Social Mobilization and Communication Support for Immunization in Mozambique

A Joint Lessons Learned Study by
UNICEF, WHO/AFRO, and USAID

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Appreciation

The team would like to express its gratitude to UNICEF/Mozambique for organizing this study and to the many people who participated in interviews. It is worth noting that Ministry of Heath staff, while eager to describe what they and their partners had done well, were also very open about their problems. They encouraged the team to suggest possible solutions to these challenges.

Abbreviations

AFP	Acute flaccid paralysis, a category that includes poliomyelitis
BCG	Vaccine for tuberculosis
DANIDA	Danish International Development Agency
DPT3	Vaccine for diphtheria, pertussis, and tetanus (third dose)
EPI	Expanded Programme on Immunization
FRELIMO	Mozambique Liberation Front
GTZ	Deutsche Gesellschaft fur Technische Zusammenarbeit (German development agency)
ICC	Interagency Coordinating Committee
MOH	Ministry of Health
NGO	Non-governmental organization
NID(S)	National Immunization Day(s)
OPV	Oral polo vaccine (third dose)
RENAMO	Main opposition group to FRELIMO
RESP	Health education unit in the MOH
UNICEF	United Nations Children's Fund
USAID	U.S. Agency for International Development
WHO/AFRO	World Health Organization/Africa Regional Office

Executive Summary

From October 1 to October 15, 1999, a four-person team studied communication and social mobilization support for polio eradication and routine immunization in Mozambique. This was the first of five national studies in Africa jointly planned and carried out by UNICEF, WHO/AFRO, and USAID (CHANGE and BASICS).

The essential idea of these studies is, while intensive immunization activities are underway due to the approaching goal of global polio eradication, to capture experiences while they are fresh and to exchange them among African countries and beyond. The focus is on good or innovative ideas that work, particularly in regard to a number of challenges that appear to frustrate most African EPI programs.

The Mozambique context

Mozambique's EPI, and communication support for its activities, cannot be understood without an appreciation of the country context:

- a decade-long war for independence, followed by a civil war that destroyed many schools and health facilities and put a halt to training of health staff;
- a socialist government from the 1970s until the late 1980s that promoted volunteerism and cooperative action;
- a country suffering from much destruction, large areas of land unusable because of mines, high illiteracy rates, and widespread poverty.

Main findings

From 1996 to 1999, Mozambique's EPI organized twice-annual National Immunization Days that became progressively more effective, culminating in the extremely successful NIDS this year. All of the "best practices" noted by the team are related to these immunization campaigns. Routine immunization services confront numerous basic challenges of organization and resources as well as lack of attention to demand creation. The effective and creative actions noted (and described in this report) are the following:

- Making NIDS a non-partisan issues and source of national pride
- Good planning at all levels
- Effective advocacy from the ministry of health
- Participation of local leaders
- Effective use of local communication channels
- Use of multiple media

- Use of incentives
- Role of public personalities
- The march of children

Of special note are the manner in which the MOH and its partners made the NIDS a non-partisan issue, above politics, and a matter of national pride. Other key factors were the effective involvement of local leaders and the good planning and substantial funding that allowed the effective use of local creativity and resources.

Despite the very effective, creative, and enthusiastic mobilization achieved for recent NIDS, communication activities in support of routine immunization and surveillance need significant strengthening. Many needed actions fall in two categories, (1) institutional strengthening and (2) collecting and using reliable quantitative and qualitative information as the basis for solid communication planning and implementation.

Several of these needs were agreed to at a planning seminar in March 1999 of the EPI and its main partner organizations. These included:

- Better integration of RESP (the MOH's health education unit) and the EPI
- Strengthening of RESP staff capabilities to support communication for routine immunization
- A specific budget and funding for communication support for routine immunization and surveillance
- A national plan for social mobilization/communication support for EPI and polio eradication.

Additional needs, identified by the study team and described in this report, include the following:

- Reliable coverage data
- Higher priority for routine immunization and surveillance
- Adapt effective ideas and build on momentum of NIDS
- Focus on basic health education in addition to mobilization
- In-depth research on knowledge, attitudes, and practices of mothers, health workers, and other groups
- Specific strategies for hard-to-convince groups
- Improvements in the client orientation of immunization services.

Introduction

From October 1 to October 15, 1999, a four-person team studied communication and social mobilization support for polio eradication and routine immunization in Mozambique. This was the first of five national studies in Africa jointly planned and carried out by UNICEF, WHO/AFRO, and USAID (CHANGE and BASICS). In addition, the partners intend to contract for several shorter papers on specific aspects of EPI communication in one country; e.g., how the Uganda EPI has moved to understand and immunize hard-to-reach populations.

Purpose of the studies

The essential idea of these studies is, while intensive immunization activities are underway due to the approaching goal of global polio eradication, to capture experiences while they are fresh and to exchange them among African countries and beyond. The focus is on good or innovative ideas that work, particularly in regard to a number of challenges that appear to frustrate most African EPI programs:

- Achieving an appropriate balance between mass media and person-to-person communication

- Achieving an appropriate balance in social marketing/communication support for NIDS (campaigns) and for routine EPI

- Undertaking an inclusive planning process to produce a communications plan that integrates support for NIDS, routine EPI, and surveillance for AFP and other diseases

- Understanding the reasons why some groups are hard to convince and using that understanding to develop effective strategies and activities to increase their participation

- Providing strong national EPI communications leadership (strategies, guidelines, training, resources) while encouraging and supporting local activities appropriate to local conditions

- Building dedicated staff and institutional support for EPI social marketing/ communications

- Building capabilities to effectively respond to rumors and urgent service problems.

