Global Polio Eradication Initiative

2005 Annual Report

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1. Executive Summary

This report measures progress achieved against the stated milestones of the *Global Polio Eradication Initiative Strategic Plan 2004-2008*, for the year 2005. In 2005, following two of the most challenging years in polio eradication, the world moved several critical milestones closer to eradication.

Lowest number of polio-endemic countries in history

Egypt and Niger successfully interrupted indigenous poliovirus transmission, reducing the number of polio-endemic[1] countries from six to four – the lowest in history. By the end of 2005, India and Pakistan were recording their lowest levels ever of polio transmission. New vaccines targeting type-specific polio – monovalent oral polio vaccines (mOPVs) – were developed with record speed and used for the first time in India and Egypt in April and May 2005. Unprecedented financial support from long-standing and new donors ensured ongoing intensification of eradication activities in Africa and Asia. And the epidemic of 2003-2005 was brought under control in most re-infected countries, with 14 out of 22 again stopping the disease.

Almost all countries re-infected in 2003-05 again polio-free

The feasibility of polio eradication in the near future was reaffirmed by the Advisory Committee on Polio Eradication (ACPE), the independent technical oversight body of the Global Polio Eradication Initiative. Convening in Geneva, Switzerland in October 2005, the group concluded that the progress in stopping virus transmission, together with the introduction of the new mOPVs, had moved the eradication effort into its final phase in all countries but one: Nigeria. The ACPE stated that with sufficient resources, expanded use of mOPVs and high-quality vaccination campaigns, all polio-affected countries except Nigeria could stop this disease in 2006. The ACPE added, however, that stopping polio in Nigeria would require at least an additional 12 months, even if the quality of immunization activities is dramatically improved in five critical states in the north of the country.

Uncontrolled transmission of poliovirus in northern Nigeria

In the first quarter of 2006, Nigeria has nearly four times as many cases compared to the same period in 2005. Five northern states now account for more than half of all global cases and represent the greatest risk of renewed international spread of wild poliovirus. These states in northern Nigeria form the only area in the world with uncontrolled transmission of poliovirus (where year-to-year incidence of polio continues to rise), at the start of 2006. However, since nationwide immunizations resumed in late 2004, other parts of Nigeria

1. Polio-endemic countries are those that have never interrupted the transmission of indigenous wild poliovirus.

have made progress. The south of the country is again polio-free; and by the end of 2005, only 13 of 37 states continued to report cases.In 2006, the highest priority is to interrupt polio transmission swiftly in all affected countries, and to help the world remain polio-free while special efforts are made in Nigeria to reach all children in the five key northern states. Simultaneously, preparations will continue for the eventual cessation of OPV use in routine immunization, after confirmation that wild poliovirus has been stopped and appropriately contained.

"New" vaccines in final phase of eradication effort

At the start of 2006, the global effort to eradicate polio underwent the most significant strategic shift since the global initiative began in 1988, with massive programmatic implications. Strategically guided by the ACPE, , use of mOPVs will be dramatically scaled up. It is expected that nearly one billion doses of mOPV will be administered in 2006, compared to 500 million doses in 2005. At the same time, any country re-infected in 2006 must conduct outbreak response in line with standing recommendations issued by the ACPE.

The key to success in implementing this massive strategic shift will be the continued support of the international community, most notably in filling the 2006-2008 funding gap of US$ 485 million. The world now has a historic opportunity to ensure that everyone – present and future generations in all countries – shares equally in the benefits of a polio-free world.

2. Highlights & challenges 2005

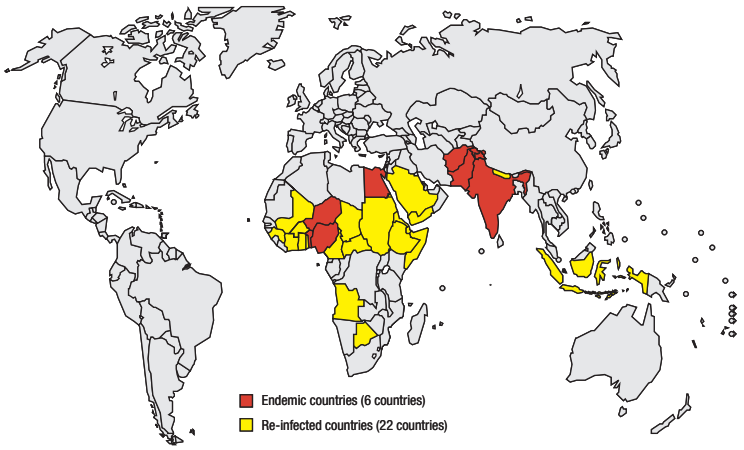
2.1 Highlights

1. Lowest number of endemic countries ever

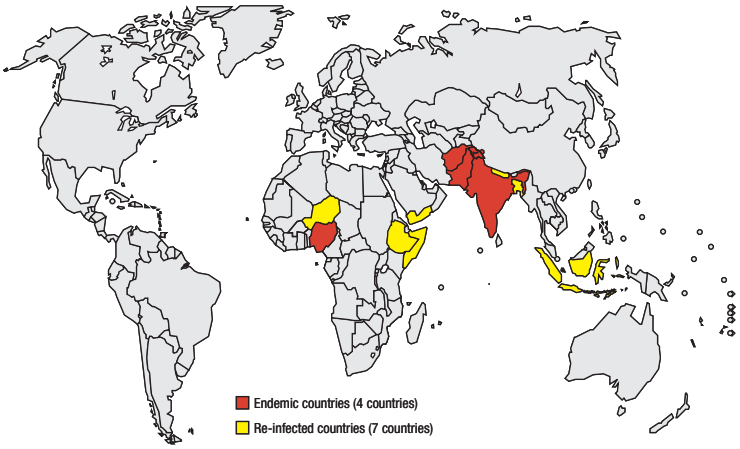
Egypt and Niger were removed from the list of polio-endemic countries, reducing the number of remaining countries with indigenous polio transmission by a third, to just four: Nigeria, India, Pakistan and Afghanistan.

Egypt's last poliovirus was reported from an environmental sample collected on 13 January 2005. Although Niger reported ten children with polio in 2005, the viruses responsible were all genetically linked to poliovirus originating in northern Nigeria, indicating that indigenous transmission within Niger itself has stopped.

Polio 2003-2005



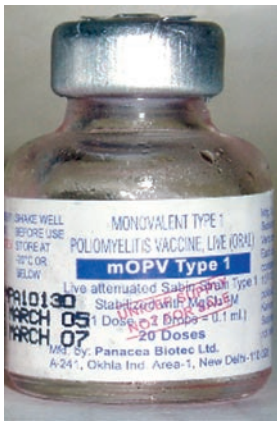
Polio in 2006
(as on 2 May 2006)



2. Almost all outbreak-affected countries again free of polio

Of the 22 previously polio-free countries re-infected since 2003, only six continued to report polio in 2006. The epidemic in nine countries of west and central Africa – the first set of countries originally affected by the spread of poliovirus from Nigeria in mid-2003 – was stopped after a series of synchronized continent-wide immunization campaigns. The large-scale outbreaks in Yemen and Indonesia – which together accounted for 781 cases, more than 40% of global cases in 2005 – peaked late in the year before starting to wane in the face of nationwide campaigns with trivalent and monovalent OPV.

3. Monovalent OPVs, the new workhorse of the global polio eradication effort



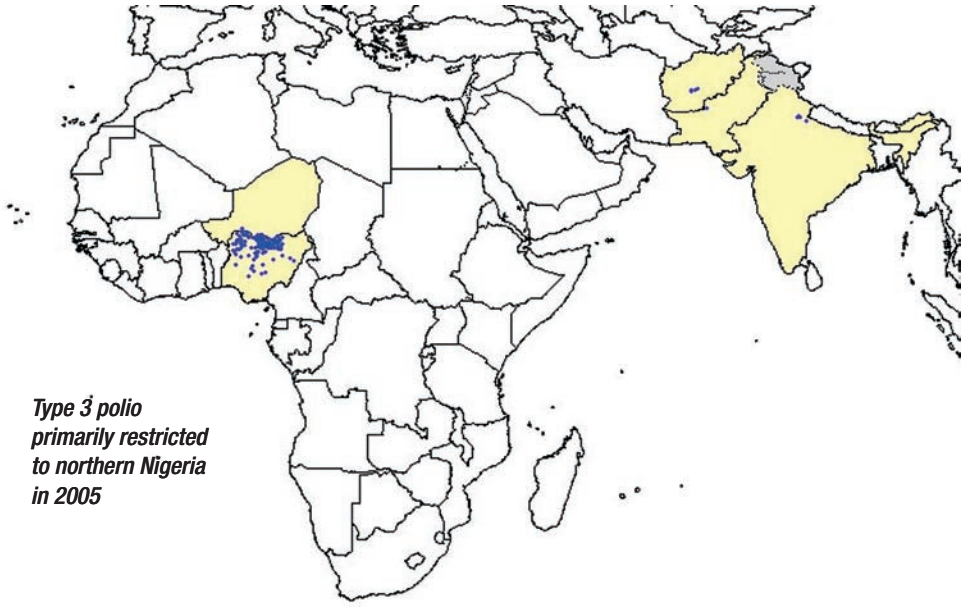
Monovalent OPVs: new workhorse of global polio eradication effort.

In November 2004, the Advisory Committee on Polio Eradication (ACPE) recommended the development of mOPV for type 1 polio (mOPV1). The vaccine was licensed a mere five months later, on 25 March 2005, and used for the first time in India in April and in Egypt in May.

Developed initially for these two countries – where dense populations and efficient virus transmission posed the greatest technical challenges to polio eradication – mOPV1 was subsequently used in outbreak settings as well. These instances included Angola, Indonesia and Yemen. The progress made in all these countries led the ACPE to recommend, in October 2005, further expansion of mOPV use in supplementary immunization activities. Both mOPV1 and mOPV for type 3 polio (mOPV3) respectively have now become the 'workhorses' of the final phase of eradication worldwide.

4. Type 3 polio on the verge of eradication in Asia

Type 3 polio is now primarily restricted to northern Nigeria, where 240 cases of type 3 polio were reported. In Asia, only nine cases of type-3 poliovirus were reported in 2005, from parts of India, Afghanistan and Pakistan. This reduction in cases and geographic concentration allows for a more aggressive use of mOPVs, to more rapidly eradicate the remaining strains of type 1 and type 3 poliovirus.



Type 3 polio primarily restricted to northern Nigeria in 2005

5. International partners underwrite development of new vaccines and outbreak response

Unprecedented levels of financial support to the global polio eradication effort from long-standing and new contributors in 2005 ensured that polio campaigns could be intensified in Africa and Asia. Of particular note is the ongoing and strong G8 commitment: G8 leaders recommitted to polio eradication during their Gleneagles Summit. Ahead of the Summit, the United Kingdom pledged US$ 108 million for a three-year period, including an immediate disbursement of US$ 36 million to effectively fill the 2005 funding gap. The Bill and Melinda Gates Foundation provided crucial grants totalling US$ 10 million in January 2005 to develop and introduce the powerful new monovalent oral polio vaccine type 1 (mOPV1). In 2005, the Bill and Melinda Gates Foundation also committed an additional US$ 25 million to help mount emergency response activities in newly-affected countries in the Horn of Africa.

The Global Alliance for Vaccines and Immunization (GAVI) board recommended that up to US$ 226.4 million be allocated from the newly-minted International Finance Facility for Immunization (IFFIm) towards a stockpile of mOPVs for the post-eradication era.

2.2 Challenges

In 2005 – even with the introduction of powerful new monovalent vaccines and the reduction in the number of endemic countries to four – polio eradication efforts faced a number of challenges. The most salient of these in the technical arena are the uncontrolled nature of transmission in parts of northern Nigeria and a geographically-expanding outbreak in Somalia that threatens the Horn of Africa. As a few strains of virus survive in key areas with high-intensity transmission, a critical challenge is ensuring that communities are aware of the risks of polio and the benefits of vaccine.

1. Uncontrolled polio transmission in northern Nigeria

Despite improvements in campaign quality following the resumption of polio immunizations in late 2004 – suspended for 12 months in 2003-04 due to rumours regarding the safety of OPV – five of the 37 states of Nigeria are currently the greatest threat to the global eradication of polio. At the start of 2006, Bauchi, Jigawa, Kaduna, Kano and Katsina States account for 56% of all cases worldwide, and represent the only area in the world with uncontrolled transmission of wild poliovirus, where the year-to-year incidence of polio continues to rise.

photo: JM Giboux/Rotary International

Kano, Nigeria is a focus of uncontrolled transmission.

