



# Polio News

E r a d i c a t i o n

Issue 17 – December 2002



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

## 2002: Lowest number of polio infected countries ever – but more cases

**A**T most seven countries will still be endemic for polio at the close of 2002 compared to 10 countries last year.<sup>1</sup> Furthermore, the vast majority of cases – more than 85% – are

confined to just nine states/provinces of 76 within India, Nigeria and Pakistan. Despite this geographical restriction in transmission, a five-fold increase in cases in northern India and Nigeria will result in more cases for 2002 (1461 to date) than for 2001 (483 total). The northern India state of Uttar Pradesh alone accounts for more than 60% of the global total (see pages 3 and 5 for more details). Four endemic countries – Afghanistan, Egypt, Niger and Somalia – have low-intensity transmission with fewer than 25 cases combined. ♦

### Polio eradication highlights 2002:

- EURO certified polio-free. Combined with the WHO's Region of the Americas (1994) and Western Pacific Region (2000), more than three billion people in 134 countries now live in certified-zones
- No polio detected in Sudan or Ethiopia
- Improved access in countries affected by complex emergencies – Afghanistan, Angola and Somalia
- Type II poliovirus has not been detected for the past three years

### TCG Findings

## HIGHLIGHTS

### THE GLOBAL TECHNICAL CONSULTATIVE GROUP (TCG) FOR POLIOMYELITIS ERADICATION

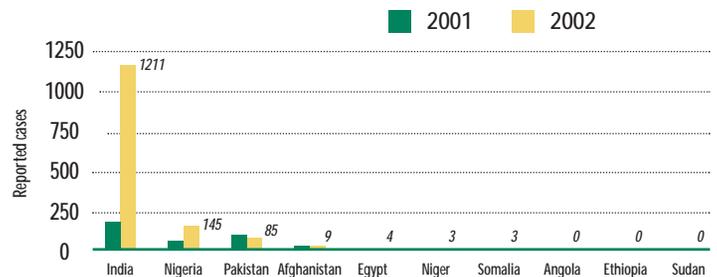
Due to the approach of the end 2002 target date for stopping transmission, and the evolution of research on post-certification immunization policy, the Global TCG held a special interim meeting 13–14 November 2002 in Geneva. Much of this issue of Polio News highlights the TCG's findings.

<sup>1</sup> All data in this issue of Polio News is as of 3 December 2002.

## TCG has “concerns” about India, Nigeria and Egypt – supplementary immunization activity (SIA) quality and quantity main issues

**T**HE Global TCG noted the progress in 2002 and was impressed with the use of surveillance information to drive the programme. The oversight body concluded that given continued high quality SIAs and improved access to children, Afghanistan, Angola, Niger and Somalia should stop transmission by mid-2003 with Pakistan following shortly thereafter. **However, the TCG noted with grave concern that closing immunization gaps in Egypt, India and Nigeria requires urgent and substantial work if transmission is to stop within 12 months.** The TCG specifically recommended at least six rounds of high-quality supplementary polio

Polio case counts in 10 endemic or recently endemic countries as of 3 December 2001 and 3 December 2002



immunization campaigns in the polio-infected areas of each country, combined with decentralizing operations and increased use of monitoring data to enhance the quality of these activities. Such steps must be carried out in the first half of 2003 to interrupt transmission by the end of the year. (See page 5.) ♦



## Part One

# POST CERTIFICATION IMMUNIZATION POLICY

## FRAMEWORK FOR THE ASSESSMENT & MANAGEMENT OF PARALYTIC POLIO IN THE POST-CERTIFICATION ERA

The November interim meeting of the TCG endorsed the framework which has been developed to summarize the risks of paralytic poliomyelitis in the post-certification era. This framework will be particularly important for discussing post-certification immunization policy with OPV-using countries and for developing policy decision models. The framework divides the risks into two major categories: (a) those due to vaccine-derived polioviruses and (b) those due to the handling of wild poliovirus stocks.