In addition to contributing to communication strategies to achieve the year 2000 polio eradication goal, the studies will serve as sustainable legacies for future use and application to other initiatives.

Dissemination of the studies

It is planned that most of the country studies will be completed by early December, so that a summary of findings may be presented at the Advisory Group for Social Mobilization and Communication for the Eradication of Polio Meeting in Harare (December 6-8, 1999). Each country study will be 15-20 pages in length, and there will be a summary paper comparing and highlighting findings from all the studies. These will be available in English, French, and Portuguese. Printed versions will be disseminated through the partners' regional and country offices. Feedback to the provincial levels of the countries visited is planned, along with the involvement of national media to provide the general public with some information on their efforts. Electronic versions of the studies will also be available for downloading through the Internet, to facilitate dissemination to wider audiences.

Team members

In Mozambique, UNICEF was the lead agency, providing essential logistical support through the efforts of UNICEF EPI Officer Alejandro Gonzalez-Richmond and consultant Matilde Elisa Moiana from the Ministry of Health. The team consisted of Mike Favin (team leader, from the CHANGE Project), Haritiana Rakotomamonjy (from UNICEF headquarters), consultant Ruth Ayisi (who has worked for seven years as a communications consultant and journalist in Mozambique), and Filipe Mabutana (a journalist, working for Radio Mozambique, who has specialized in health issues).

Methodology

The methodology of the study comprised document review and interviews and observations among key informants. The study team interviewed approximately 50 persons in Maputo and in the capitals and four rural districts in Sofala and Nampula provinces. These people ranged from mothers and fathers, to traditional birth attendants and healers, to teachers and religious leaders, to media people, to health staff and consultants. (Lists of persons interviewed and documents consulted are found in Annex A. An lengthy list of questions, prepared in English and Portuguese before the study began, helped guide these interviews. The team gave two debriefings, one for UNICEF staff on October 14 and one for MOH and donor-agency staff on October 15.

Limitations and constraints

During the first week of the study, many key EPI staff and advisors were not available in Maputo to be interviewed because they were attending a national EPI meeting in Beira. Thus, they could not be interviewed until the last few days of information-gathering, after the team's visits to the provinces. This situation made it a more difficult for the team to gain a good overview of the program at the beginning of the study and limited the possibility of follow-up interviews with key people.

In rural districts of Sofala Province, the need to use a translator for some interviews may led to the loss or distortion of some information. Also, some of the mothers interviewed had been chosen by health staff, so they may not have been typical.

The EPI in Mozambique

Historical context

The decade-long year war that resulted in independence from Portugal in 1975 left Mozambique a devastated country with a primarily subsistence economy and over 90 percent of the population illiterate. Under its first President, Samora Machel of the Mozambique Liberation Front (FRELIMO), the country became a Marxist socialist nation, with the government taking over major enterprises, abolishing individual land ownership, and creating state farms and peasant cooperatives.

The period from 1982 to 1992 was again punctuated by war between RENAMO, founded by Rhodesia in the mid-1970s and then supported by South Africa's minority regime, and the Government. The civil war brought death and destruction to the countryside. There were many atrocities, including the placement of millions of anti-personnel mines. Approximately a third of health facilities and schools were destroyed, many of which have not yet been replaced.

Beginning in 1990 the Government began moving towards a market economy. Since the peace accords in 1992, there have been a gradual repatriation of thousands of refugees and slow reconstruction of the country, but Mozambique remains one of the world's poorest countries. Although multi-party democracy has begun to take hold, FRELIMO has never been seriously challenged at the ballot box. RENAMO support remains strong in some rural areas.

The Expanded Programme on Immunization

Although restrained by its difficult colonial legacy and inefficient economy, Mozambique's

post-independence priorities were education and health. Mozambique was one of the few countries to widely implement primary health care as defined at Alma Ata in 1978, with wide community participation and use of community volunteers.

Mozambique's EPI began in 1979 following a national immunization campaign against smallpox. In the turbulence of war, immunization coverage never reached much beyond half of eligible children. During the height of the conflict, it was possible to immunize only in the areas controlled by the FRELIMO government, principally the cities. Most immunizations given in rural areas were given by NGOs. Training of new health staff ceased for a decade.

Since 1992, the EPI has had to rely on mobile brigades, based in district seats, to provide minimal services in areas far from functioning facilities. Even today, only about half of public health facilities offer regular immunization services. This is due to a lack of trained personnel, vaccine, spare parts, and equipment. In fact, only about half of health staff working in immunization have received specific training in the area.

Most of Mozambique's EPI costs are donor funded. DANIDA was the predominant funder until 1996, when it suddenly withdrew its support. Since then, a group of donors (including WHO, UNICEF, USAID, GTZ, and Swiss Aid) has provided substantial funding and some technical assistance, but routine services still suffer the effects of the war and the DANIDA pullout. The cold chain is aging and shrinking. A large investment is clearly needed to revive the routine program.

Despite all of these problems, routine coverage levels officially have continued to rise. This may actually be the case, due mainly to the activities of NGOs and mobile brigades. (In Nampula Province, e.g., NGOs support the EPI in 15 of 21 districts.) However, because of unreliable population statistics (see below), program officials are in reality uncertain if routine coverage has been rising, holding steady, or even declining over the past two years. The chart below shows reported routine coverage. The significant jump in 1998 is probably due to the use of 1997 census data in the denominator.