With four times as many cases at the start of 2006 than in 2005, Nigeria poses a more serious risk to the international community than ever before.

2. Large-scale, geographically expanding outbreak in Somalia

With most of the 2003-2005 polio outbreaks stopped or stopping – including the large-scale epidemics to hit Indonesia and Yemen in early 2005 – the Horn of Africa remains the most vulnerable of the outbreak areas.

The epidemic in Somalia, at first restricted to the capital Mogadishu, spread to the north of the country by the end of the year. Reaching all children with OPV in Somalia is extremely difficult – as it is in other countries affected by insecurity such as Afghanistan – but also it is indispensable to protecting not only children in Somalia, but also its Horn of Africa neighbouring countries, in particular Ethiopia, Sudan and Kenya.

The ACPE, in October 2005, issued new international standards for polio outbreak response to guide countries in planning and responding to any importations of virus. These are the guidelines being applied in the Horn of Africa, where they have led to the beginning of a decline in the number of cases from Somalia.

Reaching every child in Somalia is critical to protecting all children in the region from poliovirus.

3. Maintaining community demand for polio vaccination

One of the key challenges in polio eradication this year is to ensure every child is immunized during immunization campaigns, especially among under-served or remote populations, by gaining community involvement and commitment to eradication efforts. These efforts are typically rendered all the more challenging with low disease prevalence coupled with the remaining need to maintain multiple immunization rounds. Though most famous in Nigeria, community uptake can typically decline in countries, especially as the incidence of polio declines.

Strong communications and social mobilization activities hinge on full engagement by various sectors of society in the planning, implementation and evaluation of immunization activities. This sort of involvement is the only way to ensure that everyone is fully aware of the risk of wild poliovirus as well as the benefits of repeated campaigns and multiple doses of OPV for children.

In 2006, strengthened social mobilization activities will be a key priority for countries conducting activities, particularly in the final bastions of the poliovirus.

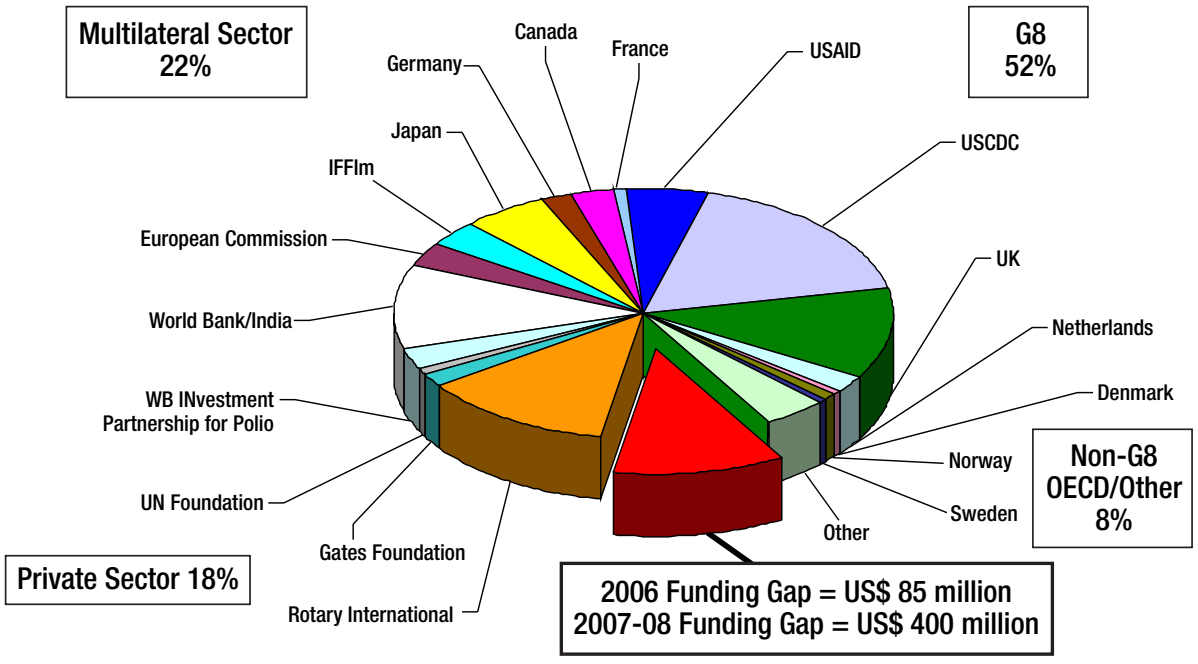
4. Final strain of polio transmission in western Uttar Pradesh, India

Western Uttar Pradesh, India, is arguably the technically most challenging place on earth to interrupt wild poliovirus transmission, due to large and dense population sizes, inadequate sanitation infrastructure and suboptimal routine immunization services. High levels of competing enterovirus circulation cause children's immunity levels to be frequently overstretched, and seroconversion rates following vaccination are at times subsequently compromised. The key to success is reaching all children, particularly under-served populations, during each and every immunization activity, and maximising each contact by administering monovalent OPV. Specific strategies aimed at outreach to under-served populations can help secure that service delivery is increased.

5. Funding gap for 2006 to 2008

Ongoing financial support from the international community to protect its multi-billion dollar investment is critical – most importantly to swiftly fill the 2006 funding gap of US$ 85 million and to mobilize US$ 400 million for 2007-2008, with multi-year and flexible financing commitments.

External Financial Contributions and 2006-2008 Funding Gap



Note: Donor contributions of US$ 25 million or more are represented in the pie chart

'Other' includes: the Governments of Austria, Australia, Belgium, Czech Republic, Finland, Hungary, Iceland, Ireland, Italy, Luxembourg, Malaysia, Monaco, New Zealand, Oman, Pakistan, Portugal, Qatar, Republic of Korea, Russian Federation, Saudi Arabia, Singapore, Spain, Switzerland, Turkey, the United Arab Emirates; African Development Bank; AG Fund; American Red Cross; De Beers, Inter-American Development Bank, International Federation of Red Cross and Red Crescent Societies, Oil for Food Programme, OPEC Fund, Sanofi Pasteur; Saudi Arabian Red Crescent Society, Smith Kline Biologicals, UNICEF National Committees, UNICEF Regular and Other Resources, United Arab Emirates Red Crescent Society, WHO Regular and Other Resources and Wyeth.

3. Strategic Objectives

Progress in polio eradication is measured against milestones set out in the *Global Polio Eradication Initiative Strategic Plan for 2004-2008*. The strategies outlined in that plan form the foundation of eradication: interruption of wild poliovirus transmission; global certification of eradication; preparation for OPV cessation; and mainstreaming of the Global Polio Eradication Initiative. The milestones set for each strategy are periodically reviewed and necessary amendments and refinements recommended by the independent technical oversight body, the Advisory Committee on Polio Eradication (ACPE).

3.1 Interruption of poliovirus transmission

Milestones 2005

⇛ **Milestone 1: One country remains endemic.**
Status: 4 countries remain endemic.
Indigenous wild poliovirus was stopped in Egypt and Niger in 2005.This brings the total number of endemic countries at the start of 2006 to four – the lowest number in history.

⇛ **Milestone 2: 100% of planned SIAs implemented in highest-risk polio-free areas.**
Status: Achieved.
SIAs conducted as planned in polio-free areas bordering areas of ongoing transmission (eg the Democratic Republic of the Congo, southern Philippines, Oman, any countries in west and central Africa, parts of China).

⇛ **Milestone 3: 40% of countries achieving GAVI targets for DTP3/OPV3 coverage.**
Status: Achieved in 2004 (2005 data not yet available).
In 2004, 51% of GAVI-supported countries achieved above 80% coverage for DPT3; 52% of GAVI-supported countries achieved above 80% coverage for OPV3.

⇛ **Milestone 4: 90% of non-certified countries will have certification-standard surveillance.**
Status: Achieved. 62 of 68* of non-certified countries have certification standard surveillance.
Seventy-nine per cent of non-certified countries reached certification-standard surveillance targets.

⇛ **Milestone 5: 90% of emergency mop-ups begun within four weeks of case confirmation.**
Status: Partially achieved. 5 of 7 emergency mop-ups begun within four weeks of case confirmation.
Emergency mop-ups began within four weeks of case confirmation in all countries except Angola (six weeks after case confirmation) and Eritrea (13 weeks after case confirmation). New international standards were established to ensure that all countries report response plans within four weeks of case confirmation.

** Countries with a population <1 million not included.*

photo: Sephi Bergerson

Thanks to progress in India, scenes like this are increasingly rare.

Endemic countries

Only four of the six countries considered endemic at the start of 2005 reported indigenous poliovirus transmission after January of that year. Egypt's last poliovirus was confirmed from an environmental sample collected on 13 January 2005, while all of Niger's ten reported cases in 2005 were found to be importations from Nigeria. India and Pakistan recorded their lowest levels ever of poliovirus transmission, with a greater than 50% decline in cases compared with 2004, largely due to the introduction of mOPV in key reservoir districts. In Afghanistan, progress continues in spite of restricted access to children in some areas of the country. Progress in all of these countries was thanks to an increase in both quantity and quality of supplementary immunization activities (SIAs), use of mOPVs, as well as new strategies to reach all populations, such as mobile and under-served populations, including use of transit vaccination teams immunizing children at high transit bus and railstations.

In Nigeria, following the resumption of immunization in 2004, the country witnessed a slower-than-expected decline in new cases in 2005, but some important advances were made at the national and state levels. At the start of 2006, however, five states in the north of the country – Bauchi, Jigawa, Kaduna, Kano and Katsina – account for more than 56% of all cases worldwide, and represent the only place in the world with uncontrolled transmission of wild poliovirus. Nigeria represents the greatest risk to renewed international spread of wild poliovirus.

In 2006, the focus will be on implementing the strategic shift, as guided by the ACPE, by dramatically scaling up the use of mOPVs. The Nigerian government is working across a range of sectors in the five key northern states to rapidly improve immunization campaign quality and ensure that all children receive vaccine during each round. In India, the focus

is on reaching all children in key districts of western Uttar Pradesh, and in particular Moradabad district. In Pakistan and Afghanistan, efforts will concentrate on rapidly interrupting transmission of polio in the key shared reservoir border areas by increasing access to all populations, including mobile communities.

Supplementary Immunization Activities (SIAs) in endemic countries in 2005

Country	Number of NIDs/SNIDs	Number of cases in 2005
Afghanistan	4 NIDs / 4 SNIDs	9
Egypt	6 NIDs / 1 SNIDs	0
India	2 NIDs / 8 SNIDs	66
Niger	5 NIDs / 1 SNIDs	10*
Nigeria	4 NIDs / 3 SNIDs	801
Pakistan	7 NIDs	28

*Imported virus from Nigeria.

Egypt

Polio-free after 5,000 years

Egypt – the country where polio was first depicted, in pharaonic times – was officially removed from the endemic country list at the start of 2006. The last indigenous poliovirus was detected in a positive environmental sample, collected on 13 January 2005.

The focus for 2006 will be to maintain high population immunity and strong disease surveillance, to ensure the country maintains its polio-free status, while poliovirus is interrupted in the remaining affected areas of Africa and Asia.

Polio has been in Egypt since pharaonic times.

Nigeria

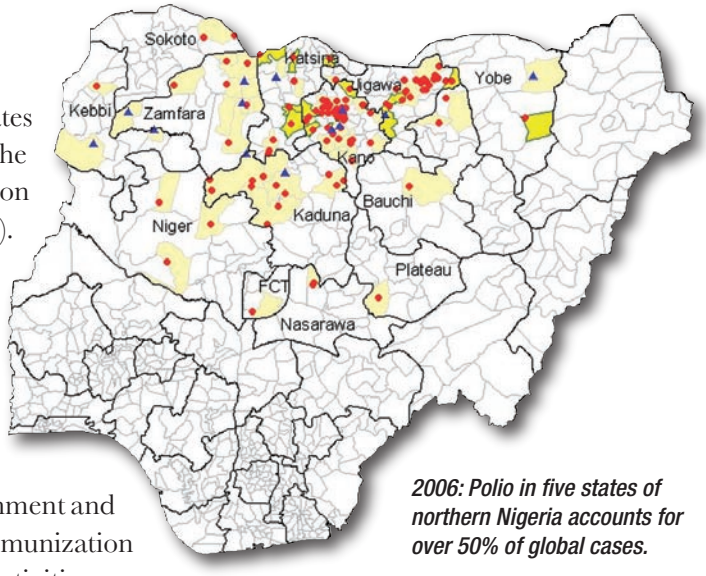
Uncontrolled transmission in north

With 801 confirmed cases in 2005, Nigeria accounted for 41% of the global polio burden. Despite improvements at national and state levels following the resumption of immunizations in late 2004, the decline in new cases has been slower than expected, as both type-1 and type-3 poliovirus continued to circulate extensively through the north of the country.

