



Stage is set for polio-free world

Despite recent high-profile polio outbreaks in previously polio-free countries such as Indonesia, Yemen and Somalia, the stage is set for a polio-free world. So concluded the Advisory Committee on Polio Eradication (ACPE), the independent technical oversight body of the Global Polio Eradication Initiative, which convened in Geneva on 11-12 October 2005.

The recently-introduced monovalent oral polio vaccine (mOPV), which accelerates protection to specific virus types, appears to have stopped transmission in Egypt and areas of India - the two greatest technically challenging areas for polio eradication. The alarming epidemic which swept across west and central Africa since mid-2003 now appears to have been stopped in ten countries, with no new cases reported outside endemic Nigeria and Niger since June. Efforts to control epidemics in the Horn of Africa, Yemen and In-



The Advisory Committee on Polio Eradication (ACPE), the independent technical oversight body of the Global Polio Eradication Initiative, convened in Geneva on 12 October 2005.

onesia, which began in late 2004/early 2005, are also starting to show progress.

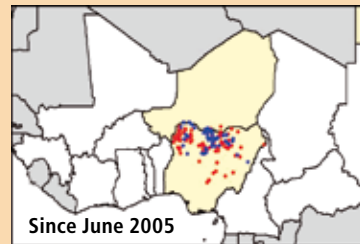
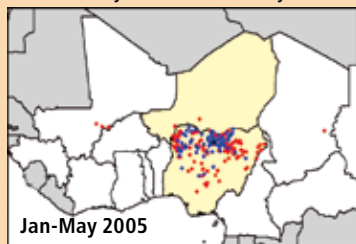
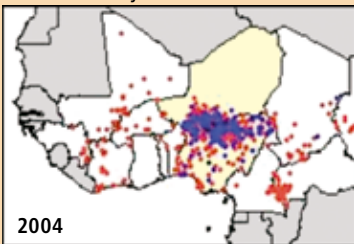
Recommending expanded use of mOPV, the ACPE concluded wild poliovirus transmission could be interrupted everywhere in the world by mid-2006 – except in Nigeria where at least a further 12 months may be necessary to finish the job. 💧

Polio epidemic in ten countries in west and central Africa successfully stopped

No new cases reported outside Nigeria and Niger since June

5 Rounds of synchronized National Immunization Days, Oct 2004 - May 2005

Data as October 2005



Progress fosters strong international support: UN committed to finishing the job

The progress achieved over the past 18 months has continued to foster strong international support for the global effort to eradicate polio. On 6 October, during a high-level United Nations (UN) visit to Geneva, UN Secretary-General Kofi Annan requested a briefing on the global effort to eradicate polio, and gave his assurance of the UN's continued support, in particular in helping ensure the necessary financial resources are available.



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).

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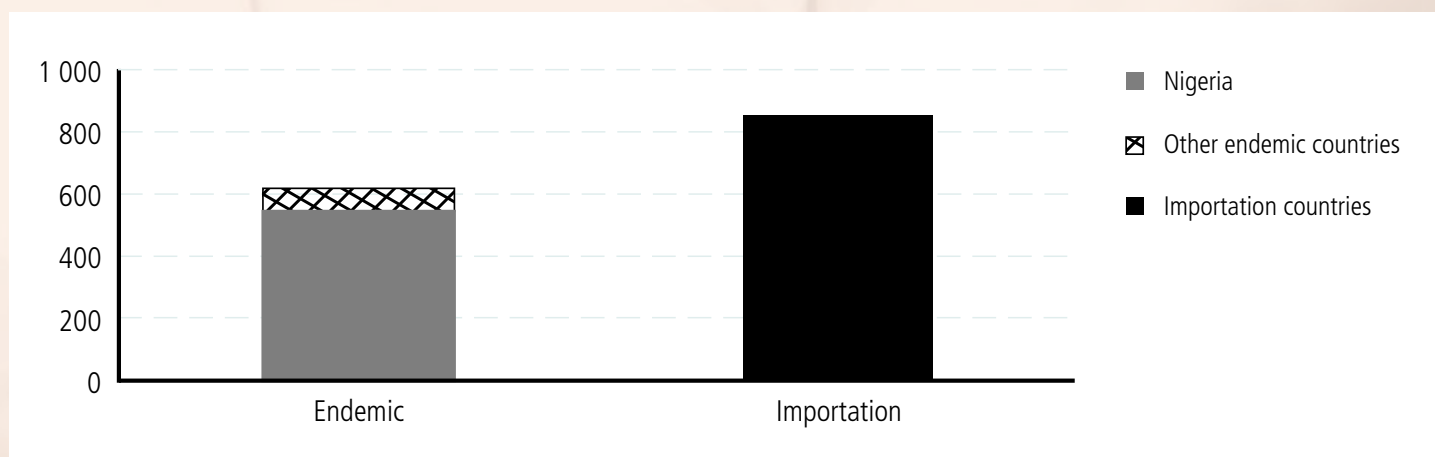
A Newsletter for the Global Polio Eradication Initiative