Year	BCG	DPT3/OPV3	Measles
1976/78	96% (campaign)	...	96% (campaign)
1979/80	...	...	...
1981	46%	56%	56%
1982	56%	43%	43%
1983	59%	38%	38%
1984	49%	32%	32%
1985	47%	29%	25%
1986	45%	28%	32%
1987	44%	40%	40%
1988	64%	38%	38%
1989	53%	47%	47%
1990	59%	43%	43%
1991	63%	42%	42%
1992	64%	50%	50%
1993	66%	49%	49%
1994	77%	55%	65%
1995	77%	58%	66%
1996	83%	59%	66%
1997	84%	61%	70%
1998	99%	77%	87%

Source: EPI, 23/04/99

It is worth noting that the fact that measles coverage is higher than DPT3 coverage implies that at the time of measles immunization (when a child is at least 9 months old), some children are not yet eligible for DPT3. This indicates the sporadic availability of services in some areas.

National Immunization Days

Mozambique instituted polio National Immunization Days (NIDS) in 1997 and has carried out three annual campaigns since then. These campaigns have gradually become stronger, and in 1999 officially reached well over 100% coverage of children under 5 with OPV. The first 1999 NID included distribution of vitamin A, and the second included measles immunization in cities and selected other districts. Coverage rates for NIDS since 1997 are found in the table below.

Province	1997	1997	1998	1998	1999	1999

	1st dose	2nd dose	1st dose	2nd dose	1st dose	2nd dose
Niasssa	80.5%	59.6%	103.7%	114.2%	118%	136%
C.Delgado	60.7%	67.2%	92.2%	107.8%	111%	118%
Nampula	78.5%	82.8%	100.2%	114.9%	108%	118%
Zambezia	81.0%	84.1%	105.7%	115.9%	132%	140%
Tete	59.5%	84.5%	105.8%	129.7%	130%	141%
Manica	50.2%	68.6%	74.3%	98.2%	108%	122%
Sofala	62.5%	66.1%	91.5%	108.8%	111%	126%
Inhambane	78.3%	74.9%	101.3%	113.1%	112%	123%
Gaza	77.2%	69.1%	97.2%	112.5%	114%	134%
Maputo	70.4%	65.7%	81.4%	102.3%	95%	103%
Maputo City	62.7%	57.8%	82.0%	95.4%	105%	122%
Mozambique	72.3%	78.9%	97.0%	111.9%	113.7%	121.0%

Source: EPI reports

Mozambique's 1999 NIDS achieved extremely high coverage rates 113.7% and 121% nationally. While the actual coverage of the target group (children under 5) cannot be over 100%, the real coverage is most likely over 90%, and as a result the MOH and its partners have decided to undertake no additional polio NIDS.

Effective and Creative Actions

The social mobilization for this year's NIDS was truly an extraordinary accomplishment for a poor, predominantly rural country with low literacy levels. This section describes some of the major factors or ideas that made social mobilization for NIDS so effective. In the judgment of the study team, some of these factors are fairly unique to Mozambique, but others are more applicable and easily used or adapted by other countries.

All of these effective and/or creative ideas are related to the NIDS. There no systematic communication support for routine immunization other than the health education talks given to groups of mothers at health facilities, nor are there any communication activities in support of community involvement in surveillance. There have

been no health education materials developed for routine immunization since 1996 when DANIDA withdrew its significant support to Mozambique's EPI.

The contrast between NIDS and routine EPI could not be starker. NIDS were supported by an extraordinary political commitment, involvement of all sectors of society, community and local-leader participation, and an enormous amount of resources from the Government, donors, and the private sector. Services were conveniently available and demand was almost universal. There was saturation coverage in mass media, some donated and some paid for (mostly by Rotary). Radio Mozambique gave reports on the 11 provinces three times a day, and the provincial branches also gave reports.

In contrast, at least in some parts of the country, routine services may be deteriorating. Equipment breaks down and is not repaired or replaced, there are frequently shortages of gasoline for mobile units or other important tasks and of per diems, occasional vaccine outages, etc. Such problems were documented in a national EPI review carried out late in 1998. There is almost no broadcast media coverage of routine immunization because all time slots must now be paid for. To illustrate the contrasting situations, Muecate District (with approximately 80,000 inhabitants), offers routine immunization at three health centers and every few months at each of 11 mobile sites, as compared to 71 vaccination sites during the NIDS.

Below are some of the best practices from social mobilization for recent NIDS in Mozambique.

Making NIDS a non-partisan issues and source of national pride

A non-partisan issue

In 1999, virtually all civic groups, religious organizations, and political parties gave strong public support to the NIDS at the national and provincial levels, publically stating that this was not a partisan issue. However, particularly in the first NIDS (1996 and 1997), support from opposition parties was not so forthcoming. Many of their local leaders opposed the early NIDS because they were organized by the FRELIMO government that they had been fighting not so long ago. Opposition parties spread rumors that vaccines caused sterilization or sucked people's blood.

During a cholera epidemic in 1997-1998, some local opposition-party leaders spread stories that government vaccinations were causing the disease. However, this epidemic, in which over a 1,000 persons lost their lives, mobilized the government and communities in ways later done for NIDS. Local leaders and volunteers educated everyone about hygiene measures, eating raw foods, and how to keep victims hydrated.