While the south of Nigeria is again considered to be polio-free, polio can only be eradicated by reaching every child in five key northern states: Bauchi, Jigawa, Kaduna, Kano and Katsina. An analysis of children's immunization status in these states indicates that more

than 40% of children have never received OPV. The five states accounted for more than half of all global cases and form the only area in the world with uncontrolled polio transmission (where year-to-year incidence of polio continues to rise). Combined with an increasingly polio-free and vulnerable world, this concentration of transmission in the north makes the risk of international spread from northern Nigeria higher than ever before.

With nearly three times as many cases at the start of 2006 than at the start of 2005, Nigeria's resources and efforts will be concentrated this year on ensuring that government and health workers at all levels rapidly improve the quality of immunization campaigns to ensure that all children are reached during activities.



2006: Polio in five states of northern Nigeria accounts for over 50% of global cases.

Northern Nigeria, only place in the world with uncontrolled polio

- Nigeria has 4 times as many cases in early 2006 compared to early 2005 (236 cases vs 54 cases, as on 02 May of each year)
- 5 of Nigeria's 37 states – Bauchi, Jigawa, Kaduna, Kano and Katsina in the north of the country – account for 84% of Nigeria's cases and 62% of cases worldwide in 2006
- More than 40% of children in these states have never been immunized

India

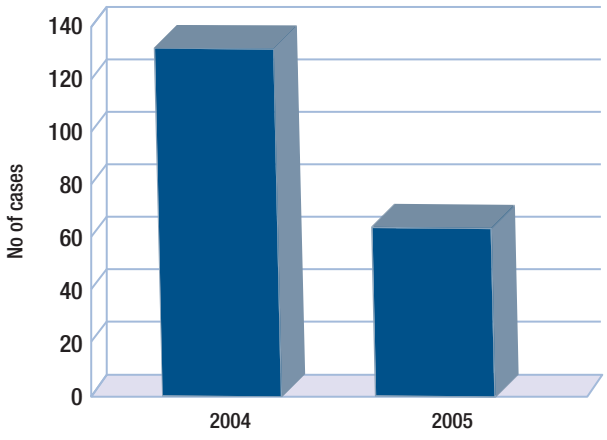
Cases halved over previous year with innovative five-point strategy

India further tightened its control over the poliovirus in 2005, with an innovative five-point strategy featuring monovalent OPV, immunization at road and rail transport hubs, involvement of under-served communities, incentives for vaccinators and the targeted deployment of medical staff.

The first use of monovalent OPV type 1 was during the April NID in key districts of Uttar Pradesh, Bihar and Mumbai. Monovalent OPV type 3 was first used on 25 December 2005.

The western part of India's Uttar Pradesh State is arguably the technically most challenging place on earth to interrupt wild poliovirus transmission, due to its large and densely-packed population, inadequate sanitation infrastructure and sub-optimal routine immunization services. High-quality campaigns, reaching more than 96% of the targeted population (as reported by independent monitors), were boosted with the deployment of mobile vaccination teams. In the state of Uttar Pradesh alone, an additional one million children were regularly reached during campaigns thanks to vaccinators giving OPV to children at high-transit bus and rail stations. Specialized strategies for communities that are traditionally under-served by health services made headway into these populations as well, with greater involvement of community members. The impact of each of these contacts was multiplied by the use of the new monovalent OPVs.

Polio in India, 2005:
Cases halved over previous year.



While the previous innovations improved the reach and impact of the vaccine, a pilot incentive scheme aimed at maintaining vaccinator morale and commitment. Under the scheme, high-performing vaccination team members were eligible for prizes such as sewing machines. Finally, surveillance medical officers from all over the

country were re-assigned to the highest-risk districts in Uttar Pradesh and Bihar in order to strengthen capacity.

Thanks to these efforts, India is now recording its lowest levels of poliovirus transmission ever, with the virus at its smallest recorded geographical extent: in 2005, India's 66 cases occurred in just 35 of the country's 607 administrative districts. The 19 positive environmental samples collected in the traditional reservoir area of Mumbai were all found to be genetically related to virus circulating in western Uttar Pradesh.

However, continuing coverage gaps in Bihar state, as well as a decline in campaign quality in several high-risk districts of western Uttar Pradesh, most notably Moradabad, allowed the virus to continue to circulate in these key areas. The state and district efforts will be focused in 2006 on reaching all children with mOPVs during each immunization campaign.

Afghanistan and Pakistan

Rapid progress but difficult access

Afghanistan and Pakistan: shared corridor of poliovirus transmission.

Intensification of immunization activities continued in both Afghanistan and Pakistan in 2005, with Pakistan halving the number of cases over previous year (28 compared to 53 in 2004). While the number of cases in Afghanistan over the previous year rose slightly from four to seven cases, the genetic diversity of circulating poliovirus declined: only indigenous type-3 polio cases were confirmed, while the three type-1 cases were genetically linked to virus circulating in neighbouring Pakistan. Similarly, in Pakistan, only type 1 virus circulated indigenously, and only one type-3 case reported. Progress in eliminating individual virus types in both countries allows for an aggressive immunization strategy with mOPV in 2006.

In both countries, the primary obstacle to polio eradication remains ongoing hampered access to some populations, due to population movements and insecurity. In Pakistan's North West Frontier Province alone, more than one million children under the age of five years live in areas where access is restricted. All levels of civil society must be engaged to ensure access is increased, while specific strategies to identify and vaccinate un-reached population groups are being developed.

The highest priority is to focus resources and efforts in the remaining joint polio reservoir shared between Afghanistan and Pakistan, a corridor extending from southern Punjab/ northern Sindh into Balochistan and southern Afghanistan.

Niger

Interruption of indigenous polio transmission, but repeated importations from Nigeria

In Niger, strong improvements in the quality of immunizations throughout 2005 interrupted the transmission of indigenous wild poliovirus transmission, and Niger was officially removed from the list of endemic countries at the start of 2006. All of the country's ten cases in 2005 were found to be importations from northern Nigeria. In 2006, the country will need to focus on maintaining high population immunity, to ensure Niger can maintain its polio-free status until neighbouring Nigeria completes polio eradication.

Polio eradication in 2005

- *49 countries conduct immunization activities*
- *220 large-scale Supplementary Immunization Activities*
- *400 million children immunized*
- *2.2 billion doses of OPV administered*

Importations of poliovirus

Polio epidemics in 14 previously polio-free countries in Africa and Asia were successfully stopped in 2005. The countries – Benin, Botswana, Burkina Faso, Cameroon, Central African Republic, Côte d'Ivoire, Eritrea, Ghana, Guinea, Lebanon, Mali, Saudi Arabia, Sudan and Togo – had been re-infected with imported poliovirus beginning in 2003. The epidemics paralysed 340 children for life in these countries, but no new cases have been reported in these areas since early June 2005.

Globally, 22 countries had been re-infected with imported poliovirus since mid-2003, 19 as a result of the spread of poliovirus from northern Nigeria, and three as a result of importations from India. In January 2006, seven of these countries continued to have active transmission of the imported poliovirus: Angola, Chad, Ethiopia, Indonesia, Nepal, Somalia and Yemen. Additionally, the formerly endemic country of Niger continues to have active transmission of imported poliovirus from Nigeria.

Polio is capable of spreading very quickly across the polio-free world; the swift response demanded over the 2003-2005 period has yielded a wealth of experience and new solutions to limit the potential of future importations. Based on these solutions, the ACPE issued new standing recommendations for responding to circulating polioviruses in polio-free areas (i.e. wild poliovirus or circulating vaccine-derived polioviruses) and called for the expanded use of the recently-developed mOPVs, which allow for a more effective type-specific outbreak response.

In 2006, the focus for any country suffering importations will be to fully implement the standing recommendations for outbreak control issued by the ACPE. In Somalia, the geographically expanding epidemic must be urgently stopped to prevent further spread of virus in the Horn of Africa. Due to the increasing risk of further international spread from Nigeria, focus for 2006 will also be to maintain high population immunity levels in the countries of west and central Africa, to minimise the risk of large-scale outbreaks following importations.

photo: WHO/Moran

Children in Indonesia enjoy the official launch celebrations around the country's polio NIDs.

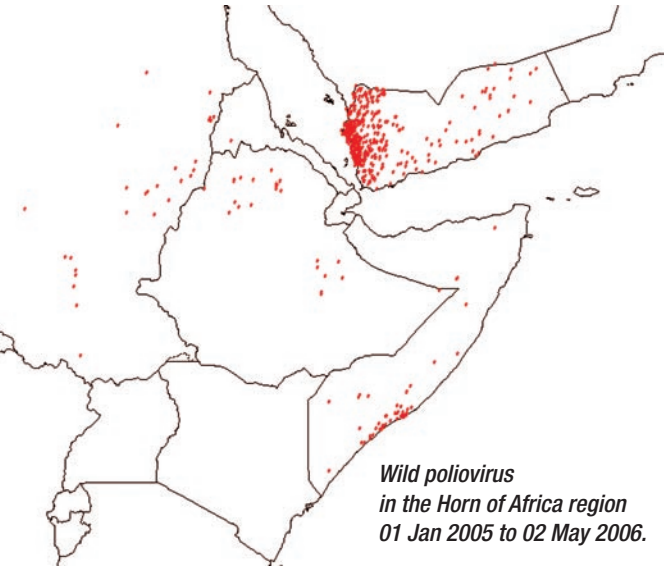
Supplementary Immunization Activities (SIAs) in re-infected countries in 2005

Country	Number of NIDs/SNIDs	Number of cases in 2005
Angola	4 NIDs	10
Cameroon	4 NIDs / 1 SNIDs	1
Chad	5 NIDs / 2 SNIDs	2
Eritrea	4 NIDs / 1 SNIDs	1
Ethiopia	5 NIDs / 2 SNIDs	22
Indonesia	3 NIDs / 2 SNIDs	303
Mali	5 NIDs / 2 SNIDs	3
Nepal	4 SNIDs	4
Somalia	8 NIDs	185
Sudan	4 NIDs / 6 SNIDs	27
Yemen	6 NIDs	478

Horn of Africa and Gulf

Initial progress threatened by geographically expanding epidemic in Somalia

The previously polio-free countries of Ethiopia, Somalia and Yemen all reported large-scale epidemics in 2005. Yemen's outbreak exploded in the early part of the year, with cases increasing rapidly in number and spreading across the country. With 478 cases, Yemen was the country with the highest number of cases in outbreak settings in 2005, second only to polio-endemic Nigeria.



Wild poliovirus in the Horn of Africa region 01 Jan 2005 to 02 May 2006.

Yemen responded swiftly, implementing a model immunization response. Following six nationwide immunization campaigns – five with mOPV – Yemen's outbreak appears to have been curbed at the start of 2006. This success demonstrates that implementing high-quality, large-scale campaigns rapidly can stop even an epidemic in its tracks.

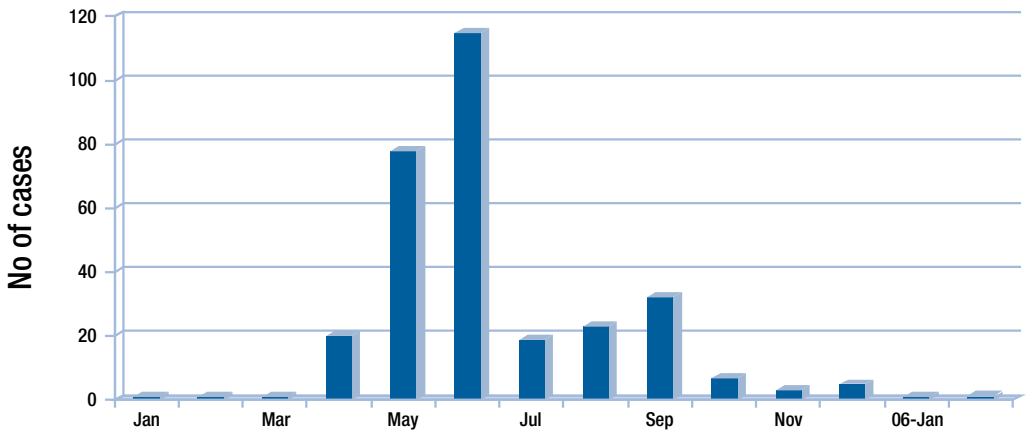
While Ethiopia's case numbers are relatively low in comparison (with 22 confirmed cases in 2005), more high-quality campaigns need to be implemented throughout 2006, to ensure the outbreak can be stopped. With Ethiopia's large population, which travels regularly across the Horn of Africa and into Kenya, the risk of further spread of polio remains high.

