with the WHO assisted the MOH in designing the accelerated immunization campaign and will continue to assist with its implementation. A major emphasis is on strengthening infrastructure, particularly the establishment of an EPI management center. UNICEF also contributes broadly to all areas of EPI development.
USAID

NAMES/TITLES:

Ms. Paula J. Bryan, Population Development Officer
Dr. Ali Biely, Health Advisor

ADDRESS:

U.S. Postal Address:  
USAID/Khartoum  
Washington, D.C.  20520-2200  

International Address:  
Sharia Ali Abdul Latif  
P.O. Box 699  
APO N. 09668  
Khartoum, Sudan

TELEPHONE:  74700  
TELEX:  22619 AMEM SD

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:

USAID supports the Rural Health Support Project, which is implemented by the MOH, One America, and AMREF. This project strengthens the capacity of the MOH to deliver primary health care, especially maternal and child health to selected regions of the country. The project trains traditional birth attendants, provides immunization equipment, trains health professionals in ORT and in management techniques, and provides technical assistance to the MOH.

USAID supports the CARE North Kordofan Child Health Project on immunization and ORT interventions, focused on a region recently hard hit by drought and famine and where infant mortality rates are well above average. USAID also provides funding to the Child Survival Project of Save the Children in Sudan. Major areas of program emphasis include immunization, ORT, nutrition education, and growth monitoring.
ROTARY INTERNATIONAL

NAMES/TITLES:

Mr. Nabil Kabbabe, Member

ADDRESS:

P.O. Box 325
Khartoum, Sudan

TELEPHONE: 70361, 72006 or 41226 (home)
TELEX: 22478, 22171

FUNDING LEVELS: Requested US$232,000 for five-year period.

MAJOR ACTIVITIES/PROJECTS:

The Polio Immunization Project in Sudan strives to achieve 100% polio immunization coverage of children 15 months old in accessible urban and rural areas of the Sudan. Specific objectives are: 1) to stimulate health education and awareness of the need for immunization; 2) to provide sufficient polio vaccines for three doses for each child in the project area; 3) to strengthen and expand existing cold-chain facilities; 4) to reinforce and exceed the city's EPI goal and; 5) to provide continuous evaluation of coverage and ongoing activities.

INTERNATIONAL CATHOLIC MIGRATION COMMISSION (ICMC)

NAMES/TITLES:

ADDRESS:

SUDANAID
Hurria Street
P. O. Box 6011
Khartoum, Sudan

TELEPHONE: 70152
TELEX: 22635 ASTRA SD ATTN: SUDANAID

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:

Through 1986, Sudanaid conducted EPI-related health care activities in Port and Northern Sudan. In the squatter community of Dar el Neim, Sudanaid worked to improve the refugee health program which provided TB control, mother/child health care, and health education in local schools and communities. In Northern Sudan, Sudanaid expanded activities of 7 clinics for malnourished children which fed 600 children daily, and support the provision of additional vaccinators who circulate clinics.
FOSTER PARENTS PLAN, INC.

NAMES/TITLES:

Mr. James Geenen

ADDRESS:

Plan International
P.O. Box 528
Khartoum, Sudan

TELEPHONE: 47244
TELEX: 24135 ATTN: James Geenen

FUNDING LEVEL: The total value of agency assistance to Sudan was US$350,357 in FY 1985.

MAJOR ACTIVITIES/PROJECTS:

To improve health care through immunization, health promotion (including village theater project), nutrition education, latrines, construction and equipping of clinics, and improvement of village water systems in Gezira Province, Khartoum.
MAJOR PURPOSES OF PROJECT: To improve the health status of mothers and children by providing priority interventions (immunization, ORT, nutrition, and malaria treatment) to the target population in the context of an integrated community development program, which includes water resources, agriculture, and sanitation.

PROJECT DURATION AND FUNDING LEVEL: The USAID child survival funding of $530,000 is provided from September 1986 to September 1989.

GEOGRAPHIC AREA SERVED BY PROJECT: There are two project impact areas: 1) Showak, Northeast Gedaref District of Kassala Province in Eastern Sudan, and 2) Um Ruwaba, in Kordofan.

TARGET POPULATION IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th>Antigen</th>
<th>Doses</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>area 1: 9,000 children ages 0-3 yrs</td>
<td>BCG</td>
<td>1 birth</td>
</tr>
<tr>
<td>area 2: 8,400 children ages 0-1 yr</td>
<td>POLIO</td>
<td>3 6,10,14 wks</td>
</tr>
<tr>
<td>75,000 children ages 1-4 yrs</td>
<td>DPT</td>
<td>3 6,10,14 wks</td>
</tr>
<tr>
<td>94,000 women ages 15-45 yrs</td>
<td>MEASLES</td>
<td>1 9 m</td>
</tr>
<tr>
<td></td>
<td>TETANUS</td>
<td>2</td>
</tr>
</tbody>
</table>


PROJECT ACTIVITIES:

- DELIVERS IMMUNIZATIONS to the target population through the existing government primary health care system.
- PROMOTES IMMUNIZATION through publicity campaigns, health education, home visits, and a family enrollment system.
- CONDUCTS SURVEY RESEARCH on knowledge, attitudes, and practice toward EPI.
- STRENGTHENS THE COLD CHAIN through equipment provision, planning, vaccine distribution, supervision, and vaccine monitoring.
- TRAINS mid-level vaccination team members as well as community health promoters, mothers, traditional birth attendants, and health committee members in technical and managerial aspects of immunization.
MAJOR PURPOSES OF PROJECT: To assist the Ministry of Health in providing services to an area hard hit by drought and famine through the integration of ORT and EPI activities into the existing primary health care system.

PROJECT DURATION AND FUNDING LEVEL: USAID funding of US$700,000 in child survival monies for the years 1986-1989.

GEOGRAPHIC AREA SERVED BY PROJECT: Northern Kordofan area - nine rural councils in two outlying districts.

TARGET POPULATION FOR IMMUNIZATIONS

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Antigen</th>
<th>Doses</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>18,000 children ages 0-1 yr</td>
<td>BCG</td>
<td>1</td>
<td>birth</td>
</tr>
<tr>
<td>74,000 children ages 0-5 yrs</td>
<td>DPT</td>
<td>3</td>
<td>6,10,14 wks</td>
</tr>
<tr>
<td>32,000 children ages 0-2 yrs</td>
<td>POLIO</td>
<td>3</td>
<td>6,10,14 wks</td>
</tr>
<tr>
<td>20,500 women ages 15-45</td>
<td>MEASLES</td>
<td>1</td>
<td>9 m</td>
</tr>
<tr>
<td>20,500 women ages 15-45</td>
<td>TETANUS</td>
<td>2</td>
<td>pregnancy</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: UNICEF and the National EPI.

PROJECT ACTIVITIES:

- DELIVERS IMMUNIZATIONS to the target population through the existing MOH primary health care system after assisting the MOH in establishing EPI for the 2 districts.

- PROVIDES TECHNICAL ASSISTANCE to the MOH in program planning and program evaluation.

- PROMOTES IMMUNIZATION within the community through publicity campaigns and health education.

- STRENGTHENS THE COLD CHAIN through provision of back-up equipment, planning and distribution of vaccines, supervision of health workers, and vaccine monitoring.
o PROVIDES TECHNICAL AND MANAGEMENT TRAINING to 80 nurses and medical assistants and to 170 community health workers and traditional birth attendants.

o ASSISTS IN WORKSHOP COORDINATION at the district capital level in management and supervision for the MOH staff.
Basic Country Data

Total population: 15.5 million
Number of births annually: 784,000
Infant mortality rate: 108/1000 live births
Total population under 5 yrs: 3.1 million
Under 5 mortality rate: 178/1000
Annual infant and child deaths (0-4): 141,000

Historical Perspective

In the 1960s and early 1970s, Uganda had one of the most developed health services delivery systems in Africa and immunization coverage rates were relatively high. However, a decade of neglect and inadequate resources and planning reversed many of these gains. According to UNICEF, fewer than 10% of children under 1 year old were immunized against measles, polio, DPT, or BCG in 1985. Measles as a cause of deaths in hospitals rose from 5.4% in 1970 to 25.6% in 1981.

In 1983, the Ugandan National Expanded Program of Immunization (UNEPI) was launched. A national plan was drawn up that was to not only increase immunization coverage in Uganda, but also significantly strengthen the entire primary health care delivery system. In 1984, an EPI management team was established with expertise in operations, health education, training, and cold-chain maintenance.

Delivery Strategies

The UNEPI has two phases. During the first phase, all major static health units will be equipped and the staff trained to offer immunization services. The second phase will expand upon phase one by offering an intensive outreach program. The UNEPI plan calls for all primary and secondary school children to be taught the importance of vaccination, and to be made responsible for the vaccination of younger children in their family. Additionally, the efforts of the NGO's (who supply approximately 50% of the health services in the country) and the private sector will be supported by providing them access to vaccines, educational material, logistical, and cold-chain support.

Technical Aspects

UNICEF has been very involved in the planning of the UNEPI and has agreed to provide the vaccines as well as technical assistance in a variety of areas. One distinguishing characteristic of the UNEPI is the use of solar refrigeration, which is to cover two-thirds of the static vaccination units.
## OFFICIAL IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th># DOSES</th>
<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
<th>COVERAGE RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BCG</td>
<td>birth</td>
<td>37</td>
</tr>
<tr>
<td>3</td>
<td>DPT</td>
<td>3, 4, 5 mos</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>Polio</td>
<td>3, 4, 5 mos</td>
<td>13</td>
</tr>
<tr>
<td>1</td>
<td>Measles</td>
<td>9 mo</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Tetanus Toxoid</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**VACCINE SOURCE:** UNICEF.

**MOH NAMES/TITLES:**

- Dr. Ruhakana-Rugunda, Minister of Health
- Mr. John Barenzi, EPI Program Manager
- Mr. Cliff Webster, EPI Senior Advisor
- Mr. D.W.O. Ongwes, EPI Training Officer
- Ms. Zuraasanda, EPI Training Officer
- Mr. Jeffrey Booker, Cold Chain Supervisor

**ADDRESS:**

Ministry of Health  
P.O. Box 8  
Entebbe, Uganda

**TELEPHONE:** 42-208-48  
**TELEX:** 613-72
WHO

NAMES/TITLES
Dr. J. T. Lema, WHO Representative

ADDRESS:
P.O. Box 6
Entebbe, Uganda

TELEPHONE: 20572
TELEX: 61227

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:

UNICEF

NAMES/TITLES:
Ms. S. Wyles, Country Representative

ADDRESS:
Uganda Teachers' Association
Building 1, First Floor
Plot 28/30 Bombo Rd.
Bat Valley, Kampala, Uganda

TELEPHONE: 256-41-259146, 234591-2
TELEX: 973-61109, 61199 UNICEF UGA

FUNDING LEVEL: For the period 1986-1990, the total amount committed out of general resources US$1.4 million. In supplementary funding to UNICEF, the Government of Italy is providing US$6,890,000; the Government of Norway is providing US$587,000; and Rotary-Japan has committed US$69,000.

MAJOR ACTIVITIES/PROJECTS:
UNICEF has been the major donor in assisting the Ugandan MOH in their national EPI. Assistance is directed towards development of competent management at the central and district levels; improvements of the central cold-storage and vaccine distribution facilities; strengthening of the cold chain; and provision of vaccines and vaccine supplies. UNICEF also assists in the training of health staff in management and immunization techniques, the mobilization of health staff for intensive outreach efforts, and the establishment of an effective system for maintenance of the cold-chain and transportation systems.
USAID

NAMES/TITLES:

Mr. Paul Cohn, Population Development Officer
(EOD 11/15/87)

ADDRESS:

U.S. Postal Address:
USAID/Kampala
Washington, D.C. 20520-2190

International Address:
British High Commission Building
Obo*e Ave.
P.O. Box 7007
Kampala, Uganda

TELEPHONE: 50791, Chancery 259791/2/3/4/5
TELEX: 59791

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:

From the years 1985-1988, USAID will support the MIHV Child Survival Program. The purpose of the project is to help Makerere University and the people living in the 36 villages surrounding the Kasangati Health Center to reestablish maternal and child health primary prevention programs at Kasangati Health Centre, including immunizations, nutrition and child spacing counseling, ante- and post-natal care, and a young child clinic.

ROTARY INTERNATIONAL

NAME/TITLE:

Mr. John Tuhe Kakitahi

ADDRESS:

Muanamugimu Nutrition Services
P.O. Box 7072
Kampala
Uganda

TELEPHONE: 77797 (office), 77798 (home)

FUNDING LEVEL: US$526,000 (including US$522,000 and US$4,000 for external promotion) has been committed for the five-year period beginning in 1985. Funds are to be released to UNICEF for vaccines.

MAJOR ACTIVITIES/PROJECTS:

In the five years of funding, the project aims to immunize all children in six districts of southwestern Uganda, where coverage is otherwise weak, and to reinforce the Expanded Program on Immunization nationwide through provision of polio vaccines. Funds are to be released to UNICEF for vaccines.
MAJOR PURPOSES OF PROJECT: To improve the health status of children ages 0-5 years old and mothers by focusing on three primary health care interventions: 1) community health education; 2) training support; and 3) an active role in the development of a PHC coordinating committee of over 38 PVOs in Uganda involved in health programs.

PROJECT DURATION AND FUNDING LEVEL: May 1986 through May 1989, with US$761,900 total funding, US$473,500 from USAID child survival monies and US$288,400 from CARE.

GEOGRAPHIC AREA SERVED BY PROJECT: Three districts in the southeast region: Jinja, Iganga, and Kamuli, with a combined population of 1.2 million in 1980. Project will sequentially be implemented in 15 sites in each of the three project years.

TARGET POPULATION FOR IMMUNIZATIONS

<table>
<thead>
<tr>
<th>antigen</th>
<th>doses</th>
<th>age</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>1</td>
<td>birth</td>
</tr>
<tr>
<td>POLIO</td>
<td>3</td>
<td>3,4,5 mos</td>
</tr>
<tr>
<td>DPT</td>
<td>3</td>
<td>3,4,5 mos</td>
</tr>
<tr>
<td>MEASLES</td>
<td>1</td>
<td>9 m</td>
</tr>
<tr>
<td>TETANUS</td>
<td>2</td>
<td>1-m intervals in pregnancy</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: The Ministry of Health, EPI.

PROJECT ACTIVITIES:

- DELIVERS IMMUNIZATIONS to the target population through existing MOH primary health care system. CARE operates a mobile immunization effort while simultaneously working to establish fixed center services at health posts.
- IMMUNIZATION PROMOTION AND COMMUNITY OUTREACH with health education and home visiting centers.
- STRENGTHENS THE COLD CHAIN through improved supervision and monitoring.
COORDINATES immunization efforts with the Church of Uganda. The Church will screen the immunization status of all children presenting for baptism as well as entry into church schools and refer them to health posts.

TRACKS program dropouts through family registration.
MIHV PROJECT AT KASANGATI HEALTH CENTER

Minnesota International Health Volunteers  
122 West Franklin Avenue, Room 5  
Minneapolis, MN  55404 USA

MIHV  
Tesangati Health Center  
P.O. Box 8839  
Kampala, UGANDA

telephone:  (612) 871-3759  
telephone:  31981

CONTACT:  Ms. Molly Rouner  
Coordinator  
Mr. Thornton Anderson  
President  
Dr. Haken Torjesen  
Technical Officer

CONTACT:  Mr. Josiah Mafirigi

MAJOR PURPOSES OF PROJECT:  To promote immunization, growth monitoring, antenatal care, and ORT through the community health committees and the health center staff.

PROJECT DURATION AND FUNDING LEVEL:  Funded in October 1985 for three years by USAID child survival monies for the amount of US$419,000.

GEOGRAPHIC AREA SERVED BY PROJECT:  Kasangati Health Center (KHC) in the Kasangati, defined area, Mpigi District. This consists of 18 square miles divided into 10 zones and 36 villages.

TARGET POPULATION FOR IMMUNIZATIONS

<table>
<thead>
<tr>
<th>antigen</th>
<th>doses</th>
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<tbody>
<tr>
<td>BCG</td>
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<td>birth</td>
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<tr>
<td>POLIO</td>
<td>3</td>
<td>2,3,4 mos</td>
</tr>
<tr>
<td>DPT</td>
<td>3</td>
<td>2,3,4 mos</td>
</tr>
<tr>
<td>MEASLES</td>
<td>1</td>
<td>9 m</td>
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<tr>
<td>TETANUS</td>
<td>2</td>
<td>pregnancy</td>
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TARGET POPULATION FOR IMMUNIZATIONS

<table>
<thead>
<tr>
<th>antigen</th>
<th>doses</th>
<th>age</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>1</td>
<td>birth</td>
</tr>
<tr>
<td>POLIO</td>
<td>3</td>
<td>2,3,4 mos</td>
</tr>
<tr>
<td>DPT</td>
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<td>2,3,4 mos</td>
</tr>
<tr>
<td>MEASLES</td>
<td>1</td>
<td>9 m</td>
</tr>
<tr>
<td>TETANUS</td>
<td>2</td>
<td>pregnancy</td>
</tr>
</tbody>
</table>

VACCINE SOURCE:  The Government of Uganda (GOU) central pharmacy, provided by UNICEF to the City Council.

PROJECT ACTIVITIES:

- DELIVERS IMMUNIZATIONS to the target population through existing government PHC system with fixed, mobile, and channelling strategies. Also uses MIHV staff to vaccinate children.

- PROMOTES IMMUNIZATION through home visits conducted by family health workers (FHWs).

- TRAINS several levels of health workers in all areas of EPI. This includes 2 senior level people in training of trainers, 10 primary health care workers, and 120 FHWs.
Basic Country Data

Total population: 29.9 million
Number of births annually: 1,356,000
Infant mortality rate: 103/1000 live births
Total population under 5 yrs: 5.4 million
Under 5 mortality rate: 170/1000
Annual infant and child deaths (0-4): 231,000

Historical Perspective

The National Expanded Program on Immunization in Zaire began in 1977. It succeeded the National Smallpox Eradication Program, which had provided mass immunization for smallpox to all persons, and BCG to persons under 20 years of age. The initial objective of the Zaire EPI was to provide systematic immunization with measles, poliomyelitis, pertussis, diphtheria, tetanus, and BCG vaccines to children from birth to 24 months of age residing in the country’s 15 largest cities. The program was developed vertically within the Ministry of Health, using the former smallpox eradication strategy of mobile vaccination teams which were directly responsible to the national program headquarters.

Soon after the program began, an effort was made to supplement the mobile strategy by providing additional immunizations through certain fixed primary health care centers. An international evaluation of the Zaire EPI in 1980 recommended that the mobile strategy be totally abandoned in favor of a fixed-center approach with outreach.

Delivery Strategies

Currently, the Zaire strategy for implementing primary health care is decentralized, with responsibility for planning and implementation delegated to the zonal level. The EPI is also implemented at the zonal level, and is operating in 176 of the 300 health zones in Zaire, reaching 56% of the population. Each zonal director is offered the choice of implementing the EPI or not. EPI is integrated with other health services and offered through zonal hospitals and health centers. Each zone decides whether to use a static center, outreach, or mobile teams.

Technical Aspects

Since its inception, the EPI in Zaire has had to rely heavily on donor support. Zaire is a CCCD country, and many of the zonal immunization programs are supported by this AID-funded program. In addition, UNICEF, the WHO, OXFAM, the Belgian government, and ECZ (Eglise du Christ au Zaire) all contribute to the EPI in Zaire.

Training is conducted for each zonal director before the EPI is started in a zone, with other training sessions held for zonal workers and regional advisors.

The cold chain is maintained at reference health centers with bicycle pickup/delivery to other health centers.
Surveillance is presently done in city hospitals. None has been done in rural areas to date. A comprehensive health information system has been developed to monitor CCCD activities at the national, regional, and health zone levels. Data compiled for 1985 represented approximately 85% of all immunizations administered.

Vaccine distribution and supply at regional levels and insufficient supervision were identified as constraints to the Zaire EPI. Program reviews were conducted in September 1980 and January 1982.

OFFICIAL IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th># DOSES</th>
<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
<th>COVERAGE RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BCG</td>
<td>birth</td>
<td>57</td>
</tr>
<tr>
<td>3</td>
<td>DPT</td>
<td>6,10,14 wks</td>
<td>37</td>
</tr>
<tr>
<td>4</td>
<td>Polio</td>
<td>birth, 6,10,14 wks</td>
<td>37</td>
</tr>
<tr>
<td>1</td>
<td>Measles</td>
<td>9 m</td>
<td>40</td>
</tr>
<tr>
<td>2</td>
<td>Tetanus Toxoid</td>
<td>pregnant women</td>
<td>50</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: USAID supplies measles vaccine; UNICEF supplies all other vaccines.

MOH NAMES/TITLES:

Dr. Mambuama, DIS, Chief EPI
Dr. Okwo Bele, National EPI Coordinator
Dr. Mambu-Ma-Disu, National CCCD Program Director
Mr. Kibungo Kambali, Health Information Systems

ADDRESS:

32 Avenue de la Justice
Kinshasa-Gombe
B.P. 9638
Kinshasa I

TELEPHONE: 31106, 31786
WHO

NAMES/TITLES:
Dr. M. Toure, Representative

ADDRESS:
Monsieur le Representant de l’OMS
B.P. 1899
Kinshasa
Zaire

TELEPHONE: 310-63
TELEX: 21144

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:
Provides vehicles, cold-chain and vaccination equipment, and vaccines.

UNICEF

NAMES/TITLES:
Mr. L. Welfens, Country Representative

ADDRESS:
Entree A
1nmeuble de la 2ene Republique
Boulevard du 30 Juin
Kinshasa, Zaire

TELEPHONE: 243-12-30257
TELEX: 968-21164

FUNDING LEVEL: During the period 1986-1990, the total amount of general resources committed is US$1,1760,000. As supplementary funding, CPHA will provide UNICEF US$109,000, and the Belgium Committee will contribute US$400,000.

