DRAFT

Revised: 29 October 1992

IMMUNIZATION IN AFRICA
ISSUES PAPER

Prepared by: Laurie Ackerman
Health and Human Resources Division
Office of Analysis, Research and Technical Support
Bureau for Africa, Agency for International Development
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>II. THE IMPACT OF IMMUNIZATION ON CHILD MORTALITY</td>
<td>1</td>
</tr>
<tr>
<td>III. STATUS OF IMMUNIZATION PROGRAMS IN AFRICA: COVERAGE AND DISEASE REDUCTION</td>
<td>3</td>
</tr>
<tr>
<td>IV. ISSUES</td>
<td></td>
</tr>
<tr>
<td>DONOR COMMITMENT TO IMMUNIZATION</td>
<td>10</td>
</tr>
<tr>
<td>FUNDING</td>
<td>12</td>
</tr>
<tr>
<td>DELIVERY STRATEGIES</td>
<td>19</td>
</tr>
<tr>
<td>SUSTAINABILITY</td>
<td>22</td>
</tr>
<tr>
<td>V. INITIATIVES FOR THE 1990'S</td>
<td>25</td>
</tr>
<tr>
<td>VI. SUMMARY OF FINDINGS AND ISSUES</td>
<td>30</td>
</tr>
<tr>
<td>VII. RECOMMENDATIONS</td>
<td>32</td>
</tr>
<tr>
<td>ANNEX A: ACRONYMS</td>
<td></td>
</tr>
<tr>
<td>ANNEX B: BIBLIOGRAPHY</td>
<td></td>
</tr>
<tr>
<td>ANNEX C: PEOPLE CONTACTED</td>
<td></td>
</tr>
</tbody>
</table>
I. INTRODUCTION

In Africa, diseases that are preventable through vaccination contribute 20% of the under age five mortality. Since 1985, countries and donors have allocated substantial financial, human and material resources to expanding and improving immunization programs. Immunization has been a primary component and top priority of the child survival strategy of the United States Agency for International Development (USAID), the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF).

With substantial donor input, countries throughout the developing world strove to achieve the global goal of 80% coverage for childhood immunization by 1990. Over the decade, tremendous progress was made in immunization coverage and disease prevention in Africa. Achievements in immunization also represent improvement in the accessibility and delivery of health services. It is the hope of African countries, USAID, UNICEF, WHO and other donors that success achieved in immunization will strengthen the delivery of other primary health care services.

The outlook for immunization in Africa during the 1990's is not clear. Despite the progress made to date, many countries still have coverage rates far below 80%. There is a recognition that some of the achievements made during the 1980's may not be sustainable.

This paper reviews the current status of immunization programs in Africa and explores some of the factors contributing to low and/or unstable coverage, including donor commitment, funding, delivery strategies and sustainability. Some of the immunization initiatives for the 1990's are reviewed in relation to their potential impact. Recommendations are made for future support to immunization programs.

This paper is not a comprehensive review of immunization programs in Africa. It does not address many technical issues that are typically covered by WHO through annual immunization program guidelines. This paper focuses on key issues related to recent trends in program coverage.

II. THE IMPACT OF IMMUNIZATION ON CHILD MORTALITY

Immunization is widely recognized as one of the most significant and cost effective interventions to prevent childhood mortality. In the absence of immunization, it is estimated that over 1.4 million children in Africa would die annually from measles,

---

1 In Africa, a slightly lower goal of 75% coverage was set for 1990.
tuberculosis and pertussis. (WHO/CEIS, April 1992) Of the vaccine-preventable diseases, measles takes the largest death toll on children in Africa. The figure below graphically illustrates the relationship between measles incidence and child mortality.

Figure 1

6-35 Month Mortality and Measles Cases
Kingandu, Zaire; 1978-1989

Vaccination against measles has been shown to have a direct effect on child mortality in several studies. As part of a measles study conducted in Senegal, five related studies were critically reviewed. The authors concluded the following:

Taken together this report and the other five studies all suggest a reduction in child mortality after the age of vaccination of at least 30%, whereas all but one found a reduction of 45-50% or considerably more. The beneficial impact of measles vaccination has been found both in urban and rural areas. (Aaby et al, April 1989)

The life-saving benefits of measles and other childhood vaccinations are tremendous. During the 1990's children in Africa face other deadly diseases such as HIV/AIDS and resurgent malaria for which there are no easy solutions. It is therefore even more critical that proven, cost-effective technologies such as vaccination be made available and accessible to all children in Africa.
III. STATUS OF IMMUNIZATION PROGRAMS IN AFRICA: COVERAGE AND DISEASE REDUCTION

Progress in Immunization Coverage in Africa

During the late 1980's astounding progress was made in the improvement of immunization programs in Africa. As shown in Figure 2, regional coverage rates for vaccines against tuberculosis (BCG), diphtheria, pertussis and tetanus (DPT), poliomyelitis (OPV) and measles nearly doubled between 1986 and 1990. (UNICEF, 7/28/92)

A regional coverage rate of nearly 60% in 1990 for the third dose of DPT meant that more than half of the children in Africa came in contact with the health care system at least three times during that year. This is an indication of the notable
improvements that have been made in the delivery of immunization services. Through successful efforts to increase coverage, innovative technologies have been introduced and important lessons have been learned about how to plan, manage, implement and evaluate health services delivery programs to maximize program accessibility and effectiveness. Important lessons have also been learned about how to mobilize all sectors of society for the successful implementation of a health initiative.

By 1990, some countries exceeded the Africa regional target coverage rate of 75 percent. Shown below are six countries that have achieved and sustained at least 75% coverage for measles vaccination.

Figure 3

MEASLES VACCINATION COVERAGE 1984–91
SELECT COUNTRIES IN AFRICA
WITH 1991 COVERAGE ABOVE 75%

Zimbabwe
Burundi
Lesotho
Malawi
Rwanda
The Gambia

Source: UNICEF
It is more difficult to document the impact of immunization programs on disease reduction in Africa because of a lack of good data. Gross estimates based on 1990 vaccination coverage indicate that over 675,000 childhood deaths from measles, tetanus and pertussis are prevented in Africa annually. (WHO/CEIS, April 1992) In a few countries where data are available, including Burundi, Lesotho, Malawi, Swaziland, and Togo, sustained reductions in the incidence of measles, polio and/or neonatal tetanus have been documented. Measles vaccination coverage and measles incidence in three countries are shown in Figures 4 and 5 respectively. (CDC/USAID, 1990-91)

**Figure 4**

Measles Vaccine Coverage
Three CCCD Countries

![Graph showing measles vaccine coverage in three CCCD countries](image)

**Figure 5**

Measles Incidence in Three CCCD Countries with Surveillance

![Graph showing measles incidence in three CCCD countries](image)
Immunization Program Challenges to be Faced in the 1990's

Despite these laudable achievements, the Africa region still suffers from the world's highest infant and child mortality rates and lags behind all other regions in immunization coverage. In 1991, 28 countries in Africa were identified by the United Nations to be in the highest under-5 mortality rate category. (UNICEF, 1992) Vaccine preventable diseases continue to be an important cause of childhood mortality. The table below estimates some vaccine-preventable deaths that continue to occur in Africa despite current coverage levels. With higher immunization coverage levels in Africa, over 750,000 annual child deaths could still be prevented.

Figure 6

Vaccine Preventable Deaths in Africa

<table>
<thead>
<tr>
<th>Disease</th>
<th>Total Deaths</th>
<th>Prevented</th>
<th>Not Prevented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neonatal Tetanus</td>
<td>259,000</td>
<td>124,500</td>
<td>134,500</td>
</tr>
<tr>
<td>Pertussis</td>
<td>190,500</td>
<td>84,500</td>
<td>106,000</td>
</tr>
<tr>
<td>Measles</td>
<td>1,000,000</td>
<td>466,500</td>
<td>533,500</td>
</tr>
</tbody>
</table>

Source: WHO/CEIS, April 1992

When the world celebrated the attainment of Universal Child Immunization (UCI) in September 1991 and achieved average coverage rates over 80%, Africa was just approaching 60% coverage for most antigens -- a remarkable achievement for the region but significantly below the global goal of 80% and the Africa regional goal of 75 percent. Figure 7 is a regional comparison of coverage with the third dose of oral polio vaccine (OPV3). It is clear from this graph, that the Africa region lags behind all other regions of the world.
Within the Africa region, there is widespread variation in coverage levels. As noted previously, some countries have achieved and maintained high coverage levels. However, the average OPV3 coverage for West Africa in 1990 was 50%, ten percentage points lower than the regional average. A few countries were far below that level, including Niger and Chad at 13% and 20% respectively. (UNICEF, 7/28/92)

As is true for other regions of the world, coverage of reproductive age women with tetanus toxoid is lower than the levels of childhood vaccination achieved. The regional average for coverage with the second dose of tetanus toxoid (TT2) in Africa in 1990 was 48 percent (WHO CEIS, April 1992).

The Global Advisory Group (GAG) on Immunization has identified a category of "Lower Coverage Countries" that generally have mitigating circumstances such as war, civil strife, economic hardship, under-developed infrastructure and sparsely settled populations. Fifteen of the 20 countries in this category are in Africa. (EPI/GAG, October 1991)
Each year there is a new target cohort born to be immunized. Coverage rates most often refer to children under the age of one year. In terms of coverage, immunization programs in essence start from "zero" each year. As shown in Figure 3, some countries in Africa maintained high coverage levels in 1991 and a few, such as Zimbabwe and The Gambia increased coverage since 1990. However, of the 28 countries reporting measles coverage for 1991, 18 or 64% have reported some decline in coverage since 1990. Eight of these countries have experienced measles coverage declines of more than 10 percentage points during this period. (UNICEF 7/28/92) Data are not yet available from all countries, so regional trends cannot be assessed. However as shown in Figure 8, coverage in some countries is disturbingly low and/or unstable.

Figure 8

MEASLES VACCINATION COVERAGE 1984–1991
SELECT COUNTRIES IN AFRICA
WITH 1991 COVERAGE BELOW 50%

Source: UNICEF
When comparing 1990 and 1991 coverage data, two things are important to bear in mind. First, 1991 data are preliminary. As noted above, not all countries have reported yet and there is some variation in the numbers depending on the source (i.e., surveys versus routine information systems). Second, given the intensity of the push for UCI in 1990, some drop off in coverage was to be anticipated in 1991. However, five of the six countries shown in Figure 8 dropped to levels below their 1989 coverage rates.

In sum, the generally low coverage levels in Africa compared with all other regions of the world, the number of countries experiencing declines in coverage since 1990 and the magnitude of these declines give rise to serious concern about the future of immunization and child survival in Africa.

Implications of Low Coverage and Perceived Coverage Declines

**Disease Control** The ultimate goal of any immunization program is disease reduction. During the 1990's, the global Expanded Program on Immunization (EPI) is adopting a targeted approach that emphasizes disease control goals and strategies. These include a 95% reduction in measles cases by 1995, the elimination of neonatal tetanus by 1995 and polio eradication by the year 2000. (EPI/GAG, October 1991) Although good data on disease incidence are not widely available and recent trends cannot be readily assessed, the first step in attaining disease reduction is to sustain high levels of immunization coverage, at least 80 percent. Low coverage rates in some African countries and the instability of coverage in others have serious implications for our ability to further impact on childhood disease and death in Africa.

**Public Confidence** The tremendous progress of the late 1980's and the widespread extension of vaccination services has instilled public confidence in the health care system. Great demand for vaccination has been generated. Throughout Africa, scenes of mothers waiting with their children in long lines at vaccination centers have become very familiar. Faltering accessibility to immunization services will likely result in faltering public confidence in the health care system. With new and more complex threats on the horizon, such as HIV/AIDS and resurgent malaria, Africa can ill afford a loss of the peoples' confidence in the health care system.

**Access to Health Care** Of all health interventions in Africa, vaccination is the one that most often reaches the largest percent of the population. With outreach and mobile strategies, vaccination services have been extended deep into the rural areas. In this respect, vaccination coverage is an indicator of health care accessibility. At best, access to health services will be only as good as vaccination coverage. For
curative, more static services, access is likely to be significantly less. It is estimated that only 56% of the population in Africa has regular access to any form of modern health service. The ratio of health facilities to people is estimated to be as low as 1:10,345. (UNICEF, July 1992)

During the 1990's, many countries are moving towards more comprehensive, integrated health programs. Interventions such as the control of infectious diseases, including malaria and acute respiratory infections, micronutrient interventions, maternal health services including family planning, and other interventions are being added as priority activities to ongoing efforts in immunization. Such interventions are critical to further reducing childhood morbidity and mortality in Africa. Offering these services in an integrated manner allows for a multi-purpose, synergistic approach to health care delivery. For example, mothers can be educated about family planning and provided birth control supplies when they bring their children in for immunization.

Low and/or unstable immunization coverage does not bode well for the potential impact of additional and integrated services. It indicates that regular access is limited and/or decreasing and consequently, opportunities for comprehensive and integrated care are constrained and may be declining. A widespread, sustainable delivery system will be required in order to maintain high vaccination coverage and allow for the successful addition of other interventions.