World Health Organization in association with Rotary International, United Nations Children's Fund and the Centers for Disease Control and Prevention



Advisory Committee on Polio Eradication - standing recommendations for responding to outbreaks

For the first time ever, in 2005, the number of polio cases in re-infected countries is higher than the number of cases in endemic countries (852 cases compared to 617 cases, as at 1 November 2005).



Recognising the global vulnerability to polio re-infection until the disease is eradicated everywhere, the Advisory Committee on Polio Eradication (ACPE), the independent, technical oversight body of the Global Polio Eradication Initiative, in September 2005 issued standing recommendations for responding to the detec-

tion of circulating polioviruses (wild poliovirus and/or circulating vaccine-derived polioviruses) in polio-free areas (WHO Weekly Epidemiological Record no 38, 23 September 2005; WHO Weekly Epidemiological Record, no 47, 25 November 2005).

ACPE standing recommendations

1. Rapid investigation and emergency plan

- Within 72 hours of confirmation of polio importation: initial investigation, local response and international risk assessment completed and action plan established
- Identification of known areas of virus transmission, major transit routes, surveillance quality, international borders and type/origin of virus importation as basis for risk assessment and action plan

2. Rapid sustained response

- Minimum of 3 large-scale immunization campaigns
- First campaign to be conducted within 4 weeks of index case confirmation
- Subsequent rounds to be held at an interval of at most 4 weeks between campaigns
- Additional rounds depending on extent and timing of any breakthrough transmission (at least 2 campaigns should have been conducted *after* detection of the last poliovirus)

3. Type-specific response

- Type-specific monovalent oral polio vaccine (mOPV) should be used for the outbreak response

4. Large-scale response

- The target population of each campaign should be at least 2-5 million children under the age of five years
- Focus must be on reaching all populations, including hard-to-reach groups and very young children, especially infants

5. High-quality response

- To ensure high quality coverage, house-to-house immunizations must be conducted
- Independent monitors should be used during the outbreak response, to verify whether at least 90% coverage was attained
- Areas with <90% coverage should undergo further mop-up immunization activities

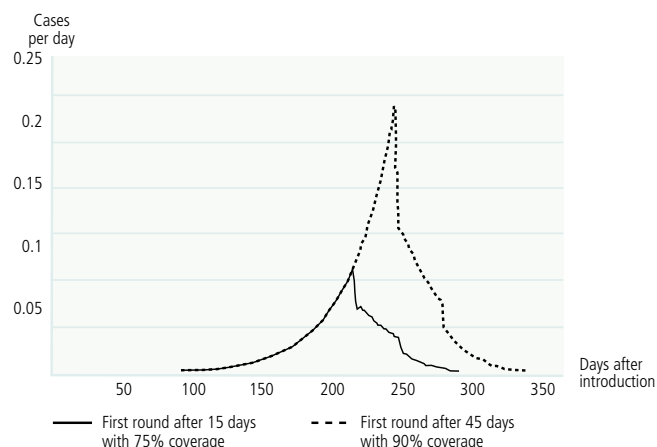
Polio outbreak response: the faster, the better...