MAJOR ACTIVITIES/PROJECTS:
UNICEF supports all areas of the EPI, including cold-chain maintenance, procurement of needles and syringes, training, social mobilization, administration, and transportation. EPI is integrated with CDD/ORT, malaria control, and iodine efficiency.
USAID

NAMES/TITLES:
Ms. Lois E. Bradshaw, Population Development Officer
Mr. Glenn Lane Post, M.D., Sup. Health/Population Dev. Off.
Mr. Gale R. Murphy, HPN Officer
Ms. Carol A. Payne, Health Development Officer

ADDRESS:
U.S. Postal Address:
USAID/Kinshasa
American Embassy
APO New York 09662-0006

International Address:
310 Avenue des Aviateurs
Kinshasa, Zaire

TELEPHONE: 25881 thru 6
TELEX: 21405 US EMB ZR

FUNDING LEVEL: For the EPI, US$735,000 (FY85), US$550,000 (FY86),
US$510,000 (FY87).

MAJOR ACTIVITIES/PROJECTS:
USAID supports the national immunization program through the African Child
Survival Initiative/Combating Childhood Communicable Diseases Project
(ACSI/CCCD) and a US$20 million bilateral rural health project that
operates nationwide through a network of health clinics run by a federation
of church groups.
ROTARY INTERNATIONAL

NAMES/TITLES:
M. Denis Lumbila-Kasongo, Member

ADDRESS:
B.P. 8843
Kinshasa I
Zaire

TELEPHONE: 77797, 77798 (office)
TELEX: c/o Ngoy MAKOBA 21058 CINAT

FUNDING LEVEL: USS1,760,000, including USS1,615,000 for vaccines, US$80,000 for social mobilization, US$40,000 for evaluation, and US$25,000 for measuring polio prevalence/incidence during the five-year period beginning in 1987 has been committed. Funds are to be released to UNICEF for the procurement of vaccines, to the Rotary Club of Kinshasa for social mobilization, and to either WHO or CCCD for polio studies.

MAJOR ACTIVITIES/PROJECTS:
The purpose of the POLIOPLUS PROJECT in Zaire is to stimulate private sector support for the national EPI in an effort to immunize at least 8,125,000 children against polio by 1989. Rotary efforts focus on coordinating the private sector support, designing and carrying out demand-creation activities for the EPI with the involvement of the private sector, and monitoring polio prevalence/incidence and immunization coverage rates.
Basic Country Data

Total population: 8.8 million
Number of births annually: 417,000
Infant mortality rate: 76/1000 live births
Total population under 3 yrs: 1.7 million
Under 5 mortality rate: 121/1000
Annual infant and child deaths (0-4): 51,000

Historical Perspective

The Zimbabwe Expanded Program on Immunization (ZEPI) has been in operation since early 1982. A nationwide program, ZEPI has adopted the WHO goal of universal immunization by the year 1990 as its national goal. Coverage targets for 1990 are: 1) BCG - 98%, 2) measles - 90%, 3) DPT - 95%, 4) polio3 - 90%. The program is increasing the number of health units offering EPI services while trying to spread them strategically so that the farthest distance to walk to a health unit should not exceed 8 km anywhere in the country. While this effort is continuing, many mothers still need to travel beyond 8 km for health care services.

National Policies

At the national level, the EPI unit is part of the MCH section of the division of Rural Health Services. The EPI unit is staffed by a combination of national personnel. Some expatriate staff are found at the provincial and district levels.

ZEPI activities are headed and coordinated by a program manager, who is supported by two cold-chain technicians, a central vaccine storage supervisor, a storeman, and a typist.

The EPI unit also sits on the MCH coordinating committee and attends all meetings of the parent Rural Health Division. Regular meetings with donor agencies are held two to three times per year and additionally as necessary.

At the provincial and municipal levels, one person is designated as the EPI program manager. The national EPI program meets with all local program managers two to three times per year. At the district level, one person is also designated to head EPI activities at that level.

Delivery Strategies

The Zimbabwe EPI uses the following three strategies in an attempt to maximize coverage levels:

1) FIXED STRATEGY - All health institutions in Zimbabwe have integrated immunization services into the overall primary health care services provided by the institution. The strategy of making all the components of MCH and PHC available on a continuous basis is referred to as a "supermarket approach" by the Ministry of Health. In addition, a policy of "immunization at every opportunity" is pursued. Health workers are
encouraged to provide immunizations to all eligible children and mothers at every contact with the health service. The adopted MCH policy also recommends that daily immunization sessions be provided. Immunizations are also provided daily in hospital outpatient departments and also in the wards for inpatients. Maternity units are required to provide child health cards and BCG vaccine before discharge for newborns. Except for those having had severe reactions to previous immunizations and children needing immediate hospitalization, all eligible children are immunized on contact. An estimated 55% of the population can be reached through the above means.

2) OUTREACH STRATEGY - Most health units, in addition to supporting the fixed strategy, conduct outreach activities in order to provide immunization services to those living 8 km or beyond from the fixed health services. Approximately 35% of the population can be served through this strategy.

3) MOBILE STRATEGY - A number of mobile health teams exist. These units serve the small but medically needy percentage (about 10%) of the population not reachable through the fixed or outreach strategies.

Technical Aspects

The Zimbabwe EPI does not have a separate budget within the MOH. However, the yearly estimated needs/expenditures are largely covered by the Government of Zimbabwe (over 80%). The remaining expenses are funded through the following donor organizations: SIDA, Save the Children (UK), WHO and UNICEF. Foreign donor contributions amounted to US$ 9.8 million, 9.6 million, 7.8 million, and 8.1 million in 1982-1985, respectively. The Zimbabwean government's contribution to the EPI covers the costs of most recurrent expenses such as staff salaries, transport and cold-chain running costs, and office and evaluation expenses.

Training is an on-going activity. From November 1981 through December 1984, 2,738 senior-level MCH/EPI personnel had completed an EPI mid-level manager's training course. 2,882 peripheral health workers had received basic EPI training.

Surveillance of EPI target diseases was considered to have been a weak point of the program in a recent MOH evaluation. Improvements in the quality and quantity of the EPI data are dependent upon the development of the national Health Information System (HIS) as a whole. This development has been progressing since 1984 when pilot programs were brought into operation at three sites. By September of 1985, the pilot phase was to have been completed and, based upon the evaluation/modifications to the pilot system, the nationwide system was to have been in operation by the end of 1986.

Prior to the national HIS' operation, local area monitoring (LAM) for the EPI target diseases was undertaken. This activity centered upon the main hospitals in Harare and Bulawayo. Based on this data, neonatal tetanus and pertussis were on the decline, measles and tuberculosis showed no changes in pattern, and reporting of diphtheria and polio were uncommon.

During 1985, however, an outbreak of polio was noted first in the southeast and later in the western parts of Zimbabwe. Seventy-one cases were reported; nearly all the victims were under five years of age with no or incomplete immunization records.
## OFFICIAL IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th># DOSES</th>
<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
<th>COVERAGE RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BCG</td>
<td>birth</td>
<td>1984* 87</td>
</tr>
<tr>
<td>3</td>
<td>DPT</td>
<td>3, 4, 5 months</td>
<td>1986 93.89</td>
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<tr>
<td>3</td>
<td>Polio</td>
<td>3, 4, 5 months</td>
<td>66 79.35</td>
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<tr>
<td>1</td>
<td>Measles</td>
<td>3, 4, 5 months</td>
<td>61 81.16</td>
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<tr>
<td>2</td>
<td>Tetanus Toxoid</td>
<td>7 months</td>
<td>53 77.48</td>
</tr>
</tbody>
</table>


**VACCINE SOURCE:** UNICEF, SIDA, ROTARY, and various pharmaceutical manufacturers.

**MOH NAMES/TITLES:**

Dr. Brigdial Falix Muchemwa, Minister of Health  
Miss Eve Serewa, National EPI Manager

**ADDRESS:**

Kaguvi Building  
P.O. Box 8204  
Causeway, Harare  
Zimbabwe

**TELEPHONE:** 726731  
**TELEX:** (987) 2141
WHO

NAMES/TITLES:
Dr. Z. M. Dlamini, WHO Representative

ADDRESS:
P.O. Box 8566
Causeway, Harare
Zimbabwe

TELEPHONE: 703682
TELEX: 4814 ZW WHO REP ZIMBABWE
CABLE: UNISANTE, HARARE

FUNDING LEVEL: US$10,000 per annum.

MAJOR ACTIVITIES/PROJECTS:
Mainly technical assistance in training activities and provision of the services of cold-chain engineers.

UNICEF

NAMES/TITLES:
Mr. Saidi Shomari, Country Representative
Dr. Mabel Ali, Project Officer, EPI

ADDRESS:
6 Fairbridge Avenue
Belgravia, Harare

TELEPHONE: 263-0703941-2; 721692
TELEX: 987-6110, 2158 UNICEF ZW

FUNDING LEVEL: During the period 1986-1990, the total amount of general funds committed is US$470,000. As supplementary funding, the Government of Norway has provided US$350,000; SportAid will provide US$500,000; the UK Government will contribute US$818,000; CUC/CPHA will provide US$308,000; and the Australia Committee will contribute US$117,000.

MAJOR ACTIVITIES/PROJECTS:
The national program is largely supported by UNICEF in the form of social mobilization, vaccine supplies and materials, training, administrative assistance, and transportation.
USAID

NAME/TITLES:
Allison B. Herrick

ADDRESS:
U.S. Postal Address:
USAID/Harare
Washington, D.C.
2052C

International Address:
172 Rhodes Ave.
P.O. Box 3340
Harare, Zimbabwe

TELEPHONE: 794-521
TELEX: 4591 USFCS ZW

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:

ROTARY INTERNATIONAL

NAME/TITLES:
Mr. Chris Tuffnell, Member

ADDRESS:
P.O. Box 395
Harare, Zimbabwe

FUNDING LEVELS: US$1,000,000 (including US$975,000 for oral polio vaccine and US$25,000 for social mobilization in the five-year period beginning in 1987 has been committed. Funds are released to UNICEF for procurement of vaccines and to the Rotary Club of Harare Central for social mobilization.

MAJOR ACTIVITIES/PROJECTS:
The POLIOPPLUS PROJECT in Zimbabwe works with promotion and participation of EPI interventions and with evaluation and reporting.

Others:
Other donors include Save the Children Federation (U.K.), the Swedish International Development Authority (SIDA), and the Canadian International Development Agency (CIDA). All these organizations work collaboratively with the Government of Zimbabwe's Ministry of Health to accelerate assistance to the EPI. The overall goal of donors is to strengthen basic primary health care services, including supervision, management, and training. The total donor funding level for this program up until 1990 is US$23,696,844, of which the government contributes US$14,616,090.
MAJOR PURPOSES OF PROJECT: To work with the MOH to strengthen the government’s program for immunization, ORT, and growth monitoring in three areas of the country.


GEOGRAPHIC AREA: Pilot project areas in Musami, Murewe District, Mashonaland East Province, 70 km east of Harare, based at St. Paul’s Mission Hospital - villages located in the four wards of Musami, Bandakanwe, Myagambi, and Chamachinda.

TARGET POPULATION FOR IMMUNIZATIONS

<table>
<thead>
<tr>
<th>Antigen</th>
<th>Doses</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
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<td>Birth</td>
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<tr>
<td>OPV</td>
<td>3</td>
<td>3, 4, 5, 18 mos</td>
</tr>
<tr>
<td>DPT</td>
<td>3</td>
<td>3, 4, 5, 18 mos</td>
</tr>
<tr>
<td>MEASLES</td>
<td>1</td>
<td>9 mos</td>
</tr>
<tr>
<td>TETANUS</td>
<td>2-dose</td>
<td>during pregnancy</td>
</tr>
<tr>
<td>TOXOID</td>
<td>1° series</td>
<td>or 1-dose booster</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: Ministry of Health, Harare.

PROJECT ACTIVITIES:

- DIRECT DELIVERY OF IMMUNIZATION through existing government system at fixed facilities (1 permanent mission hospital and 5 health centers) and community outreach posts (46).
- IMMUNIZATION PROMOTION AND COMMUNITY OUTREACH through community leaders, health education efforts, and home visits.
- COLD-CHAIN STRENGTHENING through equipment provisions (bicycles with cold boxes).
- TRAINING of approximately 40 village health workers.
Bangladesh

Basic Country Data

Total population: 101.1 million
Number of births annually: 4,374,000
Infant mortality rate: 124/1000 live births
Total population under 5 yrs of age: 17.9 million
Under 5 mortality rate: 196/1000
Annual infant and child deaths (0-4): 853,000

Historical Perspective

The Expanded Program on Immunization (EPI) was formally launched in Bangladesh on April 7, 1979. Unlike many other countries, EPI did not follow up smallpox eradication activities in Bangladesh. The EPI began with two centers in Dhaka city and later opened primary centers in district towns and subdivisional towns throughout the country. Subsequently, upazilla health centers with electricity available for vaccine storage began providing immunization services. This was gradually followed by the opening of subcenters without vaccine storage capacity in all districts. Thus, service delivery was predominantly center-based through unipurpose vaccinators called EPI technicians, and did not incorporate multipurpose health workers as originally envisioned. Despite the establishment of 433 primary centers and 800 subcenters between 1981-1985, immunization coverage of the target population increased only slightly during the same time period, with less than 2% of infants fully immunized.

National Policies

By 1984 it became apparent that a fundamental reappraisal of the Bangladesh EPI was in order. In early 1985, a national MCH strategy was published, to be implemented within the third five-year plan for Population and Family Health. Immunization was upheld as one of the three key technical components of the plan and by mid-1985 the Government of Bangladesh adopted the goal of Universal Child Immunization (UCI) by 1990. The program is to be accelerated according to a plan of action from July 1985 to June 1990 in order to meet the goal of Universal Child Immunization (UCI) in Bangladesh. This review and plan of acceleration is supported by the Government of Bangladesh, UNICEF, WHO, SIDA, World Bank, NORAD, and BRAC with funds totaling US$23.1 million for the period 1985-1990. According to a joint statement by the BDG/UNICEF and WHO, the BDG is committed to this program of UCI through accelerated EPI activities within the context of the primary health care structure and as a leading element of maternal and child health services. USAID assistance is anticipated for major urban areas.

Current Scope

The principle elements of the new UCI strategy for Bangladesh are described as follows:

1. Carefully designing and phasing social mobilization techniques to generate both support and demand.
2. Involving all relevant sectors and departments of government, such as Social Services, Women's Affairs, Education, Agriculture, Bangladesh Rural Development Board, and local government.
Improving delivery of immunization services from existing Upazila Health Complexes.

Intensifying rural outreach services from existing Upazila Health Complexes.

Intensifying immunization activities in "high access" or urban areas in phases.

Of these donors, UNICEF is playing a leading role, supporting the planning and implementation process. Presently the program focuses primarily on rural expansion and has not begun accelerated EPI in Bangladesh's urban areas.

Technical Aspects

A joint MOH/UNICEF/WHO/USAID EPI evaluation took place in March 1987. Between 1983 and 1986, the Bangladesh EPI has carried out three special disease surveys which provide estimates of morbidity and mortality due to measles, polio, and neonatal tetanus. Some sentinel disease surveillance has been ongoing in the infectious diseases hospitals and TB hospitals in Dhaka, Chittagong, Khulna, Rajshahi, and Sylhet, and plans are underway to include eight medical college hospitals in the sentinel surveillance system.

RECOMMENDED IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th># Doses</th>
<th>Antigen</th>
<th>Recommended Age</th>
<th>Coverage Rates (WHO, 1987, &lt;1 yr)</th>
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<tbody>
<tr>
<td>1</td>
<td>BCG birth</td>
<td>birth</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>DPT 6,10,14 wks</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Polio 6,10,14 wks</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Measles 9 m</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Tetanus Toxoid 15-45 yrs</td>
<td>3 (pregnant women)</td>
<td></td>
</tr>
</tbody>
</table>

VACCINE SOURCE: Most EPI vaccine is provided exclusively by UNICEF through Unicpac, which procures vaccine through world tenders. There is some local production of DPT and TT in Dhaka through the Institute of Public Health.

MOH NAMES/TITLES:

Mr. Salahuddin Qader Choudhury, Minister of Health
Dr. B. M. Hedayetullah, Director General of Health Services
Dr. A. K. M. Tofar Rahman Talukder, EPI Project Director

ADDRESS:

Ministry of Health
Dhaka 5
BANGLADESH

TELEPHONE: 404183, 404079, 404238
TELEX: 950-642-222 (Ministry of Foreign Affairs)
WHO

NAMES/TITLES:
Dr. Aung Alasdair, WHO Representative
Ms. Maggie Usher, EPI Training Consultant

ADDRESS:
WHO
G.P.O. Box No. 250
Dhaka 1000
Bangladesh

TELEPHONE: 504622, 504523, 503713

FUNDING LEVEL: Estimated EPI financial support for the period 1985-1990 is approximately US$1,200,000.

MAJOR ACTIVITIES/PROJECTS: WHO planned to support supplies, local training, overseas fellowships, and technical assistance with US$443,000 during 1986-1987.

World Bank

NAMES/TITLES:
Ms. Bonnie Stanton

ADDRESS:

TELEPHONE:

LEVEL OF FUNDING: The World Bank estimates providing US$1,400,000 to EPI from 1985-1990.

MAJOR ACTIVITIES/PROJECTS:
Supports staff salaries and supplies EPI vehicles.
UNICEF

NAMES/TITLES:

Mr. A. Kennedy, Country Representative  
Dr. R. N. Basu, Planning Advisor, EPI  
Mr. Mark Weeks, Planning Advisor, EPI  
Mr. Mahbub Shareef, Resident Program Officer, Chittagong  
Mr. Jiban Kumar Baral, Program Officer, Chittagong

ADDRESS:

UNICEF  
P.O. Box 58  
Dhaka, Bangladesh

TELEPHONE:  
980-2-500-180 through 6 (Dhaka office)  
980-2-070-8314 (Chittagong office)

TELEX:  
642471 cef bj

FUNDING LEVEL: From 1988-1993, UNICEF will provide US$6,933,000 in general resources. Supplementary funds will be provided to UNICEF by SIDA for US$11,023,600 and the Government of Switzerland for US$180,000. An additional US$5,642,000 in supplementary funds is being sought.

MAJOR ACTIVITIES/PROJECTS:

UNICEF has focused on improving the capacity and capability of health staff. UNICEF support is also in the form of vaccine supplies, transportation, cold-chain equipment, cash support for local costs, and technical assistance.
USAID

NAMES/TITLES:

Mr. Gary Cook, Health Officer
Mr. Doug Palmer, Health Officer
Ms. Sharon Epstein, Chief, Population, Health & Women
Ms. Sigrid Anderson, NGO Coordinator
Ms. Nancy Hugert, Urban Volunteer Program, ICDDR/B

ADDRESS:

U.S. Postal Address: USAID/Dhaka
Washington, DC 20523

International Address: Adamjee Court Bldg. (5th floor)
Motijheel Commercial Area
G.P.O. Box 323, Ramna
Dhaka, Bangladesh

TELEPHONE: 237161-63, 235093-99, and 235080-89
TELEX: 642319 AEDKA BJ

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:

The Urban Volunteer Program has an immunization component, mainly in the form of motivational work for the EPI rather than service delivery. The USAID-funded project is implemented by ICCDR/Bangladesh for the modification and expansion of an ongoing program which incorporates the volunteer time of poor urban women to treat and refer ill children and to provide health education in their own neighborhoods.

In conjunction with the BDG, USAID/DHAKA is currently developing an immunization strategy for key metropolitan areas in the country. The four areas identified for future urban EPI acceleration are: Dhaka, Chittagong, Khulna, and Rajshahi, which are municipal corporations.

During 1985-1988, USAID will support PVO child survival projects of the Helen Keller Institute, Save the Children Federation, and the Salvation Army World Service. Also, AID has supported the REACH Project in placing a long-term EPI advisor in Bangladesh to assist with urban immunization activities. REACH has also provided technical assistance to the WHO/SEARO office to adapt a computerized EPI information system to the needs of the national EPI.
ROTARY INTERNATIONAL

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CABLE: WORLDWIDE

FUNDING LEVEL: US$2,156,000 which includes US$2,146,000 for polio vaccine and $10,000 for social mobilization for the five-year period beginning in 1986 has been committed. The funds are to be released to UNICEF for vaccines and to District 328 for social mobilization.

MAJOR ACTIVITIES/PROJECTS: The POLIOPLUS PROJECT is administered by the national EPI and involves all Rotary Clubs in Bangladesh through representation on the National Accelerated EPI Committee and through participation in EPI-strengthening activities at the local level. In the five years, the project aims to immunize 15,200,000 children against polio and to progressively increase immunization coverage to 85% by 1991.

OTHERS

There are hundreds of private groups, both local and foreign, working in Bangladesh. Many of these non-government organizations (NGOs) are involved in some facet of the immunization effort. Although information presented here is incomplete, it is worth mentioning the EPI involvement of these groups:

Bengali Rural Action Committee (BRAC) will provide an estimated US$2,000,000 to EPI between 1985-1990. BRAC supports supervision and motivational activities.

CARE, through a NORAD contribution, will direct US$1,000,000 toward EPI community-level training during the five years beginning late 1985.

ADAB and VHHS are involved with various aspects of NGO coordination.
MAJOR PURPOSES OF PROJECT: To enhance and expand child
survival activities in the community in designated
project impact areas, and to improve and promote
immunizations, ORT, and growth monitoring in the
project communities.

PROJECT DURATION AND FUNDING LEVEL: Three-year AID child
survival project funded for the amount of US$181,000
for the life of the project.

GEOGRAPHIC AREA SERVED BY PROJECT: The project is
headquartered in Dhaka, with project impact areas in
the upazillas of Rangunia, Nasirnagar, Ghior, and
Mirzapur.

TARGET POPULATION IMMUNIZATION
SCHEDULE
FOR IMMUNIZATIONS

<table>
<thead>
<tr>
<th>antigen</th>
<th>doses</th>
<th>age</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>1</td>
<td>birth</td>
</tr>
<tr>
<td>POLIO</td>
<td>3</td>
<td>6,10,14 wks</td>
</tr>
<tr>
<td>DPT</td>
<td>3</td>
<td>6,10,14 wks</td>
</tr>
<tr>
<td>MEASLES</td>
<td>1</td>
<td>9 m</td>
</tr>
<tr>
<td>TETANUS</td>
<td>2</td>
<td>pregnancy</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: EPI Central Store in Dhaka.