The serious implications of low and unstable immunization coverage in Africa mandate a close look at immunization programs and the factors that contribute to coverage. In the sections that follow, four major factors are considered: donor commitment to immunization, funding levels, delivery strategies and sustainability measures.

IV. ISSUES

DONOR COMMITMENT TO IMMUNIZATION

One of the most significant features of the immunization drive during the 1980's was that all of the major health donors agreed in their ranking of immunization as a top priority health intervention. UNICEF, WHO, the United States, Nordic, Italian, Canadian and other governments, Rotary international and other non-governmental organizations all promoted immunization as a key intervention in developing countries. This convergence of donor interests and strong national government commitment throughout most of Africa was a major driving force in increasing immunization coverage rates. It appears that donor priorities are expanding in other important
health and development areas during the 1990's and the relative priority ascribed by
donors to immunization as a health intervention is waning. Examples of policy
developments at UNICEF and USAID are illustrative.

Beginning in 1977, the World Health Assembly adopted a resolution that included
the goal of providing immunization for all children of the world by 1990. In 1985, the
United Nations affirmed full support of this goal and seventy-four Governments and
more than 400 voluntary organizations pledged their support.

"UCI" or the attainment of Universal Child Immunization became the key
development objective for UNICEF during the late 1980's. UNICEF did continue to
work in growth monitoring, oral rehydration, breastfeeding and other areas, but efforts
in immunization dominated the organization's development agenda. Working with
 Ministries of Health, UNICEF offices throughout Africa engaged in extraordinary
activities to attain 80% coverage. In 1991, the attainment of UCI on a global basis was
celebrated. This global accomplishment however, masked regional and country
variation. As noted above, the average coverage rate in Africa was 60% in 1990.

UNICEF's policy commitment to immunization remains high in the 1990's, but
the focus of UNICEF's program has expanded dramatically. At the close of the
decade during the World Summit for Children, 27 child health and development goals
were established. In the 1990's, UNICEF is expanding from its primary focus on
immunization to a number of other areas, including basic education, nutrition and
aiding children in especially difficult circumstances. In Africa and other regions,
UNICEF is also promoting the Bamako Initiative. As discussed in Section V, this
Initiative is focused on the development of sustainable systems for the delivery of
health services. It is not specific to particular disease interventions, such as
immunization.

During the 1980's, child survival was one of USAID's top priority development
strategies and immunization was a key child survival intervention. Of the four major
child survival components, immunization and oral rehydration therapy, the "twin
engines", were given higher priority than nutrition and child spacing. Country missions
were encouraged to focus on raising immunization coverage as the first order of
business in health development. Most central, regional and bilateral health projects
focused primarily on the "twin engines".

As we enter the 1990's, the official USAID policy on child survival remains
unchanged. However, the definition of child survival has been widely expanded.
Today, in addition to immunization, oral rehydration therapy, nutrition and child
spacing, activities in acute respiratory infection control, health systems development, vector control, water quality, malaria, nutrition of women, women’s health, orphans/displaced children and health care financing can all be attributed, at least in part, to child survival. Most of USAID’s new bilateral health projects are more comprehensive than their predecessor projects. They are integrated programs that cover a number of health interventions and system development strategies.

Both UNICEF and USAID have expanded their top priorities in health beyond immunization and other core child survival interventions. Given the multitude and complexity of factors that influence maternal and child health in Africa, expansion beyond the “twin engines” is important. Without a more comprehensive approach, it will be difficult to achieve maximum impact on mortality reduction and the improvement of child health status during the 1990’s. However, it is not clear that all countries in Africa have the capacity to expand beyond immunization and other core interventions at this time. This is especially true for countries with low or unstable immunization coverage that may not be sustaining modest gains made to date.

The expansion of health program focus and scope does appear to have caused a decrease in the level of priority and attention given to immunization by UNICEF, USAID and other donors. It is likely that diminishing donor commitment to immunization is one cause of faltering coverage rates in some African countries. Further evidence of a decline in donor interest is presented in the following section.

FUNDING

A major factor in ensuring high coverage rates is the level of funding provided for immunization programs. In this section, recent funding trends for immunization programs in Africa are considered in terms of their potential impact on coverage levels.

Immunization Program Costs

The total cost of an immunization program includes personnel, transportation, vaccines, needles, syringes, ice packs and other supplies, refrigerators and other equipment, vehicles, buildings costs, maintenance, training, communications and other miscellaneous operating expenses. Data on the percentage costs of specific immunization budget line items are difficult to find. One study conducted in 1986 estimated the following breakdown:
Salaries 38-39%
Supervision 20%
Vaccines 10-12%
Transport 8-9%
Other 5-7%
Capital Costs 14-16% (REACH, March 1991)

A commonly used indicator to compare the cost of different immunization programs is "total cost per fully immunized child". This is the total cost of the program (including technical assistance) divided by the number of infants fully immunized with all required vaccines. Cost per fully immunized child varies notably across programs, from $4 to $19, but averages about $15 per fully immunized child. (REACH, March 1991)

Recent price increases have focused a lot of donor attention on the cost of vaccines as a critical component of immunization programs. Vaccine prices since 1986 are outlined in the table below. These prices will result in an increase in the cost of vaccines to immunize one child from $0.69 in 1991 to $0.85 in 1992 and a global increase in the cost of UNICEF vaccine procurement from $46.9 million to possibly $89 million during the same period. (UNICEF, April 1992)

Figure 9

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>20</td>
<td>0.82</td>
<td>0.87</td>
<td>1.10</td>
<td>1.10</td>
<td>1.00</td>
<td>1.10</td>
<td>1.30</td>
</tr>
<tr>
<td>DPT</td>
<td>20</td>
<td>0.44</td>
<td>0.68</td>
<td>0.85</td>
<td>0.78</td>
<td>0.80</td>
<td>0.90</td>
<td>1.15</td>
</tr>
<tr>
<td>OPV</td>
<td>20</td>
<td>0.43</td>
<td>0.95</td>
<td>0.95</td>
<td>0.85</td>
<td>0.95</td>
<td>1.10</td>
<td>1.40</td>
</tr>
<tr>
<td>Measles</td>
<td>10</td>
<td>0.68</td>
<td>1.54</td>
<td>1.45</td>
<td>1.30</td>
<td>1.16</td>
<td>1.35</td>
<td>1.60</td>
</tr>
<tr>
<td>TT</td>
<td>20</td>
<td>0.38</td>
<td>0.38</td>
<td>0.50</td>
<td>0.40</td>
<td>0.40</td>
<td>0.55</td>
<td>0.65</td>
</tr>
</tbody>
</table>

Source: UNIPAC/Supply Division

This increase in vaccine prices is significant and will have serious implications for the future financing of immunization programs. To keep this development in perspective, it is important to recall that vaccines, although an essential hard currency expense, comprise only 10-12% of the total budget for an immunization program.
Financial Support of Immunization Programs in Africa

Funding for immunization programs in Africa has come from host country governments and multilateral, bilateral and non-governmental donors.

African Governments

National governments have most often covered the costs of salaries, some communications, general expenditures and buildings. These costs do not usually represent additional outlays for immunization programs but are part of the general budget for operating the public health system. A 1990 synthesis of EPI cost effectiveness studies suggested that national governments in Africa are financing fewer immunization costs than previously estimated. In this study, governments were found to shoulder about 30-60% of program costs as opposed to the 80% assumed earlier. The authors hypothesized that financing patterns may reflect the relative dominance of donor organization priorities and level of resources rather than a lack of commitment on the part of national governments. The availability of donor resources may lead to a redirection of government monies away from EPI toward other health programs (e.g., curative services). (REACH, September 1990)

Although governments may be able to provide additional support to their immunization programs, a 1990 policy analysis demonstrated how difficult it would be for African governments to fully support their immunization programs during the 1990’s. This study estimated that African countries would have to spend between 0.1% and 0.5% of their gross domestic product (GDP) on immunization programs in order to achieve 80% immunization coverage in the year 2000. (REACH, February 1990) With health care budgets comprising on average only 1-2% of GDP, this allocation to immunization would be very significant, and more than likely, not feasible.

If countries were to allocate 0.1% of their GDP to immunization, this study projected that 27 of the 28 African countries studied would not achieve 80% coverage by the year 2000. Fourteen of these 27 countries would have coverage rates below 40 percent. The global goal of 80% coverage at a cost of $15 per fully immunized child would take many African countries more than 25 years to achieve, since it would be that long before 0.1% of the GDP of these countries was large enough to cover the necessary costs.

The authors contend that "...even under the most optimistic (and unrealistic) assumptions about economic growth, meeting an 80% coverage target is well beyond the economic capacities of many countries. Under the more likely [growth]
scenarios, many countries would be hard pressed even to allocate the amounts of resources required to maintain existing coverage levels without external resources. (REACH, February 1990)

Donors

Within current immunization programs, vaccines, training, supplies, vehicles, equipment and external technical assistance are primarily funded by the donors. In addition, donors often support communication (e.g., mass media) and social mobilization activities. The 1990 synthesis of EPI cost studies mentioned above, suggested that donors cover between 40% and 70% of the costs of immunization programs in Africa. (REACH, September 1990) This support includes both foreign exchange costs such as vaccines, and local recurring costs, such as fuel and staff per diem.

Many donors have provided both financial and technical support to immunization programs in Africa. What follows is not a comprehensive review of donor support, but rather focuses on the inputs of selected major financial donors, including UNICEF, the primary multilateral donor, Rotary International, the most significant non-governmental donor and the U.S. government, an important bilateral donor. Although WHO is the lead provider of technical guidance and contributes financially to EPI on a global basis, this paper does not include a detailed review of WHO support. However, it has been reported that WHO funding for EPI in Africa is declining during the 1990's. (WHO, May 1992)

UNICEF

UNICEF serves as the primary donor to childhood immunization on a global basis. UNICEF procures vaccine at competitive prices for most of the developing world and also provides support for cold chain equipment, vehicles, training, supplies, social mobilization and other program costs.

In 1990, UNICEF allocated $155 million globally to immunization. Of this allocation, $51 million went to Africa. For Africa this represented a near doubling of the $26.7 million allocated in 1988. (UNICEF's Operating Statistics June 1992) In fact, with UNICEF’s major emphasis on meeting the global targets by 1990, this amount may have been excessive. It generated levels of effort among UNICEF staff and host

2 UNICEF support includes UNICEF’s general resources as well as money channeled through UNICEF to Africa from governments and other donors.
country officials and health workers that could not have been sustained over the long term. In this respect, some levelling off in 1991 of funding, activities and coverage should have been anticipated.

Executive Director James Grant recently declared that it is appropriate for up to 20% of general resources program expenditures to be allocated for immunization activities. Above that amount, countries may request additional funding from global funds. (UNICEF, 2/28/92) Despite this high-level commitment to immunization, expenditures went from $51 million in 1990 to $30.9 million in 1991. (UNICEF, June 1992) Although some decline from 1990 may have been expected, it is worrisome that the 1991 expenditures are even lower than those for 1989. Thirteen country programs are currently experiencing shortfalls in funding. For Benin, Chad, Congo, Liberia and Zimbabwe, the budget shortfall represents over 40% of UNICEF’s planned program expenditures for 1992/93. One cause of these shortfalls was the 1990 cut off of Italian government funding to UNICEF for UCI in Africa. (UNICEF 2/11/92, 8/14/92)

With UNICEF’s move towards program expansion and integration, it is possible that some immunization funding is now being reported in the more general "health" line item. However, UNICEF’s budget for health in Africa remains at its 1990 level of $50.3 million during 1991, making it unlikely that "health" is picking up where EPI is dropping off. It is interesting to note that outside of the health sector, funding for emergency relief in Africa increased significantly from $19 million in 1990 to $34.8 million in 1991. This included responses to crises in Liberia, Somalia, and elsewhere. During 1991, the number and complexity of emergencies in Africa increased. With the current drought in Southern Africa, that trend is expected to continue. Below is an outline of UNICEF’s expenditures on EPI, Health and Emergency relief since 1986 in millions of dollars and as a percent of UNICEF’s total expenditures.

Figure 10

<table>
<thead>
<tr>
<th>Budget Item</th>
<th>1986 (%)</th>
<th>1987 (%)</th>
<th>1988 (%)</th>
<th>1989 (%)</th>
<th>1990 (%)</th>
<th>1991 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPI</td>
<td>15 (13%)</td>
<td>28 (21%)</td>
<td>27 (18%)</td>
<td>38 (23%)</td>
<td>51 (24%)</td>
<td>31 (15%)</td>
</tr>
<tr>
<td>Health</td>
<td>22 (20%)</td>
<td>24 (19%)</td>
<td>31 (21%)</td>
<td>36 (21%)</td>
<td>50 (23%)</td>
<td>50 (24%)</td>
</tr>
<tr>
<td>Emergency Relief</td>
<td>19 (17%)</td>
<td>18 (14%)</td>
<td>23 (16%)</td>
<td>16 (10%)</td>
<td>19 (9%)</td>
<td>35 (17%)</td>
</tr>
</tbody>
</table>

Source: UNICEF, June 1992
At the June 1992 UNICEF Executive Board meeting, it was decided that immunization funding would be straight-lined over the next five years at a global level of $100 million. Although this amount is substantial, it is not clear how much impact it will yield in light of growing populations, continuing efforts to increase coverage and increasing vaccine prices. It is also not yet clear what percent of the $100 million will be spent in Africa.