The re-infection of Somalia is of paramount concern to polio eradication efforts in the Horn. With 185 cases confirmed in 2005, and the epidemic spreading from the original epicentre in Mogadishu to other areas of the country, the main challenge in stopping the epidemic will be regular access to all populations in a country plagued by political instability. The engagement of all local staff and communities – to identify windows of opportunity during which vaccinators can reach all parts of the country – will be critical to campaign quality. In particular, massive security problems in Mogadishu require constant, and painstakingly re-established, access.

Indonesia

Aggressive response to outbreak prevents further spread across Asia

Initially restricted to two provinces on Java Island (Banten and West Java province), a massive polio epidemic quickly spread to neighbouring Sumatra Island, as well as Central Java and the national capital, Jakarta. Following the implementation of several large-scale immunization campaigns, using mOPV in the highest-risk districts, the epidemic appears to be coming under control at the start of 2006. Further mop-up campaigns may be needed, depending on breakthrough transmission in the early part of the year.



Indonesia polio outbreak 2005

The polio outbreak in Indonesia caught the attention of the world's media, due to a combination of the threat to other polio-free countries throughout Asia, the risk to Indonesia's children and the coincidental reports of avian influenza in Indonesia. Global media attention on the outbreak fuelled a truly international response. The Philippines and Vietnam, for example, launched large-scale preventive immunization campaigns, while the Malaysian government conducted medical examinations on Indonesian nationals entering the country.

West and central Africa

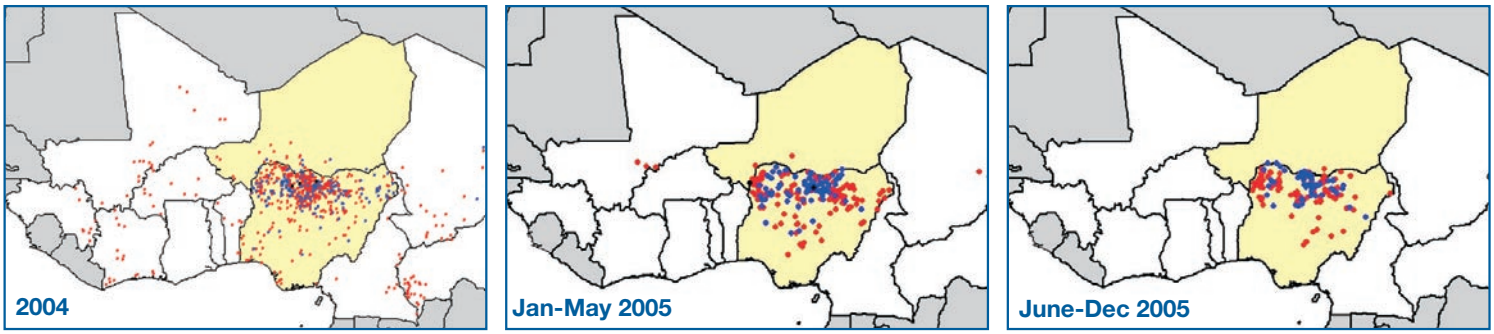
Epidemic curbed by massive effort

The polio epidemic in nine countries of west and central Africa – Benin, Burkina Faso, Cameroon, Central African Republic (CAR), Côte d'Ivoire, Ghana, Guinea, Mali and Togo – was stopped in 2005. No new cases were reported in these countries after early June. The epidemic, starting in 2003, paralysed nearly 200 children for life.

Emergency efforts to stop the epidemic had been launched under the auspices of the African Union (AU), through a series of mass, synchronized immunization campaigns across 23 countries, reaching as many as 100 million children with multiple doses of OPV over nearly two years.

Polio outbreak in west and central Africa

- 5 Rounds of synchronized immunization campaigns, Oct 2004 to May 2005, carried out under African Union auspices
- 23 countries – from Senegal to Somalia
- 100 million children vaccinated



Angola and Nepal

In addition to the larger outbreaks outlined above, both Angola and Nepal had cases of polio following importation of virus. Genetic sequencing determined that the viruses originated in India. With ten and four cases respectively, Angola and Nepal each carried out four large-scale immunization campaigns in response.

3.2 Certification of global polio eradication

Milestones 2005

⇛ **Milestone 1: All AFP specimens will be processed in a WHO-accredited laboratory.**
Status: Achieved.
100% of AFP specimens were processed in a WHO-accredited laboratory.

⇛ **Milestone 2: 75% of countries will have completed each laboratory biocontainment phase (phase I).**
Status: Partially achieved.
60% of countries have completed phase I of the laboratory biocontainment phase.

⇛ **Milestone 3: 70% of countries will submit final certification documentation.**
Status: Achieved.
78% of countries submitted final certification documentation

AFP surveillance: performance doubles in highest-risk areas

The overall sensitivity of acute flaccid paralysis (AFP) surveillance (timeliness and completeness of AFP reporting and collection of adequate stool specimens) in 2005 was maintained at certification-standard levels in all WHO regions, and further improved in the three endemic regions. The trend towards increased AFP reporting – which began in 2004 – continued apace, with an overall 43% increase in AFP reporting globally from 2004 to 2005, mainly due to increased reporting from India (80% of the overall increase), as well as from Pakistan and Nigeria.

Isolation of poliovirus at the Polio Regional Reference Laboratory in Ghana.

photo: WHO/F. Paladin

Performance of AFP surveillance and reported wild poliovirus cases, 2004 and 2005, by WHO Region

WHO Region	No. of reported AFP cases		Non-polio AFP rate		Percent AFP with adequate stool specimens		Wild Virus Confirmed Polio Cases	
	2004	2005	2004	2005	2004	2005	2004	2005
AFR	9 719	11 685	2.90	3.30	89%	85%	934	851
AMR	2 309	2 202	1.38	1.33	79%	80%	0	0
EMR	6 176	8 845	2.70	3.69	89%	88%	187	727
EUR	1 516	1 473	1.14	1.10	81%	82%	0	0
SEAR	16 270	31 519	2.70	5.21	83%	82%	134	373
WPR	6 521	6 698	1.61	1.65	88%	88%	0	0
GLOBAL	**42 511**	**62 422**	**2.29**	**3.34**	**86%**	**84%**	**1 255**	**1 951**

Data in WHO as of 02 May 2006

Of note, the three regions certified as polio-free – the Americas, Europe and the Western Pacific – were also able to maintain overall AFP surveillance at the required level, even though the level of AFP reporting slightly decreased from 2004 to 2005 in all three regions.

The success of efforts to further increase AFP sensitivity in Asia, as well as the detection of significant surveillance quality gaps at the sub-national level in central Africa and the Horn of Africa in 2004 led to the adoption – following a recommendation from the Advisory Committee on Polio Eradication – of an operational target of reaching a non-polio AFP rate of at least 2/100,000 for endemic countries, re-infected countries and countries at high risk of wild virus importation.

AFP surveillance in Nigeria is essential for the planning of vaccination campaigns.

Countries in endemic Regions not reaching certification-standard AFP surveillance in 2005[2]

Country	AFP cases reported	Annualised non-polio AFP rate	% AFP cases with adequate specimens	Reported wild poliovirus
Algeria	60	0.6	85%	-
Botswana	16	2.3	69%	-
Burundi	48	1.7	70%	-
Gabon	8	1.1	75%	-
Gambia	16	2.6	72%	-
Guinea-Bissau	6	0.9	83%	-

In 2005, only six African countries did not reach 'certification standard' AFP surveillance quality. Another six countries had non-polio AFP rates of 2 and above (range 2 to 4.6), while the percentage of AFP cases with adequate specimens was at either 79% (South Africa, Ethiopia, Cote d'Ivoire, Thailand) or at 78% (Sri Lanka, Yemen), with good geographical representation of collected stool specimens. These countries are considered as having reached 'certification-quality' AFP surveillance in 2005. Therefore, a total of 62 of 68 countries in endemic regions, or 91%, have reached certification-quality AFP surveillance in 2005.

Before a WHO region is certified as polio-free, countries become eligible to submit certification documentation. As of January 2006, 78% of WHO member states have submitted final certification documentation: all (100%) of the 135 countries in the three WHO regions already certified as polio-free; and 33 of 80 countries in the three remaining polio-endemic regions (10 in the African Region, 15 in the Eastern Mediterranean Region and 8 in the South-East Asian Region). The African Regional Certification Commission has now reviewed and accepted final documentation from ten countries: Botswana, Gambia, Kenya, Lesotho, Malawi, Rwanda, Senegal, Swaziland, Zambia and Zimbabwe. In the Eastern Mediterranean Region, two countries – Sudan and Yemen, which had submitted final documentation following a 3-year polio free period – experienced a polio outbreak following an importation of wild poliovirus. Due to the duration and size of the outbreaks, both countries will have to re-submit this documentation one to three years after the last outbreak-associated case, depending on the decision of the Regional Certification Commission (RCC).

The focus for 2006 is to:

- Maintain and further improve the sensitivity of AFP surveillance, particularly in endemic regions;
- Maintain and enhance AFP surveillance where needed in polio-free countries, particularly in countries with documented 'immunity gaps', in order to be able to detect and respond to wild poliovirus importations in a timely manner;
- Continue to work on new methods to decrease the time between case notification and case confirmation.

Global laboratory network working overtime

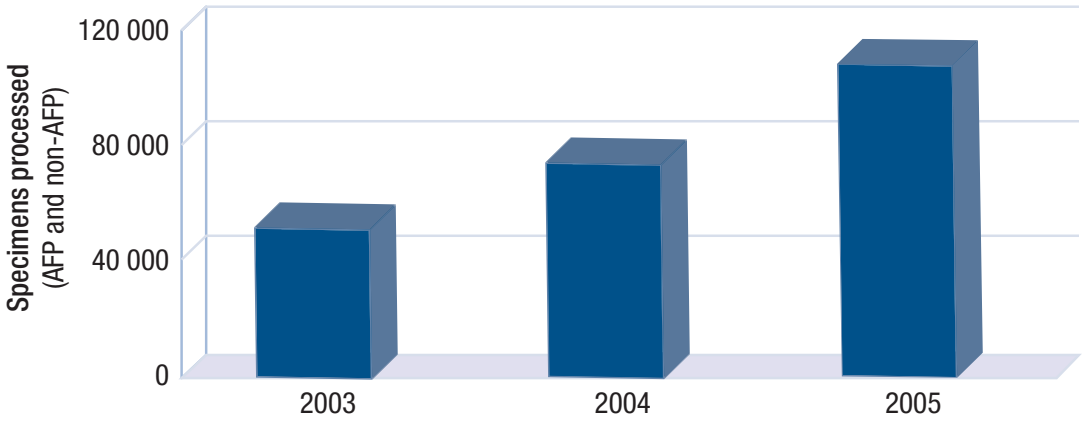
Laboratory results are used for planning immunization responses to halt remaining poliovirus transmission chains and to monitor progress towards achievement of the eradication goal to

2. Of 81 countries with AFP surveillance systems in the African, Eastern Mediterranean and South-East Asian Regions, 13 have populations of < 1 million and are not considered for this analysis because they were unlikely to have sustained undetected indigenous transmission.

certify regions as polio-free. Rapid and accurate laboratory results are paramount. A global network of 145 laboratories in 90 countries underpins AFP surveillance. The network's quality assurance programme incorporates a WHO administered accreditation program involving annual (usually on-site) evaluation of performance, proficiency testing, timeliness and accuracy of results. Ninety seven percent of laboratories were fully accredited in 2005, and all samples from AFP cases were tested in accredited laboratories with arrangements for parallel testing of samples from poorly performing laboratories, where necessary.

The laboratory network analysed approximately 120,000 faecal samples in 2005, representing a 50% workload increase compared to 2004. Increases were highest in endemic regions: approximately 90% in SEAR, 45% in EMR and 25% in AFR. The impact was greatest on laboratories in Egypt, India (Lucknow and Mumbai), Nigeria, Pakistan and South Africa. Overall 95% of virus isolation results were reported within 28 days and over 95% of ITD results were reported within 14 days of poliovirus detection.

Laboratory network samples processed (endemic regions only)



Maintenance of reporting timelines was possible because of strategies implemented to meet demands in 2005. Extra resources were mobilized for supplies and training of personnel. The number of work shifts was doubled in Lucknow, India. Sample referral arrangements were changed in India to more equitably distribute workload. The number of laboratories conducting intra-typic differentiation (ITD) was increased by two (Senegal and Ibadan, Nigeria became fully functional). The Côte d'Ivoire laboratory, equipped to perform ITD tests in 2004, had persistent technical difficulties that remained unresolved because poor security prevented assigning a consultant to assist with on-site trouble-shooting.