PROJECT ACTIVITIES:

- DIRECT DELIVERY OF IMMUNIZATIONS through existing
  Government of Bangladesh health care personnel in a
  series of campaigns, which differs from the GOB's
  predominant fixed-center approach.

- PROMOTION OF IMMUNIZATIONS through community
  organizations.

- TRAINING of community-level workers in family
  registration, vaccine storage, use, and maintenance.

- TRAINING of traditional birth attendants.
MEDITERRANEAN SEA

Sidi Barrani Port Said Matruh

Nisrant A-Suez Gia Cairo Siwa El Faiyum

WESTERN DESERT

Luxor, El Kharga

ARABIAN DESERT

Lake Nasser

EGYPT
Basic Country Data

Total population: 46.9 million
Number of births annually: 1,626,000
Infant mortality rate: 93/1000 live births
Total population under 5 yrs of age: 7.1 million
Under 5 mortality rate: 136/1000
Annual infant and child deaths (0-4): 220,000

Historical Perspective

In Egypt, immunization is mandatory for all of the EPI target diseases except for neonatal tetanus. Immunization with DPT became compulsory in 1956. This was followed in 1973 with BCG vaccine, which is obligatory for all children under three months of age. Immunization against poliomyelitis was introduced as an obligatory measure in 1968 and for measles in 1977. From 1973, tetanus toxoid has been made available to all pregnant women on a voluntary basis. Although immunizations have been available and widely accepted for many years, Egypt still suffers from a high incidence of childhood diseases that could be prevented by immunization.

National Policies

The MOH has cooperated extensively with WHO and UNICEF in the development of its EPI. At the national level, EPI comes under the preventive health services, which is headed by a Director General who is fully responsible for overall planning, supervision of program implementation, and evaluation. EPI activities are, however, distributed among many sectors of the Ministry of Health.

Delivery Strategies

The primary strategy for the program is to provide immunizations at fixed health centers throughout the country. Immunizations are given in each of the 3,000 MOH health facilities delivering primary care, in each of the 9 university hospital centers, and in a number of other public and private sector institutions. The physical distribution of health centers in Egypt is excellent, and less than 5% of the population is more than 3 kms from a health center. Apparently, mass vaccination campaigns are also used to control poliomyelitis.

Technical Aspects

Problems noted by a WHO team include: 1) a policy of immunization sessions that offer only one vaccine at a time, perhaps missing children who are actually old enough to receive an antigen other than the one being given on that day; 2) an urgent need for improvement of the management and supervisory systems of the EPI; and 3) a need for improvement in the surveillance and health information system.

Some problems with maintenance of cold-chain equipment have been identified as well. UNICEF has contributed an impressive amount of cold chain equipment, providing over 20% of the EPI cold-chain equipment each year for an unspecified period of time.
(Please note: Many of the WHO recommendations may have already been incorporated into the Egyptian EPI. The 1984 program review is the most current document used as background material for this review. The 1984 cluster sample survey shows a high 78% complete coverage rate, although tetanus toxoid remains low. USAID's EPI subproject is beginning in 1988 as part of the child survival program.)


OFFICIAL IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th># DOSES</th>
<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
<th>COVERAGE RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>(WHO, 1987, &lt;1 yr)</td>
</tr>
<tr>
<td>1</td>
<td>BCG</td>
<td>birth</td>
<td>84</td>
</tr>
<tr>
<td>3</td>
<td>DPT</td>
<td>4, 6, 8 mos</td>
<td>95</td>
</tr>
<tr>
<td>3</td>
<td>Polio</td>
<td>4, 6, 8 mos</td>
<td>95</td>
</tr>
<tr>
<td>1</td>
<td>Measles</td>
<td>9 mos</td>
<td>74</td>
</tr>
<tr>
<td>2</td>
<td>Tetanus Toxoid</td>
<td>pregnant women</td>
<td>8</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: The Egyptian Organization for Biological and Vaccine Production (VACSERA) produces DTP vaccine and is responsible for the procurement of other vaccines from international suppliers (principally UNICEF). WHO EPI reviews have revealed cold-chain deficiencies at the national level at VACSERA.

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Dr. Abdel Aziz Sha'arawi, Director General, MCH Department
Dr. Ahmed Hashem, Director General, Urban Basic Care
Dr. Salah El-Din Mawkour, Director General, Infectious Diseases
Dr. Hussein Aly Amei, Director, Epidemics Control Department and National EPI Programme Director
Dr. Nazar Aly Adeem, Director, Food Central Department
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FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:

WHO has been a major actor in the Egyptian EPI.
UNICEF

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FUNDING LEVEL: US$3.4 million is provided from general resources for the period 1988-1989. From 1988-1990, US$4.0 million in supplementary funding will be sought.

MAJOR ACTIVITIES/PROJECTS:
The program strategy will comprise: 1) the strengthening of the ongoing expanded program of immunization activities as part of the primary health care infrastructure; 2) the use of pulse and campaign approaches to accelerate child immunization; 3) the linkage of EPI activities with other child survival and development activities, in particular, control of diarrheal diseases/oral rehydration therapy and 4) increased focus on social communication and social mobilization techniques to boost public demand for child immunization. UNICEF will support staff training and communication activities, as well as the provision of vaccines and selected cold-chain equipment to ensure the efficiency of cold-chain operations.
USAID

NAMES/TITLES:

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Mr. Terrence Tiffany, Chief, HRDC/Population
Ms. Constance L. Collins, Asst. Health Office
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MAJOR ACTIVITIES/PROJECTS:

AID's contributions to Egypt's EPI will be concentrated on the
Immunization/Child Survival Project scheduled to begin at the end of 1986.
This program will offer the chance to apply sophisticated social marketing
techniques for the promotion of immunization programs.

USAID will also make upgrading the management and supervision systems a
principal concern of its assistance. This will entail advising top
management on the development of better program planning and allocation of
resources, developing procedures, manuals, and training for better
management of the entire cold chain, and improving the EPI management
information system so that proper amounts and types of vaccines can be
distributed on a timely and efficient basis. The project will also assist
with the development of a surveillance system and an epidemiologic
investigation service (EIS). USAID has committed US$29.8 million to this
bilateral project.

OTHER DONORS: CIDA has pledged US$1.898 million to the UCI program.
Basic Country Data

Total population: 758.9 million  
Number of births annually: 22,606,000  
Infant mortality rate: 105/1000 births  
Total population under 5 yrs of age: 99.2 million  
Under 5 mortality rate: 158/1000  
Annual infant and child deaths (0-4): 3,617,000

Historical Perspective

India has a long history of vaccination programs. The National Tuberculosis and Smallpox Programs of the 1960's preceded the Expanded Program on Immunization (EPI), launched in 1978. DPT, DT, and TT vaccines were available prior to 1978. Polio and typhoid were included in the program in 1979-80, TT was extended to school age children in their last year of primary and secondary school in 1980-81 and measles vaccine was introduced in 1985-86.

National Policies

The Government of India (GOI) has adopted a national health policy based on the PHC approach. Under this policy, more than half of the national goals relate to maternal and child health with immunization goals among these. EPI is an integral part of the MCH division of the Department of Family Welfare, within the MOH.

Delivery Strategies

Delivery of immunizations is provided through the existing health care delivery system, which includes the hospitals, dispensaries and MCH clinics in the urban areas and primary health centres in the rural areas. Although there are no field personnel specifically devoted to EPI, outreach sessions to subcenters and villages are organized and planned by the health workers. Outside of the national program, some immunization services, mainly in urban areas, are provided by private practitioners. Although the number of these children immunized in not reported, vaccines are provided to private practitioners through the local branches of the Indian Medical Association.

In 1985 the Universal Immunization Programme (UPI) was adopted by the GOI. Although the UPI has an overall aim of universal immunization coverage for the nation by 1989-1990, the intent is to avoid becoming a vertical program and a distraction from other important national efforts. In 1985, 30 districts were selected in which to initiate UPI activities. The districts were chosen by the potential population coverage and by the sophistication of the existing health infrastructure. Many of the districts are now under the Integrated Child Development Services (ICDS) scheme. The districts generally have well established health and child development services. In 1986, 60 districts were added to UPI. The current plan will add 90 districts in 1987, 120 districts in 1988, and 120 more districts in 1989.
The initial capital outlay of the program will total $264 million with $25,000 per year in recurrent costs expected in each district. By 1990, UPI and EPI will be merged.

Technical Aspects

In keeping with one goal of UPI - to document the reduction of EPI diseases - a sentinel disease surveillance system is being developed in each of the UPI districts. Active surveillance for polio and neonatal tetanus has also been initiated in the UPI districts.

EPI related training occurs at the following levels in India: 1) undergraduate curricula of medical and nursing students; 2) curricula of the multipurpose workers (MPWs); and 3) sessions in postgraduate courses of public health for medical officers.

Problems with the program stem from the enormous scale of the country and the comprehensiveness of the national effort. Within 5 years, proposed plans cover 93 million pregnant women and 82 million infants, with approximately 840 million doses to be administered. Areas for which considerable attention during this expansion process is anticipated include communications, cold chain strengthening, training, supervision and record keeping.

A WHO EPI review has never been conducted on a national scale, but regional reviews have been carried out in 1982 in Bihar, in 1983 in Maharashtra, and in U.P. North East Region.
## Official Immunization Schedule

<table>
<thead>
<tr>
<th>Doses</th>
<th>Antigen</th>
<th>Recommended Age</th>
<th>Coverage Rates (WHO, '87 &lt;1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BCG</td>
<td>birth</td>
<td>24</td>
</tr>
<tr>
<td>3</td>
<td>DPT</td>
<td>3,5,9 months</td>
<td>44</td>
</tr>
<tr>
<td>3</td>
<td>Polio</td>
<td>3,5,9 months</td>
<td>35</td>
</tr>
<tr>
<td>1</td>
<td>Measles</td>
<td>9 months</td>
<td>..</td>
</tr>
<tr>
<td>2</td>
<td>Tetanus Toxoid</td>
<td>pregnant women</td>
<td>37</td>
</tr>
<tr>
<td>2</td>
<td>DT</td>
<td>10 years, 16 years</td>
<td>..</td>
</tr>
<tr>
<td>2</td>
<td>Typhoid</td>
<td></td>
<td>..</td>
</tr>
</tbody>
</table>

**Vaccine Source:** BCG, DPT and TT are locally produced: BCG by the BCG Laboratory, GUINDY, Madras; DPT by Kasauli, Haffkine, Chowgule, Bengal Immunity & India Serum Institute; TT by Kasauli and India Serum Institute. Polio is imported and locally produced from bulk vaccine by Haffkine Bio-Pharmaceutical Co. Measles vaccine is imported.

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FAX: (91) 3318607

FUNDING LEVELS:

MAJOR ACTIVITIES/PROJECTS:

Training, technical assistance with vaccine manufacturing.
UNICEF

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FUNDING LEVELS: Total UIP (Universal Immunization Programme) requirements through 1990 are US$ 750.0 million. UNICEF has been asked to provide US$ 106.0 million of which US $12-14 million will come from general resources. In supplementary funds Canada is providing to UNICEF US$ 26.5 M; Sweden US$ 32.5 M; Japan US$ .2 M; and Rotary US$ .5 M. An additional $33.8 M is being sought as specific-purpose contribution. USAID is expected to provide US$ 25.0 M of this.

MAJOR ACTIVITIES/PROJECTS:

UNICEF works largely with efforts to raise donor support which is greatly needed, particularly as the accelerated program is rapidly being phased into new districts. A major emphasis is on surveillance and distribution of materials and supplies; district programme management, and disease surveillance. UNICEF has also recently been addressing organizational problems in urban areas where external agencies need better coordination in and communication about their activities. UNICEF broadly supports all areas of the EPI including cold chain maintenance, social mobilization, logistics, training, transportation, and supply of vaccines.
USAID

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Suzanne Olds, Chief, Population Office
John Grant, Food for Peace Officer

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MAJOR ACTIVITIES/PROJECTS:

AID is not providing any direct assistance to the UPI, but is involved in several projects with immunization related components. These include:

- India technical collaboration which is implemented by HHS. Conducts basic medical research and collects epidemiological data on issues related to child survival. Under this project, US and Indian scholars research and solve problems of vaccine production and delivery.
- Child survival support which improves EPI at the national level and tests applications at the state level.
- Biomedical research implemented by CDC and WHO which assists the GOI in creating a lab-based field epidemiology program.
- Identifying an optimum distribution system for vaccines which is implemented by PRICOR and supports an in-depth study of the distribution of vaccines.

USAID also supports REACH in providing short-term technical assistance to assist with the EPI management information system. In addition, REACH anticipates on providing assistance in a and a financial assessing for the vellore polio control program in FY88.
Basic Country Data

Total population: 166.4 million
Number of births annually: 5,043,000
Infant mortality rate: 79/1000 live births
Total population under 5 yrs of age: 22.6 million
Under 5 mortality rate: 126/1000 live births
Annual infant and child deaths (0-4): 630,000

Historical Perspective

The Expanded Program on Immunization (EPI) began in Indonesia in 1976 with the antigens BCG, DPT, and TT; the polio vaccine was introduced in 1978 and the measles vaccine in 1982. From the program's inception, when immunizations were offered only in an initial 55 kecamatans, the EPI was phased in over 90% of Indonesia's 5,639 health centers. Additionally, several important strategy changes have occurred since the first years when Juru Immunisasi, the former smallpox vaccinator, was the exclusive provider of EPI vaccinations.

National Policies

The Government of Indonesia is currently working under its fourth five-year plan for community development, which is called Pelita IV (April 1984-May 1989). The MOH goal under this plan is to reduce infant mortality, with program priorities in nutrition, immunization, control of diarrheal diseases, maternal and child health, and family planning. The EPI targets set for the end of Pelita IV are that all children under 1 year of age will have access (defined to be within 5 kms of the service post) to immunization and that 65% of all children will be "fully immunized" by their first birthday.

Current Scope

The EPI operates out of approximately 5,000 health centers, each of which serves an average of 30,000 persons. Each center has at least one vaccinator who makes scheduled outreach visits to village posts, designated originally as vaccination posts. Now that a deliberate effort is under way to make the EPI part of the integrated family health package, these posts are being transformed into integrated health posts, where MCH and family planning services are also provided. These posts are known as Pos Yandu.

These health posts are developed and managed by the community at the village level and supervised and assisted by professional health workers from the nearest health center. Under this system, midwives have assumed increased responsibility for immunization screening and delivery, especially with respect to tetanus toxoid for pregnant women. The Pos Yandu approach relies on the assistance of community volunteers, who are organized primarily through a national women's group under the Ministry of Social Welfare known as the PKK (Family Welfare Movement).

Under Pelita IV, the EPI has set the goal of 65% coverage for all EPI vaccines for all children age 5 and under, to be achieved by 1989. In order to attain this goal, the EPI has intensified activities in the 8 largest provinces, which cover 70% of the Indonesian population. In
addition, the program has: 1) stressed the importance of the more recently adopted provision of polio and measles vaccines and of actively recruited voluntary organizations like the PKK to be partners in immunization, and 2) concentrated on the shift from unipurpose vaccination posts to the integrated Pos Yandu approach. A complementary source of immunization delivery is carried out through hospitals and private practitioners. Close links to the medical school and teaching hospitals are being established in order to institutionalize EPI training and encourage local operations research. Strong support for EPI is increasingly evident from the Ministry of Religion, which now promotes tetanus toxoid immunization to all women just before marriage.

Technical Aspects

A WHO/UNICEF/USAID/GOI program review of Indonesia's EPI was conducted in December 1986. Progress was recognized in expansion of delivery services, immunization coverage, and the level of involvement of community organizations. Program activities recommended for emphasis were those designed to reduce "missed opportunities" and high drop-out rates and to introduce the EPI into clinical facilities.

**RECOMMENDED IMMUNIZATION SCHEDULE**

<table>
<thead>
<tr>
<th># DOSES</th>
<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
<th>COVERAGE RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td>(WHO, 1986, &lt;1yr)</td>
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<tr>
<td>1</td>
<td>BCG</td>
<td>birth</td>
<td>64</td>
</tr>
<tr>
<td>3</td>
<td>DPT</td>
<td>3, 4, 5 mos</td>
<td>46</td>
</tr>
<tr>
<td>3</td>
<td>Polio</td>
<td>3, 4, 5 mos</td>
<td>43</td>
</tr>
<tr>
<td>1</td>
<td>Measles</td>
<td>9 months</td>
<td>45</td>
</tr>
<tr>
<td>2</td>
<td>Tetanus Toxoid</td>
<td>pregnancy and women ages 15-45</td>
<td>25</td>
</tr>
<tr>
<td>2</td>
<td>Diptheria Tetanus</td>
<td>6, 9 yrs</td>
<td>57</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: All bacterial antigens are locally produced by Biofarma, Bandung. Measles vaccine is procured by UNICEF through IBRD loans. Polio vaccine is procured through Rotary International contributions.

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MAJOR ACTIVITIES: Provides technical assistance.
UNICEF

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FUNDING LEVEL: For 1988, US$1.0 million has been provided from UNICEF general resources. In supplementary funds, US$1.7 million was provided to UNICEF by Rotary International; US$510,000 by the Government of Italy (through IMR funds); and US$8,900 in previous funds from the Government of Switzerland.

MAJOR ACTIVITIES/PROJECTS:

UNICEF was particularly active in promoting the movement of the PKK (Family Welfare Movement) into the field of EPI. Recently, UNICEF helped produce a basic EPI booklet for NGOs and influential members in communities to promote the awareness of their responsibility towards the health of children. In the past, UNICEF efforts have focussed on supporting development of the infrastructure in the most populated areas. As acceleration efforts move into less dense areas, UNICEF will emphasize training and management needs of health staff, regional directors, and cold-chain technicians.

With a grant from USAID, UNICEF administers a project entitled "Child Survival Activities through Non-Governmental Organizations." The project is implemented by selected NGOs, primarily those with religious affiliation.
USAID

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Dr. Emmanuel Voulgaropoulos, Chief, HPN
Ms. Joy Riggs-Perla, Health Development Officer
Mr. Howard Miner, Health Development Officer, Project Officer for EPI
Ms. Kathleen McDonald, Health Development Officer
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FUNDING LEVEL: Approximately US$8,700,000 is to be spent out of the remaining uncommitted funds during the amended life of the project (1987-1990).

MAJOR ACTIVITIES/PROJECTS:

USAID's major contribution to Indonesia's EPI is called (similarly) the Expanded Program in Immunization Project. The project began in 1979 and has recently been extended until September 30, 1990. The project's major purpose is to accelerate the national immunization program through increased vaccine coverage, improved cold-chain performance, and strengthened epidemiological surveillance capacity.

USAID has also supported assistance with the national EPI plan and a Child Survival Initiative Concept Paper through the REACH Project.

AID also funds four child survival projects each with an EPI component. These are implemented by the PVOs, Save the Children, Project Concern International, the Helen Keller Institute, and CARE.
ROTARY INTERNATIONAL

NAMES/TITLES:

Mr. P. D. G. Abidin Kartasoebrata

ADDRESS:

Jalan Katalia 19
Tomang Raya, Jakarta Barat
Indonesia

TELEPHONE: 021-593279 (office)
TELEX: 4867 DARCO IA
CABLE: SOEDAPHARM

FUNDING LEVEL: US$6,115,000 is being provided for the five-year project, beginning in 1986. US$6,100,000 is committed to UNICEF for the purchase of OPV and US$15,000 for public information.

MAJOR ACTIVITIES/PROJECTS:

Rotary International will be involved in the public relations and promotional facets of the project.
SAVE THE CHILDREN—CHILD SURVIVAL/URBAN INITIATIVE

SAVE THE CHILDREN
54 Wilton Road
P.O. Box 950
Westport, CT 06881 USA

telephone: (203) 226-7272
telex: 4750020 Answer Back SAVECHILD

CONTACT: Dr. Warren Berggren
Director Primary Health Care

SAVE THE CHILDREN
Jalan Sumenet 7
Jakarta (Pusat) 10310
Indonesia

telephone: (021) 331-471

telex: 79646024
Answer Back PUBLIC IA

CONTACT: Ms. Donna Sillan
Health Coordinator

MAJOR PURPOSES OF PROJECT: To improve the health of mothers and children in an urban village setting through an integrated approach to training and broad-based community participation within the Pos Yandu system. Priority will be placed on increased access and utilization of nutrition, immunization, ORT, family planning, and maternal and child health services by the target population.

PROJECT DURATION AND FUNDING LEVEL: Three-year AID-funded child survival project beginning in 1985 for US$180,000.

GEOGRAPHIC AREA SERVED BY THE PROJECT: The project will be implemented in the urban village of Duri in West Jakarta. Duri is comprised of 14 neighborhoods called Runkun Warga or RWs. SAVE will work in the eight RWs in the northern portion of the area. These RWs receive services from the GOI health centers, called PukesMas, while the remaining six neighborhoods in the southern half of Duri receive services from DAMAI, a private Catholic center operated by St. Carolus Hospital.

TARGET POPULATION FOR IMMUNIZATIONS

IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th>Antigen</th>
<th>Doses</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>1</td>
<td>1-3 mos</td>
</tr>
<tr>
<td>DPT</td>
<td>3</td>
<td>3,4,5 mos</td>
</tr>
<tr>
<td>POLIO</td>
<td>3</td>
<td>3,4,5 mos</td>
</tr>
<tr>
<td>MEASLES</td>
<td>1</td>
<td>9 mos</td>
</tr>
<tr>
<td>TETANUS</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>TOXOID</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

VACCINE SOURCE: Government of India.