Rotary International

Rotary International has been the primary donor to Africa for polio vaccine. Rotary’s financial support is the result of a one-time global fund-raising effort. Through this campaign, Rotarians around the world set out to raise $120 million to eradicate polio from the face of the earth. Instead, they raised $240 million and are currently supplying polio vaccine through UNICEF to nearly 100 countries around the world. During the late 1980’s, it was estimated that Rotary was providing through UNICEF, 80% of the developing world’s polio vaccine.

Between 1988 and 1990, Rotary committed approximately $30 million annually to national immunization programs. These funds are awarded as "PolioPlus" grants to individual countries for vaccine and to a much lesser extent, social mobilization, cold chain equipment and surveillance. With respect to Africa, a total of approximately $44 million in "PolioPlus" grants have been awarded to 39 African countries and $19 million has been expended since 1985. (Rotary, 7/16/92) The lion’s share of these funds have passed through UNICEF for vaccine procurement.

Polio eradication, the goal of Rotary’s efforts, requires much more than routine immunization. It must also include systematic reporting of all suspected cases, regular vaccination "blitzes" or campaigns, establishment of laboratory networks and other measures. According to WHO, global polio eradication will cost as much as $1 billion or more in foreign exchange costs alone. (Rotary, July 1992)

Therefore, as Rotary’s "global pot" of funds is drawn down and the challenges of global polio eradication are fully realized, Rotary is becoming more strategic and focused in their support of immunization programs. Rotary has decided to reduce annual funding for UNICEF to about $10-15 million and to direct unobligated funds towards countries and regions that have specific polio eradication plans and are well on their way to implementing them. In the global plan for polio eradication, Africa will be the last region tackled at the end of the decade. Therefore, the flow of Rotary funding to Africa can be expected to slow over the next few years, with the exception
of targeted efforts in the Southern cone countries as they push towards polio eradication. Polio eradication is discussed further in Section IV.

USAID

Since the smallpox eradication campaign, the U.S. government has been an important bilateral donor to immunization programs in Africa. A major channel for USAID support to immunization programs in Africa during the 1980's was the Africa Child Survival Initiative: Combatting Childhood Communicable Diseases (CCCD) Project.

USAID funds have primarily and increasingly been used to support technical assistance. USAID has also been involved in the procurement of vaccines, supplies and logistics, but procurement for Africa has declined in recent years. With "Buy America" policies, USAID generally does not have a comparative advantage in procurement. Vaccines from the United States cost anywhere from 5 to 100 times more than vaccines procured internationally by UNICEF. Needles can be purchased from New Jersey at competitive prices.

USAID funding for immunization during the late 1980's can be summarized in terms of obligations. Expenditure data are not readily available. Between 1988 and 1990, USAID obligated just over $25 million for immunization in Africa. This amount included regional funding as well as bilateral funding from 19 country missions in Africa. This figure does not include central obligations because these numbers cannot be disaggregated regionally. (ISTI, July 1992)

Between 1991 and 1993, planned obligations for immunization in Africa total about $16.5 million, with bilateral money from ten country missions. By 1993, there will be no regional funding for immunization programs in Africa and only seven USAID country missions plan to obligate funds for immunization. These countries are C.A.R., Cote d'Ivoire, Kenya, Mali, Niger, Nigeria and Togo. (ISTI, July 1992)

The decline in USAID funding for immunization is caused by several factors. In part, it is a result of the termination of the regional CCCD Project. Also, USAID has nearly stopped direct procurement activities for immunization in Africa. In 1991, only

---

3 In 1992 UNICEF pays $0.03 for a dose of TT, $0.06 for a dose of DPT, $0.07 for a dose of OPV and $0.16 of measles vaccine. The Centers for Disease Control prices are $0.14 for a dose of TT, $6.25 for a dose of DPT, $2.09 for a dose of OPV and $9.48 for a dose of measles vaccine.
two countries allocated funds for vaccine procurement. Another factor is the expansion in program focus described above. As the priority of other health interventions increases, the proportion of funds allocated for immunization is declining.

General Comments on Funding

Funding for immunization in Africa during the late 1980's was plentiful. A great deal of financial, logistic and technical support was forthcoming from external sources, including many donor agencies and organizations. With this support, immunization coverage in Africa increased greatly. As we enter the 1990's, the major donors appear to be reducing their inputs into immunization programs. It is likely that donor funding declines are an important factor contributing to the instability of program coverage in Africa.

It will be very difficult for African governments to rapidly absorb the full costs of their immunization programs. If left to their own resources, it has been projected that many countries in Africa would not reach 80% coverage for more than two decades. Although studies have indicated that there may be much greater potential of Governments to support their programs than was evident in the 1980's, significant and rapid declines in donor funding for immunization will have serious implications for disease control in Africa.

In the 1990 EPI cost analysis mentioned previously, the authors conclude that donor partnerships for EPI must be established. "...donors will have to commit to provide, on a continuing basis, the difference between country resources and resources sufficient to meet the agreed upon target coverage levels. This means that the donors obligations, in financial terms, will vary in relationship to the economic capacity of the country partner. Of critical importance, as well, is that donors' commitments cannot be time limited. Rather, they must be based on an open-ended commitment to provide necessary resources as long as the country partner continues to demonstrate commitment and political will by providing a fixed [increasing] and substantial share of national economic resources to the program." (REACH, February 1990)

DELIVERY STRATEGIES

The types of vaccine delivery strategies pursued strongly influenced program coverage in Africa during the 1980's. In this section, recent changes in delivery strategies are considered in terms of their impact on immunization coverage levels.
Definitions of Different Strategies for Vaccine Delivery

Four main strategies are used to deliver immunization services. They are:

**Fixed Facilities:** This strategy provides immunizations at fixed health facilities, such as health centers, clinics or outpatient departments of hospitals. The ideal situation would be to have health centers within a reasonable distance of all families and offering comprehensive basic preventive and curative services on a daily basis, including immunization. However, access to health care facilities in Africa is limited. In at least 18 countries, less than 50% of the population has access to a modern health care facility (UNICEF, 1992). In rural and remote areas, the figure is much lower. Moreover, with resource limitations, many fixed facilities do not offer comprehensive services and can only provide immunizations weekly or monthly.

**Outreach:** Outreach immunization sites are fixed places away from health facilities (e.g. community health posts) where permanent health facility staff visit regularly to offer immunizations. Dates, times and sites of immunization must be pre-scheduled and well known by the target community for the strategy to succeed. Outreach can greatly increase access and coverage in areas around fixed facilities, but is limited by staff, transportation and weather constraints.

**Mobile Teams:** In areas that are too remote to be served by fixed or outreach services, special teams can be sent to visit a series of immunization sites. The teams travel over a period of several days visiting prearranged villages and sites. This strategy is particularly appropriate for nomadic or very sparsely populated areas. It is an expensive strategy and is constrained by a lack of proper supervision and the long intervals between visits. In Burkina for example, mobile teams are scheduled to reach each child only twice annually in their assigned areas of coverage, making it impossible for the children to be fully immunized with all vaccines during the first year of life. (REACH, June 1992)

**Acceleration:** Accelerated strategies are designed to immunize a large number of children at the appropriate age within a limited time frame. There are a wide range of accelerated strategies, including mass campaigns, national immunization days, weeks or months and local community door-to-door "pulses". Social mobilization and public awareness building are extremely important components of acceleration to ensure that the maximum target population is reached. Often during acceleration activities, fixed facilities, outreach sites and mobile teams are all utilized.
Costs of Different Delivery Strategies

The cost of immunization programs varies according to the type of delivery strategy used. In Africa, one study found fixed facilities to be the least expensive approach at about $7 per fully immunized child. Mobile teams and campaigns were more expensive at approximately $11 and $16 respectively. (REACH, March 1991)

However, the variation on cost per fully immunized child within any strategy is also significant. In West Africa, the costs of delivery through fixed facilities ranged from $7 in Mauritania to $17 in The Gambia. Mobile costs ranged from $7 in Burkina to $14 in Mauritania and campaign costs ranged from $8 in Mauritania to $19 in Senegal. Some of the factors identified to influence the cost-effectiveness of vaccination programs include coverage rates, size of the target population, the number and type of personnel as well as their productivity, and the type and durability of materials and supplies. (REACH, March 1991)

Recent Trends in Implementation

As noted in Section III, accessibility to health facilities in many African countries is limited. With the push for UCI during the late 1980's, accelerated immunization strategies were implemented throughout Africa to increase coverage beyond the reach of fixed facilities. According to WHO, 85 acceleration activities were reported by 43 countries in Africa between 1986 and 1990. Most of these acceleration efforts were national scale and this is a higher number than reported by any other region. (WHO CEIS, April 1992)

Analyses have shown that these accelerated efforts had a tremendous impact on coverage in some areas. For example, one study in Nigeria revealed that as many as 50% of the immunizations given in 1988 were provided during the nine National Immunization Days held that year. (WHO et al, November 1989) Coverage in the rural areas of Senegal increased threefold during a six month acceleration phase in 1986/87. (UNICEF, No. 5) In Cameroon, nearly 60% of the doses of vaccine administered during 1986 were administered on two national immunization days. Increases in coverage were especially evident in difficult areas with otherwise low performance. (UNICEF, No. 4)

Since 1990, Nigeria and many other countries have not engaged in accelerated activities. Nigeria is one of the countries to experience a drop in coverage during 1991. In Chad, mass campaigns ended in 1989 in favor of intensifying fixed facility
activity. The result was a 20-30% drop in coverage rates for all antigens in 1990 and continuing through 1991. (CABLE, 8/6/92)

It seems clear that fixed facilities in many African countries are not yet able to provide the level of coverage achieved through acceleration. Acceleration has allowed these countries to push beyond the system and reach populations who otherwise have no access to modern health care. In remote, inaccessible areas, accelerated strategies may be the only effective means of reaching these populations at this time. The inability of countries to sustain high levels of access without acceleration is already causing coverage declines and has serious implications for efforts to integrate additional services into the immunization delivery system on a sustained basis.

The costs and impact of acceleration vary across countries and even within countries. The question is not one of routine versus accelerated strategies. The challenge ahead is to identify locally appropriate and efficient combinations of delivery strategies that reach the maximum populations, but do not detract from the longer term process of developing an infrastructure and delivery system through which comprehensive basic health services can be provided over the long term.

SUSTAINABILITY

Along with funding and delivery strategies, a third issue to consider when assessing the apparent declines and instability of vaccination coverage in many African countries is whether immunization efforts have been designed and implemented to maximize their sustainability. Sustainability refers to the ability of programs to continue financially and institutionally after external support has been terminated.

In this section, the immunization efforts of the 1980's are assessed in terms of five conditions that have been identified through a series of field studies to increase the likelihood of sustainability. These conditions are:

* Perceived Effectiveness: Technically effective interventions whose effectiveness has been brought to the attention of relevant constituencies,
* Integration: Strong implementing agencies with activities fully integrated into the Ministry of Health in a manner that encourages integration of child survival activities,
* Local Financing: Increasing portion of overall recurrent program costs borne by local sources, including the national budget and communities,
Training: Strong and institutionalized training program with trained cadre of trainers, and

Design Process: Design and redesign efforts that occur in a process of mutual, respectful negotiation and are responsive to nationally defined needs, objectives and capabilities. (USAID, December 1990)

Perceived effectiveness: This condition has been met to some extent in terms of coverage, but not in terms of disease reduction. Both types of data are essential to the effective management of immunization programs. With globally-accepted, standard and simple methodology (30 cluster coverage surveys), countries have been able to demonstrate the accomplishments of their immunization programs. In 1990, all countries in Africa reported their national immunization coverage rates to WHO. However, by mid-1992, 1991 coverage data for several African countries are still unavailable. In order to be useful for program management, coverage data must be standardized, complete, timely and accurate.

Documenting the effectiveness of immunization programs in reducing disease in Africa is problematic. Current data on disease incidence are woefully inadequate. As an example, all of Africa reported 611 cases of polio to WHO in 1990. Calculations based on incidence and population estimate that the total number of polio cases was actually over 50,000. (WHO/CEIS, April 1992) The CCCD project has established model surveillance programs in a few African countries and WHO, UNICEF, Rotary International, the REACH project and others are giving increasing attention to surveillance. However, better documentation of disease reduction will be critical to the attainment of EPI goals and will be an important tool for sustaining interest in and commitment to immunization programs during the 1990’s.

