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CAPITALIZATION OF THE REVOLVING FUND OF THE EXPANDED PROGRAM ON  
IMMUNIZATION

This report is presented to the Executive Committee in response to Resolution XXI of the XXVI Meeting of the Directing Council. It summarizes the progress of the various components of the Expanded Program on Immunization (EPI) in the Americas, and focuses on the status of capitalization of the EPI Revolving Fund for the purchase of vaccines and related supplies.

1. Introduction and Policy Basis

The Expanded Program on Immunization (EPI) has its basis in Resolution WHA27.57, adopted by the World Health Assembly in May 1974. General program policies, including the EPI objectives, were approved in Resolution WHA30.53, adopted in May 1977.

These resolutions were endorsed by the PAHO Directing Council in September 1977 by Resolution CD25.27. This resolution also established the EPI Revolving Fund for the purchase of vaccines and related supplies (cold chain equipment, syringes and needles).

The importance of the EPI as an essential component of maternal and child health and primary health care was emphasized in Resolution WHA31.53, adopted in May 1978, and in the Declaration of Alma-Ata in September 1978. The EPI is an essential element within PAHO/WHO's strategy to achieve health for all by the year 2000, and immunization coverage of children has been included among the indicators which PAHO/WHO proposes to use to monitor the success of that strategy at regional and global levels.

2. Objectives

The program's long-term objectives are to:

- reduce morbidity and mortality from diphtheria, pertussis, tetanus, measles, poliomyelitis and tuberculosis by providing immunization against these diseases for every child in the world by 1990 (other selected diseases may be included when and where applicable), and by providing immunization against tetanus as needed for women of childbearing age;
- promote countries' self-reliance in the delivery of immunization services within the context of comprehensive health services;
- promote regional self-reliance in matters of vaccine quality control and vaccine production.

3. Situation Analysis

The EPI Medium-Term Program (MTP) for 1978-1983 for the Region of the Americas was formulated and formally adopted as part of the overall MTP for the control of communicable diseases in 1978. Objectives relating to planning, program management, operation of a revolving fund for purchase of vaccines and related supplies, training, research and evaluation were identified. The regional progress which has been achieved to date is presented in the following sections:

3.1 Planning

The MTP set the target that the Region would establish an annual list of countries participating in the EPI and that each of those countries would have a plan of operations. Such list was prepared, and by the end of 1981 all countries had prepared biannual plans of operation for the period 1981-1983.

3.2 Program Management

The MTP states that the success of program management will be reflected through the achievement of (a) overall coverage levels in infants for DPT, measles and poliomyelitis vaccines of 50 per cent and for BCG of 75 per cent by the end of 1983, and (b) a decline in the incidence of the target diseases.

Available data from 15 countries in the Region, encompassing 60 per cent of the population of Latin America and Caribbean for the year 1980, suggest that coverage levels are in the order of 35 per cent for DPT, measles, and poliomyelitis, and 50 per cent for BCG.

In Latin America and the Caribbean, apart from 12 countries which succeeded in bringing down the incidence of poliomyelitis to less than 0.1/100,000 inhabitants, no significant decline in the reported incidence of the target diseases can be discerned as yet.

### 3.3 Training

The MTP called for the development and implementation of training courses on overall planning and management, management for mid-level supervisory personnel, cold chain and logistics, and vaccine quality control.

Such courses have been developed and over 3,500 health staff have been trained in PAHO-sponsored courses. An equal number of health staff has been trained in courses fully sponsored by national authorities, using the EPI-developed materials and educational methodology. A course for training of refrigerator repair technicians has been developed and tested in one country.

### 3.4 Research

The regional EPI Medium-Term Program identifies some specific areas in which work should be accomplished before 1984. These relate to the epidemiology of the EPI target diseases, improvement in cold chain equipment, and cost-effectiveness of different strategies for immunization delivery.

Work has been completed or is progressing in all of these topic areas, with notable advances in studies of the epidemiology of measles; the development of costing guidelines; the preparation of disease recognition materials; and the testing of a wide range of cold boxes, refrigerators, freezers and temperature indicators, through the PAHO cold chain focal point established in collaboration with the Government of Colombia and the University in Cali.

### 3.5 Evaluation

As called for in the Medium-Term Program, the elements required for a regional EPI information system were developed during 1978 and 1979, and regular analysis and feedback of national achievements have been provided through national and regional publications such as the EPI Newsletter, published bimonthly by PAHO.

Despite the considerable improvement in EPI-related information systems which has occurred in recent years, much remains to be done. As of the end of 1981, from the 47 countries or areas in the Americas, immunization coverage was not known for 32 countries/areas, and reports on the incidence of the EPI target diseases had been received from less than half of the countries or areas for the calendar year ending in December 1981. The quality of vaccines being used was not known for 20 countries or areas.