In line with the standing recommendations for outbreak response by the Advisory Committee on Polio Eradication (ACPE) (see page 2), mathematical modelling predicts that a rapid, large-scale immunization response is preferable to a delayed response. Exploring the trade-offs between time and coverage, mathematical modelling suggests that an initial quick response with medium coverage (above 70%) is more beneficial in controlling an outbreak than a delayed activity with higher coverage, as long as the initial rapid response is followed by two, large-scale campaigns attaining high coverage (at least >90%).

See figure on right: in a hypothetical outbreak in a low income country of 10 million people, implementing a first round with 75% coverage 15 days after the onset of the first paralytic case leads to 5 cases, compared to 11 cases if the first round occurs 45 days after the onset of the first paralytic case, but attains 90% coverage.

Rapid response translates into a lower number of cases

Main assumptions: 10 million people, low-income country, no SIAs in the previous 5 years, 50% routine OPV3 coverage, $R_0=10$, AFP surveillance, 2nd and 3rd rounds cover 90% of under fives, all rounds use mOPV



Status of polio outbreaks in 2005

Country	Date of index case	Total number of cases	Date of most recent case (onset of paralysis)	2005 number of NIDs/SNIDs* since index case (as at 14 Nov)	Type of vaccine used (monovalent or trivalent OPV)**	Status of outbreak
Angola	25 April	9 cases	3 September	3 NIDs	Monovalent OPV: 2 NIDs; trivalent OPV: 1 NID	Possible ongoing transmission
Cameroon	8 February	1 case	8 February	4 NIDs	Trivalent OPV	Apparent interruption of transmission
Chad	2 August 2003	1 case (24 in 2004; 25 in 2003)	6 May	4 NIDs 2 SNIDs	Trivalent OPV	Apparent interruption of transmission
Eritrea	23 April	1 case	23 April	3 NIDs	Monovalent OPV: 1 NID; trivalent OPV during other campaigns	Possible ongoing transmission (insufficient data)
Ethiopia	21 December 2004	17 cases (1 in 2004)	29 August	4 NIDs 2 SNIDs	Monovalent OPV: 1 NID; trivalent OPV during other campaigns	Possible ongoing transmission
Indonesia	13 March	283 cases	2 October	2 NIDs 2 SNIDs	Trivalent OPV	Ongoing transmission
Mali	15 April 2004	3 cases (19 in 2004)	1 May	4 NIDs 2 SNIDs	Trivalent OPV	Apparent interruption of transmission
Nepal	6 August	1 case	6 August		Trivalent OPV	Immediate outbreak response ongoing
Somalia	12 July	37 cases	26 September	4 NIDs	Monovalent OPV: 3 NIDs; trivalent OPV: 1 NID	Geographically contained, but ongoing transmission
Sudan	20 May 2004	26 cases (127 in 2004)	17 June	4 NIDs 4 SNIDs	Monovalent OPV: 1 NID; trivalent OPV during other campaigns	Apparent interruption of transmission
Yemen	25 February	473 cases	1 October	5 NIDs	Monovalent OPV: 4 NIDs; trivalent OPV: 1 NID	Possible ongoing transmission