Integration: To date, this condition has not been met in most African countries. Largely in response to the weak and underdeveloped health care delivery systems existing in these countries, heavily subsidized immunization programs have often been implemented on a vertical basis with separate procurement, administration, and/or evaluation systems. In many countries, accelerated strategies have been pursued that mobilize and are dependent on tremendous resources from outside of the health care system. The expansion of immunization services has far outpaced other health services, creating an autonomous delivery system, including outreach and mobile capability. It is now recognized that sustainable program achievements require strong infrastructure and support systems, including training, logistics, management, information, etc. More and more programs are being designed to build capacity and strengthen institutions. The challenge to these programs is to ensure that all of the important EPI lessons and technologies are incorporated and built upon.
Local Financing: This condition has not been met. As described in Section IV, the likelihood of complete financial sustainability on the part of African governments for immunization is minimal during the foreseeable future. However, the need to strive for increasing self-sufficiency is clear. The trend for immunization program funding during the late 1980's was one of donors increasing their inputs. Over the years, donors have been putting more and more resources into immunization programs while governments are providing less than we previously assumed. In Malawi, the immunization program does not appear as a line item on the government's budget. Six years into Chad's 10-year EPI program, the government has not contributed any financial support. (CABLE, 8/6/92) If countries begin to shoulder some of the costs of immunization during the 1990's, they will become more prepared to take over the programs as donors gradually turn to other development problems.

Training: This condition has been partially met in the sense that EPI training in Africa has been very strong, but is not yet institutionalized. Through training of trainers courses and courses in management and supervision, a strong, talented and dynamic cadre of immunization managers, trainers and supervisors has been developed throughout the continent. EPI training programs have served as models for the development of other training programs, including diarrheal disease control and acute respiratory infection control. However, EPI training programs are not yet fully integrated within the existing education and health care systems. In-country training courses sponsored by a variety of donors have not always been well-coordinated. Most countries do not have overall national training plans to ensure that training is obtained by those who need it when they need it. In addition, EPI workshops are most often held outside of the countries' formal education system as periodic in-service training activities. Although the REACH project has made some progress in Kenya, EPI has not yet become an integral part of medical, nursing and other health worker education programs in Africa.

Design Process: The initial EPI goals and strategies were not negotiated on a national basis. The target of 80% coverage by 1990 was a global target. Although Africa adopted a target of 75% coverage, this was only a slight modification of the global target, rather than a determination based on local priorities and capabilities. Unified, simple goals served to galvanize tremendous interest and accomplishment in immunization during the early years of the UCI initiative. However, the 1980's revealed tremendous variation in how and what the regions, countries and sub-national areas can accomplish in immunization. The global goal may have been too high and acceleration may have been too extreme for many countries in Africa to achieve and sustain. Negotiating a balance between the global coverage and disease control
goals set for the 1990's and the need for locally appropriate and negotiated goals and strategies will be of critical importance in terms of sustainability.

Summary

In terms of the five conditions thought to lead to eventual sustainability, the EPI experience in Africa during the 1980's has not been very successful. Two conditions, local financing and mutually negotiated program design at the local level have not been met. Integration of immunization services into existing systems and programs has not been achieved in most countries. The remaining two conditions, perceived effectiveness and institutionalized training have been partially attained. Based on these sustainability criteria, it appears that for the most part immunization programs in Africa during the late 1980's were not designed and implemented to facilitate their sustainability. This is likely to be contributing to the perceived instability of immunization coverage rates. Based discussions in Section IV, complete financial sustainability is probably not an appropriate goal for immunization in Africa. However, increasing the share of the governments' contribution and enhancing institutional capacities can certainly strengthen immunization programs in Africa and reduce the level of external resources required.

V. Initiatives for the 1990's

Governments and donors recognize the need for continued progress in immunization coverage, disease reduction and sustainability during the 1990's. Several initiatives are underway with the objective of contributing to one or more of these goals. In this section, selected initiatives are reviewed in terms of their purpose and potential.

Initiatives Designed for Increased Coverage and Disease Reduction

At the 1991 World Summit for Children, the World Health Assembly goals of neonatal tetanus elimination by 1995, 95% reduction of measles deaths by 1995 and global polio eradication by the year 2000 were endorsed. In this section, efforts towards the measles and polio goals are reviewed. Although the neonatal tetanus initiative is very relevant to Africa where TT coverage is low and 52% of births are not attended by trained health workers, it is not specifically reviewed in this paper.
The Measles Initiative

The Measles Initiative is a recent USAID effort with the chief objective of demonstrating that the immunization system can be made to work effectively in countries that have lagged behind in building their immunization programs. It specifically targets measles, the most serious of the vaccine-preventable diseases in Africa in terms of childhood morbidity and mortality. The Measles Initiative operates in Kenya, Burkina and Niger.

The Measles Initiative is initially a two-year, $3 million effort. It is based on the assumption that "shortages of vaccines and supplies are not the main reasons for low coverage in most of these countries, and that a coordinated effort to improve the management, communication and quality of care of the EPI can yield decreased measles cases and mortality. (CABLE, State 312575) The Measles Initiative is a combined effort of three major USAID projects: the REACH Project, HealthCom and The Quality Assurance Project. These projects provide intensive technical assistance in management, planning, evaluation, communication and quality assurance.

As of mid-1992, surveys and baseline analyses had been completed and workshops and training had been implemented in the target countries. In Kenya and Burkina, where there is a high drop out rate between the first dose of DPT at six weeks and the measles vaccination at nine months, efforts focus on decreasing this gap through raising awareness and sustaining demand. In Niger where coverage rates are still very low, the major objective is to increase the population's access to basic immunization services. (USAID, June 1992)

Although this Initiative may be appropriate in its effort to target measles and to identify and pursue locally appropriate mixes of delivery strategies, it has some significant constraints. First, the Initiative is too short in duration and too small of an investment to expect achievement of sustainable impacts. Second, it is disturbing to note that one of the countries, Kenya, is now experiencing a measles vaccine shortage with a budget shortfall of $2.5 million expected over the next three years. USAID has been the sole supplier of measles vaccine to Kenya until recently when the mission's operating year budget (OYB) was reduced. This situation brings into serious question the Measles Initiative's design assumption that adequate logistics are available and only intensive technical assistance is needed to improve immunization programs in most African countries. It suggests the need to re-evaluate the extent to which program resources are meeting the countries' priority immunization needs.
Polio Eradication

As mentioned previously, the global polio eradication effort is being phased in on a regional basis. To date, polio has nearly been eliminated in Latin America and efforts are greatly increasing in the Western Pacific. It is anticipated that the polio eradication effort will intensify in Africa towards the end of the decade. The advantages in human and financial terms of eradicating polio are significant. Globally, it is estimated that polio eradication will result in the prevention each year of disability for 600,000 polio victims, and of 20,000 unnecessary deaths. (Rotary, July 1992) The cost savings from eliminating the need for polio vaccine in the United States alone would currently be $220 million each year. (CDC, August 1992)

As noted in Section IV, polio eradication will require systematic reporting of all suspected cases, regular vaccination "blitzes" or campaigns, establishment of laboratory networks and other measures in addition to strong and effective routine immunization programs. Globally, polio eradication will cost as much as $1 billion or more in foreign exchange costs. Including local expenditures, the total cost will be much higher.

The global pursuit of polio eradication does pose some serious issues for immunization programs in Africa. First, polio eradication is a global priority which is not a top health priority for many African countries facing HIV/AIDS, uncontrolled fertility and resurgent malaria. Second, the polio eradication effort may pull resources away from routine immunization services and temporarily from certain geographic regions. Third, polio eradication is a very vertical intervention and may hamper efforts to integrate basic health services. Fourth, the types of interventions required by polio eradication are very advanced for the current immunization situation in Africa. These include nearly universal immunization coverage, zero-based reporting from every district, outbreak response and laboratory capability. If these are implemented rigorously with external resources for fast results at the close of the decade, the chances of leaving behind a sustainable infrastructure for the delivery of other immunizations and health services are limited.

As a global campaign with tremendous potential global benefit, polio eradication will come to Africa late in the decade. To capitalize on the experience and maximize its benefits, African governments and donors must identify and pursue those aspects of polio eradication that will strengthen immunization and health care systems over the long term. For example, efforts made now to improve surveillance and information systems will ensure a good foundation for eradication and are likely to
result in additional long-term benefits, such as improved advocacy for immunization and data-based decision-making in the health sector.

Initiatives Designed for Sustainability

The Children's Vaccine Initiative

The problem of vaccine supply is being addressed through a major initiative spearheaded by UNICEF. The Children's Vaccine Initiative is an effort to ensure the development and introduction of new and improved vaccines at the lowest possible cost. Two aspects of the Children's Vaccine Initiative are addressed in this section: the Global Vaccine Supply Strategy and the Vaccine Independence Initiative (VII).

As part of the Global Vaccine Supply Strategy, a scatter plot was made of 130 industrial and developing countries based on population size and relative wealth. Countries were categorized according to their potential for engaging in vaccine production or share production. Although this analysis showed great potential for improving the global vaccine supply situation, it revealed that most African countries and over 50% of the world's children fall into the lowest potential categories. (GAG, October 1992) Although wealthier countries can become more independent in vaccine supply in the near future, donors should anticipate providing vaccine for the lower category countries for many years to come.

The Vaccine Independence Initiative (VII) is organized to provide a mechanism for countries to become self-reliant in vaccine procurement. The VII includes four components: planning for vaccine needs; procurement; a revolving fund; and a mechanism for utilizing local currencies and replenishing the dollar based fund.

The short term objective of the VII is to establish a vaccine planning, financing and procurement mechanism for high-quality, low-cost vaccines for EPI in a group of countries that have the national budgetary resources to finance some or all of their vaccine requirements. The long term objective is to ensure sustainability of national immunization programs by assisting countries in becoming self-reliant in the systematic procurement of quality, low cost vaccine delivered in a timely and dependable manner. (UNICEF, April 1992) USAID has committed up to $6 million ($4 million in mission funding) to the global VII. Most of this support will be for revolving fund capitalization. A small portion will cover some technical assistance.

The criteria for countries to participate in the VII revolving fund include GNP per capita, government interest, level of immunization coverage (i.e., at least 50%),
capacity of the local UNICEF office to absorb local currency and the strength of the country's currency. Based on these criteria, it is anticipated that Sub-Saharan African countries will be among the latter countries to become involved.

Notwithstanding the financial constraints noted above, there would be two major advantages to early Sub-Saharan African country participation in the VII revolving fund. First, the establishment of a revolving fund will require countries to create a line item on the government budget for EPI vaccines, even if they are only paying for 5% of their vaccines. Second, the VII will strengthen the procurement capability of the government. Both of these developments would contribute to a foundation for improved sustainability.

Although of the VII can be an important step towards greater sustainability of immunization programs, its limitations must be acknowledged. Vaccines, as noted previously, only comprise 10-12% of immunization program costs. Therefore, even if African countries were to fully absorb the cost of vaccines, 30-60% of immunization program costs would still need to be provided by external sources.  

Bamako Initiative

Most donors are putting a higher priority on systems strengthening for sustainability during the 1990's. One major effort in this regard is the Bamako Initiative, spearheaded by UNICEF in collaboration with the World Bank and selected bilateral donors, including Italy and the Netherlands.

The aim of the Bamako initiative is to revitalize the public health care delivery system by strengthening district management while capturing some of the resources the people themselves are spending on health. Four key interventions are pursued: maintenance of immunization coverage; the prevention and treatment of malaria, diarrhea and acute respiratory infections; safe motherhood; and HIV/AIDS prevention. The Bamako Initiative plans to incorporate and build on lessons learned through immunization programs during the 1980's. As of mid-1992, the initiative was operating in selected districts in 18 African countries with a total target population of 20 million. Start up and implementation have been slow in some countries due to policy resistance and administrative constraints. (UNICEF, July 1992)

---

4 This assumes (as noted in Section IV) that governments in Africa are currently covering approximately 30-60% of immunization program costs. Adopting the costs of vaccines would therefore bring the government burden to about 40-70% of program costs, leaving 30-60% to be funded externally.
The Bamako Initiative is designed primarily to address many critical sustainability issues, including local financing through essential drugs, cost recovery and community participation, integration of programs into existing institutions and institutionalization of services.

It is too early to fully assess the impact of the Bamako Initiative. The Initiative does appear to have political support in Africa and USAID offices in Senegal and Burundi report notable progress in linking the Bamako Initiative to EPI sustainability (Cables, 8/7/92 and 8/11/92) However, it is important to note that with a limited target population and a prolonged process approach, this Initiative will not solve the Africa's immunization constraints in the short term. Coverage and sustainability objectives will only be realized over the long term.

VI. SUMMARY OF FINDINGS AND ISSUES

FINDINGS

Tremendous progress was made by immunization programs in Africa during the 1980's. Coverage rates nearly doubled for the region and declines in vaccine-preventable disease and death were documented in some countries. Access to immunization services was increased notably as services were extended deep into rural areas. Innovations in social mobilization, training, technology and delivery strategies, and improvements in planning, management and evaluation were realized as a result of immunization efforts.