PROJECT ACTIVITIES:

- REINFORCES STATIC DELIVERY OF IMMUNIZATION through existing GOI Pos Yandu system with periodic campaigns.
- PROVIDES TECHNICAL ASSISTANCE for EPI program planning, evaluation, and communications at the local level.
- IMMUNIZATION PROMOTION AND COMMUNITY OUTREACH through a publicity campaign and home visits.
- COLD-CHAIN STRENGTHENING through equipment inventory and provision, supervision, and monitoring.
- TRAINING and curriculum development for local VHWs, called kader.
HELEN KELLER INTERNATIONAL (HKI)

Helen Keller International
15 West 16th Street
New York, NY 10011 USA

telephone: (212) 620-2100
telex:

CONTACT: Ms. Lila Rosenblum, Member
Interaction Child
Survival Task Force

MAJOR PURPOSES OF PROJECT: HKI plans to carry out six mini-projects under the AID child survival grant:
1) Surveillance and containment of vitamin A deficiency;
2) Aceh provincial vitamin A, plus immunization field trial;
3) Social marketing for vitamin A distribution and intake;
4) Field trial of fortification of MSG with vitamin A;
5) Liquid vitamin A cost study;
6) Computerization of nutrition directorate.

The second of these subprojects is the only one that is concerned with immunization, and will be the only one discussed here. The purposes of this subproject are primarily research oriented, yet include the improvement of coverage, distribution, and monitoring of vitamin A capsules and immunizations. Additionally, the project hopes to improve the current method of monitoring births and deaths and to measure the association between child and infant mortality and two interventions: 1) vitamin A only; and 2) vitamin A plus immunizations.

PROJECT DURATION AND FUNDING LEVEL: 1985 AID-funded three-year child survival project, in the amount of funding US$606,200.

GEOGRAPHIC AREAS SERVED BY THE PROJECT: The northernmost province, Aceh, on the island of Sumatra. Specifically, the project will be carried out in West Aceh Kabupaten (district). The six subdistricts (called kecamatan) included are Samatiga, Kuala, Teunom, Kawai XVI, Jaya, and Seunagan.

TARGET POPULATION FOR IMMUNIZATIONS

IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th>Antigen</th>
<th>Doses</th>
<th>Ages</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POLIO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEASLES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TYPHOID</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7,000 children ages 0-12 months for all four vaccines
VACCINE SOURCE: Vaccine supplies will be provided from the GOI according to routine procedures.

PROJECT ACTIVITIES:

- **DIRECT DELIVERY** of immunizations (along with vitamin A and iron distribution) through existing government PHC system.

- **TECHNICAL ASSISTANCE** to study factors that influence demand for vitamin A and immunizations in the six target kecamatans; also to study existing vital registration methods and develop strategies for their improvement.

- **IMMUNIZATION PROMOTION AND COMMUNITY OUTREACH** through home visits by PKK to families of children not attending events.

- **COLD-CHAIN STRENGTHENING** through supervision.
PROJECT CONCERN INTERNATIONAL (PCI)

Project Concern International
3550 Afton Road
San Diego, CA 92123
(714) 927-9690

Project Concern Indonesia
Technical Officer
Kotak Pos 56
Kendari 93001
Sultra, Indonesia

telephone: (619) 279-9690
telex: 695488 Answer Back PROJCON

CONTACT: Mr. Neil Huff
CONTACT: Dr. Frederick Shaw

MAJOR PURPOSES OF PROJECT: To enhance the Pos Yandu system through assistance in training and equipping of TBAs and through training of TBAs/VHWs in community motivation, education, and follow-up procedures.

PROJECT DURATION AND FUNDING LEVEL: Three year AID-funded child survival project from 1985. Funding is at US$500,000.

GEOGRAPHIC AREA SERVED BY PROJECT: The project will be cooperating with Department of Health officials in the southeast region of Sulawesi, which is the province of Southeast Sulawesi, or SULTRA. SULTRA is one of the 4 provinces on the island of Sulawesi. PCI is currently working in 55 villages in 5 kecamatans of Kabupaten Kolaka.

TARGET POPULATION IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th>Antigen</th>
<th>Doses</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>1</td>
<td>1-3 mos</td>
</tr>
<tr>
<td>DPT</td>
<td>3</td>
<td>3,4,5 mos</td>
</tr>
<tr>
<td>POLIO</td>
<td>3</td>
<td>3,4,5 mos</td>
</tr>
<tr>
<td>MEASLES</td>
<td>1</td>
<td>9 mos</td>
</tr>
<tr>
<td>TETANUS</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>


PROJECT ACTIVITIES:

- Provision of technical assistance for immunization program planning and evaluation with multisectoral involvement.

- Training of TBAs to become village health workers and to assist in recruiting pregnant mothers for TT immunizations.

- Training of mid-level health interns in project planning, implementation, monitoring, and evaluation before entry into the civil service.

- Cold-chain strengthening through supervision, monitoring, and follow-up.
MAJOR PURPOSES OF PROJECT: To complement and enhance CARE’s existing rural community-based water and sanitation program through the promotion of primary health care services for pregnant and lactating women and immunization services for children 3-14 months of age.

PROJECT DURATION AND FUNDING LEVEL: USAID has funded the three-year child survival project with US$313,000 in addition to CARE’s support of $409,000. The USAID funds were obligated in September 1985.

GEOGRAPHIC AREA SERVED BY PROJECT: Forty-eight target villages were selected because they were underserved by the government or other health services. These villages are in three provinces - West Java, West Nusa Tenggara, and East Java.

TARGET POPULATION FOR IMMUNIZATIONS

<table>
<thead>
<tr>
<th>antigen</th>
<th>doses</th>
<th>age</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>1</td>
<td>birth</td>
</tr>
<tr>
<td>POLIO</td>
<td>3</td>
<td>6,10,14 wks</td>
</tr>
<tr>
<td>DPT</td>
<td>3</td>
<td>6,10,14 wks</td>
</tr>
<tr>
<td>MEASLES</td>
<td>1</td>
<td>12-15 mos</td>
</tr>
<tr>
<td>TETANUS</td>
<td>2</td>
<td>4 wk interval</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: UNICEF supply to project clinics will be supplemented with vaccine provided by CARE.

PROJECT ACTIVITIES:

- DELIVERS IMMUNIZATIONS to the target population through existing GOI personnel.
- COMMUNITY HEALTH VOLUNTEERS PROMOTE IMMUNIZATION through health education provided at bi-weekly home visits of all homes where children under 5 years of age reside.
- PROVIDES COLD-CHAIN equipment and syringes to specific health centers.
- TRAINS COMMUNITY HEALTH VOLUNTEERS (cadre) in health education skills and problem solving.
- TRAINS child survival field officers in supervision and training of cadre.
Basic Country Data

<table>
<thead>
<tr>
<th>Total population:</th>
<th>21.9 million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of births annually:</td>
<td>754,000</td>
</tr>
<tr>
<td>Infant mortality rate:</td>
<td>90/1000 live births</td>
</tr>
<tr>
<td>Total population under 5 yrs:</td>
<td>3.3 million</td>
</tr>
<tr>
<td>Under 5 mortality rate:</td>
<td>130/1000</td>
</tr>
<tr>
<td>Annual infant and child deaths (0-4):</td>
<td>98,000</td>
</tr>
</tbody>
</table>

Historical Perspective

Immunization services have been available in Morocco for some time. Among the vaccines currently included in the EPI, BCG was introduced in 1949, DPT in 1963, polio vaccine in 1964, and measles vaccine in 1980. Until 1968, most immunizations were delivered through ma's campaigns. With the development of the health system infrastructure, immunization services were integrated in the mother and child health care services from 1968. In 1981-1982, immunization activities were intensified.

Delivery Strategies

The EPI is based upon two strategies for delivering immunizations: a fixed strategy for urban areas and for rural residents living within 2 km of a health center, and an outreach strategy for all other rural residents. Though the original intention of the program was to attain 100% coverage by 1985, coverage levels through 1984 remained modest.

Technical Aspects

In 1980, an internal review noted the following problem areas: deficiencies in planning and programming, resource utilization, supervision, and evaluation. A special investigation on existing cold-chain equipment revealed a considerable lack of equipment, particularly in rural areas. This survey also showed inadequate staff knowledge in respect to equipment maintenance. In order to correct these shortcomings, steps were taken to intensify the program, including intensive training of personnel involved in immunization, provision of cold-chain equipment, and various epidemiological studies.

In December 1986, a detailed study was jointly undertaken by UNICEF and the Ministry of Public Health to assess and analyze the Moroccan EPI program since its inception. (Reference: Organisation des Journees Nationale de Vaccination. Etude d'Applicabilit. Ministere de la Sante Publique, Royaume du Maroc, Decembre 1986.) After examining the EPI performances and constraints that existed until the end of 1986, serious consideration was given to the idea of implementing a national vaccination campaign as an effective and relatively rapid means of decreasing morbidity and mortality rates. In early 1987, the decision was made to undertake a national vaccination campaign, to be carried out on national journées de vaccination in the fall of the next three years. The campaign was designed to provide total vaccination coverage to all children under 5 and tetanus vaccinations to rural mothers accompanying their children. The MOPH regular vaccination infrastructure would continue providing immunizations during the rest of the year and following the campaign.
# OFFICIAL IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th># DOSES</th>
<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
<th>COVERAGE RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BCG</td>
<td>birth</td>
<td>67</td>
</tr>
<tr>
<td>3</td>
<td>DPT</td>
<td>3, 4, 5 mos</td>
<td>46</td>
</tr>
<tr>
<td>3</td>
<td>Polio</td>
<td>3, 4, 5 mos</td>
<td>46</td>
</tr>
<tr>
<td>1</td>
<td>Measles</td>
<td>9 mos</td>
<td>40</td>
</tr>
<tr>
<td>2</td>
<td>Tetanus Toxoid</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

VACCINE SOURCE: IMPORTED.

**MOH NAMES/TITLES**

Dr. Edelhay Mechbal, Director of Technical Affairs  
Dr. Mustapha Denial, Director of the National Immunization Program

**ADDRESS:**

Direction des Affaires Techniques  
Ministere de la Sante Publique  
Rabat, Morocco

**TELEPHONE:** 611.21  
**TELEX:** 32998
WHO

NAMES/TITLES:
No resident staff.

UNICEF

NAMES/TITLES:
Mr. Alan Everest, Resident Representative
Dr. Othman Akalay, National Officer-Primary Health Care

ADDRESS:
UNICEF
Casier Onu
Rabat/Chellah
Morocco

TELEPHONE: 212-7-600-83, 212-7-600-99
TELEX: 32773m

FUNDING LEVEL: General resources committed total US$2,185,000 for the period 1987-1991. As supplementary funding, US$326,400 has been provided by Rotary International in 1987. An additional US$3,100,000 is being sought for the period 1987-1991.

MAJOR ACTIVITIES/PROJECTS:
UNICEF supported the national vaccination campaign, particularly in procuring vaccines, training, material support, and evaluation. Other UNICEF assistance includes cold-chain development, training and management, monitoring, placement of computers, transportation, and designing of written and visual social mobilization.
USAID

NAMES/TITLES:
Mr. Dale C. Gibb, Chief, HPN
Mr. Paul G. Ehmer, Health Development Officer

ADDRESS:
U.S. Postal Address: USAID/Rabat
American Embassy
APO New York 09284-9400

International Address: 2 Ave. De Mairakech
Rabat, Morocco

TELEPHONE: 622-65
TELEX: 31005

FUNDING LEVEL: US$2,000,000 is programmed for FY 86.

MAJOR ACTIVITIES/PROJECTS:
USAID's Population and Family Planning Support Project III is an integrated maternal child health and family planning program that has, from its inception, provided support to the GOM’s national immunization program. Outreach health workers, under the Visite a Domicile de Motivation Systematique (VDMS) activity, have provided immunization referral since 1984. In FY 84, with US$2 million in child survival funding, USAID added major impetus to the GOM’s program, providing vehicles, fuel, training, and material support to the activity. An additional US$1.5 million in FY 87 will support the GOM’s national vaccination campaign, to be carried out on a series of days each fall for the next three years. The campaign covers tuberculosis, diphtheria, polio, tetanus, whooping cough, and measles.

These funds, as well as those programmed in future years, also support other child survival activities, including diarrhea control, nutrition, prenatal care, and birth surveillance. They supplement a family planning fund, the US$18 million provided under the project.
ROTARY INTERNATIONAL

NAMES/TITLES:

Mr. Mohamed Moufadil, Member

ADDRESS:

45 Avenue Allal Ben Abdellah
Rabat, Morocco

TÉLÉPHONE: 336-46 or 310-20
TELEX: EWING MA 31822 M

FUNDING LEVELS: US$719,921 has been committed for vaccines, US$620 for advance analysis, US$4,000 for public information, and US$59 for contingency cost of vaccines. Funds are to be released to UNICEF for procurement of vaccines and to the Rotary Club of Rabat.

MAJOR ACTIVITIES/PROJECTS:

The POLIOPLUS PROJECT was approved in February 1982, to supply 18,945,300 doses of polio vaccine for five years and to assist in the implementation of the immunization program throughout Morocco. The project will also promote activities in the 36 medical provinces.
Basic Country Data

Total population: 16.5 million
Number of births annually: 669,000
Infant mortality rate: 134/1000
Total population under 5 yrs: 2.7 million
Under 5 mortality rate: 206/1000
Annual infant and child deaths (0-4): 137,000

Historical Perspective

With the WHO's assistance, Nepal's Expanded Immunization Project (EIP) began in 1977 as a successor to the smallpox control program. The project was started in three districts and carried out by various national agencies, including the Integrated Community Health Project (ICHP), the Family Planning and Maternal Child Health Project (FP/MCH), the Tuberculosis Control Program (TBCP), the Dooley Foundation under contract with the government, and government and mission hospitals.

Initially, DPT and BCG were introduced, and a year later (1978/1979) TT was also introduced. Because of difficulties in maintaining the cold chain in Nepal, measles and polio vaccines were not available until 1980/1981 in the zonal and district offices and 1981/82 in the field.

National Policies

An Expanded Immunization Committee coordinates immunization policies, strategies, and schedules with the EIP and the Public Health Division, of the Ministry of Health, which also provides immunization. The EIP and PHD combined provide immunization coverage for 74 of Nepal's 75 districts, which accounts for 98% of the total population.

The Public Health Division is part of the MOH and is intended to be the primary agent for the delivery of health services in rural areas. The long-term GON policy is to hand over immunization activities in districts from the EIP to the PHD by 1991. Some questions have been raised, however, about the future of immunization activities in newly integrated districts. EIP has invested a significant amount of resources in the creation of a program which includes a cold chain and a trained staff and appears to work reasonably well. In the past, almost none of the EIP staff have been incorporated into the integrated staff structure at the time of transfer.

Delivery Strategies

Nepal is using various strategies for acceleration of the EIP. These include: 1) utilization of all fixed PHC facilities such as hospitals, health posts, MCH clinics, and other institutions run by NGOs; 2) assigning supplementary mobile teams in densely populated areas; 3) increasing community awareness through all possible communication channels; 4) integrating EIP campaigns into three important national events during each year; and 5) social mobilization.
The PHD strategy is to deliver immunization through: 1) the health post clinics; and 2) the village health worker (VHW) outreach system which calls for the VHWs to spend five days a month on immunization activities.

Technical Aspects

Regional vaccine storage depots have been set up in four regions, with trained staff and suitable refrigeration equipment. In addition, national training activities in mid-level management and cold-chain logistics, using WHO training materials translated into Nepali and involving staff from all the projects and organizations involved in EIP, have become routine. Immunization coverage evaluation surveys have been done in several districts to document the progress of the program and point out areas needing improvement.

Field supervision has consistently been noted as needing strengthening in Nepal. Although many recommendations have been made in past consultant visits, their practical implementation in the field has been stalled because EIP has apparently not been identified as a priority within the primary health care network.

WHO EPI reviews were conducted in February 1980 and December 1985.

OFFICIAL IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
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<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
<th>COVERAGE RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BCG</td>
<td>birth</td>
<td>65</td>
</tr>
<tr>
<td>3</td>
<td>DPT</td>
<td>6 wks, 4,5 mos</td>
<td>31</td>
</tr>
<tr>
<td>3</td>
<td>Polio</td>
<td>6 wks, 4,5 mos</td>
<td>20</td>
</tr>
<tr>
<td>1</td>
<td>Measles</td>
<td>9mos</td>
<td>46</td>
</tr>
<tr>
<td>2</td>
<td>Tetanus Toxoid</td>
<td>15-44 yrs</td>
<td>10</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: UNICEF.

MOH NAMES/TITLES:

Mr. Gunjeshwore Prasad Singha, Minister of Health
Dr. B. B. Karki, Medical Officer-Public Health Division
Dr. Suniti Acharya, Chief EIP
Mr. Amir Man Shrestha, Cold Chain Section Senior Supervisor, EIP
Dr. Suniti Acharya, Chief EIP

ADDRESS:

Ministry of Health
Ram Shah Bath Lane
Kathmandu, Nepal

TELEPHONE: 523200 TO 11 (ask for WHO)
TELEX: 2306 or 2206 UNDP NP (for WHO)
WHO

NAMES/TITLES:
Dr. P. Micovic, Representative
Mr. Garry Presthus, Technical Officer
Dr. N. C. Srivastava, STC Cold Chain Engineer-EPI/SEARO

ADDRESS:
The WHO Representative
UN Common Building Pulchowk
Lalitpur
P.O. Box No. 108
Kathmandu, Nepal

TELEPHONE: 52 19 80 and 52 19 89
TELEX: 2306 OR 2206 UNDP NP (for WHO)

FUNDING LEVEL: $113,800 (7/83-7/84)

MAJOR ACTIVITIES/PROJECTS:
Provides technical expertise and training and fellowship opportunities for the national EIP program.
UNICEF

NAMES/TITLES:

Dr. Lay Maung, Country Representative
Mr. Ali Mahalati, Project Officer, Health
Mr. Shiroishi Yukihiro, Project Officer, EPI

ADDRESS:

UNICEF, Nepal
United Nations Building
P.O. Box 1187
Gairidhara Road
Pulchok
Kathmandu, Nepal

TELEPHONE: 977-5-21988/1, 5-21966, 5-21980
TELEX: 3161464 UNCF IN; 02206 UNDP NP

FUNDING LEVEL: UNICEF provides US$1.9 million from general resources and seeks an additional US$8.7 million as specific-purpose contributions for the period 1988-1995. The government budget allocation for the same period amounts to US$18.9 million.

MAJOR ACTIVITIES/PROJECTS:

UNICEF supports and contributes to all areas of EPI, including training, transportation, supply of vaccines and materials, social mobilization, and monitoring and evaluation. UNICEF cooperates with WHO, USAID, Rotary International, and non-government organizations in the support and development of HMG/MOH accelerated EPI activities to reach 86% coverage for BCG, DPT3, OPV3, and measles of all infants and 95% coverage for TT2 of all women within 15-44 years of age in all 75 districts of the country by 1995.
USAID

NAMES/TITLES:

Dr. David H. Calder, Chief, HPN
Mr. David Piet, Health Development Officer
Dr. Nils Daulaire, Chief of Party, John Snow, Inc.

ADDRESS:

U.S. Postal Address:  
USAID/Kathmandu  
Washington, D.C. 20520-6190

International Address:  
Pani Pokhari  
Kathmandu, Nepal

TELEPHONE:  411179, 412718, 411601
TELEX:  NP 9472381 AEKTM

MAJOR ACTIVITIES/PROJECTS:

USAID supports the national EIP program by supplying refrigerators and spare parts for refrigerators as well as equipment for cold rooms. In addition, USAID's Integrated Rural Health/Family Planning Project conducts a tetanus immunization campaign for all married women of reproductive age in the Terai, with technical assistance from JSI. In 1988, REACH will assist in the design and participation of a neonatal tetanus mortality survey.
Basic Country Data

Total population: 100.4 million
Number of births annually: 4,155,000
Infant mortality rate: 115/1000
Total population under 5 yrs: 17.4 million
Under 5 mortality rate: 174/1000
Annual infant and child deaths (0-4): 727,000

Historical Perspective

The Federal Government of Pakistan (GOP) launched a country-wide Expanded Program on Immunization (EPI) in 1979 as part of the fifth five-year plan. By 1982, however, progress had been disappointing, with only 2% of the children fully immunized. Subsequently, additional resources were directed toward EPI as one of three components of the Accelerated Health Programme (AHP) which was launched in 1982-1983.

The AHP/EPI is headed by the National Coordinator at Pakistan's National Institute of Health (NIH), and was funded through the federal and provincial annual development programs (ADPs) rather than through the operating budgets of the Ministry of Health and provincial health department. Thus, it was set up temporarily as a vertical program, with the intention that the immunization program would eventually become integrated into the ongoing primary health care services system.

The first two years of the AHP/EPI showed impressive increases in full immunization coverage of the 0-5 year-old target population. In less than two years, the program had reached approximately 9 million children. By mid-year 1985, every province had organized a mass vaccination drive, and high public awareness of the need for immunization was achieved through an intensive mass media campaign. By 1986, these accelerated efforts helped achieve 65% immunization coverage for all but the measles vaccine for the infant population.

Following the success of the AHP program, the GOP agreed to its continuation, with concentration on the immunization of infants and pregnant women. The MOH has established coverage targets both nationally and at the provincial level in order to achieve the Universal Childhood Immunization (UCI) objective by 1990. Likewise, each province has developed its own plan of action to carry through with this plan.

National Policies

The federal level of the AHP/EPI has responsibility for procurement of vaccine and other immunization supplies, training of senior- and mid-level EPI managers, overall planning and evaluation, and disease surveillance and information systems. The provincial level is responsible for implementing the immunization program, under the direction of a full-time EPI project manager. The management responsibilities are further subdivided down to the division and district levels of political jurisdiction.
Delivery Strategies

The delivery strategies for achieving these objectives incorporate fixed centers, outreach teams, and mobile teams. The fixed centers are located in existing health facilities and serve the population within a 5km range. The number of fixed centers will be increased from 1,740 in 1986 to 4,165 in 1988, which means that each health facility in the country will provide EPI services. The outreach teams serve the population living within the 5-8 km range of the health center. The team is composed of 2-4 vaccinators who often reach their service areas by bicycle or motorbike. The acceleration effort plans to increase the number of these teams from 1,921 in early 1986 to 3,946 by 1988. Mobile teams are used in some provinces to cover sparsely populated areas and isolated villages. These teams consist of 4-6 vaccinators assisted by a driver with a vehicle. The planned increase from 1986 to 1988 is to add another 63 teams, for a total of 142.

