

environmental protection, encompassing human development topics such as population policy, education and training, poverty, urbanization, and female participation in development, as well as the relation of these topics to health. Sir George Alleyne, who headed the WHO delegation at the conference, pointed out that the Rio Declaration, which arose from UNCED, states that "Human beings are at the center of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature." He also insisted that, rather than being viewed as an adjunct to human development, health must be viewed as a resource in its own right, one that

is fundamental to the production and use of all the other resources that contribute to national development.

The conference also produced the Declaration of Barbados, which affirms that small island developing states should, in accordance with their own priorities, strive toward the goals of sustainable development by means of strategies and programs aimed at improving the quality of life. The declaration also stresses the responsibility and role of the international community to provide financial assistance and promote fair, equitable, and nondiscriminatory trading arrangements and a supportive international economic system.



Strengthening the Health Infrastructure through Disease Control: The Polio Eradication Study

In August 1994, three years had elapsed since the detection of the last case of paralytic poliomyelitis caused by wild poliovirus in the Region of the Americas. Countries are now carrying out activities related to certifying the disease's eradication, which entails surveillance of acute flaccid paralysis and wild virus circulation.

The poliomyelitis eradication effort has required a unique concerted effort by national governments and a consortium of donor agencies. Given that the duration of the combined effort and the degree of joint planning and program execution were unprecedented in a health campaign, it was considered worthwhile to study what, if any, impact that effort has had on the strengthening of health infrastructure. Therefore, in 1993 PAHO commissioned a group of independent investigators from a variety of fields to carry out an extensive review of the ramifications of the program in six countries of the Region: Bolivia, Brazil, Colombia, Guatemala, Mexico, and Paraguay.

Preliminary data from this study indicate that the Expanded Program on Im-

Sources: (1) PAHO/HMP/EPI. Expanded Program on Immunization. Washington, DC: PAHO; 26 April 1994. (Document CE113/11; report to the 113th Meeting of the Executive Committee). (2) Provisional Report of the Taylor Commission to Assess the Impact of EPI-Polio on Health Systems in the Americas. Presented at the Fourth Meeting of the Taylor Commission in Washington, DC, 24 June 1994. (Unpublished document).

munization (EPI) and the polio eradication initiative have contributed significantly to building the capacity of health services in the Region. The following is a summary of some of the many aspects of the program that are thought to have fostered the development and strengthening of the health infrastructure.

Personnel. A cadre of trained epidemiologists is now available in all the countries. These professionals have considerable experience in epidemiologic surveillance, disease control activities, and operational research. In addition, virologists in several laboratories were trained in the most advanced techniques for enterovirus diagnosis.

Laboratories. A network of virology laboratories was established. The diagnostic capabilities of these laboratories were enhanced by the transfer of technologies such as DNA probes and polymerase chain reaction (PCR). The laboratories are now undertaking responsibility for other diagnostic procedures, such as those used to confirm measles.

Planning. All the countries improved their health planning capabilities. They now have one- and five-year national plans of action for immunization programs that outline objectives, activities, and anticipated results and identify expected costs and national and international funding sources. These plans serve as management tools for program implementation, monitoring, and evaluation.

Coordination. An Interagency Coordinating Committee (ICC) was created for the first time in the Region in conjunction with the polio eradication initiative. It includes participation by all the agencies that collaborated in the vaccination effort. The Region-level ICC is replicated in each country as well. Under the leadership of the country's ministry of health, the national ICC monitors program im-

plementation. Over the last three years, the ICCs expanded their mandates to deal with other aspects of maternal and child health, particularly the goals of the World Summit for Children. They also monitor other general health issues. As a result of their enhanced role, a core group of health professionals participating in the ICCs received training in financial planning and management.

Prestige. The eradication of poliomyelitis has been a prestigious health sector accomplishment that has increased the chances of obtaining further resources to address other health problems.

Data. An information system for vaccination coverage is now in operation at the county or district level throughout Latin America. It identifies immunization coverage for children under 1 year of age and helps managers target resources to areas with the lowest coverage. The coverage rate serves as a surrogate indicator of access to and performance of the health infrastructure.

Surveillance. During the last five years, the most comprehensive surveillance system for human health that has ever existed in the Hemisphere was put into operation, with over 20,000 health units—covering 100% of all counties or districts in Latin America—reporting weekly on the presence or absence of cases of acute flaccid paralysis (such cases are considered probable cases of poliomyelitis). Over 80% of these cases are investigated promptly by specially trained epidemiologists. This system is now being expanded to include other vaccine-preventable diseases, particularly measles and neonatal tetanus; it also proved crucial for the early detection and follow-up of the cholera epidemic.

Procurement. A Revolving Fund for Vaccine Procurement has been operating for the past 13 years. The fund ensures that high-quality vaccine is avail-

able in the countries in a timely manner. The countries reimburse the Fund in local currency. The Fund served as the model for establishment of UNICEF's "Independent Vaccine Initiative," now in operation.

Social Mobilization. While other health programs had previously used social mobilization techniques, none had done so on the scale or with the breadth of outreach of the EPI and the polio eradication campaign. This effort succeeded not only in educating people about the existence and use of vaccines but also in overcoming cultural resistance to vaccination and familiarizing the communities with their health services and health personnel. The campaign garnered the participation of many different types and levels of community leaders, and the experience they gained has facilitated their involvement in other health programs. The campaign was also publicized in a variety of mass media, making use of celebrities to spark the public's interest.

The health services' rapid response to the cholera emergency owed a great deal to the lessons learned from the EPI and polio eradication strategies regarding social mobilization, use of the mass media, and epidemiologic surveillance.

The gains achieved in combatting poliomyelitis and other diseases that used to be major causes of childhood morbidity and mortality are of historic proportions, but they are fragile. For that reason, it is essential—now more than ever—that all organizations (multilateral, bilateral, and nongovernmental) that have contributed to the program continue to do so. Such support will be critical to reinforce the national immunization programs and health infrastructure in their efforts to sustain the advances that have been attained. Simultaneously, it will facilitate achieving the goals and targets set forth in 1990 at the World Summit for Children of further reducing the incidence of measles and eliminating neonatal tetanus as a public health problem.



Summary of Cholera in the Americas in 1993

The total of 209 192 cases of cholera reported from the Americas in 1993 represented a 41% reduction from 1992—the largest reduction in any region of the world. Reports of the disease were received from 21 countries in the Americas in 1993. The incidence of cholera decreased in Bolivia, Ecuador, Panama, and Venezuela, while it increased in Argen-

tina, Brazil, Guatemala, Honduras, and Nicaragua. The fall in incidence in countries where large outbreaks occurred in 1991 and 1992 reflects the strong regional commitment to the prevention of enteric diseases and to public education aimed at both individuals and communities. It is likely that improved awareness of cholera in the Americas has contributed to strengthened surveillance and disease reporting in the Region.

The overall cholera case-fatality rate in the Americas exceeded 1% for the first

Source: Cholera in 1993 (Parts I and II). *Wkly Epidemiol Rec* 1994;69:209,213–214.