Yet, overall immunization coverage in Africa lags behind all other regions of the world and there is evidence of program instability and coverage declines since 1990 in some African countries. It is not yet clear whether this is a temporary slump caused by "overexertion" during 1990 or whether it is more serious. However, the generally low coverage levels in Africa, the number of countries experiencing unstable and declining coverage rates and the magnitude of some of the declines give rise to serious concern about the future of immunization and child survival in Africa.

The possible consequences of low, unstable and/or declining coverage in Africa include: reduced ability to control childhood disease and death, a loss of public confidence in the health care system, and reduced opportunities for the provision of integrated basic health services. Changes in donor commitment, funding levels and delivery strategies, and inadequate attention to the issue of sustainability have all been found to be important factors in terms of past and future immunization program coverage in Africa.
ISSUES

Country Variation and Global Priorities: An important lesson learned from immunization programs during the 1980’s is the tremendous variation among countries in Africa in terms of needs and capacities. Levels of achievement, extent of infrastructure, availability of trained health personnel and other variables differ markedly across regions and countries within Africa. The global goal of 80% (75% in Africa) coverage by 1990 was too ambitious for many African countries to achieve and sustain. Goals of eliminating and eradicating selected diseases during the 1990’s are also likely to be too resource intensive and imposing for most African countries. Attempts to achieve these goals and to expand into many other health areas in Africa may hamper impact and threaten the longer term health care system development process. Striking a balance between local and global priorities so that programs can be tailored to meet each countries’ needs and ensure maximum sustainable impact will be an important challenge of the 1990’s.

Funding Approach and Local Ownership: Donor funding for immunization in Africa during the 1980’s was plentiful and immunization programs were largely associated with the donors. Since 1990, donor funding is declining while the costs of immunization programs are rising. Most African governments are committed to their immunization programs, but are not yet ready or able to fully absorb the costs of their immunization programs. The time frame and scope of many of the new donor initiatives are too short and too small to compensate for this gap. Providing sufficient donor support while encouraging longer term financial and institutional sustainability on the part of African countries is a second major challenge for the 1990’s.

Accessibility: Acceleration strategies were effective at increasing access to immunization services in many difficult and remote areas of Africa during the 1980’s. However, these accelerated activities tended to be quite resource intensive. There has been a reduction in accelerated immunization activities since 1990. Fixed facilities have not been able to fully compensate for this reduction. Increasing access through a locally appropriate, cost-effective and sustainable mix of delivery strategies is a third major challenge for the 1990’s.

Expansion and Integration: Many of the national immunization programs in Africa have been narrowly focussed and conducted on a vertical basis, outside of the existing health care infrastructure. Some of the new initiatives, such as polio eradication, will require even greater verticality. At the same time, most governments and donors are striving to expand and integrate various maternal and child health interventions for greater impact, efficiency and sustainability. Finding a way to maintain the effectiveness of vertical programs while increasing program scope and integration is a fourth major challenge for the 1990’s.
Information Systems: Weak information systems have made it extremely difficult to measure the true impact of immunization programs. Data on coverage and disease incidence are critical to the effective management of immunization programs. Coverage data are standardized, collected and reported by many African countries. However, not all countries are reporting and there continue to be problems in terms of the timeliness, completeness and accuracy of reports. Data on disease incidence and the systems to collect them are virtually absent in Africa. Improving information systems in a way that strengthens the overall health delivery system is a fifth major challenge for Africa during the 1990’s.

Emergencies: Political instability and civil strife continue to be a significant constraint to development in Africa. Crises in Liberia, Somalia, Zaire and other countries have disrupted ongoing immunization and health programs. They have taken a significant toll in human life and are diverting resources away from longer term development efforts. Designing and implementing health development activities that facilitate larger efforts to stabilize and enhance the economic and political conditions of African countries may be the greatest challenge to be faced during the 1990’s.

VII. RECOMMENDATIONS

- Analysis of Coverage Rates: Further analysis of immunization coverage rates since 1990 in African countries is urgently needed. The magnitude, scope and causes of any declines in coverage must be identified and delineated. Analysis of countries that have sustained high coverage levels will also be important. These analyses should help in determining the level and type of support required for country immunization programs in Africa over the years to come.

- Time Frame: The donors must adopt a longer term time frame in their support to immunization programs in Africa. Tremendous work remains to be done to reduce the heavy toll of vaccine preventable diseases on children in Africa. It is clear that African governments cannot rapidly absorb the costs of or sustain their immunization programs independent of donor input. Long-term partnerships between donors and governments must be developed to ensure ongoing support for immunization and to encourage increasing self-sufficiency for immunization on the part of African countries.

- Funding: For the short term, the major donors should convene to review their commitments to immunization programs in Africa. New initiatives should be reviewed in terms of their contribution. The objective of this meeting should be to ensure adequate resources, identify potential shortfalls, and reach consensus
on how to compensate for any major gaps in country programs. Strengths of individual donors (e.g., UNICEF and procurement) and complementarity of donor inputs should be guiding principles in this process.

- **Strategy Development:** It is time for USAID to update the Agency and Africa Bureau health and child survival strategies to reflect the priorities of the 1990's. There is an urgent need for a state-of-the-art strategy to serve as a framework for the many new bilateral and central health projects being developed.

- Issues to be highlighted in the revised strategy include the continued importance of immunization for child mortality in Africa; the stratification of countries according to their needs, priorities and absorptive capacities; and the importance of working towards greater sustainability. Approaches to be incorporated into the revised strategy include increased attention to systems strengthening, integration of basic health services such as immunization and family planning, and improved collection and use of information for better management and decision-making.

- Recognizing the value of donor collaboration and consensus, USAID should work closely with UNICEF, WHO and other donors in the process of strategy development to help ensure that donor approaches and contributions are complementary.

- **Vaccine Supply:** To address the issue of vaccine supply for Africa:

  - USAID should encourage the early introduction of the Vaccine Independence Initiative into at least one or two African countries. These countries should have relatively strong immunization programs. Burundi and Kenya have been suggested as possible candidates. Successful implementation of the VII in one or two countries will serve as a model for other countries and will lay the groundwork for increased self-sufficiency in vaccine procurement.

  - USAID should reach agreement with UNICEF that monies saved as a result of industrial countries becoming independent in vaccine supply will be applied to those countries that are furthest from self-sufficiency in vaccine supply.

  - In addition, USAID should explore with UNICEF the potential for negotiation with the private sector and vaccine manufacturers to limit vaccine price increases.
Annex A

Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>BCG</td>
<td>(Tuberculosis Vaccine)</td>
</tr>
<tr>
<td>CCCD</td>
<td>Combatting Childhood Communicable Diseases Project</td>
</tr>
<tr>
<td>CDC</td>
<td>Centers for Disease Control</td>
</tr>
<tr>
<td>CEIS</td>
<td>Computerized EPI Information System</td>
</tr>
<tr>
<td>DPT</td>
<td>Diphtheria, Pertussis and Tetanus Vaccine</td>
</tr>
<tr>
<td>EPI</td>
<td>Expanded Program on Immunization</td>
</tr>
<tr>
<td>FIC</td>
<td>Fully Immunized Child</td>
</tr>
<tr>
<td>GAG</td>
<td>Global Advisory Group on Immunization</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>OPV</td>
<td>Oral Polio Vaccine</td>
</tr>
<tr>
<td>OYB</td>
<td>Operating Year Budget</td>
</tr>
<tr>
<td>REACH</td>
<td>Resources for Child Health Project</td>
</tr>
<tr>
<td>TT</td>
<td>Tetanus Toxoid Vaccine (for women)</td>
</tr>
<tr>
<td>UCI</td>
<td>Universal Child Immunization</td>
</tr>
<tr>
<td>UNICEF</td>
<td>United Nations' Children's Fund</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>VII</td>
<td>Vaccine Independence Initiative</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
</tbody>
</table>
Annex B

Bibliography

Aaby Peter et al, Child Mortality Related to Seroconversion or Lack of Seroconversion after Measles Vaccination, Pediatric Infectious Disease Journal, Vol 8 No 4, April 1989

CABLES

* State 243956, Immunization Programs in Africa, 7/30/92
* Ndjamea 3722, Immunization Programs in Africa, 8/6/92
* Nairobi 17559, Immunization Programs in Africa, 8/7/92
* Bujumbura 3358, Immunization Programs in Africa, 8/7/92
* Dakar 8484, Immunization Programs in Africa, 8/11/92
* Bamako 5854, Immunization Programs in Africa, 8/14/92
* Yaounde 7445, Immunization Programs in Africa, 8/18/92
* Dar Es 4833, Immunization Programs in Africa, 8/21/92
* Kampala 4762, Immunization Programs in Africa, 8/25/92
* Accra 5870, Immunization Programs in Africa, 9/4/92
* Maputo 3949, Immunization Programs in Africa, 9/9/92
* State 312575, Health: Special Measles Control Support for Africa


Foster et al, Health Sector Priorities Review: Measles, the World Bank, September 1991

Global Advisory Group (GAG) on EPI, 14th Meeting, Series of Reports, Turkey, October 1991

* EPI in the 1990's - A Concept Paper
* Achieving the 90% Immunization Coverage Target by the Year 2000
* EPI Overview in the African Region
* Report on the Progress of the Vaccine Independence Initiative

Global Advisory Group (GAG) on EPI, 15th Meeting, Series of Reports, Indonesia, October 1992

* EPI Global Overview
* Global and National Resource Needs of EPI Strategies
* Basic Training for EPI in the 1990's
ISTI, Center for International Health Information USAID Health Information System,
Facsimile messages dated 7/17/92 and 7/21/92

REACH, ESSENTIALS: A Guide for Program Officers, August 1989

REACH, Rosenthal, The Economic Burden of a Sustainable EPI: Implications for
Donor Policy, February 1990

REACH, Brenzel, The Costs of EPI, John Snow Inc., Revised September 1990


REACH, Percy et al, Cost Recovery for Immunization: A Worldwide Survey of
Experience, April 1991

REACH, Grabowsky, Issues for Achieving the 1995 Measles Control Targets in
Developing Countries, June 1992


Rotary International, Facsimile message dated 8/14/92

UNICEF, Lessons Learned - Rapid Assessment: Cameroon’s National Vaccination
Campaign, Evaluation Publication No. 4

UNICEF, Lessons Learned - Rapid Assessment: Senegal’s Accelerated Immunization
Phase, Evaluation Publication No. 5


UNICEF, Facsimile Message dated 2/11/92

UNICEF, Grant, Memo, Sustaining Universal Child Immunization, 2/28/92

UNICEF, Vaccine Independence Initiative - Request for Funding from USAID, April
1992

UNICEF, Executive Board, Assuring Vaccines for the Children of the 1990’s, May 1992


UNICEF, Coverage Statistics from Africa, Facsimile dated 7/28/92

USAID, CCCD Project, Sustainability Strategy, December 1990

USAID, Child Survival, A Seventh Report to Congress On the USAID Program, April 1992

USAID, Measles Initiative Progress Report, June 1992

WHO/CEIS, World Health Organization, April 1992

WHO/EPI, Additional Resources required to Achieve the Eradication of Poliomyelitis in ways that Strengthen EPI and Promote Primary Health Care, Working Paper, January 1992


WHO/EPI, Study of Global Expenditure on Immunization Activities (DRAFT), June 1992

WHO et Al, In-Depth Review of Nigeria’s Expanded Programme on Immunization and Programme for the Control of Diarrheal Diseases, November 1989

Annex C

People Contacted Outside of USAID

The Reach Project

Mary Harvey, Senior Technical Officer
David Boyd, Technical Officer

UNICEF

Terrel Hill, MD, Child Survival Unit
Jama Gulaid, Child Survival Unit
Phillip Van Haecke, Child Survival Unit
Malika Abrous, Program Office
Martin Mogwanja, Africa Desk
Harold Fleming, Program Office

Rotary International

John Wahlund, PolioPlus Program

Centers for Disease Control

Stan Foster, MD, Field Services Division
Jean Roy, Field Services Division
SUMMARY: OVER THE LAST SEVERAL MONTHS, AFR/ARTS/HHR HAS NOTED IN A FEW CABLES AND APIS, MISSION CONCERN AND/OR COMMENTS ABOUT A PERCEIVED DOWNTURN IN IMMUNIZATION COVERAGE AND ACTIVITIES IN AFRICA. WE HAVE ALSO HEARD FROM VARIOUS SOURCES THAT UNICEF AND OTHER DONORS MAY BE REDUCING THEIR SUPPORT TO IMMUNIZATION. AS WE ENTER THE 1990'S, HAVING ACHIEVED GREAT PROGRESS IN IMMUNIZATION AND THE REDUCTION OF VACCINE-PREVENTABLE DISEASES DURING THE 1980'S, WE NEED TO BE FULLY COGNIZANT OF THE IMMUNIZATION SITUATION IN AFRICA TO HELP ENSURE THAT HARD EARNED GAINS ARE CONTINUED AND SUSTAINED IN THE MOST EFFICIENT MANNER. THIS CABLE REQUESTS MISSIONS TO PROVIDE A BRIEF UPDATE ON THE STATUS OF IMMUNIZATION EFFORTS IN THEIR COUNTRY.