Because the Accelerated Health Programme ends in 1987 (in 1986 in Punjab), funding has been sought from WHO, UNICEF, and USAID until the EPI becomes part of the provincial operating budgets.

The Punjab EPI has begun to address the long-term goal of integration of immunization into the primary health care system by choosing to train vaccinators to perform other PHC tasks. In principle, the vaccinators will be supervised more and more by medical officers at the rural health centers. By early 1987 the Punjab Province Finance Department had agreed to pay the salaries of MOH vaccinators and some of these training expenses. Other provinces will face a similar decision in late 1987.

EPI Reviews

A review of the Accelerated Health Programme and other Selected primary health care activities in Pakistan was conducted from November 10 - December 6, 1984. This was a joint report by the GOP, WHO, UNICEF, USAID, and CIDA review team. In October 1986, the national EPI coordinator requested a review of the disease surveillance system in order to further improve the EPI in Pakistan. The evaluation was carried out by CDC. A national immunization coverage and disease survey was planned for March 1987.
OFFICIAL IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th># DOSES</th>
<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
<th>EPI NATIONAL REPORTED COVERAGE RATES (1986, &lt;1 yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BCG</td>
<td>birth</td>
<td>77.8</td>
</tr>
<tr>
<td>3</td>
<td>DPT</td>
<td>3,4,5 mos</td>
<td>63.1</td>
</tr>
<tr>
<td>3</td>
<td>Polio</td>
<td>3,4,5 mos</td>
<td>63.1</td>
</tr>
<tr>
<td>1</td>
<td>Measles</td>
<td>9 mos</td>
<td>69.3</td>
</tr>
<tr>
<td>2</td>
<td>Tetanus Toxoid</td>
<td>pregnancy</td>
<td></td>
</tr>
</tbody>
</table>

VACCINE SOURCE: Some measles vaccine is locally produced at the NIH. This production plan opened in 1984 and is financed by His Royal Highness, Prince Talal of Saudi Arabia, and CIDA. NIH is producing rabies, measles, activated polio, tetanus toxoid, typhoid, and cholera vaccines. DPT vaccine is imported and put into vials at NIH. To obtain necessary quantities, additional antigens are obtained through UNICEF.

MOH NAMES/TITLES:

Mr. Sasdar Ghulam Mohammed Mehar, Minister of Health
Major General (Retd.) M.I. Burney, Executive Director, National Institute for Health, and the National Coordinator, EPI
Col. Mohammad Akram Khan, National Project Manager, EPI
Dr. Amir Rahman, Deputy Director, EPI, N.W.F.P.
Dr. Arif Bhatti, Medical Officer, EPI, Punjab
Dr. Rana Afzan, Medical Officer, EPI, Baluchistan
Mr. Mushtaq Ahmed, Assistant Technical Officer, EPI
Dr. Mohammad Umar Baloch, Assistant Director, EPI, Sind

ADDRESS:

National Institute of Health
Islamabad, Pakistan

TELEPHONE: 820797, 828607 (Akram)
TELEX: 5811-NAIB-PK HEALTH INST
WHO

NAMES/TITLES:

1. Dr. N. Tavil, WHO Country Coordinator
2. Dr. Witjaksono, WHO Epidemiologist and EPI Advisor
3. Mr. Ismatullah Chaudhury, WHO Operations Officer, Punjab
4. Mr. Mohammed Hanif Lang, Operations Officer, N.W.F.P.
5. Ms. F. Rahman, Operations Officer
6. Mr. M.N. Raza, Operations Officer
7. Mr. N. Md. Khan, Operations Officer

ADDRESS:

1. P.O. Box 1013 Block 2, Diplomatic Enclave No-1, Ramna 5
2. National Institute of Health, Islamabad
3. Directorate of Health, Cooper Road, Lahore
4. Directorate of Health
   Government of NWFP, Peshawar
5. Directorate of Health, EPI, Karachi

TELEPHONE: 822316 (Dr. Tavil)
TELEX: 5886-UNIBA-PK UNDP for WHO

FUNDING LEVEL: US$720,000 has been committed over the three-year period, from 1986-1988, at approximately $240,000 per year.

MAJOR ACTIVITIES/PROJECTS:

Technical support in the form of a senior EPI advisor to be stationed at NIH and four operations officers, one to be stationed in each province. Assistance in staff training, monitoring, and evaluation of the program. Supply of cold-chain monitors, teaching aids, and materials.
UNICEF

NAMES/TITLES:

Mr. C. Schonmeyer, Country Representative
Mr. Julian Lambert, Health/Nutrition Programme Officer, Islamabad
Mr. Dan O'Dell, Senior Programme/Planning Officer, Islamabad

ADDRESS:

BLUE AREA
UNICEF
P.O. Box 1063
Islamabad, Pakistan

TELEPHONE: 823564/8:5142
TELEX: 5585, UNICEF PK

FUNDING LEVEL: US$3.155,200 was provided by UNICEF from general resources over the three-year period 1986-1988. For 1988-1992, UNICEF is requesting US$6.93 million in supplementary funding. UNICEF will provide US$1.07 million from its general resources during that same period.

MAJOR ACTIVITIES/PROJECTS:

Major inputs include the procurement of vehicles and cold-chain equipment and staff training for cold-chain technicians, and in part for peripheral workers. Additionally, UNICEF supports monitoring and evaluation of EPI activities and technical support.
USAID

NAMES/TITLES:

Mr. Raymond S. Martin, Chief HPN
Ms. Heather Goldman, Health Development Officer

ADDRESS:

U.S. Postal Address:  
USAID/Islamabad  
Washington, D.C. 20520-8100

International Address:  
Diplomatic Enclave  
Ramna 5  
Islamabad, Pakistan

TELEPHONE:  8261-61 thru 79
TELEX:  82-5-864

FUNDING LEVEL: USAID will provide US$2,500,000 for financial assistance toward the procurement of vehicles, staff training, and surveillance, monitoring and evaluation of the disease surveillance systems for the accelerated immunization effort over the three-year period of 1986-1988.

MAJOR ACTIVITIES/PROJECTS:

The Primary Health Care Project assists the GOP with the improvement of quality and coverage of priority primary health care services in rural areas. The four major components to the project are: 1) support to the EPI including commodities and training; 2) improvement of management of basic health services through training and introduction of management systems; 3) training of health workers, especially medical technicians, the revision of the medical technical training curriculum, and the construction and equipping of 13 medical technician training schools; and 4) strengthening of the ORT program, including technical assistance, communications, and training.

USAID is also supporting the REACH Project in two studies relating to injection equipment use. These studies will be conducted in 1988. The first will be a field trial of a new single-dose non-reusable syringe, and the second will be a diversion study of the disposable syringes currently being provided for the establishment of a tetanus toxoid production facility.
ROTARY INTERNATIONAL

NAMES/TITLES:

PDG Kassim Dada, Chairman, Asbestos Cement Industries

ADDRESS:

Kassam Manzil, Randal Road
Karachi, 3
Pakistan

TELEPHONE: 724209, 728011
TELEX: 25388 SLIM PK
CABLE: SINOVES BKK 5

FUNDING LEVEL: US$4,370,000 of which US$2,250,000 is for vaccines and US$120,000 is social mobilization during the five-year period has been committed.

MAJOR ACTIVITIES/PROJECTS:

The POLIOPLUS PROJECT is involved in mobilization efforts of the media and other service organizations and businesses to support EPI. Rotary is also a participant in the EPI working groups in the National Institute of Health.

CIDA (CANADA)

NAMES/TITLES:

Ms. Carol Kerfoot, Second Secretary
Canadian Embassy, Islamabad

Mr. Mohammad Iqbal Qureshi
Project Manager
EPI Communications Project
National Institute of Health
Islamabad, Pakistan

TELEPHONE: 821101, 821102, 821103, 821104
TELEX: 5700 Answer Back 5700 DOCAN PK

FUNDING LEVEL: 7 million Canadian dollars has been allocated from 1983-1985. 1.7 million Canadian dollars were designated for communications and the remainder went to purchase vaccines.

MAJOR ACTIVITIES/PROJECTS:

CIDA supports communications activities for EPI and provides funds for vaccines.
UNHCR (UNITED NATIONS HIGH COMMISSION ON REFUGEES)

NAMES/TITLES:

Dr. Claude Agillaume
Health Program Director
UNHCR
Pakistan

TELEPHONE: 826005
TELEX: 952-5665 Answer Back 5665 UNHCR PK

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:

Provides EPI services for the Afghan refugee population of approximately 2,000,000 in the Northwest Frontier Province.
MAJOR PURPOSES OF PROJECT: To initiate primary health care outreach programs in four of the PVO's curative clinics and to expand the coverage of two existing PVC outreach programs.

PROJECT DURATION AND FUNDING LEVEL: US$626,000 in USAID funds for three-year child survival project begun in late 1985.

GEOGRAPHIC AREA SERVED BY PROJECT: The project will operate in 10 outreach areas supported by base dispensaries in the following areas: Azam Town, Saddar, and Orangi, all outside of Karachi; and Quazipur and Thal in the Northwest Province.

TARGET POPULATION FOR IMMUNIZATIONS

<table>
<thead>
<tr>
<th>antigen</th>
<th>doses</th>
<th>age</th>
</tr>
</thead>
<tbody>
<tr>
<td>children ages 0-5 years</td>
<td>BCG</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>POLIO</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>DPT</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>MEASLES</td>
<td>1</td>
</tr>
<tr>
<td>pregnant and other child-bearing age women</td>
<td>TETANUS</td>
<td>2</td>
</tr>
</tbody>
</table>


PROJECT ACTIVITIES:

- DELIVERS IMMUNIZATIONS to the target population through Salvation Army clinics through PVO personnel.
- TRAINS village health workers in immunization promotion through home visits.
PHILIPPINES

SOUTH CHINA SEA

PACIFIC OCEAN

SULU SEA

CELEBES SEA

MALAYSIA
Basic Country Data

Total population: 54.5 million
Number of births annually: 1,743,000
Infant mortality rate: 48/1000 live births
Total population under 5 yrs: 8.0 million
Under 5 mortality rate: 78/1000
Annual infant and child deaths (0-4): 139,000

Historical Perspective

The Ministry of Health (MOH) launched the Expanded Program on Immunization (EPI) in the Philippines on July 12, 1976, with assistance from UNICEF and WHO. The opening activities of the program provided BCG to children entering school. By July 1982, measles vaccine was adopted, and the program had evolved to include nationwide coverage for all of the EPI target diseases. Two years later, the DPT schedule was increased from two to three doses. About the same time, immunization became more integrated into the national Maternal and Child Health (MCH) program.

Levels of immunization coverage have shown many fluctuations since 1982, with national managerial support, planning at all levels, supervision, programs communications, and use and maintenance of cold-chain materials being identified as areas where improvements were needed.

National Policies

In April 1986, President Aquino issued the sixth proclamation of her administration which ordered that national support be given to the international goal of Universal Child Immunization (UCI) by 1990.

Current Scope

Soon after the proclamation for UCI, a comprehensive program review for the EPI was conducted by the MOH, with input from a committee composed of representatives from UNICEF, WHO, Save the Children Foundation, Rotary International, and USAID.

The national EPI strategy is based on immunization days held at government hospitals, municipal health centers, and subunits of the health centers known as Barangay Health Stations. From 1976 to 1983, immunization days were held twice a year, and from 1984 until 1986 the campaigns were held on a quarterly basis. Upon recommendation from the review committee, vaccination days will now be held at least one time per month.

Within the MOH, responsibility for the EPI rests with the National Immunization Unit (NIU), which is headed by the National Immunization Officer, who is responsible to the Deputy Minister of Health. The National Immunization Unit is in charge of operations planning, vaccine ordering, and monitoring/evaluation. Additionally, the NIU coordinates the collaboration with the Health Education and Manpower Development Service, which is responsible for the national-level training plan, and with the Division of Information of the Office of the Minister of Health, which is
responsible for the EPI Information, Education and Communication (IEC) plan. The Cold Chain Field Operations Officer, designated by the MOH, is responsible for overall cold-chain management.

Regional, provincial, and district level officials are responsible for management of the EPI at the those levels. There is a regional cold room located within the regional office. The Bureau of Laboratories (BRL) is responsible for vaccine storage and distribution, as well as production of TT and BCG vaccines. The Health Intelligence Service (HIS) carries out disease surveillance.

Technical Aspects

In November 1986, the Philippine EPI published a manual of procedure which covers all issues of training and operations and policy. In September 1986, the first issue of the EPI Newsletter was published. It is slated for monthly publication to be distributed by direct mail to health workers delivering immunization on a nationwide basis.

RECOMMENDED IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th># DOSES</th>
<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
<th>COVERAGE RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BCG</td>
<td>birth</td>
<td>62.2</td>
</tr>
<tr>
<td></td>
<td>DPT</td>
<td>6,10,14 wks</td>
<td>31.0</td>
</tr>
<tr>
<td></td>
<td>Polio</td>
<td>6,10,14 wks</td>
<td>32.1</td>
</tr>
<tr>
<td>1</td>
<td>Measles</td>
<td>9 mos</td>
<td>27.7</td>
</tr>
<tr>
<td>2</td>
<td>Tetanus Toxoid</td>
<td>pregnant women</td>
<td>18.4</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: BCG and TT vaccines are locally produced. DPT and measles vaccines are supplied by UNICEF. Polio vaccine is imported.

MOH NAMES/TITLES:

Dr. Manuel Roxas, Deputy Minister for Public Health
Dr. Aurora Villarosa, Director, Bureau of Health Services
Dr. Gloria Casabal, Chief, Maternal and Child Health Division
Dr. Ponciano Aberin, National Immunization Officer
Dr. Cory Aranas, Regional EPI Officer

ADDRESS:

Ministry of Health
P.O. Box 2932
Makati, Philippines

TELEPHONE: 7116716
WHO

NAMES/TITLES:

Dr. H. Nakajima, Director, Regional Office for Western Pacific
Dr. Hu Ching-Li, WHO Representative

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Regional Office for the Western Pacific
P.O. Box 2932
Manila 2801
Philippines

TELEPHONE: 5218421
TELEX: 27652, 63260, 40365
FAX: 632/52 11 036

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:

WHO will provide technical consultants and financial assistance for mid-level course training.
UNICEF

NAMES/TITLES:
Ms. P. Kale, Country Representative
Ms. Bituin Gonzales, Health Programme Coordinator

ADDRESS:
UNICEF
6th Floor NEDA Building
106 Amorsolo St.
Legaspi Village, Makati
Metro Manila, Philippines

TELEPHONE: 85-06-11 through 25, 86-42-45 (Representative)
TELEX: 22251 UNA FOR UNICEF

FUNDING LEVEL: The budget for 1988-1992 is under negotiation. UNICEF will provide US$2.0 million for strengthening health services for 1988. Out of a total of US$416,000, US$210,000 is allocated for UCI. Funds for EPI are also allocated under area-based CSD. In supplementary funding, US$3.9 million will be provided for total health services. An additional US$7.8 million in supplementary funding is being sought for the area-based child survival initiative. Vaccines are provided through UNICEF for Rotary International.

MAJOR ACTIVITIES/PROJECTS:
UNICEF has had a significant role in encouraging the MOH to move from a quarterly to a monthly immunization schedule and to adopt the WHO standard of contraindications. A joint WHO/UNICEF EPI review identified surveillance and monitoring techniques as areas of weakness, which UNICEF has also been focusing on. UNICEF will continue to provide vaccines, other logistical supplies such as cold-chain facilities, technical consultancy, and financial assistance for training and conferences, especially consultative workshops for EPI managers. While supporting the national program, UNICEF will strengthen the EPI component in selected provinces/urban areas as part of the area-based CSD.
USAID

NAMES/TITLES:

Mr. William H. Johnson, Chief, HPN
Mr. Kenneth Farr, Asst. Health Development Officer
Mr. Edward Muniak, Population Development Officer

ADDRESS:

U.S. Postal Address:  
USAID/Manila  
APO San Francisco  96528-8600

International Address:  
1201 Roxas Blvd.  
Manila, Philippines

TELEPHONE:  521-7116
TELEX:  722-27366 AME PH

MAJOR ACTIVITIES/PROJECTS:

USAID has supported the REACH Project in the placement of an EPI advisor for approximately 1 year to 18 months to assist the national EPI with evaluation, IEC, training, and management development.

USAID is willing to provide technical assistance and logistical support to existing new bilateral projects and grants.

ROTARY INTERNATIONAL

NAMES/TITLES:

PDG Antonio P. Tambunting, Jr.

ADDRESS:

Rm. 301, State Condominium Bldg. 1  
182 Salcedo St., Legaspi Village  
Makati, Metro Manila

TELEPHONE:  187-9971, 818-5639

MAJOR ACTIVITIES/PROJECTS:

Through the POLIOPLUS Project, Rotary International will continue to provide polio vaccines, intensify EPI campaigns, particularly in urban areas, for mass immunizations, and provide some logistical support. All Rotary Clubs in the Philippines are cooperating to support the national EPI. The grant provides US$892,500 for polio vaccine and US$25,000 for social mobilization.
SAVE THE CHILDREN FOUNDATION (U.K.)

NAME/TITLE:
Mr. Michael Novell, Director

ADDRESS:
Save the Children Federation (SCF)
322 Secretariat Bldg.
PICC, CCP Complex
Roxas Blvd
Metro Manila

TELEPHONE:  832-0309, extension 7655

MAJOR ACTIVITIES/PROJECTS:
Participated as a member of the recent EPI evaluation committee.
Basic Country Data

- Total population: 6.8 million
- Number of births annually: 331,000
- Infant mortality rate: 128/1000 live births
- Total population under 5 yrs: 1.3 million
- Under 5 mortality rate: 210/1000
- Annual infant and child deaths (0-4): 70,000

Historical Perspective

The EPI was initiated in the Yemen Arab Republic (YAR) in 1977 as a long-term integrated component of the established health services. Until 1983, mobile teams provided immunization services.

National Policies

All immunization activities throughout the YAR are under the technical responsibility of the EPI, working under the Department of Primary Health Care/Basic Health Services (PHC/BHS) in the Ministry of Health.

The target age group for immunizations is infants under one year, although children up to five years old are not refused immunization. Additionally, a school immunization program is in place for delivering DT and BCG vaccinations to elementary school students.

Delivery Strategies

Presently, EPI activities are focused on providing technical assistance to health institution staff who give immunizations. However, only one-third of health facilities are delivering immunization services and only approximately 30% of the population has access to EPI services.

By 1985, the YAR EPI had succeeded in vaccinating 10-15% of its target age group with all six antigens. In light of these low coverage rates, the Yemen EPI has called for an acceleration strategy. A trial was conducted in Amran District in five primary health care unit areas where PHC workers and local birth attendants administered the immunizations themselves after an initial five-day training period. Coverage improved to 80% for both OPV/DPT and BCG. This strategy of application of PHC principles to EPI was adopted by 50% of the 200 PHC units at the end of 1985. Accessibility of the population to EPI was projected to increase from 30% to 40% by the end of 1986.

Other strategies proposed by YAR EPI to reach their target of 100% coverage for infants under 1 year old in both rural and urban areas by 1990 are to: 1) strengthen and consolidate existing EPI services to be able to cover at least 30% of the child population in their operational areas; 2) extend EPI services to all the health facilities, health centers/sub-centers, MCH clinics, and PHC units; and 3) undertake a nation-wide mass immunization campaign in 1987 featuring national immunization weeks beginning in October 1987.
Technical Aspects

Limited financial resources, a lack of sufficient numbers of trained personnel, difficult transportation through Yemen's mountains and deserts, and a very limited primary health infrastructure have all posed formidable constraints to the delivery of immunizations.

OFFICIAL IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th>DOSES</th>
<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
<th>COVERAGE RATES (VHO, 1985)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BCG</td>
<td>3 mos</td>
<td>32</td>
</tr>
<tr>
<td>3</td>
<td>DPT</td>
<td>3, 4, 5 mos</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>Polio</td>
<td>3, 4, 5 mos</td>
<td>15</td>
</tr>
<tr>
<td>1</td>
<td>Measles</td>
<td>9 mos</td>
<td>17</td>
</tr>
<tr>
<td>2</td>
<td>Tetanus Toxoid</td>
<td>women of childbearing age</td>
<td>2</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: UNICEF.

MOH NAMES/TITLES:

Dr. Muhammed Ahmed al-Kabab, Minister of Health
Mr. Ali Ismail al-Olofi, Deputy Minister of Health
Dr. Jaffar Mohamed Said, Director General of Medical & Health Services
Dr. Abbas Zabarrah, Director of Primary Health Care
Dr. Al Hamli, Director of Planning, Evaluation & Statistics
Mr. Ali al-Sowari, Director of Health Education
Dr. Mohammed Hajjar, Director of International Relations
Dr. Ahmed Said, Director EPI Program

ADDRESS:

Sanaa, YAR

TELEPHONE: 72673
WHO

NAMES/TITLES:
Dr. Zamil Al-Alawy, WHO Representative

ADDRESS:
P.O. Bcx 543
Sanaa
Yemen Arab Republic

TELEPHONE: 272943, 272873
TELEX: 2683 WHO YE

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:
Provides epidemiological, administrative, and advisory services.

UNICEF

NAMES/TITLES:
Mr. Stewart McNab, Country Representative
Ms. Hind Al-Musri, Project Officer

ADDRESS:
Anman Road
(Next to National Water and Sewer Authority Office)
Sanaa, Yemen

TELEPHONE: 231256, 231258
TELEX: 946 2191, 2461

FUNDING LEVEL: US$2.5 million is budgeted from general resources for the period 1987-1991. An additional US$3.0 million in supplementary funds are being sought for the period 1988-1990.

