



Polio News

Eradication

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Every Child Counts



A Newsletter for the Global Polio Eradication Initiative Expanded Programme on Immunization, Department of Vaccines & Biologicals, World Health Organization in association with Rotary International, United Nations Children's Fund and the Centers for Disease Control and Prevention



Polio Eradication: Plan of Action 2000-2005 A Message from Dr Gro Harlem Brundtland

ONE year ago, the World Health Assembly gave its full support to those countries still battling wild poliovirus. The Member States unanimously resolved to accelerate activities to eradicate polio by the end of the year 2000. Over the course of the last 12 months, this pledge has turned into genuine action, with very impressive results. Political leaders, health workers, donors and millions of volunteers focussed their actions, demonstrating that to eradicate polio, every child counts.

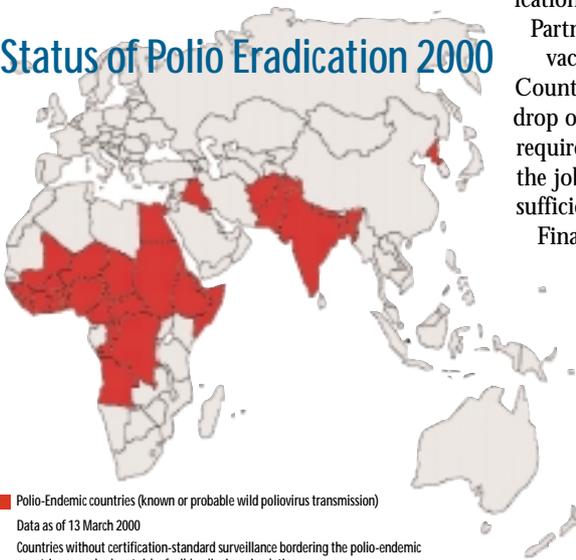


Progress: At the beginning of 1999, there were 50 polio-endemic countries. As a direct result of increased activities to eradicate the disease, that number dropped to 30 at the beginning of 2000. National Immunization Days (NIDs) reached more children than ever before. In India, for example, 147 million children were immunized in a single day. In other countries such as the DR Congo, warring factions put down their arms so that health workers could vaccinate as many children as possible.

A Full Agenda from 2000-2005: It is important to stress that we are now entering a period of more – not less – intense eradication activities. Countries that are polio-endemic, or recently endemic, must continue with intensified, **high quality NIDs**. Every country must strive for **certification-standard AFP surveillance** so the last viruses can be found. **Mop-Up campaigns** can then eliminate the final chains of virus transmission, to be followed by certification of polio's eradication. It is also time to begin implementing the Global Plan of Action for **Laboratory Containment** of wild poliovirus stocks. While we work hard on this agenda, we will also be working to achieve consensus on the important question of **when to stop polio immunization**.

The Challenges: There are promising signs that many of the remaining polio-endemic countries will eradicate the disease before the year is through. Some countries, however, are at a high risk of continued poliovirus transmission after the end of 2000. To successfully eradicate the disease in these countries, we must overcome several challenges. The political commitment to fully accelerating eradication activities, demonstrated so well over the last 12 months, must continue.

Status of Polio Eradication 2000



Partner agencies are working with vaccine suppliers to ensure enough oral polio vaccine (OPV) is delivered in a timely manner for all scheduled NIDs. Countries must do their part by conducting high quality activities, so that every drop of OPV is used effectively. As we intensify polio eradication activities, we will require more funding. We are US\$ 300 million short of the total needed to finish the job. If eradication activities are not of an adequate quality, or if we don't have sufficient funds, the total price of the polio eradication programme will increase.

Finally, we must have access to every child. I am working with Carol Bellamy, the Executive Director of UNICEF, and UN Secretary General Kofi Annan to arrange more Days of Tranquillity in conflict-affected areas, especially DR Congo and Angola.

From 2000 through 2005, we must also move aggressively to exploit the opportunities to **strengthen routine immunization health systems**, using the lessons learned in polio eradication. This will be one of the many legacies of the tremendous effort in building a polio-free world. We can all look forward to a world in which no child is crippled by this terrible disease. ♦



Quality NIDs and Mop-Ups

To eradicate polio, all remaining known and suspected polio infected countries (see map page 1), bordering countries, and high risk areas, must continue with intensified NIDs and Mop-Ups, as did Cambodia and Peru and as India is doing now.