A) DURING THE LATE 1980'S THE AFRICA REGION MADE ASTOUNDING PROGRESS IN THE IMMUNIZATION OF CHILDREN. REGION WIDE COVERAGE RATES NEARLY DOUBLED FROM LESS THAN 30 PERCENT IN 1985 TO NEARLY 60 PERCENT IN 1990. HOWEVER,
SOME COUNTRIES HAVE REPORTED LOWER CHILDHOOD VACCINATION COVERAGE RATES IN 1991 THAN WERE REPORTED FOR 1990. PRELIMINARY INTERNATIONAL DATA INDICATES THAT THERE MAY HAVE BEEN DECLINES IN GHANA, MALI, NIGERIA, SENEGAL, TANZANIA, CAMEROON. HOWEVER, DEFINITIVE NUMBERS ARE DIFFICULT TO OBTAIN AT THIS TIME.

B) MISSIONS ARE REQUESTED TO PROVIDE THE MOST RECENT NATIONAL COVERAGE RATES FROM THEIR COUNTRIES, INDICATING THE SOURCE OF THE DATA.

C) IF VACCINATION COVERAGE RATES HAVE RECENTLY DECLINED, OR IF THEY HAVE SHOWN SIGNS OF INSTABILITY, MISSIONS ARE REQUESTED TO ANSWER THE FOLLOWING QUESTIONS:

1) WHAT ARE THE POSSIBLE REASONS FOR THE DOWNWARD OR UNSTABLE TRENDS IN VACCINATION COVERAGE?

2) ARE THESE TRENDS EXPECTED TO CONTINUE OR IS COVERAGE EXPECTED TO STABILIZE?

3) WHAT HAS HAPPENED TO THE BUDGET FOR IMMUNIZATION, INCLUDING BOTH THE DONOR AND GOVERNMENT CONTRIBUTIONS? WHY?

4) HAVE THERE BEEN ANY SHORTAGES IN SUPPLIES (E.G., VACCINES, NEEDLES, COLD CHAIN EQUIPMENT)? IF SO, WHAT WERE THE CAUSES OF THESE SHORTAGES?

5) HAVE THERE BEEN CHANGES IN THE IMMUNIZATION PROGRAM, STRATEGIES AND ACTIVITIES? IF SO, WHAT ARE THESE CHANGES AND HOW HAVE THEY AFFECTED THE PROGRAM?

6) SPECIFICALLY, WHAT MEASURES, IF ANY, ARE BEING TAKEN TO ENSURE SUSTAINABILITY OF THE IMMUNIZATION PROGRAM? HOW HAS THE PURSUIT OF SUSTAINABILITY AFFECTED THE PROGRAM'S IMPACT?

D) WE REGRET ADDING TO THE MISSIONS ALREADY HEAVY WORKLOAD WITH THIS REQUEST, BUT BELIEVE THAT IT IS CRITICAL FOR THE AGENCY AND, MORE SPECIFICALLY, THE AFRICA BUREAU TO KEEP ABREAST OF CHANGES IN EPI COVERAGE, PARTICULARLY IF THERE ARE INDICATIONS THAT COUNTRIES ARE EXPERIENCING SIGNIFICANT DECLINES. WITH THIS INFORMATION, WE CAN DIALOGUE WITH OTHER DONORS. AS PUBLIC CONFIDENCE HAS BEEN BUILT UP IN THE HEALTH SYSTEM'S CAPACITY TO IMMUNIZE, IT WOULD BE A SHAME TO DESTROY THAT NEW CONFIDENCE.
E) PLEASE SEND YOUR RESPONSES TO AFR/ARTS/HHR ATTENTION: HOPE SUKIN BY AUGUST 21, 1992. THANK YOU. YY
E.O. 12356: N/A

SUBJECT: IMMUNIZATION PROGRAMS IN AFRICA

REF: STATE 243956

1. MOST RECENT NATIONAL COVERAGE RATES FOR BURUNDI, ACCORDING TO THE ANNUAL VACCINATION REPORTS FROM PVCCP PROGRAM/MINISTRY OF HEALTH/BURUNDI (1990, 1991), ARE AS FOLLOWS:

   BCG  90%  88%
   DPT 3  85%  84%
   MEASLES 75%  75%
   POLIO 3  84%  90%

BURUNDI IS ONE OF THE LEADING COUNTRIES IN MEETING VACCINATION COVERAGE GOALS. AS THE FIGURES ABOVE INDICATE, FOR THE MOST PART, THE EPI PROGRAM HAS BEEN ABLE TO SUSTAIN THE MAJORITY OF VACCINATION COVERAGE RATES. ALTHOUGH 24 DECREASES OCCURRED WITH BCG AND DPT 3, MEASLES REMAINED AT THE SAME LEVEL AND POLIO 3 ACTUALLY INCREASED 4%.

2. THE FOLLOWING PARAS CORRESPOND WITH THE QUESTIONSPOSED IN SECTION C OF REFTEL:

A) THE MINISTRY CITES THE POLITICAL PROBLEMS OF NOVEMBER 1991 AS THE REASON FOR THE DECREASES. SPECIFICALLY, COVERAGE DECLINES OCCURRED IN PROVINCES WHERE THE MOST FIGHTING TOOK PLACE.

B) COVERAGE IS EXPECTED TO, AT A MINIMUM, REMAIN STABLE. USAID/BURUNDI'S PROPOSED HEALTH PROJECT WILL ADDRESS SUSTAINABILITY AND COVERAGE RATE INCREASES. THUS FAR, EPI IS CLEARLY A MOH PRIORITY PROGRAM.

C) USAID HAS GIVEN FUNDS FOR VEHICLES, GAS, AND REPAIRS. UNICEF AND THE ROTARY CLUB SUPPLY THE VACCINES. UNICEF HAS ALREADY CONTACTED US INFORMALLY TO SAY THAT IN THE LONG RUN, THEY WILL NEED FUTURE SUPPORT FROM USAID TO COVER VACCINE COSTS. IT IS DIFFICULT TO ESTIMATE GRB CONTRIBUTIONS.

- MARCH 1992 - 1993

<table>
<thead>
<tr>
<th>VACCINE</th>
<th>RATE PERCENT</th>
<th>RATE PER CENT</th>
<th>PER CENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.C.G.</td>
<td>86.2</td>
<td>68.8</td>
<td>36.8</td>
</tr>
<tr>
<td>POLIO 1</td>
<td>65.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POLIO 2</td>
<td>57.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POLIO 3</td>
<td>46.9</td>
<td>37.0</td>
<td>21.8</td>
</tr>
<tr>
<td>DPT 1</td>
<td>70.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DPT 2</td>
<td>59.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DPT 3</td>
<td>48.0</td>
<td>46.0</td>
<td>21.8</td>
</tr>
<tr>
<td>MEASLES</td>
<td>44.0</td>
<td>35.0</td>
<td>25.0</td>
</tr>
</tbody>
</table>

ESTIMATED FIGURES

SOURCE: NON - PNC/EPI/CDD REVIEW - MARCH 1992
- WHO CLUSTER SAMPLING METHOD.

Unfortunately, these figures, which are expected to be published for international comparisons, are suspect. One observer of the study documented violation of the survey protocol in a way that may significantly deflate the reported rates.

2. OTHER SOURCES OF INFORMATION, SPECIFICALLY SERVICE PROVIDER REPORTS FROM THE EPIDEMIOLOGY DIVISION OF THE MINISTRY PROVIDE FIGURES WHICH ARE SIGNIFICANTLY LOWER. 1991 IMMUNIZATION RATES ACCORDING TO THESE REPORTS ARE: B.C.G. 54.8, MEASLES 38.6, POLIO-1 38.6, AND DPT-2 38.6. THE MISSION BELIEVES THAT THESE FIGURES ARE A BETTER REFLECTION OF THE IMMUNIZATION SITUATION IN GHANA, BUT THERE ARE NO HARD DATA TO SUPPORT A FIRM DECISION. ALL REPORTED FIGURES SHOULD BE VIEWED AS BEING INDICATIVE, AND NOT DEFINITIVE. REGARDLESS OF ONE'S VIEW OF THE DATA, LITTLE PROGRESS HAS BEEN MADE OVER THE LAST FOUR YEARS.

3. UNEXPECTEDLY, MANY HEALTH WORKERS EXPECT A DECLINE IN COVERAGE IN COMING YEARS WITH THE CHANGE IN EPI PROGRAM STRATEGY. IN THE MID '90S THE GOVERNMENT OF GHANA EMPHASIZED MASS IMMUNIZATION CAMPAIGNS AS THE MAIN STRATEGY FOR ATTAINING THE GOAL OF 80 PER CENT COVERAGE OF THE UNDER 2 YEAR OLDS BY 1998. THIS STRATEGY CAME TO AN END IN 1998 WITHOUT A PLANNED PHASING OUT PROGRAM, IN TERMS OF ORGANIZATION AND RESOURCE MOBILIZATION WHICH WOULD BE EFFECTIVE FOR PROVIDING ROUTINE IMMUNIZATION SERVICES AT STATIC AND OUTREACH HEALTH UNITS COUNTRYWIDE.

4. IN ORDER TO AVOID THE EXPECTED DECLINE IN IMMUNIZATION COVERAGE, A MINISTRY OF HEALTH TASK FORCE IS CURRENTLY WORKING OUT THE ORGANIZATIONAL AND RESOURCE MOBILIZATION STRATEGIES FOR ROUTINE IMMUNIZATION AT ALL STATIC AND OUTREACH HEALTH UNITS COUNTRYWIDE AS PART OF THE PACKAGE FOR CHILD SURVIVAL AND DEVELOPMENT PROGRAM. IT IS EXPECTED THAT THIS STRATEGY WILL NOT ONLY STABILIZE BUT INCREASE COVERAGE TO THE LEVEL OF REDUCING THE INCIDENCE OF IMMUNIZABLE DISEASES.

5. THE GOVERNMENT OF GHANA AND DONOR AGENCIES SUCH AS UNICEF, WHO AND SOME NGOs HAVE SUPPORTED THE EPI PROGRAM WITH THE NEED SUPPLIES SUCH AS VACCINES, COLD CHAIN EQUIPMENT, NEEDLES AND OTHER LOGISTICS. THERE ARE CONTINUOUS COMPLAINTS FROM THE FIELD THAT PROVISION OF NEEDLES AND SYRINGES HAS BEEN INADEQUATE. IT IS UNCLEAR WHETHER THIS IS DUE TO INADEQUATE PROCUREMENT OF EQUIPMENT OR WHETHER IT IS DUE TO THE KNOWN MAJOR PROBLEMS WITH THE INTERNAL DISTRIBUTION SYSTEM IN PARTS OF THE COUNTRY.

6. A MAJOR CONCERN IS THAT UNICEF IS MARKEDLY REDUCING ITS CONTRIBUTION TO EPI FROM USD 1.39 MILLION IN 1991 TO USD 0.56 MILLION IN 1992 AND AN AVERAGE OF USD 0.5 MILLION ANNUALLY 1993 TO 1995. SINCE APPROXIMATELY HALF OF UNICEF'S GHANA BUDGET IS EXPECTED TO COME FROM CURRENTLY UNFUNDED SUPPLEMENTARY FUNDING, IT IS UNCLEAR HOW MUCH WILL ACTUALLY BE MADE AVAILABLE. THE MISSION IS UNAWARE OF OTHER MAJOR DONORS BECOMING INVOLVED IN EPI.

7. SINCE THE MINISTRY OF HEALTH DOES NOT SPLIT OUT EPI PROGRAMS IN ITS BUDGET FIGURES, IT IS IMPOSSIBLE TO DETERMINE WHAT DIRECTION BUDGET SUPPORT IS MOVING.

8. A SPECIFIC EQUIPMENT PROBLEM THAT WAS RECENTLY REVEALED WAS THE FAILURE OF 38 SWISS SOLAR REFRIGERATORS WITHIN THREE MONTHS OF INSTALLATION IN 1987. THESE HAVE NOT YET BEEN REPAIRED. FOUR YEARS WERE CONSUMED IN CONDUCTING AN INDEPENDENT EVALUATION, AND PROCUREMENT OF PARTS. AN ADDITIONAL NINE MONTHS HAVE PASSED WHILE THE PARTS HAVE LAGGED WAITING PORT CLEARANCE. WE DO NOT KNOW THE EFFECT THIS HAS HAD ON THE OVERALL EPI PROGRAM, SINCE SOLAR REFRIGERATORS-HIERD ON MISSION SITE VISITS HAVE BEEN FUNCTIONING AS INTENDED. THE MISSION WISHES TO STRESS THAT THESE UNITS WERE NOT REPEAT NOT PURCHASED BY USAID OR WITH USAID FUNDS.