By 1998/9, the national RENAMO leader was a strong supporter of NIDS, and only a few local leaders still resisted. It was noted that polio does not cripple children according to their political party. All parties helped mobilize their followers, as, for the most part *the NIDS were converted from a polio issue to a matter of national pride.*

An achievement essential for national development
People came to feel that having successful NIDS was essential for the development of the country, since no country could progress with health problems such as polio still present. No political or other leader wanted to be seen as not supporting such a goal. It was also argued that the country and the world would save millions of dollars a year once polio was eradicated and polio immunization could be suspended.

While making NIDS a national rather than a partisan issue has not been easy in Mozambique, the experience may be useful for other countries that in conflict today, such as the DRC, a priority country for polio eradication, and Angola, which has had an internal conflict similar to Mozambique's. *The gradual growth of this national commitment was a reflection of the successful national reconciliation process* following the war, a process that other nations in or ending conflict can hopefully duplicate.

Good planning at all levels

Clear instructions broken down from national to community levels
The Social Mobilization Sub-Committee of the national Interagency Coordinating Committee (ICC) agreed on the basic messages for the campaigns, and the MOH's health education unit (RESP) designed materials for national use, including a poster, stickers, and pamphlets for collaborating organizations and groups such as NGOs and local leaders. Generally, clear instructions regarding the campaign went from the national to the provincial to the district to the community levels. The ICC at first met weekly, then twice a week as the campaign dates approached.

Accountability at all levels
The Minister of Health asked each of the 11 provincial governors to take responsibility for the NID in the province (to become the *padrino* or "godfather,"); the governors asked the heads of various provincial directorates to each take responsibility for one district; and the district administrators asked the heads of district programs to take responsibility for the success of the NID in one section of the district. These requests for taking responsibility were accompanied by (1) clear general instructions concerning campaigns strategies, planning steps (including social mobilization), and implementation; and (2) just as importantly, basic resources for planning and implementation. The provincial, district, and

community levels all designed appropriate local actions for service provision and social mobilization.

Along with this accountability, a this system instilled a genuine sense of competition among the provinces.

Effective advocacy from the ministry of health

Personal letter of invitation and acknowledgment
Supported by individual and organizational members of the Interagency Coordinating Committee, the Ministry of Health orchestrated the good planning and outstanding intersectoral support for the 1999 NIDS. The Minister of Health personally signed letters to every school, union, NGO, religious, and other organizations in the country, asking for their participation and support; and, following the NIDS, sent letters of thanks to all. Provincial governors played a similar role in the provinces. As an illustration of their sense of pride in participating, many schools still displayed their letters of acknowledgment several months after the NIDS.

Generating support across sectors and levels
The MOH was able to orchestrate an impressive commitment at all levels for the NIDS. This commitment was evident in public statements and actions of everyone from President Chissano to local community leaders.

The MOH's effective advocacy was powerful, involving all sectors of society. It went well beyond public health groups to include schools, churches, NGOs, women's groups, the association of war veterans, youth organizations, local companies, multinationals such as British, and other partners. (Annex D contains a partial list of these partners.) A representative of British Petroleum noted that his company supported the NIDS both as a way of improving the situation of the community where BP works as well as improving the company's image.

Partnerships with broadcast and print media
One particularly effective advocacy strategy was to engage journalists to cover all aspects of the campaign, from the beginning of planning. Print and electronic media often reported on the campaign objectives, how activities were being organized, what was currently happening, etc. During the NIDS, MOH officials became much more accessible to the press, and a. press liaison person worked out of the Deputy Minister's office. There were press releases, and NIDS funds paid transportation and per diem costs for journalists to cover the NIDS. Journalists were trained on EPI, which significantly improved the technical accuracy of their coverage of the topic. The Minister of Health gave a number

of press conferences, and the Deputy Minister gave weekly press conferences for all media. Besides many group and individual meetings with partner organizations, the MOH prepared written information for the press as well as brochures for NGOs and local leaders explaining the NIDS and how groups could support them.

Participation of local leaders

During the country's civil war, the church and traditional leaders were not systematically engaged by the FRELIMO government. Catholic church members were once called "traitors" in the 1980s for advocating peace talks with RENAMO, and some traditional leaders were thought to have collaborated with the Portuguese and later with RENAMO. However, after President Chissano took office, he sought the help of the Catholic Church to bring about direct negotiations with RENAMO. It was the church that arranged for the first talks between the two sides during the war, which eventually lead to the Peace Accord in October 1992.

Almost everyone the study team interviewed felt that a key to the huge turnout for immunization was the very active participation of local leaders. Most important were the traditional chiefs (or *régulos*), but others (such as clergy of Western churches, spiritualists, and traditional healers) also played active roles in places. Such people were sometimes termed "spontaneous activists" who helped with NIDS along with existing activists who had participated in previous mobilizations.

Although the role of such local leaders was key, achieving the cooperation of some *régulos* was not easy, since some withheld support until they received some kind of incentive (see below).

Effective use of local communication channels

The numerous program collaborators effectively employed local media such as plays, songs, dances, drums, and megaphones to inform people and interest them in the NIDS. Which of these channels was used was determined locally. For example, in the city of Nampula many theater groups were active. Such channels, along with community meetings and house-to-house visits, were essential for reaching the large (but unknown) portion of the population who were not reached by electronic or print media. (An evaluation of the 1998 NIDS found that 35.3% of mothers had heard about the NIDS via radio.)

The head of the mobilization unit for FRELIMO felt that electronic media alone would have had little impact without face-to-fact contact with the population. He stressed Mozambique's oral tradition and the fact that over 40 percent of the population remains

unable to read and write.