Wild polioviruses were isolated from AFP cases in 16 countries in 2005 and in sewage waters only in 1 additional country (Egypt). Genetic characterization of isolates showed that indigenous viruses were transmitted in five countries (Afghanistan, Egypt, India, Nigeria and Pakistan), seven countries had new virus importations (Angola, Eritrea, Indonesia, Nepal, Niger, Somalia, Yemen) and five countries had continued transmission of imported viruses introduced in 2003 (Cameroon, Chad) or 2004 (Ethiopia, Mali, Sudan). Viruses in Angola and Nepal originated in India whereas viruses from Nigeria were imported into ten countries.

The network detected a type 1 VDPV outbreak affecting 47 AFP cases in Indonesia in 2005 as well as type 2 and type 3 VDPV outbreaks in Madagascar with five paralysed children. VDPVs were detected in immunodeficient persons in Iran, USA (Minnesota), and Spain (in a child of Moroccan origin) and from sporadic AFP cases in China, Japan, and Saudi Arabia. Other non-outbreak VDPVs were isolated from non-paralysed persons in Hong Kong, and from sewage waters in Egypt, Israel and Slovakia.

In 2006 the following initiatives will be implemented to increase the speed of laboratory results:

- Additional laboratories in endemic regions will be upgraded to perform polymerase chain reaction, pending the availability of resources for equipment and staff training. Polymerase Chain Reaction capacity will allow simultaneous serotyping and ITD of polioviruses, shortening analysis time, decreasing the need for shipping of isolates and reducing shipping costs.
- A new test algorithm using existing technologies in a different sequence was evaluated in three locations (India, Pakistan and CDC-Atlanta). The algorithm could potentially be introduced in ITD testing laboratories should it provide more rapid results without compromising current sensitivity and specificity of poliovirus detection.
- New reagents or approaches for poliovirus nucleic acid detection in faecal samples will be evaluated within two years.
- An ELISA test for polio IgM antibody detection will be evaluated for possible use in the OPV cessation era.

Global laboratory containment: Europe leads the way

Poliovirus lab containment activities continue to focus on minimizing the risk of a facility-based poliovirus reintroduction into a polio-free country. Phase I containment activities are nearing completion in WHO regions certified as polio free with 75% of countries in those regions having completed the activities. A review of containment activities by countries of the WHO European Region was conducted by the Regional Certification Commission (RCC) at its meeting in 2005. The RCC concluded that all countries provided convincing documentation to demonstrate regional completion of Phase I, making Europe the first WHO region to pass this milestone. A similar meeting was held in the WHO Western Pacific Region that concluded all but two countries in the Region have completed and documented the activities. In the Region of the Americas, the first regional meeting on poliovirus laboratory containment was held to review the process to date in Latin American countries and make plans for regional completion by end 2007

Europe completes Phase 1 of wild poliovirus containment

During its 2005 annual meeting, the European Regional Certification Commission declared that Phase I of wild poliovirus containment was officially complete in the WHO European Region.

The WHO Regional Office for Europe started Phase I polio containment

activities in 1999 with pilot surveys in five Member States, expanding in 2000 to all Member States. The process involved 46 WHO consultant visits to countries and eight sub-regional containment workshops over five years.

By 2005, the 52 European member states surveyed 55,748 biomedical laboratories operated by federal and local governments, universities, hospitals, industries, and private corporations. Of these, 256 laboratories in 25 countries reported possession of wild poliovirus and potential wild poliovirus materials. Laboratories in 27 countries reported possession of no wild poliovirus materials, while laboratories in 20 demonstrated that wild poliovirus materials had been destroyed.

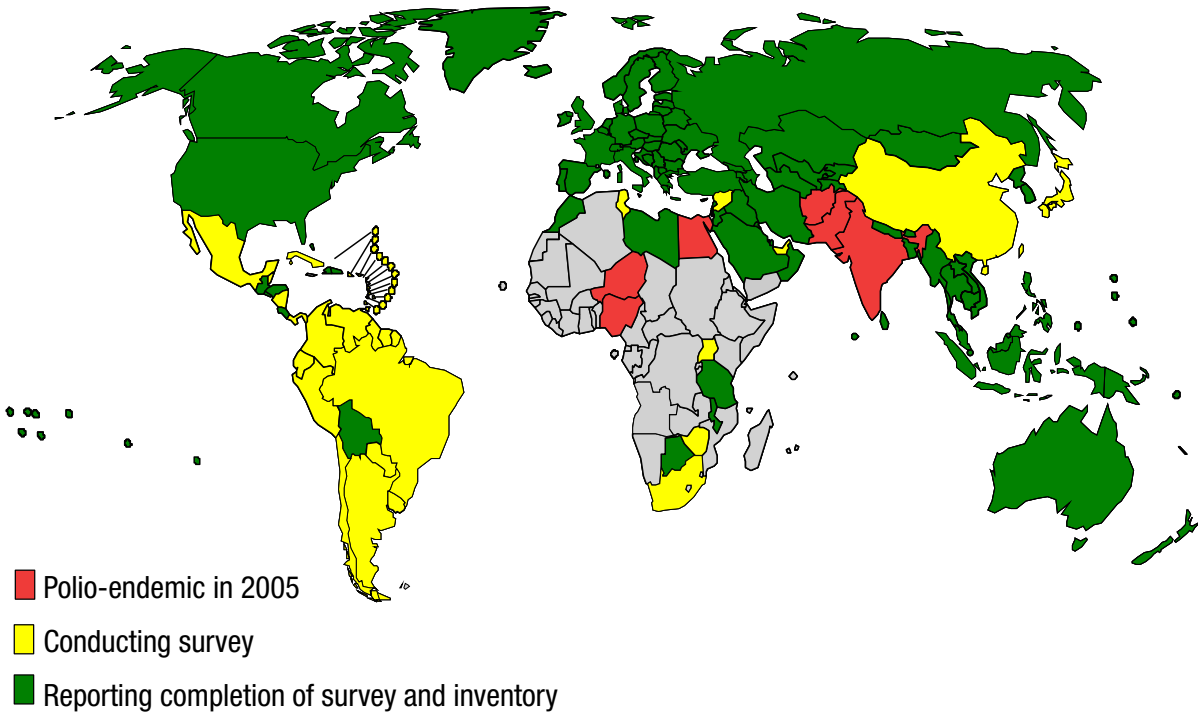
Now ready to begin Phase II, the countries of Europe can make risk-reduction plans for the post-OPV era, through destruction of poliovirus materials except in a limited number of designated essential international facilities.

Achievements have also been made by countries in WHO regions not yet certified as polio-free. All countries not reporting polio in 2005 in the WHO South East Asia and Eastern Mediterranean Regions have completed the laboratory survey and inventory and are in the process of compiling documentation for review by their respective RCCs. Due to the high risk of polio importation in many countries of central and western Africa, containment activities in WHO's African Region were focused on the southern and eastern parts of the continent. A meeting of countries in these epidemiological blocks was held in 2005 to review current status and create plans to complete Phase I activities by mid 2006. Pilot countries of Botswana, Malawi and Tanzania provided very useful reports on the process to their neighbouring countries.

Poliovirus containment activities are now an integral part of the eradication campaign with countries in all six WHO regions conducting the activities and RCCs reviewing the work. As polio circulation continues to decrease worldwide, it will become increasingly important to minimize the risk posed by facility-based polioviruses. In 2006, the following activities will be implemented:

- The WHO *Global Action Plan for poliovirus containment in the post eradication/post-OPV era* will be published. The plan will describe activities to achieve the containment of wild polioviruses after eradication and OPV/Sabin polioviruses after cessation of OPV use.
- A strategy of risk reduction, through destruction of unneeded poliovirus materials worldwide, and stringent risk management measures are proposed to ensure that global investments in a polio-free world will be safe guarded in perpetuity.

Progress on Phase I of Global Containment



3.3 Development of products for the global OPV cessation phase

Milestones 2005

⇛ **Milestone 1: Local strategies to reduce VDPV risks will be introduced.**
Status: Ongoing.
Monitoring of subnational immunization coverage is ongoing.All poliovirus isolates are screened for discordant results and a protocol for identifying iVDPVs has been established.

⇛ **Milestone 2: Feasibility of incorporating the detection and immediate notification of circulating polioviruses into IHR/GOARN will be assessed.**
Status: Achieved.
Polio was incorporated into the IHR (2005) which is the version approved by the World Health Assembly in May 2005.It will come into effect in mid-2007.

⇛ **Milestone 3: Monovalent OPV, IPV and trivalent OPV stockpile sizes will be defined for the post-OPV era.**
Status: Achieved.
A global stockpile will consist of 750 million doses of each of the three OPV serotypes. Funding is pledged from GAVI/IFFIm to initiate a stockpile and a tender will be issued in late 2006.

⇛ **Milestone 4: Third edition of *Global Action Plan for Laboratory Containment of Wild Polioviruses* (GAPIII) published.**
Status: Ongoing.
All four components of GAP III were developed by end-2005 and will be consolidated into a version for public consultation by mid-2006.

Risks associated with OPV cessation

The ability of Sabin vaccine viruses to mutate and acquire greater transmissibility and neurovirulence necessitates an eventual end to the use of OPV. While the current risk posed by wild polioviruses remains far greater than the risk of vaccine-derived polioviruses (VDPVs), the number of wild viruses is rapidly decreasing; and as long as OPV use continues, the threat of VDPV will persist. A threat, if not addressed, could negate the eventual achievements of polio eradication. It is for this reason that OPV is considered incompatible with a polio-free world and the eventual global cessation of OPV has been recommended by the ACPE once wild poliovirus eradication has been certified.

Vaccine-derived poliovirus (VDPV)

Concerns over the risks presented by vaccine-derived poliovirus (VDPV) took centre stage in 2005 as the driving force behind the need for OPV cessation following the global eradication of polio. This was further highlighted by three well documented outbreaks during the year in Cambodia, Madagascar, Indonesia. In addition, the detection of vaccine-derived poliovirus in Minnesota, USA, among a religious group objecting to vaccination demonstrated that no country is safe from VDPVs.

A VDPV case is defined as a live, attenuated strain of the virus contained in the oral poliovirus vaccine (OPV) which has mutated and reverted to a neurotropic form and acquired enhanced transmissibility characteristics. The genome of VDPV differs from the parental Sabin strains by 1% or more. VDPV can be further classified as:

a) iVDPV (*immunodeficient* excretors of vaccine-derived polio) isolated from immunodeficient patients who have prolonged infections after exposure to OPV;

b) cVDPV (*circulating* vaccine-derived polioviruses) that are associated with sustained person-to-person transmission resulting in at least two patients with paralytic manifestations; and

c) aVDPV (*ambiguous* vaccine-derived polioviruses) which are either clinical isolates from patients with no recognized immunodeficiency and not associated with an outbreak, or environmental isolates whose ultimate source has not been identified.

The four cases of VDPV detected in Madagascar this year were considered to be cVDPV, as were the 46 cases found on Madura Island in Indonesia in 2005. The latter represents the largest cVDPV outbreak to date.

The programmatic experience of controlling these outbreaks, and comparing these with those caused by wild poliovirus, suggest that fewer rounds of supplementary immunization activities are needed to eliminate the circulation of VDPV.

Risk mitigation: strategy and tools

A comprehensive approach must be taken to optimize the management of the risks of either the re-emergence of polio due to a cVDPV or re-introduction of either a wild or Sabin poliovirus, following the global interruption of wild poliovirus transmission. Progress on these risk management strategies is detailed in this section.

Containment of wild and Sabin polioviruses

Substantial progress has been made in 2005 in laying the foundations for the long-term containment of wild polioviruses and – for the first time – Sabin vaccine strains. The 3rd edition of the Global Action Plan for Laboratory Containment of Wild Polioviruses (GAPIII) will outline the key management strategies to reduce the risk of inadvertent re-introduction of poliovirus after eradication and OPV cessation.

In addition to the experience gained through the preparation and implementation of the 1st and 2nd editions of the GAP, four major areas of work are informing the development of GAP III, with a target date of late-2006 for distribution for public comment.

First, the long-term programmatic needs for poliovirus have been defined in terms of both the types and minimum number of poliovirus-containment facilities that may be required during and after OPV cessation. A minimum number of facilities (target < 20) with the capacity to store and handle poliovirus will be required indefinitely for essential IPV production and quality control, research, and diagnostic functions.