*This page summarizes the research to date on the nature and magnitude of the risks of vaccine-derived polioviruses as presented to the November TCG. The next issue of Polio News will include an update on the risks of polio paralysis due to the handling of wild poliovirus stocks, with a special focus on the progress in containment.*

(see table on the right)

## Risks from the continued use of oral polio vaccine (OPV): VAPP, cVDPV and iVDPV

A key factor in the risk assessment for OPV-using countries is the small but continuing risks of paralytic polio due to OPV. These include vaccine associated paralytic polio (VAPP), the emergence of circulating vaccine derived polioviruses (cVDPVs) and excretion of VDPVs from immunodeficient people (iVDPV). Preliminary estimates presented to the TCG on the total global burden of disease due to **VAPP**, measured in terms of the number of cases per birth cohort, is 250–500 cases per year. Although the risk of emergence of a **cVDPV** appears to be even lower than VAPP, it is conditional on factors such as the level of population immunity and immunity gaps. Screening of >5000 Sabin polio isolates and enhanced global surveillance for cVDPVs over the past three years has documented cVDPV on just three occasions at a frequency of one episode per year. These three recent cVDPV outbreaks resulted in a total of 29 cases, but experience from the pre-eradication era in Egypt suggests that cVDPVs may establish endemicity under certain conditions. The **iVDPV** burden from 40 years of use of OPV stands at 19 cases globally with just four patients continuing to excrete poliovirus today. There have been no secondary cases. New research is underway on further ways of expressing the risks from cVDPVs and iVDPVs, and will be presented to the Global TCG meeting on an ongoing basis. ♦

Risks of polio paralysis in the post-certification era\*\*

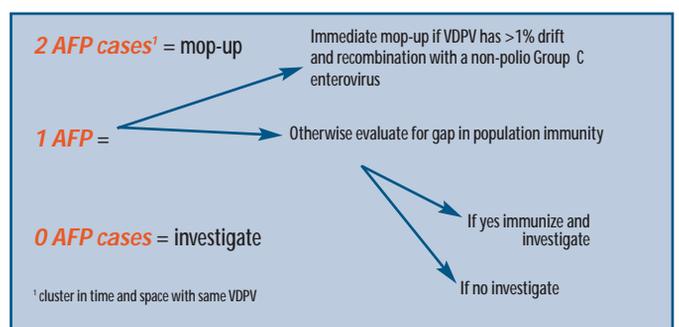
"Risk category"	Risk	Frequency	Estimated global annual burden*
Risks of polio paralysis from continued use of oral polio vaccine	VAPP	1 in 2.4 million doses of OPV administered	250–500 cases per year
	cVDPV	One episode per year in 1999–2001 (Haiti, Madagascar, the Philippines,)	Approx. 10 cases per year (total of 29 cases in three years)
	iVDPV	19 cases since 1963, with 4 continuing to excrete; no secondary cases	<1 case per year
Risks of paralysis from mishandling of wild poliovirus	Inadvertent release from an IPV manufacturing site	One known event in early 1990s	No cases
	Inadvertent release from a laboratory	None to date	
	Intentional release	None to date	

\* Study and data collection is ongoing for all categories  
\*\* Under current polio immunization policies

## Vaccine derived poliovirus (VDPV) investigation and response guidelines

USING the data and experience available at the end of 2002, the TCG endorsed interim guidelines for responding to the isolation of VDPVs. These guidelines emphasize the need for a mop-up response to (a) any AFP cases from which a VDPV is isolated which has greater than 1% genetic drift and recombination with a group C non-polio enterovirus and (b) any cluster of AFP cases from which a common VDPV is isolated (*see below*). The guidelines state that in all other instances the first response should be an appropriate epidemiological, clinical, immunologic and virologic investigation. If there is an identified immunization coverage gap, whether geographic or demographic, this should be addressed while the investigation is ongoing. These guidelines will be updated as additional information becomes available. The WHO guidelines on response to wild poliovirus are also being updated to include the VDPV investigation and response guidelines. ♦

Decision-tree for responding to the isolation of a vaccine-derived poliovirus (VDPV)



