



**Regional Office for the Western Pacific  
Bureau régional du Pacifique occidental**

**REGIONAL COMMITTEE**

**WPR/RC40/10**

**Fortieth session  
Manila  
19-25 September 1989**

**4 August 1989**

**ORIGINAL: ENGLISH**

**Provisional agenda item 14**

## **THE EXPANDED PROGRAMME ON IMMUNIZATION: PROGRESS REPORT**

The objective of the Expanded Programme on Immunization (EPI) is to control the target diseases. Progress and achievements have been recorded by the national expanded programme on immunization in all the countries and areas of the Region. By the end of 1988, the overall average rates of immunization coverage in developing countries in the Region had reached 83% for BCG, 78% for DPT<sub>3</sub>, 85% for TOPV<sub>3</sub>, and 70% for measles. This has resulted in a substantial reduction of all the target diseases except measles.

The task has not yet been completed, because Universal Child Immunization has yet to be achieved. EPI is already prepared to meet the challenge of the 1990s to achieve or maintain high coverage and to control or eradicate the target diseases.

## 1. INTRODUCTION

The regional Expanded Programme on Immunization (EPI) was launched in 1976. Its objective is to reduce the morbidity, mortality and disabilities caused by tuberculosis, diphtheria, pertussis, tetanus, measles and poliomyelitis by providing immunization for all children by 1990, and to add other vaccines as they become available. When the programme started, immunization services were virtually non-existent in developing countries, and were mostly confined to urban areas in the developed countries. Now almost 90% of all the newborn have access to EPI vaccines. WHO promotion of immunization against Japanese encephalitis in countries where this disease is endemic began in 1985, and hepatitis B in all countries was added in 1986.

## 2. PROGRESS OF THE PROGRAMME

### 2.1 Regional progress

Member States have strongly supported EPI from the beginning. This has been reflected in resolutions adopted by the Regional Committee during the past decade. More importantly, countries have taken action resulting in spectacular increases in immunization coverage in recent years.

EPI has now grown to be a large, very active programme of the Member States, working with a network of organizations which includes the United Nations system, bilateral agencies and nongovernmental organizations. Extrabudgetary support has been essential for national programmes and has grown with their success. This support has been used to meet such needs as training, the development of training materials, vaccines, injection and sterilization equipment, cold chain equipment and supplies, and health education materials.

UNICEF has collaborated with WHO to strengthen national managerial capacities in immunization, particularly by supporting training activities and by reviewing national programmes with WHO and other partners. UNICEF and WHO issue joint statements on technical aspects of a number of primary health care interventions. Recent immunization statements include: "Planning principles for accelerated immunization activities" (1985), "Selection of injection equipment" (1986), "Immunization and AIDS" (1987), and "Vitamin A for measles" (1987). During 1987 and 1988, UNICEF and WHO collaborated in producing material for briefing on accelerating and sustaining national immunization programmes in developing countries, especially for the national programme managers and other staff.

### 2.2 Developed countries

Developed countries have continued to increase gradually and sustain high immunization coverage rates, with over 80% for BCG, DPT<sub>3</sub> and TOPV<sub>3</sub>. The incidence of the diseases covered by these vaccines has been dramatically reduced, in some countries to zero in the case of diphtheria and poliomyelitis. Several of these countries introduced measles immunization after the inception of EPI, and coverage has been increasing slowly, but is still insufficient, as outbreaks and periodic epidemics of the disease continue to occur. All the developed countries are now immunizing against hepatitis B and Japan is immunizing against Japanese encephalitis.

WHO continues to encourage these countries to increase and sustain high immunization coverage. They participate in WHO meetings, workshops and training courses, and receive technical papers, reports and prototypes of health education and training materials.

### **2.3 Developing countries**

In the developing countries immunization has been expanded in phases, adding to the geographical areas covered and the antigens used as the programme progresses. WHO has worked with Member States to develop flexible immunization schedules and training materials. It has also provided technical leadership in monitoring and evaluation, and coordinated vaccine procurement and distribution.

In the South Pacific island countries, BCG, DPT<sub>3</sub> and TOPV<sub>3</sub> were available nationwide by 1980. Measles vaccine was added between 1982 and 1984. These countries and areas have achieved remarkably high immunization coverage with all the EPI vaccines, often surpassing coverage achieved by developed countries. Immunization coverage rates by the end of 1988 were BCG, 90%; DPT<sub>3</sub>, 80%; TOPV<sub>3</sub>, 85%; measles, 80%. High coverage has been sustained for the past several years.

The incidence of diphtheria, poliomyelitis and neonatal tetanus has almost reached zero. Outbreaks of measles and pertussis still continue to occur periodically, as the susceptible population builds up. It is estimated that to control measles over 95% immunization coverage rate will be necessary.