Secondly, a detailed assessment was conducted of the facility-associated risks of potential community exposure to polioviruses after eradication and OPV cessation (Dowdle W. R., et al., Containment of polioviruses after eradication and OPV cessation: characterizing risks to improve management. Risk Analysis, 2006 - in press). This assessment provided the basis for designing risk-appropriate biosafety measures (or 'primary safeguards') for facility storing or handling polioviruses after eradication.

As a third element of work, an assessment was conducted on the consequences of a poliovirus release during or after OPV cessation (Fine P. E. M. and Ritchie S., Consequences of release/reintroduction of polioviruses in different geographic areas after OPV cessation.

Risk Analysis, 2006 - in press). This article identified and analyzed the factors influencing the range of consequences that might result from the re-introduction of a wild poliovirus or Sabin strain (from a self-limited infection to re-established endemic transmission), as the basis for recommending 'secondary safeguards' that should be in place in any country or area choosing to store or handle polioviruses after OPV cessation.Finally, specific standards were developed for the management of poliovirus bio-risks in the limited number of essential facilities that will handle or store such viruses following OPV cessation.

By late 2005, this work was being consolidated into an overall poliovirus biocontainment strategy for the OPV cessation and post-OPV phases of the Global Polio Eradication Initiative.

Vaccine Stockpile

A significant achievement in 2005 was the development in record time of monovalent oral polio vaccines, for both type 1 and type 3 polio. Four manufacturers developed and received regulatory approval for use of mOPV1 in 2005. These vaccines were used extensively in 2005 (>500 million doses) and proved to be an important additional tool to the polio eradication initiative. Most importantly, these vaccines may be responsible for eliminating wild poliovirus transmission in Egypt and Mumbai as well as significantly decreasing the incidence of poliovirus in the polio-endemic reservoirs of South Asia and Africa (outside Nigeria). mOPV3 was licensed by one manufacturer and approximately 10 million doses were used in a large campaign in Western Uttar Pradesh, India in December 2005.

A stockpile of monovalent vaccines for outbreak response in the post-OPV era.

Monovalent OPVs are now the 'workhorses' of the final polio eradication effort, and also play a crucial role in the post-eradication era.

An internationally-managed global stockpile of mOPVs (types 1, 2 and 3) is being developed for use in the event of a polio outbreak after the cessation of OPV. Such a stockpile will allow a type-specific response which will not only ensure a greater impact of the outbreak response, but also prevent the reintroduction of other polioviruses. As a major development in 2005, the up-front financing of the stockpile which includes development, licensing, procurement, operational and storage costs was secured through the International Finance Facility (IFF) for Immunization, in the amount of US$ 226.4 million.

IPV: Supplement to the WHO position paper on IPV following OPV cessation

As part of the preparations for a polio-free world, it will be essential that all countries currently using OPV develop a well-defined immunization policy for the post-OPV cessation era. Each country must determine the most appropriate national immunization policy: whether to discontinue all polio vaccination or switch to IPV routine use. During 2005, the Global Polio Eradication Initiative worked on the preparation of a "Supplement to the WHO position paper on IPV following OPV cessation", published on 14 April 2006. The supplement provides guidance for countries that elect to retain poliovirus after OPV cessation for vaccine production, polio diagnostics or research in laboratories. Specifically, it articulates the concept of secondary safeguards and lays out the requirements for high population immunity against polio for countries that retain polioviruses. In addition, for countries that do not elect to retain poliovirus, but perceive themselves at risk of intentional use or because a neighbouring country retains poliovirus, it introduces the concept of a 2-dose IPV schedule to provide adequate population immunity.

The supplement also outlines a research agenda which includes the development of new vaccines such as IPV produced from Sabin strains, which may allow additional options for protection against polio.

Antiviral compounds against poliovirus

The Global Polio Eradication Initiative continues to evaluate the potential role of antivirals in the post-OPV era for both outbreak response and the management of rare long-term shedders of poliovirus (iVDPVs). A special meeting was convened by the National Academy of Sciences (NAS) in Washington (at the request of CDC and WHO) in the beginning of November 2005 to deliberate the rationale and programmatic needs for and the development of antiviral compounds against polio. The NAS committee identified promising approaches, including capsid-binding inhibitors, and protease inhibitors. A detailed report by the NAS committee was published in late February 2006.

3.4 Mainstreaming of the Global Polio Eradication Initiative

Milestones 2005

⇛ **Milestone 1: 50% of joint GAVI/polio priority countries implementing integrated plans.**
Status: Achieved.
By end-2005, all joint GAVI/polio priority countries had established integrated plans, Nigeria being the final one.

⇛ **Milestone 2: 75% of countries will integrate or expand AFP reporting, as appropriate (especially for measles and neonatal tetanus).**
Status: Achieved.
78% (114/146*) of countries/territories with AFP systems have integrated or expanded AFP surveillance with measles or neonatal tetanus.
**Includes only low- and middle-income countries.*

⇛ **Milestone 3: 50% of countries with GAVI-supported ICC and, if appropriate, TAG.**
Status: Achieved.
ICC processes now integrated for all immunization activities in all major countries of AFR, EMR, SEAR, PAHO and WPR.

⇛ **Milestone 4: 50% of polio-funded 'human resources' formally contributing to multi-disease programmes.**
Status: Achieved.
Over 80% of polio-funded field staff contributed formally to multi-disease programmes. This function has been included in almost all post descriptions.

⇛ **Milestone 5: 75% of countries where polio operations are fully integrated with those for measles.**
Status: Achieved.
78% of countries with AFP surveillance systems (114/146) have benefited from surveillance through integration of activities. 83% of polio network laboratories (120/145) conduct measles testing either in the polio laboratory, or in the same institute, thereby allowing integration of the infrastructure established for the polio laboratory network.

Mainstreaming of the Global Polio Eradication Initiative involves two major areas of work: the integration of long-term functions into existing national and international mechanisms for managing other pathogens of international public health importance and the use of its capacity and experience to serve other public health programmes. 2005 marked the strongest progress yet towards institutionalising long-term functions and exploiting the benefits of the polio staff network – spread across some 50 countries – to strengthen health care in some of the most under-served areas of the world.

Integration of long-term functions

As with smallpox, the work of an eradication programme does not stop with elimination of the pathogen from the human population. A number of key functions associated with the interruption of wild poliovirus will need to continue after global polio eradication and are outlined in this section.

Surveillance: Polio and the International Health Regulations, 2005

In May 2005, the World Health Assembly (WHA) adopted the IHR (2005), the International Health Regulations 2005. Coming into effect in 2007, the IHR (2005) identifies four diseases

(smallpox, SARS, avian influenza of pandemic potential and circulating polioviruses) of which any occurence must be reported internationally. Due to the progress in global polio eradication, both wild and vaccine-derived circulating polioviruses (cVDPVs) have become of international public health importance and will be notifiable under the International Health Regulations (2005).

Containment: GAP III

The Third Edition of the Global Action Plan for Laboratory Containment of Wild Polioviruses (GAP III) will describe activities to achieve the containment of wild polioviruses after eradication and OPV/Sabin polioviruses after cessation of OPV use. GAP III establishes primary and secondary safeguards to minimise the risk of the re-emergence or re-introduction of polio into the environment and to mitigate the risks following such introduction. Four major areas of work are informing the development of GAP III, with a target date of late-2006 for distribution for public comment. These include a definition of the long-term programmatic needs for poliovirus; detailed assessment of the risks of exposure to polioviruses after eradication and OPV cessation; an assessment of the consequences of a poliovirus release; and the development of specific standards for the management of risks in the limited number of facilities that might handle or store such viruses in the post-OPV era. (See page 27 for further details.)

Response: GOARN

The Global Outbreak Alert and Response Network (GOARN) is a technical collaboration of existing institutions and networks which pool human and technical resources for the rapid identification and confirmation of, and response to, outbreaks of international importance. GOARN provides an operational framework to link this expertise and skill to keep the international community constantly alert to the threat of outbreaks and ready to respond. Polio is increasingly integrated into this network, notably through disease detection, response mechanisms and deployment of staff.

Integration of capacity and experience

Scaling up routine immunization services: 'Reaching Every District'

The Reaching Every District (RED) strategy was initiated in 2002 in order to build on experiences gained in the Global Polio Eradication Initiative and to reach the 80% routine immunization target more rapidly in every district.

The RED strategy is based on the polio eradication model of reaching entire populations through detailed planning at district level. It focuses on five key operational components which have been integral to the success of polio eradication:

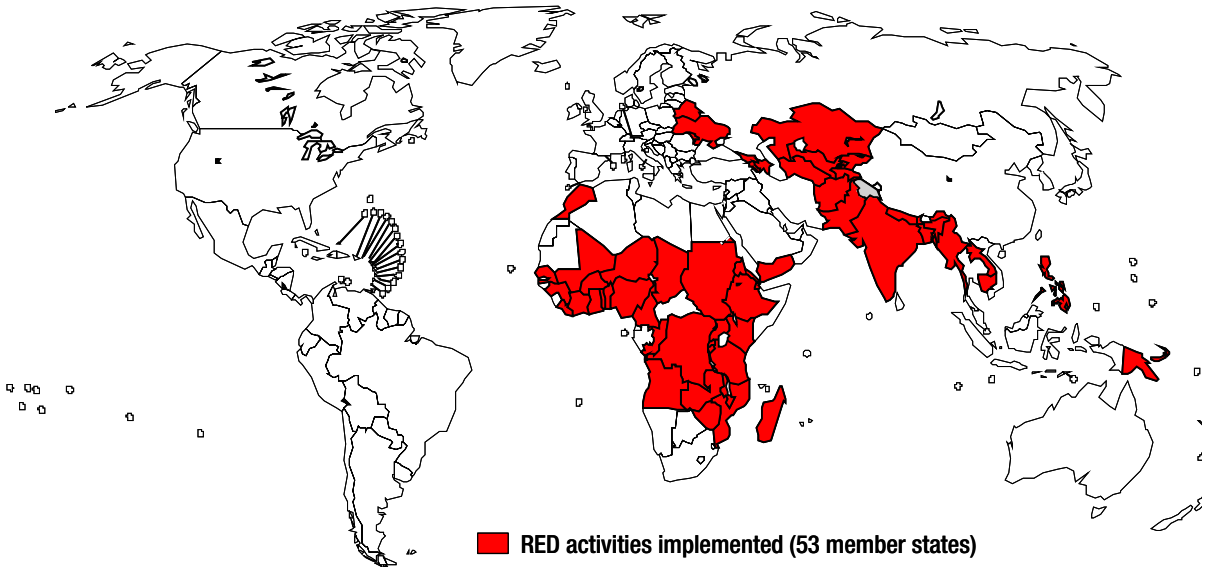
1. Planning and management of resources: better management of human and financial resources;
2. Supportive supervision: on-site training by supervisors;
3. Re-establishment of outreach services: regular outreach for communities with poor access;
4. Community links with service delivery: regular meetings between community and health staff;
5. Monitoring and use of data for action: chart doses and map populations in each health facility.

Since 2002, 53 countries have adopted and introduced the RED strategy. An evaluation in June 2005 in five African countries – the Democratic Republic of the Congo, Ethiopia, Kenya, Madagascar and Zimbabwe – showed impressive results, with the number of districts reaching the 80% routine immunization target increasing from 70 to 197 between the years 2002 to 2004, and the number of un-immunized children in these countries nearly halved during that time-period.

Reports from countries in Southeast Asia also show encouraging developments. In Bangladesh and Nepal, for example, RED is helping to identify under-performing districts, including hard-to-reach populations, with a problem-solving approach. In several countries, RED is also helping to deliver other health interventions, including fighting malaria, malnourishment and intestinal parasites.

In all countries which had adopted and introduced the RED strategy by end-2005, polio-funded staff have been integral to its implementation, working closely with national immunization authorities. The Global Alliance for Vaccines and Immunization (GAVI) and other partners have provided vital funding for district activities.

Countries implementing "RED" activities in 2002-2005



Supporting the response to outbreaks of diseases of public health importance

The polio network also regularly helps respond to other health emergencies and outbreaks, including measles, SARS, avian influenza, Marburg fever and Ebola outbreaks. With local knowledge of communities, health systems and government structures, the polio network's technical capacity in disease surveillance and planning of large-scale operations often helps sustain international and national relief efforts. As the global polio eradication network has matured, other disease areas that once benefited from the network on an ad-hoc basis have now come to increasingly rely on the network's infrastructure. In 2005, among others,

photo: WHO/C. Black

The polio network frequently helps respond to other health emergencies, such as the 2005 Marburg Fever outbreak in Angola.

the polio network supported outbreak response activities for avian influenza in Indonesia (and Nigeria in 2006) and Marburg fever in Angola, as well as yellow fever in Sudan.