# AFP and polio reporting, year-to-date (data received at WHO Geneva as of 03 December 2002)

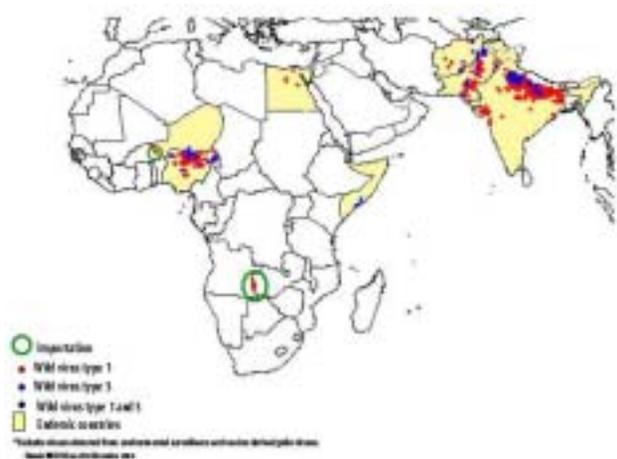
	2001 (as of 04 December 2001)				2002 (as of 03 December 2002)			
	Non-polio AFP rate	Adequate stool specimens	Polio confirmed cases	Wild polio virus cases	Non-polio AFP rate	Adequate stool specimens	Polio confirmed cases	Wild polio virus cases
African Region	2.9	72%	70	39	2.9	83%	164*	151
Region of the Americas	1.24	76%	10*	0	0.98	93%	0	0
Eastern Mediterranean Region	1.81	84%	157	110	2.25	88%	99	99
European Region	1.32	90%	3**	2	1.17	83%	0	0
South-East Asia Region	1.53	84%	178	178	1.63	84%	1211	1211
Western Pacific Region	1.19	87%	0	0	1.2	88%	0	0
Global total	1.46	82%	418	329	1.79	85%	1474	1461

\* Vaccine derived polio virus. In 2001, in the American Region, in Dominican Republic 3 cases and in Haiti 7 cases.  
 In 2002, in the African region, in Madagascar, 4 cases  
 \*\* Importation of wild poliovirus into the region

## Wild poliovirus map

03 December 2001 – 02 December 2002

## Timeline: total wild poliovirus and date of most recent wild poliovirus by country as of 03 December 2002



## NIDs calendar for selected countries

Region	Country	January 2003 Type of activity Intervention	February 2003 Type of activity Intervention	March 2003 Type of activity Intervention
AFRO	Cameroon	21-Jan / SNIDs / OPV Round 2		
	Central African Republic	21-Jan / NIDs / OPV Round 2		
	Chad	21-Jan / NIDs / OPV Round 2		
	Equatorial Guinea	21-Jan / NIDs / OPV Round 2		
	Gabon	21-Jan / NIDs / OPV Round 2		
	Nigeria	25-Jan / NIDs / OPV Round 1		00-Mar / SNIDs / OPV Round 2
EMRO	Afghanistan			00-Mar / SNIDs / OPV Round 1
	Egypt			00-Mar / NIDs / OPV Round 1
	Iraq			00-Mar / SNIDs / OPV Round 1
	Somalia		00-Feb / NIDs / OPV Round 1	00-Mar / NIDs / OPV Round 2
	Pakistan	28-Jan / SNIDs / OPV Round 1		03-Mar / NIDs / OPV Round 1
	Yemen	00-Jan / NIDs / OPV Round 2		
SEARO	Bangladesh			29-Mar / NIDs / OPV Round 1 / Vit A
	India	05-Jan / NIDs / OPV Round 1	09-Feb / NIDs / OPV Round 2	
	Maldives	00-Jan / SNIDs / OPV Round 2		
	Myanmar	12-Jan / NIDs / OPV Round 2		
	Nepal	04-Jan / NIDs / OPV Round 1	08-Feb / NIDs / OPV Round 2	
	Thailand	21-Jan / SNIDs / OPV Round 2 / Vit A		

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

## Dozens of US Rotary club members help immunize millions of children against polio in Africa



Photo: © Rotary International/A.M. Giboux

Nigerian Rotarian immunizes a child in northern Nigeria. This part of the country continues to have the highest levels of transmission of wild poliovirus in Africa.