Use of multiple media

The wide use of mass media complemented face-to-face, traditional channels. As noted above, the MOH greatly facilitated "news" coverage of the campaign preparations and activities, and NIDS funds directly paid for spots and programs on national and provincial radio and television. Thus, perhaps a third of the population was exposed to mutually reinforcing traditional and mass media. In addition, the extensive coverage in newspapers, magazines, radio and television reached the great majority of urban and organizational leaders, continuing to build their interest in the NIDS and the feeling that everyone was participating in this important national priority.

Use of incentives

In the years following independence, there was a tremendous outpouring of participation and voluntary donations of time for health and other national goals. Over the last several years, as Mozambique have moved into a free market economy, people (and local leaders in particular) have become less willing to donate their support without some compensation or at least public recognition. Thus, one of the keys to the successful social mobilization for recent NIDS was the availability per diems for health staff and such volunteers as members of cultural troops. Some *régulos* were said to delay campaign preparations until they received their incentives. Campaign teeshirts and caps for vaccinators and traditional leaders appear to have been an important incentive in the campaigns. These were contributed by UNICEF as well as Rotary, British Petroleum, and Banco Standard Totta. A number of people interviewed emphasized the importance of these incentives and expressed the need for more.

One NGO staff person, however, felt that if sufficient time and care were taken to explain the importance of local leaders' help, incentives would not be necessary. She felt that using them also creates an expectation that must be met indefinitely.

Role of public personalities

Public personalities, starting with the President, helped create and sustain wide interest in the NIDS. These included political leaders from all parties, such religious leaders as the Cardinal of Maputo and the Bishop of the Christian Council of Mozambique, and Farida Gulamo, a polio survivor who is president of the Association of Handicapped Persons of Mozambique (ADEMO).

The march of the children

With support from the First Lady's Cabinet and the Health Directorate of the City of Maputo, a march of 300 children in Maputo received wide media coverage. The children marched through the streets shouting for their mothers to get them vaccinated against polio.

Why Did It Work for Polio?

In terms of their impact on public health, a number of health issues are more important than polio. AIDS and malaria immediately come to mind. Why, then, did such a successful mobilization for polio occur in Mozambique? Shedding light on this question cold add insights to address other health issues. The following reasons were suggested during the study in Mozambique.

- Polio mostly affects children, and involving leaders for children's causes is easier than, say, AIDS, which involves adult behavior. (Possibly the impact of mothers and fathers dying on their children should be emphasized in motivating action for other diseases.)
- The fight against polio through NIDS is a relatively quick, time-bound behavior, in contrast to the need to always use a condom to be prevent the spread of AIDS, for example,
- Polio vaccine is oral. If the vaccine were an injection, the population's response may have been different.
- Political parties felt that this was an issue they could not afford to give lukewarm support. There was competition between parties and provinces, but at the same time success became a matter of national pride.
- There was the right combination of donor commitment and support with availability of funds.

Program Needs for More Effective Social Mobilization/Communication Support to EPI

As mentioned above, despite the very effective, creative, and enthusiastic mobilization achieved for recent NIDS, communication activities in support of routine immunization and surveillance need significant strengthening. Many needed actions fall in two cate-gories, (1) institutional strengthening and (2) collecting and using reliable quantitative and qualitative information as the basis for solid communication planning and implementation. Several of these needs were agreed to at a planning seminar in March 1999 of the EPI and its main partner organizations. These included:

- Better integration of RESP (the MOH's health education unit) and the EPI
- Strengthening of RESP staff capabilities to support communication for routine immunization
- A specific budget and funding for communication support for routine immunization and surveillance
- A national plan for social mobilization/communication support for EPI and polio eradication.

The partners have already taken some initial steps to implement these recommendations. With substantial support from UNICEF, for example, a draft five-year plan for EPI communications has been prepared. Additional problems or needs identified by the study team are discussed below.

Reliable coverage data

As mentioned above, coverage levels in the NIDS and routine immunization are overestimated, possibly by as much as 25%. Three arguments for this contention are:

- Coverage rates of well over 100% in recent NIDS, which informants believe are due to using population figures that are too low;
- Outbreaks of measles and other immunizable diseases that indicate lower-than-official coverage; and
- The fact that many informants judge services to be deteriorating at a time when coverage is officially increasing.

Thus, program managers do not have a precise idea how many children are unreached by immunization and where they are located; how many children start but do not complete their basic series of immunizations; how many children complete the basic series but not until after their first birthday, thus exposing them to unnecessary risk. The lack of reliable data makes it difficult for the EPI to decide, for example, to what degree to emphasize extending current services (via new fixed or mobile sites) or to improve current services where they are. Which are the priority problems -- low coverage, late coverage, high dropout rates, poor access, etc.? Having a solid basis on which to prioritize problems and design strategies is essential both for service delivery and for communication activities.

There are a number of actions that the EPI might consider to remedy this problem. They are not mutually exclusive.

- Adjust census figures to realistic levels on the provincial and/or district levels for estimating coverage.
- Carry out national and/or provincial coverage surveys.
- Institute a series of internal comparisons of the number of various antigens given on all levels -- national, provincial, district, and facility -- so that, for example, each level would do a monthly comparison of BCG immunizations with DPT3 and measles immunizations. The objective at each level would be to continually reduce the difference between the two numbers.

Higher priority for routine immunization and surveillance

Polio eradication, as well as control or eradication of other immunizable diseases, depends on more than effective campaigns. In addition, programs must:

- achieve high routine immunization coverage,
- create and operate an effective surveillance system with good geographical coverage, and
- mount, as needed, local mop-up immunization.