MAJOR ACTIVITIES/PROJECTS:
In the past, UNICEF has helped to upgrade the cold chain and to expand the entire PHC network. UNICEF is working hard to encourage the government to undertake an accelerated EPI program; however, insufficient funds have stalled this effort. UNICEF assistance includes provision of vaccines, needles, and syringes and designing of written and visual social mobilization and education materials.
USAID

NAMES/TITLES:
Ms. Lee Feller, HPN Officer

ADDRESS:
U.S. Postal Address:  
USAID/Sanaa  
Washington, D.C.  20520-6330

International Address:  
P.O. Box 1088  
Sanaa, Yemen

TELEPHONE:  271950 thru 58  
TELEX:  2697 EMBSAN YE

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:

AID helps support the national EPI and also supports the Tihama Primary Health Care Project, implemented by Management Sciences for Health. This project has established 72 primary health care units and has completed the first stage of a regional campaign aimed at an EPI coverage of 90% in Tihama.

The recently signed Yemen "Accelerated Cooperation for Child Survival" project provides for REACH assistance in the development of primary health care systems of six governorates, with an emphasis on EPI development.
Basic Country Data

<table>
<thead>
<tr>
<th>Data</th>
<th>Value</th>
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<tbody>
<tr>
<td>Total population:</td>
<td>6.5 million</td>
</tr>
<tr>
<td>Number of births annually:</td>
<td>278,000</td>
</tr>
<tr>
<td>Infant mortality rate:</td>
<td>117/1000 live births</td>
</tr>
<tr>
<td>Total population under 5 yrs:</td>
<td>1.1 million</td>
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<tr>
<td>Under 5 mortality rate:</td>
<td>184/1000</td>
</tr>
<tr>
<td>Annual infant and child deaths (0-5):</td>
<td>51,000</td>
</tr>
</tbody>
</table>

Historical Perspective

Before the EPI began in Bolivia, immunizations were periodically supplied by the Ministry of Health and Social Services (MPSSP) through mass campaigns and at health facilities with refrigeration equipment. From 1969-1976, a mass campaign involving smallpox and BCG vaccines reached approximately 2 million persons. The MPSSP also conducted an anti-polio campaign in 1973 and an anti-measles campaign in 1976.

In 1977, after the first PAHO EPI conference, the MPSSP adopted the following EPI policies: vaccination on a permanent and continuing basis in existing health facilities; simultaneous immunization of children with DPT, polio, measles, and BCG vaccines; and immunization of all children under the age of three years, but with special emphasis on children under the age of one year, and pregnant women with tetanus toxoid.

The Expanded Program on Immunization (EPI) began in Bolivia in 1979, with the technical support of the Pan American Health Organization (PAHO) and with financial support from USAID. During June 1979, the first national EPI conference took place in Cochabamba, concentrating on financial and technical issues in implementing EPI. By September of 1979, the first demonstration site commenced operations in the rural Punata province of Cochabamba, and by 1980 EPI services were being implemented in most areas of the country.

Delivery Strategies

During 1980 and 1981, the immunization coverage attained by an essentially institutional (clinic based or fixed) strategy reached a maximum of 25-30% of children under 3 years old for third doses and 28% of children under 3 years for vaccines with only one dose. After this period, a strategy of popular mobilizations (mass campaign) was begun, permitting improvements in the coverage of immunizations from 28,838 children under one year old in 1982, to 112,838 in 1984. In spite of this national effort, vaccination coverage of children under one year old still appeared to be one of the lowest in the Americas.

Both the MOH and donors acknowledge that Bolivia's strategy of mass campaigns has not worked particularly well and are proposing a new, accelerated EPI which will shift the focus from mass campaigns to a more permanent service delivery system. The new EPI plan for 1988-1990 has the objective of immunizing 90% of Bolivian children under three years of age against polio, diphtheria, tetanus, measles, and TB.
The National Division of Immunization is responsible for all EPI activities. The Divisions of Epidemiology and Maternal and Infant Health cooperate in the supervision of immunization sites, program assessment, statistics, administration, and health education.

Technical Aspects

A joint UNICEF/PAHO/MPSSP/Rotary evaluation of EPI in Bolivia was undertaken in 1985. This evaluation analyzed program activities on a national level as well as in 126 service sites. Separate sub-assessments of regional programs in Cochabamba, Chuquisaca, Tarija, and Oruro were also made. Constraints which the MOH has faced include inadequate technical personnel, lack of transport, difficulty maintaining the cold chain (especially in rural areas), a relatively low level of public education/motivation concerning the immunization program, and a difficult topography with highly-dispersed patterns of population settlement.

OFFICIAL IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th># DOSES</th>
<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
<th>COVERAGE RATES (WHO, 1987, &lt;1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BCG</td>
<td>birth</td>
<td>24</td>
</tr>
<tr>
<td>3</td>
<td>DPT</td>
<td>3,6,9 mos</td>
<td>33 (3rd)</td>
</tr>
<tr>
<td>3</td>
<td>Polio</td>
<td>3,6,9 mos</td>
<td>30 (3rd)</td>
</tr>
<tr>
<td>1</td>
<td>Measles</td>
<td>9 mos</td>
<td>21</td>
</tr>
<tr>
<td>2</td>
<td>Tetanus Toxoid</td>
<td>pregnant women</td>
<td></td>
</tr>
</tbody>
</table>

VACCINE SOURCE: Rotary International funds procurement of OPV through UNICEF.

MOH NAMES/TITLES:

Dr. Jorge Mariscal P., National Director, Division of Epidemiology
Lic. Enrique Lavadenz L., Chief, Division of Immunizations/EPI

ADDRESS:

Ministry of Health
P.O. Box 1453
La Paz, Bolivia

TELEPHONE: 37-54-60-2(3)
TELEX: 2220 Answer Back BNV
PAHO

NAMES/TITLES:

Dr. Hugo Villegas, Representative
Dr. P. Hallkyer, Medical Officer

ADDRESS:

Senor Representante de la OPS/OMS
Apartado 3745
San Jose
Costa Rica

TELEPHONE: 231686
TELEX: 2568

FUNDING LEVEL: US$566,800 has been committed for the period 1987-1991, representing 4.7% of the total projected EPI budget in that time period.

MAJOR ACTIVITIES/PROJECTS:

UNICEF

NAMES/TITLES:

Mr. J. Mayrides, Country Representative
Dr. O. Castillo, Project Officer, Health

ADDRESS:

Av. 20 de Octubre 2695
Plaza Abaroa
Casilla No. 20527, La Paz

TELEPHONE: 591-2-321699 or 591-2-343410
TELEX: 355-3243

FUNDING LEVEL: For the period 1988-1990, supplementary funding of US$800,000 is being sought.

MAJOR ACTIVITIES/PROJECTS:

UNICEF has been supporting the Bolivian EPI since 1983. Activities are coordinated with the MOH, USAID, PAHO, and Rotary in all areas of EPI, including cold-chain maintenance, procurement of needles and syringes, training, social mobilization, administration, and transportation.
USAID

NAMES/TITLES:

Mr. Paul Hartenberger, Deputy Chief, HPN
Mr. Michael Hacker, Supervisory General Development Officer

ADDRESS:

U.S. Postal Address:  
USAID/Bolivia  
APO Miami, FL 34032

International Address:  
Banco Popular Del Peru Bldg.  
Corner of Calles Mercado and Colon  
P.O. Box 425  
La Paz, Bolivia

TELEPHONE: 350-120, 320-251
TELEX: AMEMB BV 3268

MAJOR ACTIVITIES/PROJECTS:

From 1979-1984, the U.S. Government obligated US$2.3 million to fund the "Control of Transmissible Diseases Project" which strengthened the national infrastructure in the areas of cold-chain equipment, provision of vaccines and related supplies, and training of health personnel.

USAID has provided a considerable amount of support to PVO child survival projects, most of which include EPI components. Since 1983, child survival project grants have been provided to CARE, Project Concern International, Save the Children Federation, Project Esperance, Foster Parents Plan International, Meals for Millions, and the Andean Rural Health Care. In addition, USAID has supported, through the REACH Project, the placement of a long-term technical assistant in Bolivia to assist with the national EPI. In 1988, REACH will conduct a review of PVO immunization activities, provide short-term EPI technical assistance, and assist in the design and implementation of a neonatal tetanus survey.
ROTARY INTERNATIONAL

NAMES/TITLES:

Sr. Walter Aramayo, Jr.

ADDRESS:

Encargado, PolioPlus
Casilla 20924
La Paz
Bolivia

TELEPHONE: 370590
TELEX: 2385 ARAMAYO BV
CABLE: POLIO 469

FUNDING LEVEL: A four-year grant of US$627,000 was provided in 1987. Of this, US$546,000 is budgeted for vaccines, US$71,000 for social mobilization, and US$10,000 for coordination.

MAJOR ACTIVITIES/PROJECTS:

The objectives of the POLIOPLUS PROJECT are to increase polio immunization 50-70%. This entails the provision of 9.9 million doses of polio vaccine to immunize 2,480,000 children. The project will take part in the national vaccination days and will assist with efforts to mobilize the private sector to support the national EPI.
MAJOR PURPOSES OF PROJECT: To provide direct services and health education for immunization, ORT, breastfeeding, nutrition, water use, and hygiene in communities where CARE has worked.

PROJECT DURATION AND FUNDING LEVEL: Three-year USAID child survival project beginning October 1985, with a USAID budget of US$625,000.

GEOGRAPHIC AREA SERVED BY PROJECT: The project is operating in three States - Chuquisaca, Tarija, and Potosi - in an estimated 120 communities where CARE has previously installed drinkable water.

TARGET POPULATION FOR IMMUNIZATIONS

<table>
<thead>
<tr>
<th>Antigen</th>
<th>Doses</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>1</td>
<td>birth</td>
</tr>
<tr>
<td>POLIO</td>
<td>3</td>
<td>3,6,9 mos</td>
</tr>
<tr>
<td>DPT</td>
<td>3</td>
<td>3,6,9 mos</td>
</tr>
<tr>
<td>MEASLES</td>
<td>1</td>
<td>9 mos</td>
</tr>
<tr>
<td>TETANUS</td>
<td>2</td>
<td>pregnant</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: Ministry of Health (MOH).

PROJECT ACTIVITIES:

- SUPPORTS DIRECT DELIVERY OF IMMUNIZATIONS to the target population through 23 MOH health workers already in place and through PVO personnel where necessary.

- TRAINING OF HEALTH CARE PROMOTERS responsible for the backstopping and supervision of CARE community health volunteers.

- TRAINING OF COMMUNITY HEALTH VOLUNTEERS in health education skills.
- IMMUNIZATION PROMOTION AND COMMUNITY OUTREACH through weekly meetings of mothers' clubs and potable water committees, and through home visits.

- LOGISTICAL AND MATERIALS SUPPORT through supply of cold chain.
SAVE THE CHILDREN FOUNDATION

Save the Children
54 Wilton Road
Westport, CT 06881 USA

telephone: (203) 226-7272
telex: 4750020

CONTACT: Dr. Warren Berggren
Director

SAVE THE CHILDREN FOUNDATION

Desarrollo Juvenil Comunitario
P.O. Box Casilla Des Correos 5793
Local Num. 13, Mezzanine
Edificio Illanpu
Avenida-Arce
La Paz, Bolivia

telephone: 59-12-32-50-11
telex: 355-2557

CONTACT: Mr. Bruce Harris,
Field Office Director

MAJOR PURPOSES OF PROJECT: To improve the chance of child survival through the establishment of improved preventive health care, health education and health surveillance practices in two rural communities. Also to reinforce the existing Government of Bolivia health structures within the project areas.

PROJECT DURATION AND FUNDING LEVEL: The project is funded for three years beginning October 1985, with Aid Child Survival monies the amount of US$506,900.

GEOGRAPHIC AREA SERVED BY PROJECT: The project is divided between two impact areas: 1) The area of Inquisivi includes the 15 communities surrounding the town of Inquisivi, where one project headquarter, is located. Also included in this project area is the community of Licoma and five surrounding villages. 2) The area of Santiesteban includes the 35 communities surrounding the town of Saavedra, with another project headquarters in Saavedra.

TARGET POPULATION IMMUNIZATION SCHEDULE
FOR IMMUNIZATIONS

<table>
<thead>
<tr>
<th>antigen</th>
<th>doses</th>
<th>age</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>1</td>
<td>0-5 yrs</td>
</tr>
<tr>
<td>OPV</td>
<td>3</td>
<td>0-5 yrs</td>
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<td>DPT</td>
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<td>0-5 yrs</td>
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<tr>
<td>MEASLES</td>
<td>1</td>
<td>0-5 yrs</td>
</tr>
<tr>
<td>TT</td>
<td>2</td>
<td>pregnancy</td>
</tr>
<tr>
<td>DT</td>
<td>2</td>
<td>12-45 yrs</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: UNICEF via the Ministry of Health.

PROJECT ACTIVITIES:

o DELIVERS IMMUNIZATIONS to target population through permanent daily vaccination posts in Quime, Licoma, the and the hospital of Saavedra. Campaigns will be held every three months in coordination with the MOH EPI campaigns. Both PVO and MOH personnel will participate.
o PROVIDES TECHNICAL ASSISTANCE for the planning, supervision and coordination of vaccination sessions to the MOH personnel.

o TRAINS and supervises village outreach workers to promote immunization through home visits, health education sessions, public speaking at community mothers' clubs, and meetings with elected community leaders.

o DEVELOPS AND IMPLEMENTS a monitoring and evaluation system.
PROJECT ESPERANZA

Project Esperanza
1911 West Earll Drive
Phoenix, AZ
telephone: (602) 252-7772

Project Esperanza
Casilla 4577
Santa Cruz, BOLIVIA
telephone: 591-684-2382
telelex: 7380 Answer Back CAPUBVI BNV

MAJOR PURPOSES OF PROJECT: To expand the primary health care services available to mothers and children in an underserved area, with emphasis on immunization, ORT and health education.

PROJECT DURATION AND FUNDING LEVEL: Three-year USAID-funded child survival project, October 1985 through 1988. Funding is from USAID and US$550,000 with an additional Esperanza headquarters contribution of US$190,915.

GEOGRAPHIC AREA SERVED BY PROJECT: The Chaco region, a sparsely populated underserved area that encompasses part of the Departments of Santa Cruz, Chiquisaca, and Tarija.

TARGET POPULATION IMMUNIZATION SCHEDULE FOR IMMUNIZATIONS

<table>
<thead>
<tr>
<th>Antigen</th>
<th>Doses</th>
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</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>1</td>
<td>3-5 mos</td>
</tr>
<tr>
<td>POLIØ</td>
<td>3</td>
<td>3,6,9 mos</td>
</tr>
<tr>
<td>DPT</td>
<td>3</td>
<td>3,6,9 mos</td>
</tr>
<tr>
<td>MEASLES</td>
<td>1</td>
<td>9 mos</td>
</tr>
<tr>
<td>TETANUS</td>
<td>2</td>
<td>pregnancy</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: Local health departments (Unidad Sanitaria)

PROJECT ACTIVITIES:

- EQUIPPING AND STAFFING 20 existing government health posts.
- DIRECT DELIVERY OF IMMUNIZATION to the target population by Esperanza-trained nurse auxiliaries, who are jointly supervised by PVO staff and MOH personnel.
- COLD-CHAIN STRENGTHENING through improved monitoring.
- DEVELOPMENT OF A UNIVERSITY EXTENSION COURSE for training of trainers; subsequently, training 8-12 local health professionals as program monitors.
- TRAINING of 60 auxiliary nurses in child survival intervention.
MAJOR PURPOSES OF PROJECT: To improve the health of mothers and children living in 242 rural communities through the promotion of ORT, immunization, growth monitoring, breastfeeding, prenatal and postnatal care.

PROJECT DURATION AND FUNDING LEVEL: Three-year USAID child survival-funded project, from October 1986 to October 1988. USAID US$500,000 and Foster Parents Plan US$785,000 funds have been committed for that time period.

GEOGRAPHIC AREA SERVED BY PROJECT: The Sucre project area covers 98 communities in Oropez Province. The Tambillo project covers 144 communities in the Los Andes and Igavi Provinces.

TARGET POPULATION FOR IMMUNIZATIONS

IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th>antigen</th>
<th>doses</th>
<th>age</th>
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<tbody>
<tr>
<td>BCG</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>POLIO</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>DPT</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MEASLES</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>TETANUS</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>


PROJECT ACTIVITIES:

- PROMOTES IMMUNIZATIONS to the target population in coordination with the Ministry of Health through health education activities.

- TRAINS 242 multifunctional health promoters, one to work with each community in the project area.

- PROVIDES HEALTH EDUCATION, MOTIVATION, PUBLICITY, AND REFERRALS to mothers' clubs and health committees in each community.
Basic Country Data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
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<tbody>
<tr>
<td>Total population:</td>
<td>9.4 million</td>
</tr>
<tr>
<td>Number of births annually:</td>
<td>340,000</td>
</tr>
<tr>
<td>Infant mortality rate:</td>
<td>67/1000 live births</td>
</tr>
<tr>
<td>Total population under 5 yrs:</td>
<td>1.5 million</td>
</tr>
<tr>
<td>Under 5 mortality rate:</td>
<td>92/1000</td>
</tr>
<tr>
<td>Annual infant and child deaths (0-4):</td>
<td>31,000</td>
</tr>
</tbody>
</table>

Historical Perspective

In 1977, Ecuador became the first country in the Americas to officially adopt the Expanded Program on Immunization (EPI). Prior to EPI implementation, immunizations were delivered sporadically by means of mass campaigns directed against single, specific target diseases (e.g., measles). Some immunizations were routinely administered in health centers, but spontaneous demand was small and no organized attempt was made to provide immunization services on a regular basis. With EPI, vaccine "brigades" were created for house-to-house immunizations and mobile clinics were employed to promote access in urban areas.

From 1977 to 1982, the immunization coverage of the under-one population increased greatly for the first dose of DPT and polio vaccines; however, the dropout rate from the first to third dose remained high. In 1982 a national strategy of intensified immunization activities was adopted, whereby a trimestrial phasing-in approach was implemented.

Current Scope

On October 26, 1985, the nationwide child survival project called Plan de Reduccion de Enfermedad y Muerte Infantil (PREMI) was launched. This Government of Ecuador (GOE) program is jointly supported by the GOE, USAID, PAHO, and UNICEF through 1988. The program is being carried out by two key Ecuadorian institutions, the Ministry of Health and the National Institute for the Child and Family (INNFA), which is headed by the First Lady of Ecuador, Dona Eugenia de Febres Cordero. The child survival interventions of immunization, ORT, and growth monitoring are the major emphases of PREMI.

The fundamental strategy of PREMI is the development of mass demand for child survival services through the use of social marketing techniques. Additionally, the basic Ministry of Health delivery system will be strengthened, in part through social mobilization. INNFA is the coordinating body for the communications facet of PREMI. Both immunization and ORT have been actively promoted throughout the country with mass media and health education. The promotional campaigns also will include breastfeeding and growth monitoring, but to a lesser degree. The communications efforts have been a key to the success of the four mass campaigns for immunization that had been held by the end of 1986.
Current Delivery Strategies

It is estimated that 40% of all immunizations provided in 1986 were given through the mass campaigns. During the first three intensive phases in October 1985, January 1986, and June 1986, approximately 1.000 immunizations were provided. INNFA has begun work on a communications strategy which supports a "pulse" approach to immunization delivery. The EPI five-year plan upholds this transition toward a pulse strategy, which is intended to complement two annual mass campaigns.

Technical Aspects

PREMI has a good system of data collection. The following methods of collection have been used in previous studies: Knowledge, Attitudes and Practice (KAP) surveys, inventory of health facilities surveys, surveillance post studies, HEALTHCOM behavior studies, cost studies, and nutritional status of children mapping. Unfortunately, EPI disease surveillance activities have not been as well developed.

The component of PREMI concerned with institutional development of the EPI has made less visible progress than has the communications component of the project. A related problem, which has been noted as a potential barrier to access to EPI services, is the inconsistent hours of operation of rural health facilities.

EPI REVIEWS: WHO reviews were conducted in 1981, October 1982, and September 1985; PREMI plans a follow up survey in 1989.

IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th># DOSES</th>
<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
<th>COVERAGE RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>(WHO, 1987, &lt;1)</td>
</tr>
<tr>
<td>1</td>
<td>BCG</td>
<td>birth</td>
<td>99</td>
</tr>
<tr>
<td>3</td>
<td>DPT</td>
<td>3,6,9 mos (DPT3)</td>
<td>41</td>
</tr>
<tr>
<td>3</td>
<td>Polio</td>
<td>3,6,9 mos (OPV3)</td>
<td>39</td>
</tr>
<tr>
<td>1</td>
<td>Measles</td>
<td>9 mos</td>
<td>54</td>
</tr>
<tr>
<td>2</td>
<td>Tetanus Toxoid</td>
<td>pregnancy (TT2)</td>
<td>11</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: DPT, measles, and polio vaccines are obtained through the revolving fund; BCG vaccine is both locally produced and obtained through the revolving fund; and TT and some DPT vaccines are locally produced.
MOH NAMES/TITLES:

Dr. Jose Thome, Minister of Health
Dr. Pablo Martinez, Premi Coordinator, MOH
Dr. Jacobo Moreta, Director of EPI
Dr. Magdelana Irlanda Ordonez, EPI Ecuador
Dr. Carmen Laspina, Dept. Director, PREMI (ORT)
Sr. Nicolas Moscoso, Director, National Vaccine Bank, Ecuador
Dr. Roberto Sempertegui, Head of EPI Surveillance, MOH Ecuador
Dr. Yolanda Grijalva, Head of Nutrition, MOH Ecuador
Dr. Marco Polo, Head of Communications for INNFA

ADDRESS:

Juan Larrea 444
Quito, Ecuador

TELEPHONE:  (011-593-2) 550-703 and 528-745 (Ministry of Health)
PAHO

NAMES/TITLES:

Dr. Carlos A. Pettigiani, Representative
Dr. Oswaldo Barrezueta, PAHO EPI/CDD advisor

ADDRESS:

Senor Representante de la OPS/OMS
Apartado Postal 8982
Sucursal 7
Quito, Ecuador

TELEPHONE: 522-100
TELEX: 22370

MAJOR ACTIVITIES/PROJECTS AND FUNDING LEVEL:

For 1987, regular PAHO funding for the EPI totaled US$23,000 to be used for investigation, cold chain, and training. Another US$193,300 is available from USAID and the IDB for surveillance, training, and supervision. For 1987-1991, USAID and IDB contributions will total US$642,800.