Then – Peru: The Final Phase

POLIO-FREE certification of the Americas in 1994 wouldn't have been possible without effective Mop-Up campaigns. Overall, during the final phase of eradication, the wild poliovirus is reduced to a small area. At this point, the appearance of a single case in a district calls for an aggressive strategy to interrupt transmission. In the Americas, this strategy was named "Mop-Up." When one case was found, health workers targeted the entire district for house to house vaccination of children between zero to five years of age with two

Then – Mop-Ups on the Mekong



DUE to the countless branches of the Mekong River and the channels draining into the Tonle Sap, or Great Lake, Cambodia is a country of waterways.

Health officials thought that wild poliovirus circulation was nearly finished in Cambodia by late 1996, after two years of seemingly successful rounds of National Immunization Days (NIDs).

Late that year however, laboratory results from stool samples taken over a period of several months revealed 13 new cases, bringing the 1996 total to 15 in nine provinces. It was discovered that 10 of the 15 cases lived on or near the waterways.

Using boats, health officials discovered substantial populations of people with very low immunization levels living on or along the waterways in Phnom Penh. They also found many communities of seasonal fishermen and their families, sizeable communities living on the rivers draining into the Tonle Sap and families living on the lake itself. OPV coverage among target-age children in these communities was uniformly poor. The children had not been reached by previous NIDs and were not being reached by routine immunization services.

To address these and other areas, Cambodia conducted High-Risk Response Immunizations (HRRIs) during May and June 1997. Boat teams systematically reached those people living on boats. Mobile teams on foot, bicycle or motorbike worked along the lakeshore and the riverbanks. Programme officials flew over the Tonle Sap in order to find all the people living on the lake and its hard-to-reach waterways.

By June the locations of the "missed" populations were known, and the strategies for reaching them had been highly and successfully refined. The waterways were targeted again in late 1997 and early 1998. By this time most children had received two to three doses of OPV.

The last virologically confirmed case of polio in Cambodia, and in all of the Western Pacific Region occurred in March of 1997. This case was a 15-month old girl who lived in a community on the eastern bank of the Mekong River, directly across the river from, and within sight of, Phnom Penh. ♦



Luis Fermin Tenorio, the last polio case in the Americas

doses of OPV given one month apart. Mop-Up operations became particularly crucial in the eradication of polio in Peru where routine coverage in many districts was below 80% because of the social strife that impeded normal delivery of immunization services. In some districts, the coverage was less than two percent. In a massive Mop-Up campaign, health workers covered one-third of the households in the country in one week. They visited two million houses and vaccinated about 2 million children. Volunteers from Rotary clubs and local women's clubs were instrumental in providing resources for materials and transport. They vaccinated children and collected ice for the cold chain. The enormous operation was repeated one month later. During both rounds, health workers searched for new cases, and found none.

The last confirmed case in Peru occurred on August 21, 1991. It was the last indigenous case of poliomyelitis in the Western Hemisphere. ♦

Now – India: Intensifying the Campaign

INDIA used to account for over 70 percent of paralytic polio cases in the world. Over the last two years, it has cut the number of wild polioviruses by almost half – from 1,934 in 1998 to 1,126 in 1999. This reduction is a direct result of intensified NIDs, assisted by global-standard Acute Flaccid Paralysis (AFP) surveillance. Some parts of the country are now ready for Mop-Ups.

India has successfully conducted 4 annual NIDs of 2 rounds each and one NID of 4 rounds. Many large States, including Kerala, Assam and Orissa had no wild poliovirus cases in 1999. Other large States such as Madhya Pradesh, Maharashtra, and Tamil Nadu registered a very marked (>80%) decline in the number of cases between 1998 and 1999.

Now, the virus is mainly limited to four States: Uttar Pradesh, Bihar, Delhi and West Bengal. Following the four rounds of intensified NIDs, one additional round in Delhi and two additional rounds in the key States, India expects another major reduction in the number of polio cases in 2000.

Wild poliovirus circulation is expected to be limited to only a few areas outside the four highest risk States. India plans to conduct rapid Mop-Ups following any wild poliovirus confirmed case of polio in these areas, so that transmission is abruptly interrupted. Every case of wild poliovirus reported from these areas will be considered an emergency. By securing the gains made in polio-eradication through Mop-Up campaigns, India, with almost a billion people, is on track to be polio-free. ♦



Quality Surveillance and Certification

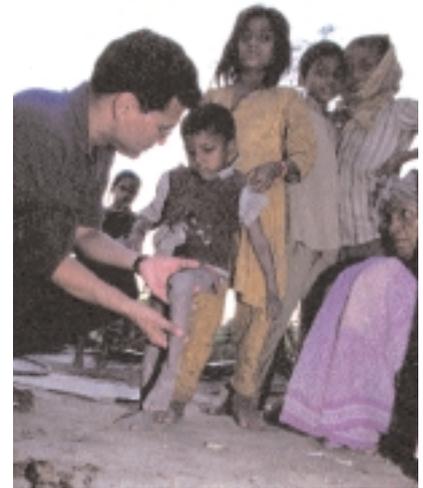
AFP Surveillance – The Linchpin in Polio Eradication

IN October of 1999, Chinese health officials discovered a child with Acute Flaccid Paralysis (AFP) in a remote area of the country. Laboratory testing of specimens from the child determined that the AFT was due to polio, and that the virus had been imported into the country. The early detection meant Chinese officials could act quickly to immunize the children in the region and stop further transmission. Without high quality surveillance, this would not have been possible.