As much as half of Mozambique's population lacks good access to fixed facilities that offer routine immunization, and there has been virtually no communication activities to support routine EPI, other than health education talks mothers at the beginning of each day at service points. This picture stands in stark contrast to the tremendous effort put into social mobilization for recent immunization campaigns.

Similarly, the quality and completeness of the surveillance system for acute flaccid paralysis (including polio) and other diseases requires substantial strengthening in health facilities, without even considering extending it to communities and supporting it with communication activities. (Rotary officials stated that they would be very pleased to support AFP surveillance but that they had never been asked.)

Clearly, now that NIDS have been successful, Mozambique's EPI needs to focus on these service-strengthening and demand creation in these other areas.

Adapt effective ideas and build on momentum of NIDS

While they are still fresh, the EPI should taken advantage and tap into some of the good ideas and enthusiasm from NIDS to support routine activities.

It would be neither logical nor productive for the MOH and its collaborators to devote the same intensity of effort to ongoing immunization as they devoted to the NIDS; nonetheless, there is no reason why, for example, there could not be intersectoral committees at various levels to promote immunization and other child health services and demand for them. There is no reason why schools, private companies, churches, and other partners in the NIDS could not support routine EPI and other MCH services at a lesser or more periodic level.

The beauty of a campaign is that the goal is clear and feedback on coverage achieved is immediate (and almost always positive). Routine EPI needs to devise one or two simple indicators that can also be publically monitored. One possibility is the percentage of children who are fully immunized when they reach their first birthday. This could be estimated and publically reported at all levels (even the facility level), possibly creating a friendly competition among facilities, districts, and provinces, and stimulating problem analysis and action to improve the indicator.

Focus on basic health education in addition to mobilization

From several dozen interviews conducted by the study team, one of the most striking findings is the low level of basic understanding among mothers, fathers, and local leaders concerning immunization. These same people who so actively participated in the NIDS cannot explain what a case of polio looks like. While people have the general concept that immunizations prevent diseases, they do not know what diseases. The most common answers from parents and leaders were malaria and cholera.

One mother that the study team interviewed in Sofala Province had a paralyzed leg and appeared to have been a victim of polio as a child. However, despite having six years of schooling, she had no idea that she might have had polio. Her family had had her treated by traditional healers. Yet despite her lack of knowledge about the disease, she had her own child vaccinated against polio.

Such findings are of concern for several reasons. First, the lack of basic understanding brings into question the level of true demand for immunization. Second, if Mozambique wants to build towards participatory democracy, it needs citizens who are at least minimally informed.
Parents and program supporters do not need to know all of the details of immunizations,

diseases, and the cold chain. But a mother leaving an immunization session should know what diseases her child was just protected against, when the child needs to return, and about the possibility of side effects and what to do about them. A mother whose child just receive polio drops should know what polio is. In general, this does not appear to be the case. People have been mobilized, but not educated.

Potentially, this could be done through any number of face-to-face communication activities as well as mass media. The basics of immunization could be taught in schools, and school children could be used as mobilizers and educators in their communities. Immunization could be featured in local festivals and other activities. These ideas and others are included in the draft EPI communication plan.

In-depth research on knowledge, attitudes, and practices of mothers, health workers, and others groups (fathers, local leaders, other influential persons)

While people can be mobilized for a simple action such as participating in NIDS, one cannot plan more complex communication or behavior-change activities without an in-depth understanding of audiences -- their current KAP, the feasibility of changing current KAP, barriers to change, and motivators/facilitators to change. One excellent, in-depth study by the Higher Institute of International Relations appears to be the only such study ever done in Mozambique (Baptista and Baleira). Clearly, more in-depth research is needed, covering the diverse populations in the country, to develop effective communication strategies, materials, and actions to support demand for routine EPI. Such studies need not be extremely costly nor use huge samples, but they must be well-designed to answer key questions and be done competently and in-depth. The findings must be clearly presented and effectively brought into program and communication planning.

This need is also strongly noted in Mozambique's draft EPI communication plan.

Specific strategies for hard-to-convince groups

Two groups were identified as hard to convince to participate in immunization programs: (1) religious groups such as the followers of John Malanga and Jehovah's Witnesses and (2) some children in urban areas, both in poor families that have little contact with mass media or local leaders and in well-off families that think immunization is something for the poor.

Although the EPI has identified and given some special attention to these groups, there has been no systematic study of the reasons for resistance and motivations and strategies for gaining participation. In addition, the EPI lacks a very precise idea of the number of families and children in these groups and therefore of the attention they merit. In-depth

research with these groups, followed by strategy formulation with the participation of leaders from the groups, would be very useful. Two logical strategies to consider are trying to convince individual leaders to cooperate and using "positive deviants" in the groups as peer educators and mobilizers.

In addition to the hard to convince, of course, are also some hard-to-reach groups. Mozambique is a large country, with many sparsely populated areas. Many people live in isolated homesteads and have difficult and time-consuming journeys to reach fixed facilities or even mobile-brigade sites. Some areas of the country, e.g. in Buzi District, are accessible only by boat at certain times of the year because of flooding. Again, the EPI needs to gather reliable information on these groups in order to make reasonable cost-effective decisions on reaching them with services as well as demand-creation activities.

Improvements in the client orientation of immunization services

Mobilization and communication alone cannot achieve full immunization of children in their first year of life. This behavioral objective is stretched out over time, requiring at least five separate visits to immunization sites. While people may be mobilized to bring their children once or twice, if services are not minimally satisfactory, people will not return for the full series of routine immunizations.