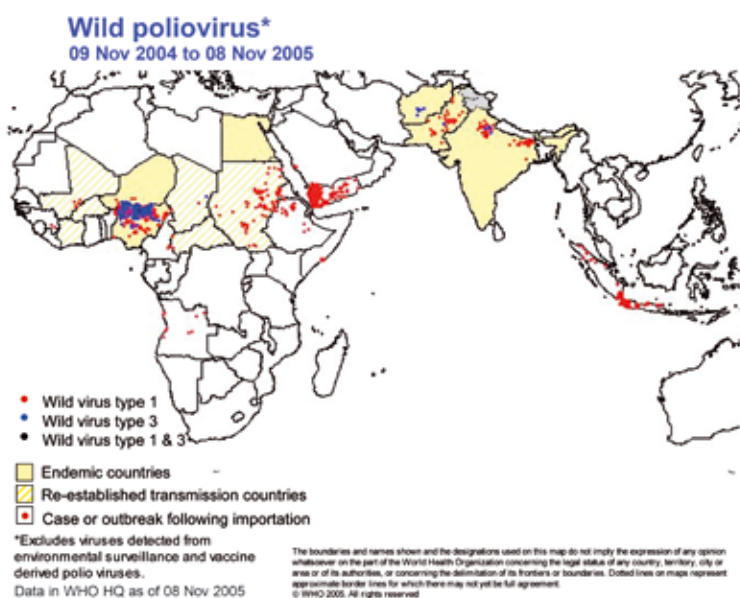
*NID: National Immunization Days – SNID: Subnational Immunization Days

** A number of these countries will conduct additional mOPV campaigns in late 2005 and early 2006

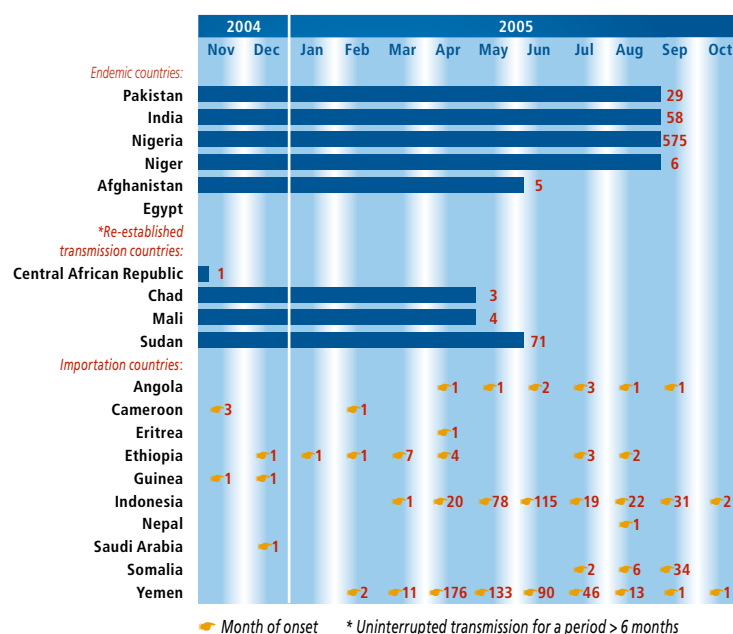
AFP and polio reporting, year-to-date comparison: 2004 and 2005

Source: Data at WHO as of 08 November 2005

Region	2004 (as of 09 November 2004)					2005 (as of 08 November 2005)				
	Non-polio AFP rate	Adequate specimen rate	Confirmed polio cases	Wild polio virus cases	Cases pending classification	Non-polio AFP rate	Adequate specimen rate	Confirmed polio cases	Wild polio virus cases	Cases pending classification
African	3.00	90%	778	778	1'262	3.20	86%	592	588	1'675
Americas	0.93	81%	0	0	392	1.12	78%	0	0	500
Eastern Mediterranean	2.59	89%	59	59	508	3.57	88%	564	564	693
European	1.12	83%	0	0	424	1.06	84%	0	0	327
South-East Asian	2.23	84%	81	81	1'769	4.40	83%	365	334	3'530
Western Pacific	1.37	87%	0	0	440	1.35	87%	0	0	433
Global total	2.06	86%	918	918	4'795	2.73	85%	1'521	1'486	7'158



Timeline: Total wild poliovirus and month of most recent wild poliovirus by country from 09 November 2004 to 08 November 2005



Supplementary immunization activities in selected countries: December 2005 - February 2006