Poliovirus is not easy to find. The virus does not live long outside the human intestinal system. The only way to locate the virus is to find the people who harbour it. This can be difficult, as the great majority of poliovirus infections do not result in paralysis. Therefore, only a few cases of paralysis may be found – even in areas where virus transmission is very intense.

Unfortunately, the paralysis caused by poliovirus is not very specific, as a number of other diseases and conditions can cause a very similar illness. Surveillance for polio eradication is therefore targeting the lead symptom of paralytic polio – acute flaccid, or floppy paralysis.

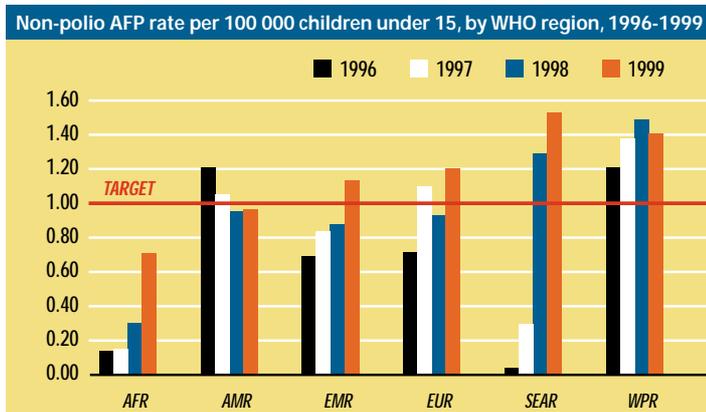
High quality surveillance will detect all children with AFP. By testing their stool specimens, health officials can distinguish true polio cases from AFP cases caused by other diseases. Infected areas (districts, provinces) are likely to be detected if all children with AFP are reported and then tested for wild poliovirus. The quality of AFP surveillance becomes crucial in countries



approaching the final phase of polio eradication. Without good AFP surveillance, supplementary immunization campaigns are like 'shooting in the dark' – only reliable surveillance will allow campaigns targeted at exactly those who are still infected.

As proven in the Chinese case, AFP surveillance is also key to detecting re-importation of poliovirus into polio-free areas. Missing poliovirus 'importations' can be disastrous, because transmission of imported virus may rapidly spiral out of control and result in a large outbreak. Early detection allows for quick action and containment.

Finally, AFP surveillance is essential for final certification of polio-free status. Without high quality surveillance, it is impossible to prove the successful interruption of wild poliovirus transmission. ♦



Certification: The Mark of Final Success



THE final step of the polio eradication initiative – before stopping poliovirus vaccination – is to ensure that wild poliovirus has indeed been eradicated worldwide. Following the examples of the smallpox eradication program and the regional certification process for polio eradication by the Region of the Americas during 1990-1994, WHO appointed an independent Global Commission for the Certification of Polio Eradication. This commission has outlined a process and specified criteria for global certification.

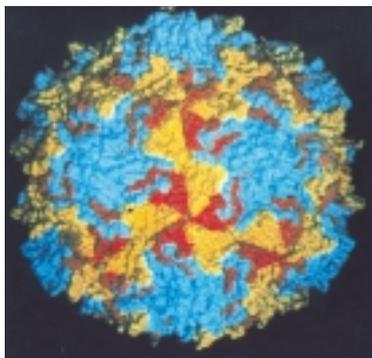
The most important criteria for certification of a region, or indeed the world, is the absence of poliovirus for at least 3 years under conditions of certification-standard surveillance. In order to demonstrate this, each WHO Region has established an independent Commission for the Certification of Polio Eradication. These regional commissions will interpret, translate and adapt the criteria for certification developed by the global commission and

develop a process and a timetable appropriate for countries in their region.

Each country must have an independent national committee that will compile and critically review all relevant data in support of the absence of wild poliovirus from their country. The regional commission then examines the data from each country. If the data warrants, the commission can then collectively certify the entire region as polio-free.