Services in Mozambique, as in most countries, need to be more client-oriented. Easily said and agreed to, this objective is not easy to implement in an environment in which health staff have poor pay, little motivation or incentive to educate clients, and may be too busy to give more attention to individual mothers and children.

Among the factors indicating a lack of client orientation were reports of:

- long waiting times
- health staff charging for free services
- staff giving mothers little or no essential information
- inconvenient service hours, e.g. mobile brigades arriving at sites and leaving before mothers return from the fields
- unreliable services beyond the district seats due to shortages of gasoline, cold chain equipment, vaccine, and per diems.

While only some of these problems are "communication" issues, they all affect the possibility of communication activities successfully motivating families to have their children fully immunized in the first year of life. The EPI needs to assess the prevalence of such problems, carry out in-depth research to gain a better understanding of reasons and barriers to change, and devise and implement effective strategies.

Annex A:
Persons Interviewed and Documents Reviewed

Interviews [Interviews in Sofala Province are not yet listed]
October 1:
Matilde Elisa Moiana, UNICEF consultant (formerly MOH)
Laila Ismail Khan, Senior Program Officer, UNICEF
Ivonne Rizzo, Head, Health and Nutrition Section, UNICEF

October 2:
Alejandro Gonzalez-Richmond, UNICEF Advisor, EPI
Nan Lewicky, IEC consultant, UNICEF

October 4:
Dr. Alexandre Manguele, Direitor Nacional de Saúde, MOH
Dr. Okey Nwanynwu, Aurelio Gomes, USAID/Mozambique
Oscar de Carvalho and Dr. Paul S. Anderson, Rotary
Amelia Russo, Communication Officer, UNICEF

October 5:
Dr. Aida Libombo, Direitora Adjunta, Saúde da Comunidade
Dr. Aly Hamzate Hamido, Artista Grafica, Repartição de Educação para a Saúde (RESP)
Antonio Carrasco, Director Geral, Instituto de Comunicação Social
Bernardo Cherinda, Sectretary of the Central Committee for Mobilization and Propaganda, FRELIMO

October 6:
Rui Barata, Delegada da Radio Moçambique, Nampula
Juvenaldo Amos, Director Provincial de Saúde, Sofala
Rafael João, Jefe de Emissão, Area de Programma , Radio de Mocambique in Beira (Sofala)
Texeira Cunheiro, Journalist, Radio de Moçambique in Beira (Sofala)

October 7:
Dionisio Cherewa, Presidente, Consejo Municipal, Cidade de Nampula
Mothers and fathers in Barrio Boa Viagem, Distrito de Monapo
Johane T. Jossefa, Infermero Basico, Hospital Rural, Distrito de Buzi (Sofala)
Eleina Marta Chicova, Agente de Medicina Preventiva, Distrito de Buzi (Sofala)
Emilia Jocia, mother of two, Distrito de Buzi (Sofala)
Eleina Joseia, mother of one, Distrito de Buzi (Sofala)

Rita Fernando, mother of eight, Barrio da Malata, Distrito de Buzi (Sofala)
José Magombe (political leader), Secretario da Bairro, Distrito de Buzi (Sofala)

October 8:
João Aussi, Gerente Adjunto de Saúde e Nutrição, World Vision, Nampula
Ciro Alfonso de Pedrado, Responsável do SESP, Nampula
Malta de Argentina Armando, Direitora Distrital de Saúde, Distrito de Muecate
Francisco Mungwanbe, Administrator, Distrito de Muecate
Angela Rau, Offical de Projetos, Cooperação Canadense
Lopez Mangate, Director Distrital de Saúde, Distrito de Nhamatanda, (Sofala)
Dominga Mascaregna, mother, Distrito de Nhamatanda (Sofala)
Vasco Mabora, father of three and primary school teacher, Distrito de Nhamatanda
Vainda Mulinganar, Curandera, Distrito de Nhamatanda
Victor Sixpenso, Presidente de Lideres Communitarios, Distrito de Nhamatanda
Samuel Saneti, Pastor de Nueva Alliança, Distrito de Nhamatanda
Farença Landinho, TBA, Rua Domingo, village in Nhamatanda district
Maria João Lino, TBA, Rua Domingo, village in Nhamtanda district
Rosa, mother of a premature child, Rua Domingo (Sofala)
Rosa, mother of six, Rua Domingo

October 9:
Mothers from Bairro Mutawanha, Nampula
Anamaria Bernardo, mother of one, rural hospital, Distrito de Nhamatanda
Domingo Luis Valepena, Jefe de Maternidade, Centro de Saúde de Metuchira, Distrito de Nhamatanda
Paulina Zivani, Técnica de Saúde Materna y Infantil, Distrito de Nhamatanda (Sofala)
Isabel Xavier, mother of 2, patient, rural hospital, Distrito de Nhamatanda

October 11:
Felisberto Muteca, Chefe Provincial do PAV, Nampula
Dr. Armerico Hassan, Director of Regional Hospital in Beira (Sofala)
Eleonora Cipriani, British Petroleum (BP), Commercial Advisor, Beira (Sofala)
Caterina Jose, mother of one, Beira (Sofala)
Margerita Antonio, mother of two, Beira (Sofala)
João Batista Rodinho, Televisão de Moçambique (TVM), Delegado in Beira (Sofala)
Paulo Maduco, Sub-jefe de Redaccão, Diario de Moçambique, Beira
Antonio Chimundo, Jounalist, Diario de Moçambique, Beira