**I**N support of Rotary's goal of a polio-free world by 2005, more than 150 Rotary members from the United States flew across the Atlantic to participate in national immunization days (NIDs) in Ethiopia, Ghana and Nigeria in October and November 2002. American Rotarians teamed up

with their local counterparts to help with vaccine delivery, volunteer recruitment and transportation, and community mobilization and education. Seattle-based Rotary Club member Ezra Teshome led 85 Rotary members to his home country of Ethiopia. "It was moving to see the families' hope at the NIDs," said Teshome. "Some had walked for miles and miles to get their children vaccinated." Brad Howard of the Oakland California Sunrise Rotary Club brought 34 Rotarians to Ghana. "Something like this gives people the chance to make a difference one person at a time," he said. *As the top private sector contributor to polio eradication, Rotary has given US\$ 182 million to eradicate polio on the African continent and committed more than US\$ 500 million worldwide.* ♦

## "Trick-or-Treat for UNICEF" raises funds for polio

**T**HE United States Fund for UNICEF is donating all the proceeds from its 52<sup>nd</sup> annual "Trick-or-Treat for UNICEF" campaign to the global effort to eradicate polio. Every 31 October in the United States, kids dress up in celebration of Halloween and go door-to-door to "Trick-or-Treat" for sweets and funds for UNICEF. The US Fund's "Trick-or-Treat" for UNICEF anticipates raising more than US\$ 4 million, from the 2002 campaign, including US\$ 850 000 from the United Nations Foundation, and it was one of the Fund's most extensive efforts involving a record number of corporate partners and distribution of 20 million donation boxes – more than four times the number distributed in 2001.

The Fund's regional offices worked to educate children and adults about polio and its ongoing effects in the remaining endemic countries. US mayors officially declared 31 October as "Trick-or-Treat for UNICEF" day in 144 American cities. The campaign gave children in schools, youth groups and clubs the chance to help raise money for the Global Polio Eradication Initiative, knowing that every dollar they collected would help immunize children against polio. ♦



## Photographer Salgado urges support for Horn of Africa polio activities

**P**HOTOGRAPHER Sebastião Salgado, who has worked tirelessly with polio partners to document eradication efforts around the world, made the case for support to polio activities in the Horn of Africa at a Polio Partners' meeting in Nairobi in September. Salgado was the keynote speaker at the gathering of partner agencies, donor and country representatives, convened to address the challenges in Ethiopia, Somalia and Sudan.

Along with ensuring access in conflict-affected areas and maintaining local political commitment, securing the US\$ 50 million required for polio activities between 2003 and 2005 in the region was considered the key challenge.

Ambassadors from Belgium, Ethiopia and the United States, representatives from various countries, international organizations, non-governmental organizations (NGOs), the US Centers for Disease Control and Prevention (CDC) and Rotary International participated in this successful event. ♦

## GAVI breakout session on polio

**T**HE polio eradication programme has enhanced vaccine delivery systems and capacity in dozens of countries with equipment, institutional arrangements such as the laboratory network and more than 2500 skilled people. Participants at the November 2002 Partners' meeting of the Global Alliance for Vaccines and Immunization (GAVI) in Dakar, Senegal joined a breakout session to discuss the potential future roles of this polio infrastructure. EPI managers from several countries including Nigeria and Bangladesh noted the importance and value of maintaining capacity to further strengthen immunization services. The group recommended that countries have a strong voice in determining the best ways to ensure the polio infrastructure is used to forward the GAVI objective of 80% routine immunization coverage in 80% of districts in every country. ♦