UNICEF

NAMES/TITLES:

Mr. Boris Blanco, Resident Programme Officer
Mr. Lenin Guzman, Project Officer, Health

ADDRESS:

Avenida 10 de Agosto 5470 y Villalengu
Edificio Cominesa, 5 Piso
Officina 55
Quito, Ecuador

TELEPHONE: 436170
TELEX: 393-021208

FUNDING LEVELS: For the period 1986-1990, US$250,000 is being sought, of which US$125,000 is currently being provided by the U.S. Committee for UNICEF.

MAJOR ACTIVITIES/PROJECTS:

UNICEF has been a sponsor of the PREMI project. From 1987-1991, UNICEF will provide vaccines, support of the cold chain, training, social mobilization, and epidemiological surveillance.
USAID

NAMES/TITLES:

Mr. William Goldman, Chief, HPN
Ms. Katherine Jones-Patron, Deputy Chief, HPN

ADDRESS:

U.S. Postal Address: International Address:
American Embassy Avenida 12 de Octubre y Avenida Patria
USAID/Quito P.O. Box 538
APO Miami 34039-3420 Quito, Ecuador

TELEPHONE: (011-593-2) 548-000
TELEX: 02-2329 USICA Q ED

MAJOR ACTIVITIES/PROJECTS:

USAID has been a sponsor of the PREMI project. For the years 1987-1990, USAID has projected the following resource commitment in bilateral funds for immunization-related activities: US$235,700 for the cold chain, US$101,500 for training, US$600,000 for social mobilization, US$285,000 for supervision, US$55,000 for epidemiological surveillance, US$70,000 for research, and US$90,000 for evaluation, for a total of US$1,437,200 for the five-year period.

MASS MEDIA AND HEALTH PRACTICES is implemented through HEALTHCOM of the Academy for Educational Development and began in 1983. The project provides technical assistance to the MOH to strengthen health education through mass communications. Health practices targeted include immunization and ORT.
ROTARY INTERNATIONAL

NAME/TITLE:
Asdrubal de la Torre

ADDRESS:
c/o Rotary Club of Quito
Portoviejo 442 y Versailles
Ed. Diez Cordovez, Apartado 436
Quito, ECUADOR

TELEPHONE: 524-556
TELEX: 2474 CIESPL ED

FUNDING LEVEL: Through the POLIOPPLUS PROJECT, Rotary International is providing US$296,000 for oral polio vaccine and US$4,000 for public information for the five-year period 1986-1990.

MAJOR ACTIVITIES/PROJECTS:
Approximately 5.8 million doses of polio vaccine will be provided to immunize 1,800,000 children through 1991. Local Rotarians have prepared a national social mobilization plan to be implemented at the provincial level.
MAJOR PROJECT PURPOSES: To improve the health of children through enhancing behavioral changes of individual family members and through community organization. Specifically, this includes increased use of ORT and immunizations.

PROJECT DURATION: This AID child survival funded project was funded for three years beginning in 1985. However, due to delays in approval by the MOH, the program probably did not begin until after January 1986.

GEOGRAPHIC AREAS COVERED BY PROJECT: Three neighborhoods within the city of Quito: Lucha de los Pobres, Jesus del Gran Poder, and Toctiuco; and in the Northwest section of the city of Portoviejo in the barrio of San Alejo.

OTHER GROUPS WHICH WORK WITH PROJECT: The project works very closely with the Ministry of Health and is aware of one other small scale PVO working in the barrio of Toctiugo, with whom SCF is coordinating efforts.

TARGET POPULATION FOR IMMUNIZATIONS:
- Children (ages 0-5);
- Women of childbearing age (15-45 years);
- Pregnant women.

VACCINE SOURCE: EPI/PREMI program and the MOH.

PVO PROJECT ACTIVITIES:

- DIRECT DELIVERY OF IMMUNIZATIONS through MOH personnel, SCF doctors, and health promoters (except BCG).
- TECHNICAL ASSISTANCE for communications and immunization promotion.
- IMMUNIZATION PROMOTION/COMMUNITY OUTREACH through universal family enrollment with the cooperation of community leaders and through community-wide meetings.
- COLD-CHAIN STRENGTHENING through purchase of refrigerators.
- TRAINING of local community health workers.
Basic Country Data

Total population: 8.0 million
Number of births annually: 334,000
Infant mortality rate: 65/1000 live births
Total population under 5 yrs: 1.4 million
Under 5 mortality rate: 109/1000
Annual infant and child deaths (0-4): 37,000

Historical Perspective

In the Republic of Guatemala immunization activities began in the 1950s at health centers in response to public demand. In the 1960s, immunization services were expanded to include national mass campaigns, which were held for one month, twice a year. These campaigns vaccinated children under 5 years of age against polio, DPT, BCG, and measles. The objective of the mass campaigns was to vaccinate 80% of the target population.

EPI began in Guatemala in 1979 when it was adopted by all members of the Pan American Health Organization (PAHO). In 1985, an Interagency Coordinating Committee was formed by the principle donors to EPI in the Americas: UNICEF, PAHO, USAID, the Inter-American Development Bank (IDB), and Rotary International. In 1986, the MOH, with the collaboration of the other donors, launched a series of National Vaccination Days (NVDs) of four days each called "Juntos por la Salud de los Ninos" ("Together for Children's Health"). For the first NVD, 6,200 immunization posts were set up and 1,017,807 children, or 71% of the target age group, were vaccinated.

Delivery Strategies

National vaccination days against polio will continue to be held twice a year for the entire country. In six areas, the NVDs will also include DPT and measles vaccines. In addition to these mass campaigns, the EPI is pursuing channeling as a strategy. Channeling began in 1983 in some districts and is to be extended to the rest of the country by 1988. Fixed health posts will offer vaccinations as part of their permanent services and some mobile teams will also be used.

Technical Aspects

The chief of the department of "Vigilancia y Control de Enfermedades" is in charge of the EPI. At the central level, an engineer of the Division of Maintenance is responsible for the cold chain. A Unit of Supervision, Monitoring, and Evaluation has been created and is responsible for each of these aspects of the EPI. WHO EPI reviews were conducted in July 1983 and November 1985, and in 1987 an evaluation of the coverage achieved in the NVDs will be conducted in each of the municipios of the country and for the 21 areas using channeling.

Guatemala was the site of field trials of Ezeject, a single-dose non-refillable injection device developed to replace traditional needles and syringes and to retain vaccine potency for up to three weeks without refrigeration.
OFFICIAL IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th># DOSES</th>
<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
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<tbody>
<tr>
<td>1</td>
<td>BCG</td>
<td>birth</td>
<td>30</td>
</tr>
<tr>
<td>3</td>
<td>DPT</td>
<td>3, 6, 9 mos</td>
<td>21</td>
</tr>
<tr>
<td>3</td>
<td>Polio</td>
<td>3, 6, 9 mos</td>
<td>21 (2)</td>
</tr>
<tr>
<td>1</td>
<td>Measles</td>
<td>9 mos</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Tetanus Toxoid</td>
<td>pregnant women</td>
<td>1</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: PAHO Revolving Fund.

MOH NAMES/TITLES:

Dr. Carlos Armando Soto, Minister of Health  
Dr. Ricardo Lopez Urzua, MD, Chief, Department of Maternal and Child Health  
Dr. Otto Zeissig, Chief, Division of Epidemiology  
Sr. Ever Sanchez, Chief, Engineering and Maintenance Unit

ADDRESS:

Ministerio de Salud Publica y Asistencia Social  
Direccion General de Servicios de Salud  
Programa Ampliado de Immunizaciones (PAI)  
Guatemala City, Guatemala

TELEPHONE: 542-2-2121-2 (National Palace)
PAHO

NAMES/TITLES:

Dr. Edilberto Antezana Aranibar, Representative
Dr. J. Luna, Medical Officer

ADDRESS:

Senor Representante de la OPS/OMS
Oficina Sanitaria Panamericana
Edificio "Etisa"
7 a, Avenida 12-23, Zona 9
Guatemala, Guatemala

TELEPHONE: 64911
TELEX: 5950

FUNDING LEVEL: US$33,000 for 1987 is committed with an additional US$156,800 from USAID and US$59,000 from the IDB. For the five-year national EPI plan, PAHO is expected to have available US$1,385,800, including US$961,800 from USAID and US$271,000 from the IDB.

MAJOR ACTIVITIES/PROJECTS:

PAHO assistance is planned in training, supervision, surveillance, research, and evaluation. Funds are also allocated for transportation, vaccines, and the cold chain.
UNICEF

NAMES/TITLES:

Mr. Agop Kayayan, Country Representative

ADDRESS:

Edificio Maya, 5th Floor
Via 5, 4-50 Zona 4
Guatemala City, Guatemala

TELEPHONE: 502-2-315511 (PBX)
TELEX: 305-6173

FUNDING LEVEL: From 1988-1990, over US$3.0 million is being provided in supplementary funding from the Government of Italy and EEC for all child survival activities.

MAJOR ACTIVITIES/PROJECTS:

The EPI is a component of the major Central America and Panama Child Survival Programme. The majority of UNICEF funds are allocated for vaccines and transportation. Additional assistance is provided in the areas of social mobilization, evaluation, training, supervision, and the cold chain.
USAID

NAMES/TITLES:
Ms. Liliana Ayalde
Dr. Jorge Chang Quan

ADDRESS:
U.S. Postal Address: 
American Embassy
USAID/Guatemala
APO Miami 34024-3190

International Address:
7-01 Avenida de la Reforma, Zone 10
Guatemala City, Guatemala

TELEPHONE: 31-15-41

FUNDING LEVEL: For the bilateral project, US$1,790,000 has been allocated for EPI in 1987 and US$4,833,000 for the period 1987-1991. USAID has also committed US$156,800 to PAHO for the Guatemalan EPI in 1987 and US$961,800 for 1987-1991.

MAJOR ACTIVITIES/PROJECTS:
USAID/Guatemala's bilateral project is the major contributor to the Guatemalan EPI. The immunization/child survival component of the project is implemented through the MOH Division of Epidemiology and assists institutionalized immunization in 21 areas for children aged 4 and younger. 3,354 health staff will be trained in immunization procedures and 300,000 children per year will be immunized.

In addition to the bilateral project, AID also contributes to the Interagency Coordinating Committee for EPI for proposals developed by PAHO. This contribution finances items such as personnel, meetings, laboratory support, information dissemination, evaluations, promotion, supervision, surveillance and outbreak control, cold chain, operational research, and the activities of an international certification commission. USAID also supports Project Hope and Project Concern International in their child survival program activities. In 1988, the REACH project anticipates conducting a review of child survival indicators and the EPI surveillance and reporting system.
ROTARY INTERNATIONAL

NAMES/TITLES:
Mr. Jorge Sittenfeld

ADDRESS:
Club Rotario Centro de la
Ciudad de Guatemala
la Calle 6-62, Zona 9
Guatemala City 9, Guatemala

TELEPHONE:  502-2-313777
TELEX:  5543 ICOGUA GU


MAJOR ACTIVITIES/PROJECTS:
The Rotary Foundation of Rotary International and Guatemalan Rotarians are providing polio vaccine, cold-chain equipment, promotional materials, and volunteers to assist the national immunization program. More than 460 Guatemalan Rotarians participated in the first set of national vaccination days in May, 1986. Rotary developed a series of questionnaires to evaluate activities at 560 vaccination posts throughout the country. Rotary's efforts in Guatemala are part of Rotary's POLIOPLUS program which has pledged to provide polio vaccine for approximately 1,920,000 Guatemalan children under the age of 5 for five years. This agreement expires in 1988 and a new five-year agreement may be negotiated.
INTERAMERICAN DEVELOPMENT BANK

NAMES/TITLES:
Mr. Robert H. Bellefeuille, Representative

ADDRESS:
Edificio Geminis 10
12 Calle 1-25, Zona 10, Nivel 19
Apartado Postal 935
Guatemala City, Guatemala

TELEPHONE: 320830, 321319, 320839
TELEX: 5233

FUNDING LEVEL: US$59,000 to PAHO for 1987 and US$271,000 for 1987-1991 has been committed.

MAJOR ACTIVITIES/PROJECTS:
The InterAmerican Development Bank (IDB) has pledged US$5.5 million for EPI in the Americas. PAHO is responsible for allocating these funds in each country. However, generally, the money provided from IDB is used to cover expenses related to training at all levels of the health system. IDB contracts with local personnel to strengthen the EPI in those countries at highest risk and provides short-term consultants needed to support program activities in the various countries of the region. In Guatemala, the IDB funds will be used for surveillance, training, evaluation, and the cold chain.
PROJECT HOPE

Project HOPE
Health Science Education Center
Millwood, VA 22646

telephone: (703) 837-2100
telex: 89674 Answer Back HOPEX-MLWD

CONTACT: Dr. David Edwards
Program Manager

Project HOPE
Apartado Postal 128
Quetzaltenango, Guatemala

telephone: (502) 961-4551

CONTACT: Dr. George Florez
Project Director

MAJOR PURPOSES OF PROJECT: To improve the health of children through promotional strategies for ORT and immunization.

PROJECT DURATION AND FUNDING LEVEL: The project is funded for three years beginning October 1985 with AID child survival monies for the amount of US$700,000.

GEOGRAPHIC AREA SERVED BY PROJECT: Twelve municipalities located throughout two departments: 1) Department of San Marcos - Tacana, Sibinal, Tajmulco, San Pablo, Ixchiguan, San Jose Ojetenam, San Cristobal Cucho, and Sipacapa; 2) Department of Quetzaltenango: Cabrican, San Miguel Ostuncalco, Concepcion Chiquirichapa, and San Martin Sacatepquez.

TARGET POPULATION IMMUNIZATION SCHEDULE FOR IMMUNIZATIONS

<table>
<thead>
<tr>
<th>antigen</th>
<th>doses</th>
<th>age</th>
</tr>
</thead>
<tbody>
<tr>
<td>11,500 children ages 0-1 yr</td>
<td>BCG</td>
<td>same as MOH schedule</td>
</tr>
<tr>
<td></td>
<td>POLIO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DPT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MEASLES</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TETANUS</td>
<td></td>
</tr>
</tbody>
</table>

VACCINE SOURCE: Ministry of Health.

PROJECT ACTIVITIES:

- CONDUCT NEEDS ASSESSMENT to evaluate resources at the aldea health posts; to identify the current practices relating to immunization and ORT as well as the resources of the communities served by the health posts.

- TRAINS COMMUNITY VOLUNTEERS, primarily midwives, in immunization promotion skills, record keeping, and outreach practices.

- ENCOURAGES COMMUNITY PARTICIPATION through publicity and health education messages on local radio stations.
Basic Country Data

Total population: 6.6 million
Annual number of births: 272,000
Infant mortality rate: 123/1000 live births
Total population under 5 yrs: 1.1 million
Under 5 mortality rate: 180/1000
Annual infant and child deaths (0-4): 49,000

Historical Perspective

Throughout the 1970s, the Government of Haiti's (GOH) Department of Public Health relied primarily on the district hospitals for service delivery. These hospitals are located in major towns in each of the country's 15 districts – and the focus of their services was primarily curative, with little opportunity to provide preventive services such as immunization and to reach out to the majority of the population living in rural communities. In more recent times, the renamed Ministry of Public Health and Population (MSPP) has tried to expand the health infrastructure in rural areas with the addition of health facilities geared to preventive services and primary health care. The activities of paramedical personnel at the fixed health centers are to be augmented by community health workers who also provide health education and similar activities and also encourage attendance at community-based "rally posts," where immunizations are delivered by health practitioners. Rally posts exist even in areas that are not served by a community health worker. Much of this change was precipitated by the large (US$35 million) five-year USAID-funded Rural Health Delivery System (RHDS) project, which began in 1980.

National Policies

An important side effect of the RHDS was the 1982 formation of a national health plan, called the "New Orientation." This plan delineated a clear set of goals, with immunization as the GOH's second-priority program, after diarrheal disease control. A strategy to implement the priority programs in a phased manner, one by one, was adopted. Following the national ORT program which began in mid-1983, the Expanded Program on Immunization (EPI) was chosen as the focal point for program implementation for 1985.

Delivery Strategies

Vaccination strategies are varied and include: 350 fixed vaccination sites; rally posts outreach; mobile horse teams; and special vaccination days of varying scope. These strategies are supported by information, education, and communications (IEC).

Because for a long time so much of the GOH's health program was concentrated in the urban areas, the private voluntary organizations (PVOs) became very active in the rural areas, to the degree that a parallel health care system evolved. In order to capitalize on the strength of the numerous health-oriented PVOs, the MSPP conducted a national survey of PVOs in late 1981-1982. This led to the formation of the Association of Private Voluntary Agencies (AOPS) working in health in 1982. Initially, AOPS
involved 20 PVOs which volunteered to adopt the MSPP priority programs (emphasizing immunization) of the national plan, to be implemented through a rally post approach. The AOPS members are obligated to enumerate the population to be served by their child survival program. AOPS can best be described as a coordinating and supervisory body of 100 Haitian agencies working in health, only 33 of which have community health programs.

Technical Aspects

AOPS along with the Haitian Community Health Institute (INHSAC) and the Child Health Institute (CHI) are the Haitian institutions that coordinate the PVOs. Collectively, they form the basis for the USAID private sector initiative. While AOPS is the body that administers AID's child survival grants, CHI provides technical assistance to the PVOs in areas such as operations research, while INHSAC is trying to provide training for both private and public sector personnel.

OFFICIAL IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th># DOSES</th>
<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
<th>COVERAGE RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(Mirgoane District, EPI survey data, March 1987)</td>
<td>(&lt;1 yr)</td>
</tr>
<tr>
<td>1</td>
<td>BCG</td>
<td>birth or first contact</td>
<td>39</td>
</tr>
<tr>
<td>3</td>
<td>DPT</td>
<td>3,4,5 mos</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>Polio</td>
<td>3,4,5 mos</td>
<td>15</td>
</tr>
<tr>
<td>1</td>
<td>Measles</td>
<td>8 mos</td>
<td>23</td>
</tr>
<tr>
<td>2</td>
<td>Tetanus Toxoid</td>
<td>pregnant and fertile-age women</td>
<td>..</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: Polio vaccine is purchased by Rotary and the other antigens are purchased by UNICEF. All are obtained through the Revolving Fund.

MSPP NAMES/TITLES:

Dr. Adrien Westerband, Minister of Health
Dr. Jean André, National EPI Coordinator
Dr. Pantera, APVA
Dr. Yolande V. Surena, MSPP, Western Region

ADDRESS:

Rue Monseigneur Guilloux
Port-au-Prince, Haiti

TELEPHONE: 5091-21726
TELEX: 3490394 Answer Back DPTASET 20330940
PAHO

NAMES/TITLES:

Dr. Robert Fischer, Country Representative
Dr. S. Garcia, Medical Officer
Dr. Jules Granpierre

ADDRESS:

Monsieur le Representant de l'OPS/OMS
Rue Fernand No. 25
Canape-Vert
Port-au-Prince, Haiti

TELEPHONE: 51732
TELEX: 0149


MAJOR ACTIVITIES/PROJECTS: Community Vaccination Days.

UNICEF

NAMES/TITLES:

Mr. C. Castillo, Country Representative
Dr. Eddy Genece, Project Officer, Health

ADDRESS:

17, Rue Armand Holly
(Debussy), Port-au-Prince, Haiti

TELEPHONE: 52891, 53525, 53917
TELEX: 349-0346

FUNDING LEVEL: From 1988-1989, US$356,000 has been committed from general resources. From 1988-1991, US$104,000 has been provided by the Canadian Public Health Association (CPHA), and an additional US$1.3 million is being sought for supplementary funding.

MAJOR ACTIVITIES/PROJECTS:

UNICEF support is in the form of commodities, transportation, cold chain equipment, cash support for local costs and technical assistance, as well as vaccine supplies. A large emphasis has also been placed on the national vaccination days.
USAID

NAMES/TITLES:

Dr. Michael White, Health Development Officer
Leslie Curtin, Population Officer
David Eckerson, Health Officer
Christopher McDermott, Health Development Officer
Dr. Serge Toureaus, REACH Resident Advisor

ADDRESS:

U.S. Postal Address: International Address:
USAID/Port-au-Prince Harry Truman Blvd.
c/o U.S. Embassy P.O. Box 1761
Washington, D.C. 20520-3420 Port-au-Prince, Haiti

TELEPHONE: (011-509-1) 20354, 20407


MAJOR ACTIVITIES/PROJECTS:

A new child survival project in the planning stages will provide the opportunity to strengthen the accomplishments of the Rural Health Delivery Services (RHDS) project, which has been in effect since 1982. The new project is expected to provide US$25 million to strengthen the EPI and to provide ORT.

USAID also provides technical and financial support to PVOs for child survival activities through complete funding of AOPS and the Child Health Institute (CHI). Through the REACH project, USAID has supported the placement of a resident advisor to Haitian PVOs with immunization programs. The advisor is a Haitian physician and will serve two years as an EPI technical and training advisor.
ROTARY INTERNATIONAL

NAMES/TITLES:
Mr. Nesley Vastey

ADDRESS:
P.O. Box 13068
Delmas
Port-Au-Prince
Haiti

TELEPHONE: 6-2028
TELEX: PP BOOTH 2030001

FUNDING LEVEL: US$777,000 has been committed, of which US$37,434 is for vaccines, US$37,434 is for the cold chain, US$29,000 is for social mobilization, and US$26,400 is for vehicles/fuel. Funds are being released to PAHO for vaccine procurement and to the Rotary Club of Port-Au-Prince.