October 12:
Manuel Matosse, Chefe da Secção do PAV

Rose Macauley, USAID Advisor to PAV
Isabel Ngomane, Head of the IEC Section, RESP
Jonas Chalufo, Director, RESP

October 13:
Dr. Carlos Tiny, WHO Representative in Mozambique
Gloria Moreira, WHO communications specialist
Florencio Papelo, Head of Research, Instituto de Instituto de Comunicação Social

October 14:
Mark Stirling, UNICEF Representative in Mozambique, and other UNICEF staff

Documents

Irãe Baptista Lundin and Sérgio Baleira. "Estudo sobre as Determinantes do Comportamento em Relação a Vacinação em Moçambique. Primeiro Esboço do Relatório sobre o Trabalho no Distrito de Mocuba na Provincia de Zambézia." Instituto Superior de Relações Internacionais, Centro de Estudos Estratégicos e Internacionais (CEEI). Maputo, 22 de Fevereiro de 1999.

República de Moçambique, Ministério da Saúde, Direcção Nacional de Saúde, Departamento de Saúde da Comunidade. Comissão de Mobilização Social dos DNVs 1999 no Departamento de Saúde da Comunidade. "Dias Nacionais de Vacinação 1999. Memorando das Actividades de Mobilização Social Realizadas."

República de Moçambique, Ministério da Saúde, Direcção Nacional de Saúde, Departamento de Saúde da Comunidade, Programa Alargado de Vacinação. No title [summary of current status of EPI in Mozambique].

República de Moçambique, Ministério da Saúde, Direcção Nacional de Saúde, Departamento de Saúde da Comunidade, Programa Alargado de Vacinação. "Avaliação Nacional do Programa Alargado de Vacinação 23 de Novembro - 11 Dezembro 1998. UNICEF - OMS - Cooperação Suíça - USAID/BASICS."

República de Moçambique, Ministério da Saúde, Direcção Provincial de Saúde de Nampula. "Relatório dos DNVS 2@ Volta." Nampula, Setembro de 1999.

República de Moçambique, Ministério da Saúde, Direcção Nacional de Saúde, Departamento de Saúde da Comunidade. "Plan Quinquenal do Programa Alargado de Vacinação (PAV) 2000-2004. Relatório do Seminário de Planificação." Namaacha, 22 a 26 Março de 1999.

República de Moçambique, Programa Alargado de Vacinação. "Plan Quinquenal 2000-2004" (draft).

República de Moçambique, Ministério da Saúde. "Dias Nacionais de Vacinação, 1999." "Dias Nacionais de Vacinação. Mobilização Social - Campanha 1999" [strategy document]. Moçambique, Maio 1999.

República de Moçambique, Ministério da Saúde, Direcção Nacional de Saúde. "Situação Actual do PAV." April 1999.

República de Moçambique, Ministério da Saúde, Direcção Nacional de Saúde, Departamento de Saúde da Comunidade, Repartição em Saúde Pública. "Avaliação da Mobilização Social dos Dias Nacionais de Vacinação (DNVs) Com o apoio financeiro do UNICEF." 1998.

Lewicky, Nan. Documents on communication strategies for PAV for the Beira Seminar, October 1999.

"Taxas de cobertura das vacinações realizadas em Moçambique de 1979 a 1998." PAV, 23/04/99.

Print materials used in the 1999 NIDS: sticker, poster, and two brochures.

Annex D:
Officials and Organizations Invited to Participate in the Launch of the 1999 NIDS

Cabinet of the President of the Republic
First Lady
Prime Minister
Provincial Governors of Maputo City and State
Cabinet Ministers (Education, Coordination of Social Action, Culture, Youth and Sports
Provincial Departments of Education of Maputo City and State
Provincial Departments of Health of Maputo City and State
Political Parties: FRELIMO, RENAMO, Panade, Pademo, PT, Palmo, Pimo, Sol, Panamo/CRD, PPPM, PCN, Fumo/PCD, Monamo
Archbishop of Maputo
Christian Council of Mozambique
Islamic Council of Mozambique
Islamic Community of Machava
Hindu Community
Religious Groups: Baptist Union of Mozambique, Reformed Church of Mozambique, Caritas of Mozambique, Caritas Diocese of Mozambique, Lutheran Evangelical Church of Mozambique, Seventh Day Adventists, and 13 more
Unions: OTM, OJM, OMM, OCM, STAE, SNJ, ASEMO
International organizations and donors: WHO, UNFPA, UNICEF, UNAIDS, UNDP, World Bank, European Union, USAID, German Cooperation, French Cooperation, NORAD, Swiss Cooperation, Irish Cooperation, Italian Cooperation, DANIDA, FINNIDA, AMODEFA, BASICS, PSI, Pathfinder, Medicus Mundi Catalunya, Africare, ADPP, Save the Children UK, Save the Children USA, World Vision, Institute of Portuguese Cooperation, Red Cross, Rotary, and 7 more
Health Science Institutes: 5
Hospitals: Mavalane, Machava, Jose Macamo, Chamanculo and Pyschiatric of Infulene
Mass Media: 12 daily and weekly newspapers, 9 national radio and television stations or networks, 4 international broadcast networks
Transportation Companies: 14 trucking and bus companies
Universities: 6
Police Commander and Army Chief of Staff
AMETRANO
Committee of Social Affairs of the National Assembly
Private companies: 51 major companies