### Pakistan – The model for quality work

SINCE 2000, Pakistan's polio eradication programme has steadily improved. With continued strong work it may be the first of the remaining "high transmission" countries to stop transmission. In contrast to Nigeria and India where cases have increased five-fold in 2002, new cases in Pakistan have declined by 10% and transmission has been reduced significantly in the traditional reservoir areas. The TCG emphasized that Pakistan's programme is strong overall, and that **success is due mainly to continued multiple rounds of high-quality SIAs** particularly in the face of decreasing caseloads and virus lineages. Other strong areas of the programme include the careful analysis and use of surveillance data to inform programme decisions and diligent follow-up of independent monitoring data prior to and following SIAs. Government commitment is high at national, provincial and, increasingly, district levels. To stop transmission, the TCG **endorsed Pakistan's SIA plans for four rounds of NIDs and four rounds of subnational immunization days (SNIDs) in 2003** along with the strategy to concentrate on identified reservoir and high-risk areas. ♦

### Nigeria – political ownership key

WHILE an increase in reported cases in 2002 (145 to date) over 2001 (56 total) is partly due to improvements in surveillance quality, transmission in several states of northern Nigeria remains intense. Despite the increase, however, cases have been geographically restricted, with just seven states, all in northern Nigeria, reporting over 90% of cases, and two states, Kano and Kaduna, with half of the total for the country. Virological evidence demonstrates that many of the strains causing disease in prior years are no longer circulating, and there are a limited number of strains remaining in circulation in 2002.

The TCG noted data showing that until very recently most children under five years of age had received insufficient (<3) doses of OPV in several of the remaining endemic states. **Although data from the September SIAs indicate improvement, the states of Kano and Kaduna in particular need to ensure high-quality SIAs, as the current coverage rates, while at 75–80%, are still too low to interrupt transmission of wild poliovirus.** The TCG concurred with the national plan for three rounds of high-quality SNIDs in the highest risk states in the first half of 2003. The TCG also emphasized that the high level of government commitment at national level needed to be matched at state and local government Area levels. ♦

### PROGRESS & CONCERNS

The November 2002 interim meeting of the TCG reviewed eradication activities in the remaining polio-endemic countries. The TCG recognized progress in all countries and singled Pakistan out for praise in particular. However it had "grave concerns" about the possibility of stopping transmission within 12 months in Egypt and India, Nigeria.

TCG comparison of eradication activities in the three "high-transmission" countries in 2002

Key activities	Pakistan	Nigeria	India
Number of rounds of large-scale SIAs in 2002	4 NIDs, 4 SNIDs	2 NIDs, 4 SNIDs	2 NIDs, 1 SNID
Management of operations	Joint national/international teams at national, state and substate levels	Joint national/international teams at national and state levels	Joint national/international teams at national level
Monitoring of SIA quality	Independent 3 <sup>rd</sup> party monitoring began in early 2002	Independent monitoring began in late 2002	Independent monitoring began in late 2002

### India – Wanted: higher quality, quantity SIAs

HISTORICALLY, India's progress in polio eradication has been unprecedented in the world, with the virus circulation drastically reduced from almost every district in the country to two states in just a few years. The most progress occurred in 1999–2000, when India undertook 10 national or subnational immunization campaigns in a 24-month period. In contrast, only three large-scale SIAs took place in 2001. The result? A five-fold increase in cases in 2002 (1211 at 4 December 2002) over 2001 (just 268 for the year). These cases are primarily (75%) centred in Uttar Pradesh (UP) – the major reservoir for polio in India and the world. At year's end, the area with the highest transmission in western UP had reseeded many other districts, including Gujarat and West Bengal which had been free of endemic polio in 2001. Data shows this major outbreak is the result of gaps in the quality of immunization activities, and that minority populations in western Uttar Pradesh are the most severely affected by these gaps. **The Global TCG considers that India – the state of Uttar Pradesh in particular – constitutes the greatest risk to the achievement of global polio eradication.**

Moving forward, **the TCG is recommending an increased number of better quality SIA rounds**, including four rounds in the areas of high-intensity transmission in the first half of 2003. These must reach every child under five years of age, particularly children in minority populations. The TCG also recommends sufficient high-quality staff to manage polio eradication at national, state and substate levels, and the formation of substate operational groups to manage polio eradication activities across a number of districts, with the support of partner agencies. ♦

## Resource mobilization

### Polio firmly on the agenda for Africa-Europe discussions

IN the final communiqué of the Second Africa-Europe Ministerial meeting held in Ouagadougou, Burkina Faso in November, African Foreign Affairs ministers noted the significant progress made toward polio eradication in Africa and called on European Union Member States to mobilize adequate funds to finish the job.