MAJOR ACTIVITIES/PROJECTS:
Through the POLIOPPLUS PROJECT, Rotary will participate in annual NVDs and other activities, initiate public information efforts, assist in active surveillance measures, and channel private sector support.
MAJOR PURPOSES OF PROJECT: To improve the health of the target population through the promotion of immunization and ORT with the assistance of health promoters, preschool teachers, and health education committees.

PROJECT DURATION AND FUNDING LEVEL: Three-year AID child survival project funded in October 1985.

GEOGRAPHIC AREA SERVED BY PROJECT: Jacmel department, which is in the southeastern portion of Haiti. Included are Jacmel City, the Jacmel surroundings of Bas Cape Rouge, Montagne La Voute, and La Vanneau; and the town of Les Cayes, Ravine Normand, Gaillard, Haut Cap Rouge and La Vallee.

MEMBER/ACTIVE PARTICIPANT IN HAITI CHILD SURVIVAL COORDINATING COMMITTEE.

TARGET POPULATION FOR IMMUNIZATIONS

<table>
<thead>
<tr>
<th>Antigen</th>
<th>Doses</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>1</td>
<td>birth</td>
</tr>
<tr>
<td>POLIO</td>
<td>3</td>
<td>6,10,14 wks</td>
</tr>
<tr>
<td>DPT</td>
<td>3</td>
<td>6,10,14 wks</td>
</tr>
<tr>
<td>MEASLES</td>
<td>1</td>
<td>9 mos</td>
</tr>
<tr>
<td>TETANUS</td>
<td>2</td>
<td>doses during pregnancy</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: Ministry of Health Sanitary Office

PROJECT ACTIVITIES:

- STRENGTHENING IMMUNIZATION DELIVERY of government program at existing health centers and preschools.
- IMMUNIZATION PROMOTION through health education provided by preschool teachers and health committees.
COMMUNITY OUTREACH through home visits by health promoters, with assistance from preschool teachers and health committees.

TRAINING of 59 health promoters.
MAJOR PURPOSES OF PROJECT: To improve the health status of the infant, child, and maternal population in project area by building on more comprehensive health services to CARE's established preschool education program. CINECO interventions to be added include immunization, ORT, growth monitoring, health education, vitamin A supplementation, and deworming.

PROJECT DURATION AND FUNDING LEVEL: Three-year project funded in October 1985 with AID child survival monies in the amount of US$696,000.

GEOGRAPHIC AREA SERVED BY PROJECT: Over the three-year project period, CARE will be implementing CINECO in 121 centers throughout the country wherever the GOH has established a Community Integrated Nutrition and Education Center (CINEC). Centers throughout the country will be incorporated into the project in three phases corresponding to the three project years.

TARGET POPULATION FOR IMMUNIZATIONS

2,700 infants age 0-12 mos
and 1,350 severely malnourished children age 1-6 yrs.

16,402 women ages 15-45 yrs

IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th>Antigen</th>
<th>Doses</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>1</td>
<td>6 wks</td>
</tr>
<tr>
<td>POLIO</td>
<td>1</td>
<td>3, 6, 9 mos</td>
</tr>
<tr>
<td>DPT</td>
<td>3</td>
<td>3, 6, 9 mos</td>
</tr>
<tr>
<td>MEASLES</td>
<td>1</td>
<td>9 mos</td>
</tr>
<tr>
<td>TETANUS</td>
<td>2</td>
<td>pregnancy</td>
</tr>
</tbody>
</table>


PROJECT IMMUNIZATION ACTIVITIES:

- TRANSPORTS VACCINES from MSPP regional offices to vaccine delivery sites.
- ESTABLISHES mobile vaccination teams in areas where there is no GOH immunization staff.
- PROVIDES cold-chain equipment in the form of cold chests for each health center.
- PROMOTES importance of immunization by requiring completion of schedule for receipt of food supplements.
- REGISTERS TOTAL POPULATION in coverage areas.
MAJOR PURPOSES OF PROJECT: To reduce child mortality related to neonatal tetanus, diarrhea, and diseases preventable by immunization among children 0-2 years of age and to vaccinate women of childbearing age for protection against neonatal tetanus.

PROJECT DURATION AND FUNDING LEVEL: USAID funding of US$408,000 for three-year child survival project beginning in late 1985.

GEOGRAPHIC AREA SERVED BY PROJECT: The project will be serving 14 communities in the north. Five central areas and three communities in the southern region will also be served. The following areas include: Cap Haitien, Fort Liberte, and Grand Rivier du Nord (north); Hinche (central); and Miragoane, Cayes and Jeremie (south).

TARGET POPULATION FOR IMMUNIZATIONS

<table>
<thead>
<tr>
<th>Antigen</th>
<th>Doses</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>POLIO</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>DPT</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MEASLES</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>TETANUS</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>


PROJECT ACTIVITIES:

- DELIVERS IMMUNIZATIONS to the target population through PVO vaccinator-educator teams in areas unserved by any other health institution with CAT mobile teams at established CAT posts.

- ENSURES FLOW OF VACCINE SUPPLY through PVO back-up vaccine stock.

- CARRIES OUT MOTIVATION CAMPAIGNS to ensure community participation in immunization days, and monitors community progress every 3-4 months.
MAJOR PURPOSES OF PROJECT: To establish and/or revitalize four local community health posts, and implement the activities of immunization, ORT, growth monitoring, and nutrition education for parents and children in the community.

PROJECT DURATION AND FUNDING LEVEL: Funded as a three-year child survival project by USAID beginning January 1986 in the amount of US$310,000.

GEOGRAPHIC AREA SERVED BY PROJECT: Two posts within a 20-mile radius of Port-au-Prince, and one at Bizoton and one at East Thor.

TARGET POPULATION FOR IMMUNIZATIONS

<table>
<thead>
<tr>
<th>Antigen</th>
<th>Doses</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>children ages 0-5 yrs (23,250), with emphasis on 0-2 yrs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>age group</td>
<td>BCG 1</td>
<td>5 mos</td>
</tr>
<tr>
<td></td>
<td>POLIO 3</td>
<td>3,4,5 mos</td>
</tr>
<tr>
<td></td>
<td>DPT 3</td>
<td>3,4,5 mos</td>
</tr>
<tr>
<td></td>
<td>MEASLES 1</td>
<td>9 mos</td>
</tr>
<tr>
<td>women ages 14-45 yrs (28,750)</td>
<td>TETANUS 2</td>
<td></td>
</tr>
</tbody>
</table>

VACCINE SOURCE: The Adventist Hospital will maintain an inventory of vaccine to supply the project.

* Member Child Survival Coordinating Committee.

PROJECT ACTIVITIES:

- DELIVERS IMMUNIZATIONS to the target population through ADRA hospital personnel.
- PROMOTES IMMUNIZATIONS in clinics and during home visits through health education and counselling.
- TRAINS 15 local health agents in community education.
- REGISTERS complete target population in coverage areas.
MAJOR PURPOSES OF PROJECT: The project will train at least 5,000 community women in child survival activities with the goal of decreasing child mortality.

PROJECT DURATION AND FUNDING LEVEL: The project is a USAID child survival project funded for US$180,000 for three years beginning in October 1986.

GEOGRAPHIC AREA SERVED BY PROJECT: The project is located in 20 villages throughout Haiti as follows: St. Martin (Port-au-Prince), Arachaie, Balan, Couyot, Duverger, Fond des Negres, Gardon, Gros Morne, La Colline, La Feronnay, Lazile, Le Blanc, Luly, Montrouis, Moulin, Vieux Borg, Aquin, Plaisance, Descruisseaux, and Rossignal.

TARGET POPULATION FOR IMMUNIZATIONS

<table>
<thead>
<tr>
<th>Immunization Schedule</th>
<th>Antigen</th>
<th>Doses</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BCG</td>
<td>1</td>
<td>birth</td>
</tr>
<tr>
<td></td>
<td>POLIO</td>
<td>3</td>
<td>3,4,5 mos</td>
</tr>
<tr>
<td></td>
<td>DPT</td>
<td>3</td>
<td>3,4,5 mos</td>
</tr>
<tr>
<td></td>
<td>MEASLES</td>
<td>1</td>
<td>8 mos</td>
</tr>
<tr>
<td></td>
<td>TETANUS</td>
<td>2</td>
<td>pregnant women and fertile-age women</td>
</tr>
</tbody>
</table>

VACCINE SOURCE:

PROJECT ACTIVITIES:

- PROMOTES IMMUNIZATIONS to the target population through home visits and home league community health sessions.
- TRAINS home league leaders and home league health educators to be community health promoters.
- CONDUCTS registration of total population in all project areas for health planning purposes.
Basic Country Data

Total population: 4.4 million
Annual number of births: 182,000
Infant mortality rate: 76/1000
Total population under 5 yrs: 0.8 million
Under 5 mortality rate: 116/1000
Annual infant and child deaths (0-4): 21,000

Historical Perspective

Immunization delivery began in 1964 when the Government of Honduras developed and implemented a program to vaccinate children under six years of age against polio, diphtheria, tuberculosis, and whooping cough. In 1973, all the EPI antigens were included in the national program of immunization. The strategy employed by the Ministry of Public Health was national campaigns. The EPI was officially launched in Honduras in 1979. At that time, an attempt was made to eliminate campaigns and to implement systematic immunization activities.

National Policies

EPI is located in the Ministry of Public Health (MPH) which coordinates with the Institute of Honduran Social Security and the Armed Forces. Within the MPH, responsibility for the administration and management of the EPI falls to the Division of Epidemiology, Department of Vaccine Preventable Diseases.

In 1980, the national legislature passed a law requiring that a vaccination card be presented to enroll in kindergarten, first grade, orphanages, daycare centers, nutrition recuperation programs, and state medical assistance establishments.

Delivery Strategies

The EPI in Honduras is a national program; however, each of the eight health regions is allowed to choose which strategy or strategies they will use in their EPI. The strategies identified in the country's 1987-88 plan of action are: 1) strengthen vaccination delivery in fixed health centers, 2) hold mass campaigns (at least two per year) to vaccinate against polio, DPT, measles, and TT (for women 15-44 years old); 3) form a child survival group to coordinate internal and external support of EPI; and 4) maintain and increase community participation in each stage of programming and implementation of EPI.

Technical Aspects

Disease surveillance has been identified as a problem area in the Honduran EPI. The 1986 plan of action outlined a plan to develop a system of epidemiological surveillance of EPI diseases by studying cases and outbreaks of the diseases and by improving knowledge and usage of EPI vaccines.
Another problem area is the cold chain. In 1983-1984 there was a polio epidemic, and vaccine efficacy studies showed that there was a serious problem in the cold chain, especially at the central level. Specifically, problems with the cold chain are due to lack of equipment, poor supervision, poor maintenance, and faulty spare parts.

WHO EPI program reviews were conducted in October 1982 and December 1984.

OFFICIAL IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th># DOSES</th>
<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
<th>COVERAGE RATES (WHO 1987, &lt;1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BCG</td>
<td>birth</td>
<td>65</td>
</tr>
<tr>
<td>3</td>
<td>DPT</td>
<td>2,4,6 mos</td>
<td>59</td>
</tr>
<tr>
<td>3</td>
<td>Polio</td>
<td>2,4,6 mos</td>
<td>58</td>
</tr>
<tr>
<td>1</td>
<td>Measles</td>
<td>9 mos</td>
<td>53</td>
</tr>
<tr>
<td>2</td>
<td>Tetanus Toxoid</td>
<td>women 15-45</td>
<td>10</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: PAHO Revolving Fund.

MOH NAMES/TITLES:

Dr. Ruben Villeda Bermudez, Minister of Health
Dr. Jose E. Zelaya, Chief, Division of Epidemiology
Dr. Roberto Cruz Gavida, Chief, EPI

ADDRESS:

Programa Ampliado de Immunizaciones
Division Nacional de Epidemiologia
Ministerio de Salud Publica
Tegucigalpa, Honduras

Ministry of Health
3A. Calle 4A Avenida
Tegucigalpa, B.C.
Honduras

TELEPHONE: 22-1036
PAHO

NAMES/TITLES:

Dr. E. Aquino del Puerto, Country Representative
Dr. Guillermo Gosset, Epidemiologist, PAHO
Dr. R. Baldissera, Inter-country Medical Officer
Dr. E. Umana, Country Medical Officer

ADDRESS:

Senor Representante de la OPS/OMS
Apartado 728
Tegucigalpa, D.C.
Honduras

TELEPHONE: 22-5773
TELEX: 1138
CABLE: OSAPAM 1138 HO

FUNDING LEVEL:

MAJOR ACTIVITIES/PROJECTS:

Major PAHO involvement is anticipated in the surveillance system. PAHO will help in the development and training for such a system.
UNICEF

NAMES/TITLES:

Mr. A. Kayayan, Country Representative
Mr. P. Fuentes, Project Officer

ADDRESS:

TELEPHONE: 3155116
TELEX: 305-6173
CABLE: 1177 UNDEVPRO

FUNDING LEVEL: From 1988-1990, US$2.7 million in supplementary funds is being provided by the Government of Italy and EEC.

MAJOR ACTIVITIES/PROJECTS:

As part of the Child Survival Development Project, UNICEF broadly supports the EPI in the form of commodities, transportation, cold-chain equipment, cash support for local costs and technical assistance, as well as vaccine supplies.
USAID

NAMES/TITLES:
Mr. Robert Haladay, Health Officer
Ms. Anita Siegel, Population Officer
Mr. Tom Park, General Development Officer

ADDRESS:
U.S. Postal Address: American Embassy
USAID/Tegucigalpa
APO Miami 34022-3480

International Address: Avenida La Paz
Tegucigalpa, Honduras

TELEPHONE: 32-3120 to 29
TELEX: USAID 1593 H0

FUNDING LEVELS: Support is as follows: FY 85, US$500,000; FY 86, US$320,000; FY 87, US$357,000.

MAJOR ACTIVITIES/PROJECTS:
Health Sector I, directed toward the poorest segment of the population, increases the number of village health workers, trains health personnel, and carries out immunization, ORT, malaria, and other infectious disease control, and provides management training and assistance to the Ministry of Public Health.
ROTARY INTERNATIONAL

NAMES/TITLES:
Mr. Joaquin D. Alcerro
Rotary Club of Tegucigalpa
Tegucigalpa, Honduras

TELEPHONE:  (312)328-0100
TELEX:  724-465
CABLE:  Interotary

FUNDING LEVEL:  US$207,500 (including US$3,980 for external promotion) for five years is being provided.

MAJOR ACTIVITIES/PROJECTS:
The purpose of Rotary's POLIOPLUS PROJECT in Honduras is to immunize over a five-year period all children under the age of one against polio. Rotary will provide 3,292,875 doses of polio vaccine, provide limited cold-chain equipment and distribution supplies, and establish a polio immunization program that will be continued by the MOH as part of its EPI. The funds are released to PAHO for the purchase of vaccines and equipment.
Basic Country Data

- **Total population:** 19.7 million
- **Number of births annually:** 700,000
- **Infant mortality rate:** 94/1000 live births
- **Total population under 5 yrs of age:** 3.0 million
- **Under 5 mortality rate:** 133/1000
- **Annual infant and child deaths (0-4):** 21,000

Historical Perspective

The Expanded Program on Immunization (EPI) in Peru was preceded by the smallpox eradication campaign. In 1966, the country also began a child immunization program which employed campaigns and ordinary vaccination services. The national EPI was adopted in 1979 to protect children against measles, polio, tuberculosis, diphtheria, pertussis, and tetanus. This program is currently referred to as the National Program for Universal Immunization in Peru by 1991 and is one of the MOH's special programs for child survival. In addition to the MOH, the Peruvian Institute of Social Security (IPSS) provides health services to approximately 28% of the population, including 50% of the population in Lima. IPSS is increasing coverage of children and is expanding its immunization activities.

Delivery Strategies

The two strategies for universal immunization in Peru by 1991 are as follows: 1) to reinforce the health care activities of outlying health establishments with improvement and maintenance of the cold chain, training and supervision of personnel, and more timely supply of program inputs; and 2) carry out local immunization days to increase awareness of the program and mobilize community resources.

In 1986, the National Vaccination Campaign (VAN-86) administered nationwide polio and DPT antigens (three doses each) along with one dose of measles vaccine. The campaign was conducted over three consecutive months with all resources being concentrated in urban centers on one two-day weekend each month, while in rural areas vaccination brigades went out for up to four weeks at a time to cover rural villages. VAN-86 implemented immunization strategies, including distribution of aspirin donated by Rotary, and house-to-house follow up by high school students and Boy Scouts.

Child survival activities also have been supported by the radio education efforts of Aula Abierta (Open Classroom) which has developed 80 radio programs devoted to health subjects, including five specifically to immunizations, and by television spots created by the MOH and Rotary Club.

Technical Aspects

Obstacles include the size of the country, a difficult geography, poor roads, and lack of communication facilities. Identified problem areas include management, supervision, and surveillance. WHO EPI reviews were conducted in 1982 and 1985.
OFFICIAL IMMUNIZATION SCHEDULE

<table>
<thead>
<tr>
<th># DOSES</th>
<th>ANTIGEN</th>
<th>RECOMMENDED AGE</th>
<th>COVERAGE RATES</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>BCG</td>
<td>birth</td>
<td>70</td>
</tr>
<tr>
<td>3</td>
<td>DPT</td>
<td>3,7,11 mos</td>
<td>48</td>
</tr>
<tr>
<td>3</td>
<td>Polio</td>
<td>3,7,11 mosm</td>
<td>47</td>
</tr>
<tr>
<td>1</td>
<td>Measles</td>
<td>9 mos</td>
<td>53</td>
</tr>
<tr>
<td>2</td>
<td>Tetanus Toxoid</td>
<td>Pregnant women</td>
<td>4</td>
</tr>
</tbody>
</table>

VACCINE SOURCE: PAHO Revolving Fund, Rotary International.

MOH NAMES/TITLES:

Dr. Ilda Urizar de Arias, Minister of Health
Dr. Raul Vargas, Director of Technical Directorate of Logistics, Informatics, and Documentation
Dr. Luis Ramirez, General Director of Control of ARI Program
Dr. Luis Seminario, Chief of Epidemiological Surveillance Unit
Dr. Manuel Diaz Rodriguez, Technical Director of Immunization Program
Dr. Enrique Percy Lavado, General Director of Immunization Program

ADDRESS:
Av. Salaverry s/n
Lima 11
Peru

TELEPHONE: 24-6165
PAHO

NAMES/TITLES:

Mr. C. Cuneo, Country Representative
Ms. R. Cardoso, Inter-country Technical Officer
Dr. J. Medrano, Country Medical Officer
Ms. Rosa Maria Cardosa, Nurse/Epidemiologist

ADDRESS:

Senor Representante de la OPS/OMS
Oficiana Sanitaria Panamericana
Casilla 2117
Lima 100, Peru

TELEPHONE: 40-9200
TELEX: 20260

FUNDING LEVEL: US$584,000 from 1987 to 1991 has been committed.

MAJOR ACTIVITIES/PROJECTS:

PAHO is the most active donor to in EPI in Peru, providing technical assistance for training, epidemiological surveillance, and program evaluation. The first country-wide EPI evaluation was conducted in January 1982 with technical assistance from PAHO. In addition, PAHO assists in the procurement of vaccines through the revolving fund and in the purchase of cold-chain equipment. Studies of training, training courses, and the development of training modules have been sponsored with technical and financial assistance from PAHO.
UNICEF

NAMES/TITLES:

Mr. P. Basurto, Country Representative
Dr. Oscar Liendo, Project Officer, Health

ADDRESS:

Parque Militon Parros 350
Miraflores
Lima, Peru

TELEPHONE:  51-14-477608
TELEX:  394-25309, 25309PE UNICEF

FUNDING LEVEL: US$1,652,000 has been noted for immunization, of which US$99,000 has been provided by the Japan National Committee for UNICEF.

MAJOR ACTIVITIES/PROJECTS:

Most of UNICEF's support to the EPI in Peru is with the cold chain, syringes, needles, and social mobilization. Other forms of assistance are in evaluation and monitoring, training, and administration.
USAID

NAMES/TITLES:

Ms. Joan E. LaRosa, Chief of Health & Nutrition Division
Dr. Howard L. Clark, REMS/SA
Dr. Linda N. Lion, Chief of Office of Human Resources
Mr. Charles Llewellyn, Health Projects Coordinator

ADDRESS:

U.S. Postal Address: American Embassy
USAID/LIMA
APO Miami 34031-3230

International Address: Corner Avenidas Inca Garcilaso de
la Vega and Espana
P.O. Box 1995
Lima 100, Peru

TELEPHONE: 33-3200
TELEX: 20335PE USAIDPR

FUNDING LEVEL: US$11,850,213 for the five years 1987-1991; a US$2,505,213
USAID grant; and US$9,345,000 in MOH counterpart funds are committed.

MAJOR ACTIVITIES/PROJECTS:

The Child Survival Action Program, when approved, will support the MOH
five-year Accelerated EPI National Plan of Action including: the purchase
and distribution of vaccines, syringes, needles, sterilizers, vaccination
cards, and cold-chain equipment for MOH and Peruvian Social Security
Institute establishments at all levels; training and supervision of MOH
personnel; health communications; community participation operational
costs; epidemiological surveillance; and evaluation.

Since 1985, the Mission has supported local PVOs to deliver child survival
services. These organizations include PRISMA (Projectos de Informatica,
Salud Medicina y Agricultura), Puentes de Salud, CARITAS, OFASA, CARE and
SEPAS.
ROTARY INTERNATIONAL

NAMES/TITLES:

Sr. Gustavo Gross

ADDRESS:

Los Rosales 460
San Isidro, Lima
Peru

TELEPHONE: 420588/89
TELEX: 25167 PE/COSUSA

FUNDING LEVEL: US$947,000 (OPV $937,000; Public Information $10,000) for five years (1986-1990) will be provided.

MAJOR ACTIVITIES/PROJECTS:

Rotary International's POLIOPLUS program is supporting EPI in Peru through funds to the PAHO revolving fund for vaccine and to the Rotary Club of Lima for public information. During the length of the project, the objective is to immunize a total of 7 million children under 5 years of age and to provide 22.3 million doses of oral polio vaccine.