Category	Country	December 2005 Type of activity	January 2006 Type of activity	February 2006 Type of activity
Endemic countries	Afghanistan	18 Dec / SNIDs	Jan / SNIDs	Feb / SNIDs
	Egypt			Feb / NIDs
	India		15 Jan / SNIDs	26 Feb / SNIDs
	Niger	19 Dec / NIDs		Feb / NIDs
	Nigeria		Jan / NIDs	Feb / NIDs
Countries with re-established transmission of wild poliovirus	Burkina Faso	13 Dec / NIDs/VitA		Feb / NIDs
	Central African Republic	09 Dec / NIDs/VitA		
	Chad	09 Dec / NIDs		Feb / NIDs
	Côte d'Ivoire	09 Dec / NIDs		Feb / NIDs
	Mali	09 Dec / SNIDs		Feb / NIDs
	Sudan		Jan / SNIDs	Feb / NIDs
Importation countries	Angola	02 Dec / NIDs		
	Eritrea	16 Dec / NIDs		Feb / NIDs
	Ethiopia			Feb / NIDs
	Somalia	13 Dec / NIDs		Feb / NIDs
	Yemen			Feb / NIDs

This calendar reflects information known to WHO/HQ at the time of print. Some dates are preliminary and may change. Please contact WHO/HQ for up-to-date information.

Polio infrastructure helps respond to natural disasters

The extensive polio eradication network at country-level frequently helps in providing immediate support to natural disasters such as the recent Pakistan earthquake and the Southeast Asia tsunami in December 2004, as well as in responding to health emergencies and outbreaks (including measles, SARS, avian influenza, Marburg fever in Angola and Ebola outbreaks). The global polio eradication network is equipped in many countries with both international and national professional staff and transport and communica-

tion capacity, allowing for immediate support to emergency response activities. The polio network has provided rapid assessment and early logistical and operational support. 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 at the forefront of international and national relief efforts.

Pakistan: polio network responds to earthquake

Following the devastating earthquake that hit Pakistan on 8 October 2005, the polio eradication infrastructure at the country level responded immediately to provide vital relief support.

Among the first relief-workers on the scene, more than 50 polio eradication epidemiologists and surveillance officers arrived in the worst-affected areas the very next day after the earthquake. The polio aid workers were equipped with 15 vehicles, radio equipment, satellite phones, as well as medicines, vaccines, potable water tanks and sleeping bags.

The immediate focus was on conducting a rapid assessment of the extent of the devastation and communicating this information back to Islamabad to allow more effective relief planning. The polio eradication staff also provided emergency rescue and first aid work, setting up treatment camps and transporting patients. The subsequent focus was on establishing early warning systems for potential outbreaks, as well as developing outbreak preparedness



WHO rapid response to earthquake in Pakistan.

plans. The polio staff also planned and helped implement large-scale immunization campaigns, vaccinating children in the worst-hit areas against measles, tetanus, polio, as well as provision of Vitamin A supplements.

India: polio infrastructure's rapid support following tsunami



Measles vaccination in Tamil Nadu, India, following the tsunami in Southeast Asia.

After the tsunami ravaged parts of Southeast Asia in December 2004, the polio network in India immediately sprang into relief action.

Deploying more than 20 staff members to the worst-hit areas of southern India, the polio team provided local support from 31 December to 9 January, and came equipped with vehicles and medicines, including oral rehydration salts and co-trimoxazole paediatric tablets to help prevent deaths due to pneumonia.

Polio staff also organized and helped implement large-scale, preventive immunization campaigns, reaching more than 150,000 children with measles vaccine (and oral polio vaccine), as well as Vitamin A supplements.

Long-term support focused on logistical and administrative assistance to state health authorities, as well as training of aid workers on public health interventions in the relief effort.