Once all six WHO regions are certified, the global commission will be able to review all available data and eventually certify the world as polio-free. In 1994, the Region of the Americas was certified as polio-free. The Western Pacific Region has not seen an indigenous wild poliovirus since March 1997, and is planning to achieve certification later this year. The European Region, with the last polio case in November 1998, is targeted for certification in 2002. The success in these three regions puts the world on track for global certification in 2005. ♦

Containing Poliovirus and Stopping Polio Immunization



AFTER eradication, the only source of wild polioviruses will be the laboratories of the world. WHO has prepared a Global Action Plan for Laboratory Containment of Wild Polioviruses to ensure that poliovirus will be contained securely in laboratories.

This Plan is linked to the three major eradication objectives: pre-eradication, post-eradication, and post-OPV immunization.

We are now in the pre-eradication phase, when wild polioviruses are decreasing or no longer circulating in many areas of the world. During this period, laboratories are requested to institute enhanced biosafety procedures for safe handling of all wild poliovirus materials. Nations are requested to identify and develop an inventory of laboratories that have such materials. Several WHO regions have started to implement this first phase of the containment plan, including the Americas, Western Pacific and European Regions.

The post-eradication period begins one year after detection of the last wild poliovirus. All laboratories listed on the national inventories as possessing wild poliovirus materials must elect to either destroy such materials, transfer selected materials to designated WHO repositories, or implement high containment procedures.

The post-OPV immunization period begins with the worldwide cessation of OPV administration and the subsequent rapid increase in the numbers of non-immune susceptible children. At that time, the laboratory biosafety requirements for wild poliovirus materials will increase from high containment to maximum containment, consistent with the increased consequences of inadvertent transmission of wild polioviruses from the laboratory to the community. Biosafety requirements for OPV and vaccine-derived viruses increase to high containment to prevent reintroduction and theoretical circulation of these viruses in unimmunized populations.

Once the poliovirus has been eradicated and safely contained in laboratories, it will become possible to stop immunizing against polio. WHO is working to prepare for this day by developing the necessary scientific basis and consensus for stopping immunization. When polio immunizations are stopped, the world will save \$1.5 billion each year – money that can be redirected to other health priorities. ♦

Polio Eradication Strengthens Routine EPI and GAVI

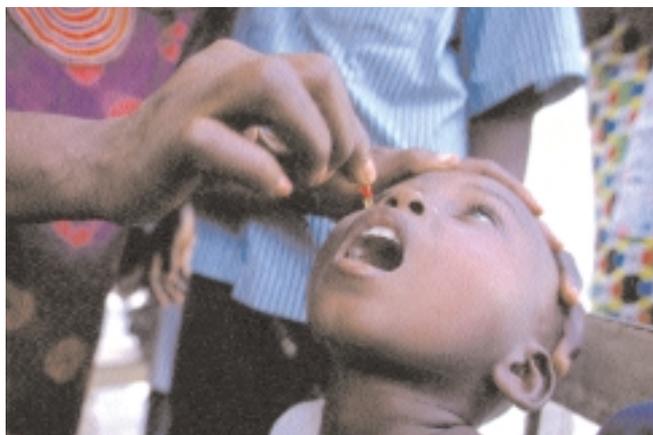
IN 1998 the World Health Assembly resolved to eradicate polio in ways which strengthen national immunization programmes. Polio eradication activities have helped strengthen EPI programmes, and will continue to do so.

In Cambodia, intensified polio eradication activities began in 1994. Polio eradication helped create a demand for immunization services, identified and reached children who had never been reached by pioneering mobile team strategies (including boat-to-boat immunization services), and strengthened management capacity to plan and implement nationwide immunization activities. With UNICEF support, fully immunized coverage among Cambodian children went from 37% at the beginning of 1994 to 75% at the end of 1995.

Funding for routine EPI activities has increased in some countries during implementation of polio eradication strategies. In Yemen, the national government funding for routine EPI increased by more than 1000% during the first 4 years of the polio eradication campaign. A USAID-funded study found the implementation of polio eradication activities in Bangladesh, Cote-d'Ivoire, and Morocco was associated with an increase in overall national funding for EPI activities. A study in India concluded the polio eradication initiative had strengthened management capacity, improved social mobilization, and increased public confidence in the health care system.

In addition, NIDs have served as a vehicle to deliver Vitamin A supplementation. In AFRO, Vitamin A supplementation has surged by > 500% since NIDs were implemented in 1996.

The Global Alliance for Vaccines and Immunization (GAVI) can build on the gains secured by polio eradication, especially by using lessons learned to reach children in areas with low routine immunization. GAVI can also expand on the advocacy and human resources developed in polio eradication. Overall, in cooperation with GAVI partners, polio eradication can help increase routine immunization coverage in polio-endemic countries. Strengthening EPI is a polio eradication priority through 2005. ♦



Children in 35 African countries received Vitamin A during polio NIDs in 1999



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