The large developing countries have also expanded their programmes in phases. Starting with a small geographical area and a limited number of vaccines, the programmes have become nationwide and included all EPI vaccines within three to five years.

Twenty of the 32 developing countries and areas in the Region have started immunization against hepatitis B. China and the Republic of Korea, two of the three countries in which Japanese encephalitis is endemic, are providing immunization against it.

## **3. OPERATIONS**

### **3.1 Flexible immunization schedules**

The programme recommends that each country and area should determine its own schedule according to its own needs. In developing countries, the EPI target diseases strike early in life and it is especially important to protect children through immunization as early as possible. A schedule which EPI recommends as a starting point for national planning is as follows:

Vaccine	No. of doses	Age of child
BCG	1	At birth
TOPV	4	At birth and with each dose of DPT
DPT	3	At 6, 10, 14 weeks
Measles	1	At 9 months
Hepatitis B	3	At birth, 6 weeks and 9 months
Japanese encephalitis	2	At 6 months and 9 months

This immunization schedule entails six contacts of the infant and the mother with the facility providing these services. It allows the health services to provide early protection of the child against vaccine-preventable diseases.

### 3.2 Educational and information material

In addition to providing direction and coordination, WHO has provided technical guidance on EPI. It has developed operational manuals and produced prototype health education and training materials which have been intensively used in national programmes and are periodically revised and updated. WHO also periodically issues technical papers which are distributed to all the countries and areas of the Region.

With WHO's technical cooperation and financial support, these materials are adapted and modified to suit the countries' particular needs and are translated into national languages.

### 3.3 Infrastructure

WHO collaborated in introducing improved methods and materials to maintain the "cold chain" and logistic systems required to keep vaccines potent in transport between the place of manufacture and the place of use, and in storage. The Organization has collaborated closely with UNICEF in this effort. During the past decade, this partnership has resulted in a whole new generation of cold chain equipment becoming available, specifically designed to meet the needs of immunization programmes in developing countries. This includes electric cold rooms and compression refrigerators, ice-lined refrigerators, kerosene and gas refrigerators, cold boxes, vaccine carriers and refrigerator trucks.

South Pacific island countries now have a well established cold chain and vaccine delivery system. In the large Asian countries almost 90% of the populated areas have adequate cold chain facilities. Remote and mountainous areas of China, the Lao People's Democratic Republic, Papua New Guinea, the Philippines and Viet Nam are covered by mobile teams because of weak infrastructure.

#### 4. PROSPECTS

The coverage now being achieved rests on a health infrastructure which has been developed during the last twelve years. It is estimated that with continued national and international cooperation all the countries and areas except two will have achieved immunization coverage rates of over 80% by 1990. EPI is already preparing for the challenges of the 1990s. These are mainly to raise immunization coverage rates where they are not yet satisfactory, and to sustain high coverage in countries where it has been achieved.

With the increasing coverage of BCG, DPT<sub>3</sub> and measles, it is planned to control or eradicate disseminated tuberculosis (e.g. miliary tuberculosis) in children and diphtheria, pertussis, neonatal tetanus and measles by 1995.

The overall rate of regional coverage for TOPV<sub>3</sub> is 85.4%. Noting this development and the current epidemiological situation of poliomyelitis in the Region, the thirty-ninth session of the Regional Committee in September 1988 adopted a resolution to eradicate poliomyelitis in the Region by 1995.

A plan of action for the regional eradication of poliomyelitis by the year 1995 was drafted in October 1988. It stresses the following measures:

- (1) raising immunization coverage rate as quickly as possible to over 80% of all infants by their first birthday and throughout the age group 1-4 years in each district, and to sustain this level;
- (2) improving disease surveillance, investigating cases and outbreaks and applying containment or control measures;
- (3) strengthening laboratory capability for isolating and characterizing poliovirus;
- (4) providing information and education for the community;
- (5) coordinating donor inputs.

One of the original goals of EPI was to put in place an infrastructure and logistical system for immunization against the six target diseases and subsequently to introduce additional vaccines. Already countries in which the delivery system is well established are adding vaccines against mumps, rubella, hepatitis B and Japanese encephalitis. Twenty three of the countries and areas in the Region have started immunization against hepatitis B. The target for 1995 is for all countries to have included hepatitis B vaccine and endemic countries to have included Japanese encephalitis vaccine.

## 5. CONCLUSION

EPI is now recognized as a high priority both by countries and by the international community. This support must be sustained, particularly by donor agencies, beyond 1990 to ensure continued programme progress and to set the stage for disease control and eradication. EPI represents one of the major stepping-stones to the goal of health for all by the year 2000.