Increasing numbers of countries are conducting national comprehensive program reviews, six having been performed in 1980/1981. The methodology for each is adapted to the needs of the country concerned, and emphasis is currently being placed on broadening the review process to consider other elements of primary health care in addition to the EPI, with particular emphasis on maternal and child health care. These evaluations identify the major problems hindering the progress of the program and suggest possible solutions which in turn generate a plan of work.

### 3.6 Operation of the EPI Revolving Fund

#### 3.6.1 Establishment of the EPI Revolving Fund

The establishment of the EPI Revolving Fund for the purchase of vaccines and related supplies (cold chain equipment, syringes and needles) was first authorized by Resolution CD25.27 of the XXV Meeting of the PAHO Directing Council (1977). The feasibility studies that preceded the establishment of the Fund demonstrated that a minimum of US\$4 million would be needed to assure smooth operation. This sum was based on the needs for supply of vaccines to 100 per cent of the target population (children under 1 year of age and pregnant women) in the 21 countries and territories that had shown interest in this purchasing mechanism at the time.

#### 3.6.2 Objectives of the Revolving Fund

In order to assure that good quality vaccines are available to all countries in the Region, the Fund has the following main objectives:

- To enable Member Countries of the Region to procure their requirements for vaccines and related supplies in an orderly and continuous manner, thereby avoiding disruptions in their programming due to lack of vaccines or lack of immediate funds for their procurement.

- To permit countries to use local currencies instead of US dollars to reimburse their vaccine purchases, thus avoiding delays and losses in the exchange of local currencies for US dollars. PAHO uses these local currencies in its country programs.
- To consolidate vaccine requirements for all participating Revolving Fund members, and to allow them to benefit from the resulting economies of scale, including the procurement of vaccines at lower prices.
- To make it possible for Member Countries to program their activities more effectively as a result of the constant flow of supplies that can be achieved with the continuous availability of funds in the Revolving Fund.
- To assure participating countries in the Fund of a good supply of quality vaccines that meet PAHO/WHO standards.
- To establish contracts with suppliers of vaccines that allow urgent orders to be placed and delivered on short notice.

### 3.6.3 Membership

Since the establishment of the EPI Revolving Fund in 1979, membership has gradually increased to include almost all of the countries and territories in the Region. During the first year of operations, 21 countries and territories elected to procure their EPI vaccines through the Revolving Fund. In 1980 and 1981 new countries used the Revolving Fund, bringing the number of participants to 31.

The present participation of the Fund includes the following countries and territories, accounting for approximately 45 per cent of the population of Latin America and the Caribbean:

Anguilla	Costa Rica	Paraguay
Antigua	Dominica	Peru
Argentina	Dominican Republic	St. Kitts/Nevis
Bahamas	Ecuador	Saint Lucia
Barbados	El Salvador	St. Vincent and the Grenadines
Belize	Grenada	Suriname
Bolivia	Guatemala	Trinidad and Tobago
British Virgin Is.	Guyana	Turks and Caicos
Cayman Islands	Honduras	Uruguay
Chile	Nicaragua	
Colombia	Panama	

#### 3.6.4 Summary of operations, 1979-1981

During its first three years of operation the EPI Revolving Fund has placed over 700 orders for vaccines worth almost US\$10.3 million. Table 1 shows the number of orders placed for each year and the corresponding dollar value.

Table 1. Dollar Value of Vaccines Purchased through the EPI Revolving Fund, 1979-1981

Year	No. of orders	Value (US\$)
1979	232	2,273,000
1980	282	3,909,400
1981	222	4,064,792
Total	736	10,247,192

Table 2 shows the prices paid for the five vaccines over the past three years, together with the prices in effect for 1982. As can be noted, the 1982 prices per dose are lower than the 1979 prices for DPT, TT and BCG vaccines. The 1982 prices for each vial size of polio vaccine are slightly lower than those for the previous period July-December 1981; overall, however, the price of polio vaccine has increased since 1979. The price of measles vaccine, which tends to be the most expensive of all the EPI vaccines, has gradually increased since July 1980-June 1981, though in that period the price of 1- and 10-dose vials decreased by an average of 23% in relation to the preceding period.