The inclusion of polio eradication in the Ouagadougou communiqué sets the stage for polio eradication to be discussed at the European Union-African Union Summit in April and for Polio Advocacy Group follow up with European governments for additional funding for polio eradication in Africa. ♦



Photo © Aventis Pasteur/ Jms

David Williams, CEO of Aventis Pasteur, signed on for the final push to eradicate polio during a ceremony with WHO Director-General Gro Harlem Brundtland and UNICEF's Executive Director Carol Bellamy at the UN Secretariat in New York in November 2002.

### Aventis Pasteur donates 30 million doses of polio vaccine

As West African countries launched a massive coordinated effort to immunize 60 million children against polio, the world's largest vaccine manufacturer, Aventis Pasteur, donated 30 million doses of oral polio vaccine to the Global Polio Eradication Initiative. The donation – the third by Aventis Pasteur – is valued at US\$ 3 million, and makes Aventis Pasteur the longest-standing corporate partner of the Initiative.

### Materials available:

The report of the November 2002 interim meeting of the Global Technical Consultative Group for poliomyelitis eradication is available electronically in English.

The *Progress 2001* (WHO/POLIO/02.08) report is now available in French.

To register to receive *Polio News*, either in print or by email, or to receive any of the items above, email: [polioepi@who.int](mailto:polioepi@who.int) or call +41 22 791 2657.

Many polio documents are available on the web site at: [www.polioeradication.org](http://www.polioeradication.org)

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### Recent donations:\*

<b>Aventis Pasteur:</b>	US\$ 3 million worth of oral polio vaccine for 2002–2005 in Africa
<b>Canada:</b>	US\$ 32 million for 2003–2005 polio eradication activities in Africa
<b>Japan:</b>	US\$ 9.6 million for oral polio vaccine in Pakistan
<b>Rotary International:</b>	US\$ 14.5 million for 2002–2003 polio activities in key countries and regions, including India, Nigeria and Pakistan
<b>Saudi Arabia:</b>	US\$ 100 000 for polio activities in EMRO countries
<b>The Netherlands:</b>	US\$ 8.2 million for oral polio vaccine and surveillance activities in Bangladesh in 2003–2004
<b>United Kingdom:</b>	US\$ 27.4 million in global funding, with a focus on Africa, and for activities in Nepal

The Global Polio Eradication Initiative expresses its gratitude to all donors. \*Donations announced since *Polio News* 16, September 2002

The Aventis Pasteur donation is already making a difference, with almost 3 of the 30 million doses earmarked for November's polio immunization campaign in Liberia.

At a recent signing ceremony attended by David J. Williams, President and Chief Executive Officer of Aventis Pasteur, Gro Harlem Brundtland, Director-General of WHO and Carol Bellamy, Executive Director of UNICEF, Mr Williams signed a banner pledging Aventis's commitment to end polio.

"The Initiative has already made tremendous progress and we admire the remarkable work done by WHO, Rotary International, CDC, UNICEF and millions of volunteers around the world," Williams said. "This donation is just one example of Aventis Pasteur's commitment. We are very proud of our involvement with the Global Polio Eradication Initiative." ♦

### Forthcoming events 2003

Date	Event	Venue
20–28 January	WHO Executive Board	Geneva, Switzerland
4–6 February	Rotary IPPC meeting	Evanston, USA
25–27 March	AFRO Regional Certification Committee	Yaounde, Cameroon
24–25 April	Global TCG	Geneva, Switzerland



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All comments and feedback on *Polio News* should be sent to: Department of Vaccines and Biologicals, WHO, Geneva.  
 Tel.: +41 22 791 3219  
 Fax: +41 22 791 4193  
 Email: [polioepi@who.int](mailto:polioepi@who.int)  
 Web site: <http://www.polioeradication.org>