Extensive support to emergency humanitarian response

The extensive polio eradication network at country-level is uniquely equipped to help provide immediate support during emergencies or other disease outbreaks.

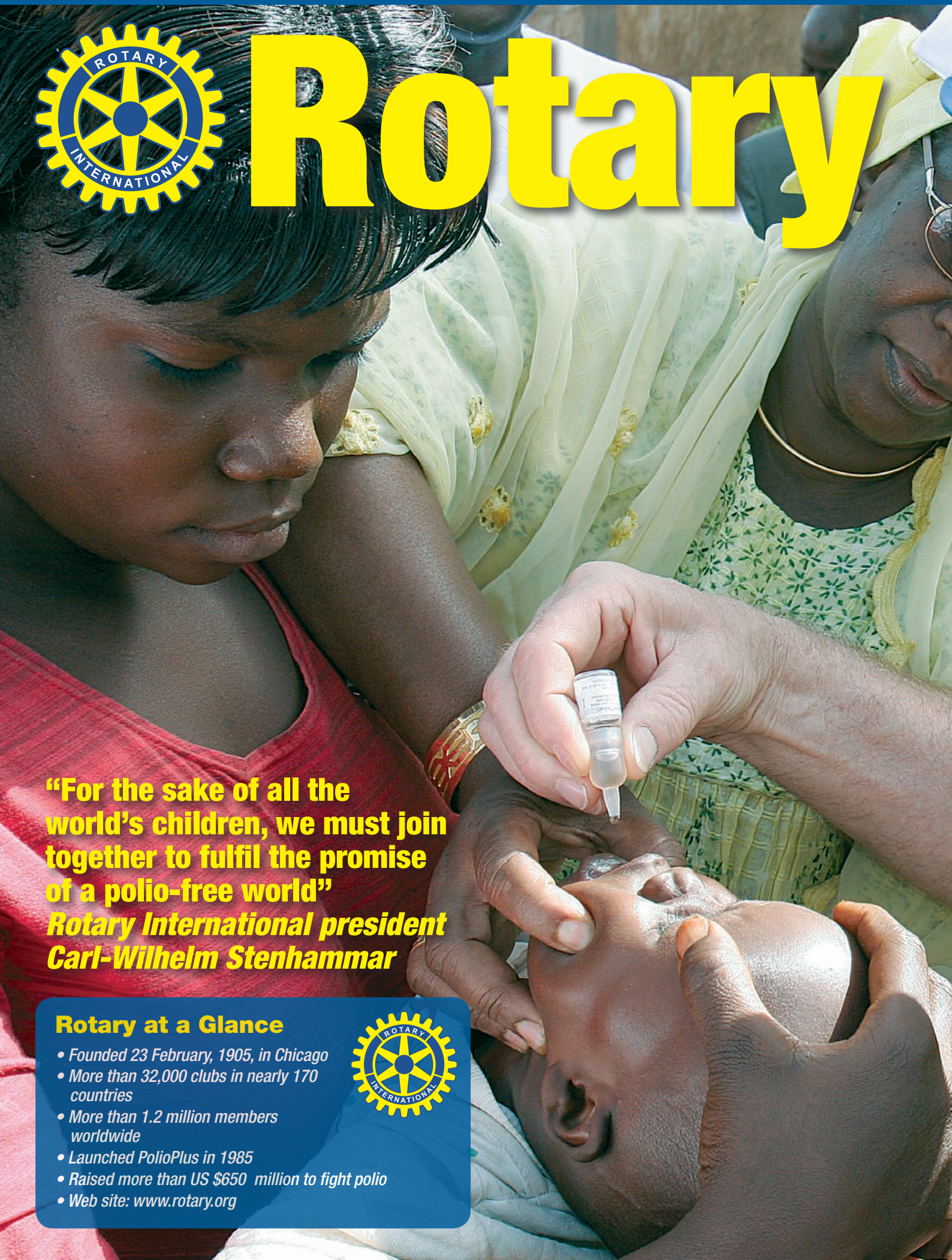
Following the October 2005 earthquake on the Pakistan-India border areas, more than 50 medical officers from the Pakistani polio eradication programme arrived within a day after the earthquake, equipped with vaccines, medications, potable water and sleeping bags, in addition to critical logistics support such as 15 vehicles and radio and satellite equipment. The medical officers conducted the initial rapid assessment of the disaster and communicated their observations to the capital to allow effective relief planning. They also provided emergency medical care during the following days, setting up treatment camps and transporting patients, while planning and implementing mass vaccination campaigns against measles, polio and tetanus.

In the days and weeks immediately following the Indian Ocean tsunami in December 2004, more than 20 polio staff were deployed by the government of India to the worst-affected areas of southern India to cope with health needs. At headquarters level, polio staff were immediately involved in resource mobilisation and staff coordination activities. In affected countries, polio staff arrived on the scene equipped with vehicles and medicines, including oral rehydration salts and co-trimoxazole paediatric tablets to help prevent deaths due to pneumonia. Polio staff also organised and helped implement large-scale, preventive immunisation campaigns, reaching more than 150,000 children with measles and polio vaccine, as well as Vitamin A supplements.

Critical logistical support to earthquake response in Pakistan.

100 YEARS OLD AND 100% COM

Rotary



"For the sake of all the world's children, we must join together to fulfil the promise of a polio-free world"
Rotary International president Carl-Wilhelm Stenhammar

Rotary at a Glance

- *Founded 23 February, 1905, in Chicago*
- *More than 32,000 clubs in nearly 170 countries*
- *More than 1.2 million members worldwide*
- *Launched PolioPlus in 1985*
- *Raised more than US $650 million to fight polio*
- *Web site: www.rotary.org*

MITTED TO POLIO ERADICATION

Rotary International, the major private-sector partner in the Global Polio Eradication Initiative, made polio a focal point of its year-long centenary celebration in 2005.

Centennial events culminated with Rotary's annual convention held 18-23 June 2005 in Chicago, USA, where the volunteer service organization was founded in 1905 by attorney Paul Harris. During the convention, World Health Organization (WHO) Director-General Dr Lee Jong-wook reminded the press, "Rotary has provided the vision and the sheer human power – in the form of millions of volunteers and advocates. Because of Rotary, we have completed 99 percent of our task, but to achieve our last one percent, we need Rotary's continuing advocacy more than ever. With your energy, support and unparalleled dedication, I know we will make this a reality."

By the time polio is eradicated, Rotary will have:

- Contributed more than US$ 650 million and countless volunteer hours towards polio eradication efforts. These funds provide oral polio vaccine, operational support, medical personnel, laboratory equipment and educational materials for health workers and the public.
- Reached out to governments worldwide for vital financial and technical support. Since 1995, donor governments have contributed more than US$ 1.7 billion to polio eradication, due in part to Rotary's advocacy efforts. Combined with direct funds from Rotary, this total accounts for more than half the money needed for the entire global polio eradication program.
- Mobilized thousands of Rotarians and millions of other volunteers and health workers across the world to immunize children against polio. Over the years, more than one million Rotary club members have donated their time and personal resources to help immunize more than two billion children in 122 countries during National Immunization Days.

4. International political commitments

Ministers of Health Meeting in January and February

The spearheading partners of the Global Polio Eradication Initiative hosted two Geneva meetings of Health Ministers of key polio-affected countries, including one for Africa on 13 January 2005 (Burkina Faso, Central African Republic, Chad, Côte d'Ivoire, Egypt, Niger, Nigeria and Sudan), and the second for Asia (Afghanistan, India and Pakistan) on 4 February. During the meetings, governments reported on progress towards the 2004 *Geneva Declaration for the Eradication of Poliomyelitis* and established plans at the international, national and sub-national levels to ensure polio transmission is stopped everywhere.

World Health Assembly

In May 2005, the World Health Assembly (WHA) re-affirmed its commitment to polio eradication, commending the notable progress in endemic areas and highlighting the ongoing risk of polio importations until virus transmission was stopped globally. The WHA called on all Member States for sustained financial and political support to ensure success.

The Organization of the Islamic Conference

Further to the 2003 polio resolution adopted by the Organization of the Islamic Conference (OIC) at the 10th Islamic Summit, the Republic of Turkey and the Kingdom of Saudi Arabia provided financial support to global polio eradication activities in 2005. The OIC Secretary-General made his first visit to WHO and met with the Director-General to discuss polio eradication efforts in OIC countries. A revised resolution on polio eradication was adopted at the June 2005 Islamic Conference of Foreign Ministers' in Sanaa, Yemen and polio was highlighted in both the First Islamic Ministerial Conference on the Child in Rabat, Morocco, and the Third Extraordinary Islamic Summit in Makkah.

The Commonwealth

Noting that the highest incidence of indigenous poliovirus transmission occurs in three Commonwealth countries – India, Nigeria, and Pakistan – the Secretary-General of the Commonwealth ensured that polio eradication was raised in his discussions with government officials from these countries during 2005. In addition, the Secretariat hosted a meeting on polio eradication inviting the High Commissioners of India, Nigeria and Pakistan and the polio partners to discuss progress and challenges in polio eradication.

UN Secretary-General Kofi Annan (second from left) is briefed on progress towards the global eradication of polio by Dr LEE, Jong-wook, WHO Director-General (far left), and Dr David Heymann, the WHO Director-General's Representative for Polio Eradication (far right).

Office of the UN Secretary-General

During a high-level visit to Geneva, United Nations Secretary-General Kofi Annan was briefed on the global effort to eradicate polio. The Secretary-General provided his assurance of the UN's continued support, in particular in helping ensure the necessary financial resources are available to finish the job of polio eradication rapidly. The polio presentation was part of a WHO briefing to the Secretary-General on work relating to disease outbreaks, including the risks of pandemic influenza.

Rotary Clubs

In late 2005 and early 2006, hundreds of Rotary club members from the United States, Canada, France, the Netherlands, Australia, Singapore and Malaysia joined thousands of their fellow Rotarians and millions of other volunteers and health workers in India, Indonesia and across Africa to help immunize children against polio. Through Rotary International, the fight against polio has been largely driven by volunteers. From fundraising to hands-on work in the field, Rotary members are doing everything in their power to end this disease once and for all. "We will work from dusk to dawn to make sure that every child under the age of five is immunized," said Bruce Howard, a Rotary member from California, United States, who led a team of 27 Rotarians to Nigeria for the immunization campaign in November.

Rotary volunteers from across the world help support polio eradication efforts, such as during this National Immunization Day in Mali.

National leadership

Across the globe, leaders of polio-affected countries lent their presence to National Immunization Days in 2005. Afghan President Hamid Karzai launched NIDs in his country and addressed the nation on television to encourage parents to have their children immunized. In Nigeria, President Obasanjo held discussions with African leaders on polio eradication at the January African Union Summit in Abuja and met with northern Nigerian governors and traditional and religious leaders to highlight the importance of routine immunization and interrupting poliovirus transmission. The First Lady of Indonesia attended the launch of NIDs in response to the outbreak and personally encouraged vaccinators and parents.

President Hamid Karzai of Afghanistan administers OPV to a child.

President Obasanjo of Nigeria dons a green polio eradication vest at the launch of a polio NID.

First Lady of Indonesia Ani Yudhoyono addresses an NID launch audience on the importance of polio vaccine.

5. Donors

Unprecedented support totalling US$ 965 million from long-standing and new contributors in 2005 ensured that intensified polio campaigns in Africa and Asia could proceed as planned, that countries were able to respond quickly to polio outbreaks, and that the polio eradication infrastructure was strengthened and continued to strengthen the public health infrastructure in many countries, particularly in Africa.

G8 leaders pledged to continue or increase their contributions to polio eradication

G8 leaders meeting in Gleneagles, Scotland in July 2005 reaffirmed their commitment to finishing the job of polio eradication, pledging to "support the Polio Eradication Initiative … in 2006-2008 through continuing or increasing our own contributions…and mobilizing the support of others". The UK took immediate action, pledging £60 million for 2005-2008. Contributions from G8 counties – the US, UK, Japan, Canada, Germany, France, Italy and Russia – account for 52% of the total financial investment to date in polio eradication.

The polio partnership continued to expand in 2005: Sweden re-affirmed its long-standing commitment to children's health by making an extraordinary US$ 30 million contribution and several Organization of Islamic Conference (OIC) countries, including Saudi Arabia, Qatar and Turkey, joined Malaysia in taking action on polio resolutions made at the October 2003 OIC Summit in Putrajaya, Malaysia and at the June 2004 OIC Foreign Ministers Meeting in Istanbul, Turkey. Spain and Monaco joined the Initiative and Iceland, the Czech Republic and Singapore also made their first polio eradication pledges in 2005.