Table 2. EPI Vaccine Prices, 1979-1982

Vaccine	Vial size (doses)	Jan. 1979- June 1980	July 1980- June 1981	July-Dec. 1981	Jan.-Dec. 1982
Polio	10	.022	.025	.035/.036*	.0297
	20	.019	.021	.029/.026*	.0253
	50	No contract in effect 1979-1981			.0199
Measles	1	.33	.28	.302	.385
	10	.14	.099	.106	.1278
DPT	10	.038	.041	.041	.0337
	20	.037	.034	.034	.0256
TT	10	.026	.026	.026	.0223
	20	.021	.023	.025	.0173
BCG	10	No contract in effect 1979-1981			.0996
	20	.055	.059	.054	.0486
	50	.029	.031	.027	.0249

\*During this period two manufacturers supplied polio vaccine.

A comparison of the prices of the five EPI vaccines when the EPI Revolving Fund was first established in 1979 with the prices in effect for 1982 is shown in Table 3.

Table 3. Percentage Change in EPI Vaccine Prices from 1979 to 1982

Vaccine	Vial size	% price change from 1979 to 1982
Poliomyelitis	10	+35
	20	+33
Measles	1	+17
	10	-9
DPT	10	-11
	20	-31
TT	10	-14
	20	-18
BCG	20	-12
	50	-14

All these figures clearly show that the EPI Revolving Fund has been a successful mechanism for vaccine procurement. In general, the Fund has managed to meet all the EPI vaccine requirements of participating members. Of particular importance is the fact that it has done so while assuring that members receive high quality vaccines, delivered on time and at considerable savings.

### 3.6.5 Capitalization

The XX Pan American Sanitary Conference (1978) authorized the Director to initiate the capitalization of the EPI Revolving Fund with an amount of US\$1 million. Resolution XXI of the XXVI Meeting of the Directing Council (1979) increased the amount of capitalization from US\$1 million to \$1.8 million. In addition to this authorized increase, the Governments of the Netherlands and Barbados, and more recently the Governments of Cuba, Mexico, Panama, Dominica, Belize and the Cayman Islands, have donated funds towards the capitalization of the Fund. Contributions have also been received from two PAHO staff members and from the East Port-of-Spain Leo Club of Trinidad and Tobago. As of 31 March 1982, capitalization of the EPI fund amounted to US\$2,328,976, an amount still well below the \$4 million needed by the Fund to operate smoothly.

PAHO has and is continuing to make an effort to secure financing for the Revolving Fund from the Inter-American Development Bank. Meetings have been held and an introductory paper on the EPI program's operations and financing requirements has been prepared for review by the Bank. Major impediments continue to be the requirement that use of the Bank's funds must be identified with specific country programs and that only certain non-convertible currencies are available at the Bank to finance this type of program.

At its XXVIII Meeting in September-October 1981, the Directing Council authorized the Director to use the Working Capital Fund, on the condition that long-term projections show no higher priority for the Fund, in order to assure smooth operation of the EPI Revolving Fund until such time as its full capitalization is realized. Although this authorization to use the Working Capital Fund as a short-term and temporary funding source for EPI procurement has been helpful in increasing procurement volume, benefits achieved have been partially off-set by continuing delays in reimbursements to the Revolving Fund by members. As of 31 December 1981, amounts due to the Revolving Fund totaled US\$1,581,682 with many of



these accounts receivable approaching or past the 60-day limit on reimbursements. Payment delays had necessitated a drawdown of \$648,330 as of 31 December 1981 from the Working Capital Fund to finance pending EPI procurement action. The financial status of the Revolving Fund improved during the early months of 1982 through changes in the Organization's billing procedures and the receipt of a greater amount of advance payments from Members. However, slightly over US\$1 million in accounts receivable against executed procurement transactions was outstanding as of 30 April 1982.

Resolution XXVII of the XXV Meeting of the Directing Council (1977) authorized the application of a service charge of 3 per cent to the net cost of the vaccine purchased under each order for the purpose of establishing a Reserve Account for potential losses on the EPI Revolving Fund operations, including losses from currency transactions. The financial status of the EPI Reserve Account as of 31 December 1981 was as follows:

	<u>US\$</u>
Balance as of 1 January 1980	61,372
3% Service Charge Income	185,693
Losses, including currency transactions	<u>( 72,369)</u>
Balance as of 31 December 1981	174,696 =====

It is expected that EPI procurement volume will continue to increase as additional capitalization becomes available, with a corresponding increase in service charge income. It is also anticipated that losses from currency differentials can be kept at or below the current annual average through increased monitoring of PAHO's currency holdings. Accordingly, the Reserve Account is currently funded beyond normal requirements, and approval is requested to permit the Director to transfer unrequired funds over and above a minimum Reserve Account balance of US\$100,000 to the Revolving Fund as additional capital. Since it is possible that one or a series of unexpected and unusual losses could deplete the Reserve Account, regardless of its size, approval is requested also to permit the Director to transfer funds back to the Reserve Account from the Revolving Fund if additional resources are ever needed.