9. MEASURES BEING TAKEN TO ENSURE SUSTAINABILITY OF THE IMMUNIZATION PROGRAM INCLUDE:

(a) STRENGTHENING OF THE DISTRICT HEALTH SYSTEM WITH A REFINED FRAMEWORK FOR COMMUNITY BASED HEALTH CARE,
(b) INCREASING PHYSICAL ACCESS TO POPULATION, HEALTH AND NUTRITION SERVICES IN ORDER TO OFFER INTEGRATED AND COMPREHENSIVE SERVICES PACKAGE,
Services to include:

- The introduction and use of community registers to improve record keeping on vital events and assist in tracking coverage of services such as immunization.

- The establishment of community based growth monitoring system.

- The training and supervision of village health workers such as traditional birth attendants (TBA's) to ensure proper antenatal, delivery and postnatal care and increased access to family planning services.

- Increased reliance on community based distribution of modern contraceptives through village health workers such as TBA's, community clinic attendants (CCA's) in the BANANO initiative, chemical sellers and market women.

- Expansion of the role of the Ghana Social Marketing Program (GSM/P) in the promotion of integrated and comprehensive maternal and child health family planning (MCH/FP) services.

- Sub contracting of services to NGO's.

These measures form part of the program of activities in the health sector in the Ghana National Program of Action for Children and Women from 1992 - 2001 (a follow up to the World Summit for Children) which has been accepted by government for implementation. Brown
SUBJECT: IMMUNIZATION PROGRAM IN MALI

The following is a response to ref tel. Since the EPI was launched in Mali in 1987, only two evaluations have taken place: one in 1990 which covered the entire country and another in 1991 which covered only the districts and regions where the program was carried out jointly by the Ministry of Health (MSHPH), UNICEF, and UNDP/UN.

1. The first report was issued in February, 1990.

National coverage rates according to that source are as follows:

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>1990</th>
<th>1991</th>
<th>Increase</th>
<th>Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>74</td>
<td>64</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>DTP1</td>
<td>66</td>
<td>56</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>DTP2</td>
<td>48</td>
<td>38</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>DTP3</td>
<td>29</td>
<td>19</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Measles</td>
<td>47</td>
<td>37</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>CCV</td>
<td>22</td>
<td>12</td>
<td>10</td>
<td>20</td>
</tr>
</tbody>
</table>

2. By comparing the coverage rates of children completely vaccinated (CCV) in 1990 to those reported in 1991 in regional capitals, we noticed the following trends for the 12-23 month population:

- Increase in 1991 compared to 1990:
  - Kayes
  - Koulakoro
  - Sipasso
  - Segou
  - Mopti
  - Gao
  - Tombouctou

- Decrease in 1991 compared to 1990:
  - Kayes
  - Mopti

3. Anyhow, these trends are not expected to continue as many difficulties are now being encountered during the implementation of the maintenance phase. The possible reasons for these constraints are as follows:

- The changes in the strategy: The EPI started with a mobile phase which lasted 3 years (1987-90) and consisted of mobile teams operating 3 passages in each cercle. The mobile phase covered all the country. The EPI then switched to the maintenance phase which covers new-borns and children who were missed by the mobile phase coverage for any reason. So the target population is seemingly low compared to that of the mobile phase. The maintenance phase is implemented by two AIDE-SOIGNANTS in each arrondissement. UNICEF procured two mobile phases to each arrondissement (one for each aide-soignant) to allow the aide-soignants to cover every village of the assigned arrondissement.

- The aide-soignants were recruited and supposed to be paid by the local community development committee (LCDS). The LCDS often failed in paying the salaries to the aide-soignants which brought a lack of motivation in most areas. The changes in strategy, the lack of motivation of health agents and the interim period which occurred between the two phases contributed to negatively affect the immunization program coverage rates.

- Concerning the budget for immunization, there is no special budget allocated to EPI. The MOH procures personnel and infrastructure and UNICEF the vaccines, needles, and cold chain equipment. In some areas where PVOs operate, they procure logistics support (vehicles, fuel, mobile phases, and per diem for personnel). FYI, USAID supports five U.S. based PVO's in assisting with EPI program in their respective regions.

- There have never been shortages in supplies in terms of vaccines and needles but sometimes the cold chain equipment gets out of order and this is due primarily to logistics management system insufficiencies.

- As stated above, the strategy changes which occurred in the immunization program have negatively affected the program. But other difficulties exacerbated this negative effect. During the March events which led to a change in the Malian government, UNICEF maintenance material stocked in a warehouse was destroyed in a fire including spare parts for vehicles and mobile phases: this provoked a slow-down of immunization activities in most areas over a sustained period. Moreover the insecurity in the north of Mali which is still ongoing negatively affected EPI activities in that area. Only fixed centers are operating in Gao, Tombouctou, and some parts of Mopti, Segou (DION) and Koulakoro (Namar) regions.

- The sole measure being taken to ensure sustainability is the creation of a national immunization fund right at the beginning of the program which theoretically is to be reinforced by a system of cost recovery of immunization cards and has to be used to finance immunization activities. However, since this fund was created it has never worked as planned. The fund is managed by the Centre National d'Immunization (CNI). The cards are said not to be paid regularly. The amount of the fund is...
A: The changes in the strategy: the EPI started with a mobile phase which lasted 3 years (1987-90) and consisted in mobile teams operating 3 passages in each cercle. The mobile phase covered all the country. The EPI then switched to the maintenance phase which covers new-borns and children who were missed by the mobile phase coverage for any reason. So the target population is seemingly low compared to that of the mobile phase. The maintenance phase is implemented by two (2) AIDE-SOIGNANTS in each arrondissement. UNICEF procured two (2) mobiles each to each arrondissement (one for each AIDE-SOIGNANT) to allow the AIDE-SOIGNANTS to cover every village of the assigned arrondissement.

B: The AIDE-SOIGNANTS were recruited and supposed to be paid by the local community development committee (CDC). The CDCs often failed in paying the salaries to the AIDE-SOIGNANTS which brought a lack of motivation in most areas. The changes in strategy, the lack of motivation of health agents and the interim period which occurred between the two phases contributed to negatively affect the immunization program coverage rates.

4. Concerning the budget for immunization, there is no special budget allocated to EPI. The MOH procures personnel and infrastructure and UNICEF the vaccines, needles and cold chain equipment. In some areas where PVOs operate, they procure logistics support (vehicles, fuel, mobiles, and perdiem for the personnel). FYI, USAID supports five U.S. based PVOs in assisting with EPI program in their respective regions.

5. There have never been shortages in supplies in terms of vaccines and needles but sometimes the cold chain equipment gets out of order and this is due primarily to logistics management system insufficiencies.

6. As stated above, the strategy changes which occurred in the immunization program have negatively affected the program. But other difficulties exacerbated this negative effect. During the March events which led to a change in the Malian government, UNICEF maintenance material stocked in a warehouse was destroyed in a fire including spare parts for vehicles and mobiles. This provoked a slow-down of immunization activities in most areas over a sustained period. Moreover the insecurity in the north of Mali which is still ongoing negatively affected EPI activities in that area. Only 14 centers are operating in Gao, Tombouctou, and ... parts of Mopti, Segou (Sind) and Koulikoro (Karal) regions.

7. The sole measure being taken to ensure sustainability is the creation of a national immunization fund right at the beginning of the program which theoretically is to be reinforced by a system of cost recovery of immunization cards and has to be used to finance immunization activities. However, since this fund was created, it has never worked as planned. The fund is managed by the Centre National d'Immunisation (CNI). The cards are said to be paid regularly. The amount of the fund is
1. Following is Mission's response to questions raised in Ref. The information presented was provided by the Service of Quot Grands Ennies (GE) which manages the Senegal Enlarged Program of Immunization (EPI).

A) PER REF PARA (C-1): The national coverage rates for the first 1992 semester (January 1 through June 30, 1992) for children aged 0-11 months are:
   - BCG: 90 PERCENT
   - DTC-3: 60 PERCENT
   - MEASLES: 54 PERCENT

   These rates were:
   - BCG: 77 PERCENT
   - DTC-3: 59 PERCENT
   - MEASLES: 45 PERCENT

B) PER REF PARA (C-2): Despite the intensive supervision put in place the rates of DTC-3 and measles remain low. The most important reason cited by GE is the difficulty in reaching children for DTC-2 and 3. This is due to the lack of follow-up social mobilization and IEC motivation which have focused only on the initial big campaign.

C) PER REF PARA (C-3): It is difficult for GE to project the trends expected but it seems that the actual rates could be stabilized at their actual levels.

D) PER REF PARA (C-6): The GOS held an inter-ministrial meeting on EPI on May 14, 1992 and agreed to provide (in addition to personnel salaries and facilities): (1) 150 million CFA for FY 1992; (2) to allocate a permanent budget to support the logistics (vehicles, cold chain equipment); and (3) to supplement purchases of vaccines as prices are now increasing. (This budget will amount 380 million CFA each year beginning FY 1993). UNICEF, Belgium and French donors continue their support to the EPI program.

E) PER PARA (C-5): The original strategy is still in place since the beginning of the program. This strategy includes three methods of service provision from (1) fixed delivery points (health posts and clinics), (2) regularly scheduled mobil teams, and (3) pulse outreach from fixed facilities.

F) PER PARA (C-6): Senegal is now implementing the Bamako Initiative (BI) based on sale of essential medicines. The supplemental funds raised will cover the recurrent costs of child survival programs including the EPI component. The GOS plans to use BI strategy to support needs of all the child survival programs. In addition, the GOS has just begun implementation of the decentralized health program where local authorities have taken charge of planning, implementing and evaluating the child survival/family planning program (including EPI). Innovative community and local financing schemes are being implemented to support the health activities. As these strategies are just beginning it is too early to know if they will permit sustainability of the EPI program.

SHIRLEY
1. GENERAL: THE MINISTRY OF HEALTH IN TANZANIA (MOH) FOLLOW THE GUIDELINES OF THE WORLD HEALTH ORGANIZATION IN ITS EXPANDED PROGRAM ON IMMUNIZATION (EPI) WHICH RECOMMEND THAT ALL CHILDREN RECEIVE BCG VACCINATION AGAINST TUBERCULOSIS, THREE DOSES OF DPT VACCINE FOR THE PREVENTION OF DIPHTHERIA, PERISOSIS AND TETANUS, THREE DOSES OF POLIO VACCINE, AND A VACCINATION AGAINST MEASLES. CHILDREN RECEIVE ALL THESE VACCINES BEFORE THEIR FIRST BIRTHDAY.


3. ACCORDING TO TANZANIA DHS CONDUCTED FROM OCTOBER 1991 TO MARCH 1992, IMMUNIZATION COVERAGE AVERAGES 66 PERCENT. ACCORDINGLY, THIS CONFIRMS THE IMMUNIZATION COVERAGE BASED ON THE EPI RECORDS FOR THE PERIOD 1989/90, WHICH COMPARES WELL WITH DHS. THE EPI MANAGERS REPORT WAS PRESENTED TO THE NATIONAL MOTHER, CHILD HEALTH AND FAMILY PLANNING (MCH/FP) COORDINATING COUNCIL MEETING HELD IN NOSHI TOWN FROM AUGUST 8TH TO 12TH, 1992.

SPECIFIC IMMUNIZATION COVERAGE RATES OF CHILDREN 12 TO 23 MONTHS OF AGE ACCORDING TO EPI REPORT AND DHS:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PERCENTAGE</td>
<td>PERCENTAGE</td>
<td></td>
</tr>
<tr>
<td><strong>BCG</strong></td>
<td>92</td>
<td>91</td>
<td></td>
</tr>
<tr>
<td><strong>DPT3</strong></td>
<td>76</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td><strong>POLIO</strong></td>
<td>66</td>
<td>71</td>
<td></td>
</tr>
<tr>
<td><strong>MEASLES</strong></td>
<td>74</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td><strong>M&amp;L</strong></td>
<td>72</td>
<td>66</td>
<td></td>
</tr>
</tbody>
</table>

THE TDHS ALSO PROVIDES IMMUNIZATION COVERAGE RATES (IN
UNCLASSIFIED
AGENCY FOR INT'L DEV.
TELECOMMUNICATIONS CENTER

C) STRENGTHENING OF HEALTH MANAGEMENT TEAMS AND MORE
TRAINING AT DISTRICT LEVEL.

D) GOT CONTINUE PAYING SALARIES OF KEY STAFFS OF EPI
PROGRAM WHO ARE EMPLOYED ON SECONDMENT BASES.
MEASURING THE IMPACT OF THESE CHANGES AND THE PROGRAM IN
GENERAL ESPECIALLY BY DISEASE SURVEILLANCE REMAINS A
PROBLEM BECAUSE DISTRICT DISEASE REPORTS ARE LATE AND
IRREGULAR. RECENTLY (AUGUST 1992) THERE HAVE BEEN
REPORTED MEASLES OUTBREAKS IN THE FOLLOWING REGIONS:
COAST, TANGA, MTWARA, RUVUMA, SHINYANGA AND KIGOMA.