The Bill and Melinda Gates Foundation and the American Red Cross were instrumental in helping countries respond to polio outbreaks in the Horn of Africa and in tsunami-affected areas of Indonesia respectively.

The Global Polio Eradication Initiative's highest priority – and the focus for 2006 – is to swiftly interrupt polio transmission in polio-affected countries, and to help the world remain polio-free while Nigeria stops transmission. Simultaneously, preparations that have been made for the eventual cessation of OPV use in routine immunization need to continue.

Essential to success will be the continued support of the international community, most notably in filling the 2006 funding gap of US$ 85 million. An additional US$ 400 million must be made available for 2007-2008 in order to implement planned activities.

African Development Bank

The African Development Bank approved a grant of US$ 2 million for polio eradication activities in Burkina Faso, Chad, Niger and Nigeria. This represents the first contribution from the African Development Bank for polio eradication.

Arab Gulf Programme for United Nations Development Organizations (AGFund)

The AGFund committed US$ 160,000 to support polio immunization in Ethiopia.

American Red Cross

The American Red Cross, through the United Nations Foundation, contributed US$ 5 million to fund polio immunization activities in tsunami-affected areas of Indonesia. This contribution helped strengthen the cold chain and vaccine-delivery capacity, as well as ensuring that appropriate social mobilization and communications outreach prepared communities to vaccinate their children.

Australia

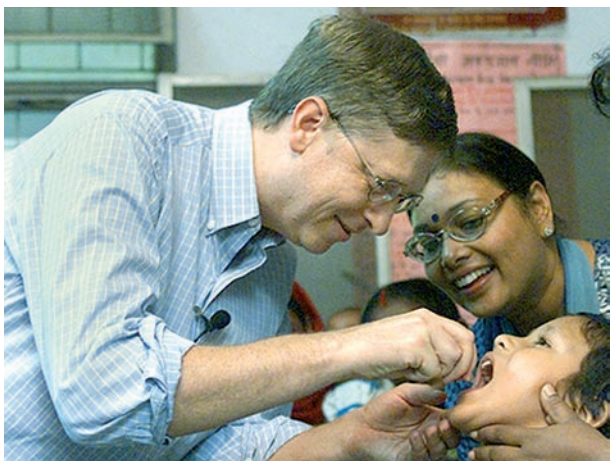
Australia committed US$ 6.32 million for polio immunization campaigns. Funds were provided to immunize children in Indonesia, and to match contributions made by Rotarians in Australia for global polio eradication efforts.

Austria

Austria committed US$ 790,000 for polio eradication efforts targeted in the Somaliland region of Ethiopia.

Bill and Melinda Gates Foundation

The Bill and Melinda Gates Foundation continued its strong support for polio eradication by providing US$ 10 million for the development and testing of the monovalent oral polio vaccine (mOPV). The Bill and Melinda Gates Foundation then committed an additional US$ 25 million to help mount emergency response activities in the newly polio-affected countries in the Horn of Africa.



Canada

In 2005, Canada committed a total of US$ 40.57 million for polio eradication. This included an extraordinary contribution of US$ 34 million to help stop the polio outbreak in west and central Africa. Funds for polio eradication were also allocated through the grant provided to Nigeria to strengthen routine immunization services, and also to match contributions for global polio eradication made by Rotarians in Canada.

European Commission

The European Commission provided a significant grant of US$ 70 million for polio eradication activities in 2005-2006 in 14 African countries. These funds played a critical role in helping stop the polio outbreak in west and central Africa. The European Commission Humanitarian Office (ECHO) provided an emergency grant of US$ 580,000 to combat the polio epidemic in Yemen.

Finland

Finland continued its support of the polio reference laboratory in Helsinki, committing US$ 380,000 over two years.

France

France provided US$ 12.44 million for polio eradication in 2005. This represents global funding in support of France's G8 commitment to polio eradication, funds for polio immunization activities in Ethiopia, and technical staff to assist polio eradication efforts in Chad and Niger.

Germany

Germany contributed US$ 12 million for polio eradication in Nigeria, by re-programming existing funds for the purchase of OPV. It also provided US$ 12 million for the procurement of OPV in India in 2005, and US$ 1.15 million in global funding.

Iceland

Iceland provided a first-ever contribution of US$ 50,000 in global support for polio eradication, adding its name to the growing list of governments and international institutions that are committed to finishing the job of polio eradication.

Global Alliance for Vaccines and Immunization (GAVI) and International Finance Facility for Immunization (IFFIm)

In an affirmation of international commitment to polio eradication, the board of the Global Alliance for Vaccines and Immunization (GAVI) approved funding of US$ 191 million to be allocated from the International Finance Facility for Immunization (IFFIm) towards creation of a stockpile of mOPVs for the post-eradication era. Funds are expected to be made available from mid-2006.

India

The Government of India allocated US$ 58.3 million in domestic resources, and accessed World Bank IDA loans of US$ 72.7 million to purchase OPV and support the implementation of intensive polio eradication strategies in 2005. The campaigns reached more than 171 million children multiple times during national polio immunization activities.

Indonesia

Indonesia provided domestic resources totalling US$ 13.8 million to respond to the polio outbreak in the country in 2005. Additional domestic funding has also been pledged for national polio immunization activities in 2006.

Ireland

Ireland complemented its annual US$ 1.21 million global contribution by providing an additional US$ 605,000 to assist with countries' polio outbreak response.

Italy

In 2005, Italy made its first US$ 6 million payment on a three-year, €14 million commitment made through the G8 process. In addition, Italy provided US$ 120,000 for outbreak response in Angola.

Japan

Japan is the third-largest public sector donor to the Global Polio Eradication Initiative and a long-standing supporter. It continued its commitment to polio eradication by providing US$ 26.5 million in funding to procure OPV for SIAs in priority countries, including emergency funding for outbreak response in Indonesia.

Luxembourg

In 2005, Luxembourg provided US$ 907,500 to help support polio immunization activities in six African countries.

Monaco

Monaco continued its support by contributing US$ 50,000 for polio eradication activities in Niger in 2005, and committed an additional US$ 13,000 in year-end funding.

Netherlands

Netherlands provided US$ 190,000 for Dutch institutions supporting polio eradication and US$ 180,000 for polio eradication activities in Togo.

New Zealand

New Zealand contributed US$ 1.4 million for global polio eradication efforts and matched the contributions raised by Rotarians in New Zealand.

Norway

Norway continued its strong support for global polio eradication by contributing US$ 7 million in global funding. It also provided US$ 470,000 in additional funding for eradication efforts in Nigeria.

OPEC Fund for Development

The OPEC Fund contributed US$ 600,000 to support polio immunization activities in Chad, Niger and Burkina Faso.

Pakistan

The Government of Pakistan contributed US$ 2.25 million in domestic resources to purchase OPV for polio campaigns in the country.

Portugal

Portugal made the final instalment of its three-year pledge of US$ 450,000 for Angola's polio eradication efforts and committed a further US$ 120,000 for activities in the country.

Rotary International

Rotary International, a spearheading partner of the Global Polio Eradication Initiative, is the largest private sector donor to the Initiative. By the time of global certification of polio eradication, Rotary International will have committed more than US$ 600 million. In 2005, Rotary International contributed US$ 29.24 million in global funding. It is also remarkable that funds are still being generated from Rotary International's membership fundraising drive for polio eradication in 2003, and by the end of 2005 a total of US$ 135 million had been raised.

Russian Federation

In 2005, the Russian Federation contributed US$ 4 million, bringing its total contribution to polio eradication to US$ 8 million.

Kingdom of Saudi Arabia

The Kingdom of Saudi Arabia made its first-ever contributions for global polio eradication efforts by providing US$ 2.66 million in global funding, and an additional US$ 500,000 for activities in Yemen.

Singapore

Singapore made its first-ever contribution of US$ 10,000 towards stopping the polio outbreak in Indonesia.

Spain

In 2005 Spain provided strong support for global polio eradication efforts and contributed a total of US$ 2.85 million. The commitment includes global funds, as well as funds for activities in eight countries in Africa, including surveillance activities in Angola, Cape Verde and Guinea Bissau.

Sweden

Sweden fulfilled its US$ 30 million pledge made at the end of 2004. These funds were critical to the implementation of synchronised polio immunization campaigns in west and central Africa in early 2005 and helped to stop the polio outbreaks in the region. Additionally, Sweden provided US$ 130,000 in year-end funds in December 2005.

Turkey

Turkey provided its first-ever contribution of US$ 500,000 for global polio eradication efforts. Turkey's leadership within the Organization of the Islamic Conference (OIC) has been critical in developing strong political commitment for polio eradication within the OIC.

United Kingdom's Department of International Development (DFID)

The United Kingdom (UK) pledged US$ 108 million for 2005-2007 and called on other G8 countries to follow their example just ahead of the G8 Summit in Gleneagles, Scotland. Additional funding was also provided for activities in Bangladesh, India, Indonesia, Myanmar, Somalia and Uganda. The UK is the second-largest public sector donor to the global initiative with total contributions of more than US$ 500 million.

United Nations Children's Fund (UNICEF)

UNICEF, a spearheading partner of the Global Polio Eradication Initiative, provided financial resources through a number of channels in 2005.

National Committees:UNICEF National Committees from Canada, Germany and Switzerland contributed a total of US$ 1.02 million for polio eradication activities.

Regular Resources: UNICEF provided regular resources totalling US$ 4.9 million in 2005. A majority of these funds were allocated for Indonesia and Nigeria.

Other resources: UNICEF provided exceptional support to stop the polio outbreak in Indonesia by allocating US$ 6.2 million for polio immunization activities.

United Nations Foundation (UNF)

In 2005, UNF contributed US$ 2.71 million to the Global Polio Eradication Initiative for support to UNICEF and WHO in Afghanistan and India. UNF also continued its support to the Global Polio Eradication Initiative's fundraising efforts. It maintained its role within the World Bank/Gates/Rotary-UNF Investment Partnership for Polio Eradication, and worked with the American Red Cross to channel resources for polio eradication to tsunami-affected areas of Indonesia.

US Centers for Disease Control and Prevention (CDC)

CDC is a core technical spearheading partner of the Global Polio Eradication Initiative. In 2005, the United States Congress allocated US$ 98.8 million through CDC to fund the procurement of OPV, operational costs and programme support through UNICEF and WHO. CDC additionally supported the international assignment of epidemiologists, virologists and other technical officers to assist WHO, UNICEF and polio-affected countries to implement eradication efforts.

The US Agency for International Development (USAID)

US Congress allocated US$ 32 million through USAID to support global polio eradication efforts. In addition, USAID facilitated funding of US$ 2 million for Afghanistan through Management Sciences for Health (MSH), and US$ 400,000 for emergency activities in Sudan through the Office of US Foreign Disaster Assistance (OFDA).

World Bank Investment Partnership for Polio Eradication

In 2005, the World Bank continued its support for polio eradication by approving the allocation of US$ 47 million in IDA loans for Phase II in Nigeria for the procurement of OPV in 2006-2007.

6. Glossary of terms

ACPE	Advisory Committee on Poliomyelitis Eradication
AFP	Acute flaccid paralysis
AFRO	WHO Regional Office for Africa
AMRO	WHO Regional Office for the Americas
CDC	US Centers for Disease Control and Prevention
cVDPV	Circulating vaccine-derived poliovirus
DFID	Department for International Development
EC	European Commission
EMRO	WHO Regional Office for the Eastern Mediterranean
EURO	WHO Regional Office for Europe
EPI	Expanded Programme on Immunization
GAP III	Third edition of the Global Action Plan for Laboratory Containment of Wild Polioviruses
GAVI	Global Alliance for Vaccines and Immunization
GCC	Global Commission for the Certification of the Eradication of Poliomyelitis
ICC	Interagency Coordinating Committee
IFFim	International Financing Facility for Immunization
IPV	Inactivated polio vaccine
ITN	Insecticide treated net
mOPV	Monovalent oral polio vaccine
NCC	National Certification Committee
NID	National Immunization Days
OIC	Organization of the Islamic Conference
OPV	Oral polio vaccine
PAHO	(Pan-American Health Organization) WHO Regional Office for the Americas
RCC	Regional Certification Commission
RED	Reaching Every District
SEARO	WHO Regional Office for South-East Asia
SIA	Supplementary immunization activity
SNID	Sub-national Immunization Days
tOPV	Trivalent oral polio vaccine
UN	United Nations
UNF	United Nations Foundation
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VAPP	Vaccine-associated paralytic polio
VDPV	Vaccine-derived poliovirus
WHA	World Health Assembly
WHO	World Health Organization

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