Gates Foundation gives US\$ 25 million grant to protect Horn of Africa

To prevent the re-establishment of polio in the Horn of Africa, the Bill & Melinda Gates Foundation has provided a critical US\$ 25 million grant, enabling a series of large-scale immunization campaigns throughout eight countries in the Horn of Africa between September and December 2005. With polio outbreaks currently affecting Eritrea, Ethiopia, Somalia and Yemen, the campaigns will reach more than 34 million children with multiple doses of polio vaccine and boost population immunity throughout the region. "The polio eradication initiative has shown the world that even in the poorest countries, widespread and debilitating disease can be defeated," said Patty Stonesifer, Co-chair and President of the Bill & Melinda Gates Foundation. "Today, as a resurgence of polio threatens to roll back the amazing progress of the past 20 years, it is more important than ever that governments and donors support the final push to eradicate polio."



Japan helps fund Indonesia's polio outbreak response

The Government of Japan, a long-standing partner of global polio eradication, responded quickly to the urgent need for funds to stop the polio outbreak in Indonesia and contributed US\$ 1.8 million to UNICEF for the purchase of oral polio vaccine (OPV) and to strengthen communications. Dr Shigeru Omi, Regional Director, WHO Regional Office for the Western Pacific, was instrumental in working with Japan to make this contribution possible.

Turkey provides funding for polio eradication



Pictured (l to r): Mr Anand Balachandran, Interagency Coordinator, Polio Advocacy Group; H.E. Ambassador Türkekul Kurttekin, Permanent Representative of the Republic of Turkey; Dr David L. Heymann, WHO Representative for Polio Eradication; Mr. Hakan Kivanc, Counsellor Permanent Mission of the republic of Turkey to the UN in Geneva.

Islamic Conference of Foreign Ministers (in Istanbul, Turkey in June 2004 and Sanaa, Yemen, in June 2005).

ECHO responds to polio outbreak in Yemen

The European Commission Humanitarian Office (ECHO) recently approved a grant of €500,000 to the World Health Organization (WHO), to fund emergency polio immunization activities in Yemen in response to the large polio epidemic in the country. Yemen had been polio-free since active disease surveillance began in 1996, but became re-infected in February this year. As at 1 November 2005, 473 cases have been reported this year, but thanks to a strong and ongoing response, the outbreak is increasingly coming under control. The funds from ECHO will be used for implementing nationwide polio immunization campaigns in the last quarter of 2005. In 2004, ECHO also funded critical polio activities in Guinea, Liberia and Sierra Leone.

Recent contributions*

All figures in US dollars

Australia	US\$ 3,6 million	for 2005, for Indonesia and to match contributions from Rotarians in Australia
Bill and Melinda Gates Foundation	US\$ 25 million	for 2005, for outbreak response in Horn of Africa
Canada	US\$ 240,000	for 2005-06, to match contributions from Rotarians in Canada
ECHO	US\$ 580,000	for 2005, for outbreak response in Yemen
Germany	US\$ 1 million	for 2005, in global funding
Italy	US\$ 115,000	for 2005, for outbreak response in Angola
Turkey	US\$ 500,000	for 2005, in global funding
United Kingdom	US\$ 900,000	for 2005, for outbreak response in Indonesia
UNICEF regular resources	US\$ 4 million	for 2005-06, for Nigeria and Indonesia
German National Committee for UNICEF	US\$ 155,000	for 2006, for Niger
USAID	US\$ 2 million	for 2005, for Afghanistan

*Contributions received since *Polio News* 24.

Materials available

Also on www.polioeradication.org

WHO Weekly Epidemiological Record, 19 August 2005: Saudi Arabia requires people aged under 15 years travelling from polio-affected countries to be immunized against the disease

Forthcoming events

23-25 Nov. 2005	Regional Certification Commission, Eastern Mediterranean Region, Cairo, Egypt
1-2 Dec. 2005	Expert Review Committee, Abuja, Nigeria
3-7 Dec. 2005	Regional Certification Commission, Western Pacific Region, Manila, Philippines
5-6 Dec. 2005	India Expert Advisory Group, Delhi, India