9. TO ENSURE SUSTAINABILITY OF THE IMMUNIZATION PROGRAM
THE FOLLOWING MEASURES HAS BEEN TAKEN;

A) GOT STARTED TAKING SOLE RESPONSIBILITY FOR SOME
PROGRAM ENTITIES EG. KEROSENE SUPPLY, AND PAYMENT OF SOME
EPI STAFF SALARIES.

B) INTEGRATION OF EPI PROGRAM WITH OTHER PHC PROGRAM TO
REDUCE RUNNING COSTS ESPECIALLY FOR MOH.

C) COMMUNITY ENCOURAGEMENT TO CONTRIBUTE TOWARDS HEALTH
SERVICES.

D) RESEARCH FOR ALTERNATIVE MODE OF PROGRAM OPERATION
EG. EPI IS PILOTING SOLAR REFRIGERATORS TO REPLACE
KEROSENE REFRIGERATORS.

IMMUNIZATION IS A PERMANENT EVENT IN TANZANIA, THE COST
HOWEVER ARE UNAFFORDABLE BY THE GOT. THE TREND FOR
IMMUNIZATION COVERAGE WILL CONTINUE TO GO DOWN IF ABOVE
MENTIONED PROBLEM WILL NOT BE SOLVED IN TIME.

10. WE HOPE THIS INFORMATION IS ENOUGH TO SHOW YOU WHAT
IS HAPPENING IN TANZANIA AS FAR AS IMMUNIZATION COVERAGE
IS CONCERNED. WE ARE READY TO PROVIDE YOU WITH MORE
INFORMATION AS YOU WISH. WE REGRET ANY DELAYS IN
RESPONDING TO YOUR CABLE. THE DELAY HAS BEEN CAUSED BY
DIFFICULTIES IN OBTAINING OFFICIAL INFORMATION FROM THE
MOH PARTICULARLY EPI PROGRAM. DE JAMETTE
UNCLASSIFIED
AGENCY FOR INT'L DEV.
TELECOMMUNICATIONS CENTER

ACTION AID-II

ACTION OFFICE AFR-45
INFO AFR-45 AFCON-3 RPO-91 POSP-01 POAR-02 RDAA-01 HEAL-04
POF-06 AIDAS-01 AFCON-05 POCE-01 /N35 AB 25/22#92

INFO LOC-08 AF-08 HHS-06

UNCLASSIFIED KAMPALA #4762

AIDAC
AID/V FOR AFR/ARTS/HHR, HOPE SUKIN; AFR/EA/U; RO/N

ABIDJAN FOR REDS/OCA/HPN

NAIROBI FOR REDS/ESA/HPN

CDC ATLANTA FOR INFO, K. MURPHY

E.O. 12356: N/A

SUBJECT: HEALTH: IMMUNIZATION IN UGANDA

REF: STATE 24356

1. USAID HAS NO INVOLVEMENT WITH THE IMMUNIZATION

PROGRAM IN UGANDA, AS UNICEF HAS PROVIDED STRONG
SUPPORT TO EPI ACTIVITIES THROUGH THE MINISTRY OF
HEALTH SINCE 1984. IN RESPONSE TO REFTEL, UNICEF
KAMPALA STATES THAT EVEN THOUGH THE COVERAGE RATES ARE
IDENTICAL FOR 1990 AND 1991, THERE WAS ACTUALLY AN
INCREASE IN COVERAGE IN 1991. ACCORDING TO UNICEF, IN
1991 THE PERCENTAGE USED FOR
CALCULATING THE NUMBER OF INFANTS IN THE POPULATION TO
4.7 PERCENT, WHEREAS IN PREVIOUS YEARS 4.8 PERCENT HAD
BEEN USED. THIS, MORE CHILDREN WERE VACCINATED LAST
YEAR THAN IN 1990, BUT THE RATES WERE COINCIDENTALLY
THE SAME. THE COVERAGE RATES ESTABLISHED FOR BOTH
1990 AND 1991 WERE:

- DPT 95
- MEASLES 74
- POLIO 77
- DPT3 77

2. IN 1990 THE COVERAGE WAS 31 PERCENT OVERALL. IN
1991 RATES WERE STATED IN PREGNANT AND NON-PREGNANT
CATEGORIES WITH 89 PERCENT OF PREGNANT FEMALES
RECEIVING VACCINE AND 22 PERCENT OF OTHERS.

3. UNICEF ADDS THAT ALTHOUGH THERE HAS BEEN NO
DECREASE IN EMPHASIS ON EPI IN UGANDA, COVERAGE MAY
WELL DECLINE THIS YEAR BASED ON EVIDENCE SEEN IN THE
FIRST SIX MONTHS OF 1992. SOME OF THE REASONS OFFERED
WERE THE LACK OF OPERATIONAL FUNDS FROM THE MINISTRY,
LOW MORALE OF WORKERS, DETERIORATING CONDITION OF
PROJECT VEHICLES, COMPETING AREAS OF INTEREST FOR
DONOR SUPPORT, AND OUTBREAKS OF INFECTIOUS DISEASES
SUCH AS MENINGITIS AND CHOLERA THAT DIVERT STAFF AND
OTHER RESOURCES.
SUMMARY: ON BASIS OF VISITS/WORK IN SEVERAL AFRICAN COUNTRIES MISSION HEALTH OFFICER BELIEVES THAT PEAK YEARS OF 1989/90 WERE RESULT OF FRENETHIC UNICEF ACTIVITY, OFTEN TARGETED TO ACHIEVE UNIVERSAL COVERAGE RATES WITHOUT APPROPRIATE ATTENTION TO STRENGTHENING MANAGEMENT OF THE PROGRAM WITHIN MINISTRIES OF HEALTH, AND WITHOUT CONSIDERATION OF COSTS (ESPECIALLY WITH MOBILE STRATEGIES), AND THEREFORE, SUSTAINABILITY. CHAD IMMUNIZATION PEAKED IN 1989, AND THEN DECLINED FOR REASONS DETAILED BELOW. END SUMMARY

1. IN CHAD, THE BACKGROUND QUOTE PROGRAMME ELARGI DE VACCINATION UNQUOTE (PEV) WAS STARTED IN 1985, AND IT'S ACTIVITIES GREW STEADILY TO ENCOMPASS MOST OF THE COUNTRY. THE PEV STRATEGY INCLUDES THE FOLLOWING POINTS:
   -- THE FIXED STRATEGY IS USED FOR ALL LOCALITIES LESS THAN 5 KM FROM A HEALTH FACILITY
   -- THE ADVANCED (OR PERIODIC) STRATEGY IS USED TO COVER AREAS 5 TO 20 KM FROM A HEALTH FACILITY.
   -- MOBILE VACCINATION TECHNIQUES ARE RESERVED FOR AREAS MORE THAN 20 KM FROM A FIXED FACILITY.
   PEAK VACCINATION FIGURES APPEAR TO HAVE BEEN REACHED IN 1989, WHEN A QUOTE MASS CAMPAIGN UNQUOTE WAS MOUNTED. THE 1989 FIGURES REFLECTING THE ACTIVITIES OF ALMOST ALL THE FIXED FACILITIES SHOWED A 20 PERCENT DROP IN BCG, A 29 PERCENT DROP IN DPT 3 AND A 31 PERCENT DROP FOR MEASLES.

2. RECENT DEVELOPMENTS
   IN JANUARY, 1998 A NATIONAL SURVEY ON IMMUNIZATION WAS CONDUCTED USING CLUSTER SAMPLING. BOTH THE 1990 AND 1991 FIGURES FOR A COMPARABLE SURVEY ARE SHOWN BELOW.

   NATIONAL PERCENT COVERAGE ATTAINED.

   IMMUNIZATION TYPE   1990   1991
   BCG               59   48
   DPT               28   22
   MEASLES           32   33
   YELLOW FEVER     36   30

3. FINANCING.
   UNICEF MOUNTED A MAJOR PEV PROGRAM IN 1986. NOW 6 YEARS INTO A 10 YEAR PROGRAM, THE MDH HAS CONTRIBUTED ZERO INTO WHAT WAS SUPPOSED TO BE AN INCREASING SHARE OF THE PEV BUDGET. FOR 1992, WHILE FINAL FIGURES ARE NOT

4. SHORTAGES.
   THESE ARE NOT A MAJOR CAUSE OF THE PROBLEMS, THROUGH PERIODIC OUTAGES OF SPECIFIC VACCINES AND NEEDLES HAVE OCCURRED.

5. CHANGES IN PROGRAM.
   THE TWO MAJOR CHANGES WHICH HAVE OCCURRED RECENTLY ARE RESTRICTING THE TARGET AUDIENCE TO CHILDREN UNDER A YEAR, AND INTRODUCING TT 5 FOR PREGNANT MOTHERS. IT IS TOO SOON TO MEASURE THEIR EFFECTS.

6. SUSTAINABILITY.
   NO NEW MEASURES BEING TAKEN NATIONWIDE ARE KNOWN TO MISSION. IT IS QUESTIONABLE FOR HOW LONG THE DONORS CAN CONTINUE TO SUSTAIN EPI PROGRAMS WITHOUT FINANCIAL OBLIGATIONS ON THE PART OF THE GOC. BOGOSIAN
UNCLASSIFIED
AGENCY FOR INT'L DEV.
TELECOMMUNICATIONS CENTER

PAGE 01
NAIROB 17559 071356Z 7145 068906 AID1446

ACTION AID-00

ACTION OFFICE AFAR-05
INFO AFEA-04 RDPO-01 POSP-01 RDAA-01 PRPC-J2 HEAL-04 AMAD-01
PODI-01 AFON-06 POCE-01 /027 A0 07/2143Z

INFO LOG-00: AF-00 /002W

R 071356Z AUG 92
FM AMEMBASSY NAIROBI
TO SECSTATE WASHDC 9782

UNCLAS NAIROBI 17559

AIDAC

FOR AFR/ARTS/HHR, HOPE SUKIN

E.O. 12356: N/A

SUBJECT: HEALTH: IMMUNIZATION PROGRAMS IN AFRICA

REF: STATE 243956

1. NATIONAL IMMUNIZATION RATES IN KENYA HAVE NOT
RECENTLY DECLINED AND ARE CURRENTLY SEEN AS RELATIVELY
STABLE.

2. WHILE COVERAGE RATES HAVE NOT DECLINED IN RECENT
YEARS, TECHNICAL ASSISTANCE THROUGH THE REACH-
COORDINATED MEASLES INITIATIVE PROJECT, IS BEING
PROVIDED TO THE NATIONAL EPI PROGRAM WITH THE GOAL OF
IMPROVING CURRENT COVERAGE LEVELS FOR ALL ANTIGENS, WITH
A SPECIAL FOCUS ON MEASLES. CONSISTENTLY, PERIODIC AND
ROUTINE SURVEILLANCE DATA INDICATE MEASLES COVERAGE
RATES (LESS THAN 80 PERCENT IN SOME DISTRICTS) ARE THE
LOWEST FOR ALL ANTIGENS. ALL ASPECTS OF EPI SERVICE
DELIVERY ARE BEING REVIEWED IN AN ATTEMPT TO IDENTIFY
AND PROPOSE MEANS TOWARDS MINIMIZING ANY BARRIERS TO
ATTAINING HIGHER MEASLES COVERAGE RATES.

3. THE CURRENT STATUS OF IMMUNIZATION LEVELS IN KENYA
WILL SOON BE ASSESSED IN A UNICEF-SPONSORED NATIONAL
COVERAGE SURVEY TO BE CONDUCTED IN 1992 BY THE CENTRAL
BUREAU OF STATISTICS AND THE MINISTRY OF HEALTH. REACH
TECHNICAL ASSISTANCE IS BEING PROVIDED TO UNICEF IN
DEVELOPING THE SURVEY PROTOCOL AND IN DATA ANALYSIS AND
INTERPRETATION. DONOR AGENCIES AND THE NATIONAL KENYA
EXPANDED PROGRAMME ON IMMUNIZATION WILL, THUS, HAVE MORE
CONCLUSIVE DATA ON RECENT COVERAGE TRENDS ONCE THE
SURVEY DATA ARE RELEASED. HEMPSTONE
4. Supplies: Due to GRC budgetary constraints, USAID/CAMEROON expects that there will be an ongoing problem in the 1990's with vaccine supplies. USAID/CAMEROON has discussed with the MOH the possibility of using loan monies from the World Bank's Health Sector Program now in development to ameliorate this problem. To date, there have been no shortages of other vaccination-related supplies.

5. Vaccination Strategies: As mentioned above, the MOH is in the process of fully integrating vaccinations into its new PHC Program. Specifically, vaccinations will be administered as a daily activity in health centers; vaccines will be delivered by PHC logistics systems; and vaccination monitoring and data collection will be folded into PHC supervision and health information systems.

6. Sustainability: Evidence from PHC pilot programs indicate that the recurrent costs of vaccination services (except for vaccines) can be borne by existing cost recovery measures fees for services and sales of drugs). COOK